IMPACT OF PERSONALIZED AI ADVERTISING ACTIVITIES ON CONSUMER'S PURCHASE INTENTIONS

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ABSTRACT

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The integration of Artificial Intelligence (AI) into digital marketing has transformed how businesses communicate with consumers, offering advanced tools to deliver more personalized, relevant, and timely advertising content. This thesis investigates the impact of personalized AI advertising activities on consumers' purchase intentions, with a focus on the effectiveness, advantages, limitations, and ethical dimensions of AI-powered marketing strategies.

The study begins by exploring the historical development and core technologies of AI, followed by a detailed overview of digital marketing evolution, tools, and techniques. Key applications such as chatbots, product recommendation systems, customer segmentation, predictive analytics, and personalized advertising are examined to understand how AI enhances consumer targeting and engagement. Furthermore, the study discusses the rising importance of emerging technologies like voice search, media content generation, and AI-enhanced customer experience.

A comparative analysis of personalized and non-personalized advertising is presented, highlighting the benefits and challenges of both approaches. Personalized advertising is evaluated based on its influence on consumer behavior, data collection practices, privacy concerns, and its effectiveness across digital platforms, especially social media. In contrast, non-personalized advertising is analyzed through

traditional channels such as television, radio, print, and outdoor media, emphasizing its relevance and limitations in the digital era.

To assess the impact of personalized AI advertising on purchase intentions, a quantitative research method was employed. Data was collected through a structured survey and analyzed using statistical tools. The results reveal that personalized advertising, when perceived as relevant and non-intrusive, positively affects consumer engagement and purchase decisions. However, concerns regarding data privacy and ethical use of consumer information remain significant barriers to full acceptance.

The research concludes that AI-powered personalized advertising can substantially enhance digital marketing effectiveness by increasing ROI, improving customer satisfaction, and enabling data-driven decision-making. Nonetheless, the success of such strategies depends on maintaining consumer trust, ensuring transparency, and addressing ethical considerations. This thesis contributes to the growing field of AI in marketing by offering both theoretical insights and practical recommendations for businesses aiming to adopt responsible and effective AI-driven advertising approaches.

Keywords: Artificial Intelligence, Digital Marketing, Personalized Advertising, Consumer Behavior, Purchase Intentions, Data Privacy, Ethics

ÖZET

KIŞISELLEŞTIRILMIŞ YAPAY ZEKA REKLAM FAALIYETLERININ TÜKETICININ SATIN ALMA NIYETI ÜZERINDEKI ETKISI

BIÇAK, DENIZ BERKAY
İŞLETME YÜKSEK LISANS TEZI

Danışman: Dr.Öğr.Üyesi Bülent ÖZSAÇMACI
Nisan 2025, 124 sayfa

Yapay zekânın (YZ) dijital pazarlamaya entegrasyonu, işletmelerin tüketicilerle iletişim kurma biçiminde önemli değişiklikler yaratmış ve daha kişiselleştirilmiş, alakalı ve zamanında reklam içerikleri sunmak için gelişmiş araçlar sağlamıştır. Bu tez, kişiselleştirilmiş YZ reklam faaliyetlerinin tüketicilerin satın alma niyeti üzerindeki etkisini incelemekte; YZ destekli pazarlama stratejilerinin etkinliğini, avantajlarını, sınırlılıklarını ve etik boyutlarını değerlendirmektedir.

Çalışmanın başlangıcında, YZ'nin tarihsel gelişimi ve temel teknolojileri ele alınmakta, ardından dijital pazarlamanın evrimi, kullanılan araçlar ve teknikler detaylı bir şekilde açıklanmaktadır. Chatbotlar, ürün öneri sistemleri, müşteri segmentasyonu, tahmine dayalı analizler ve kişiselleştirilmiş reklamcılık gibi uygulamalar incelenerek, YZ'nin hedefleme ve müşteri etkileşiminde nasıl avantaj sağladığı ortaya konmuştur. Ayrıca sesli arama, medya içeriği üretimi ve YZ destekli müşteri deneyimi gibi yükselen teknolojilere de yer verilmiştir.

Kişiselleştirilmiş ve kişiselleştirilmemiş reklam uygulamaları karşılaştırmalı olarak analiz edilmiş; kişiselleştirilmiş reklamcılık tüketici davranışları, veri toplama yöntemleri, gizlilik endişeleri ve sosyal medya etkileri bağlamında değerlendirilmiştir. Buna karşın kişiselleştirilmemiş reklamcılık ise televizyon, radyo, basılı medya ve dış mekan gibi geleneksel kanallar üzerinden günümüz dijital çağı açısından irdelenmiştir.

Kişiselleştirilmiş YZ reklamcılığının satın alma niyeti üzerindeki etkisini değerlendirmek amacıyla nicel araştırma yöntemi kullanılmıştır. Anket yoluyla toplanan veriler istatistiksel analizlerle değerlendirilmiştir. Elde edilen bulgular, kişiselleştirilmiş reklamların ilgili ve rahatsız edici olmayan biçimde sunulması durumunda, tüketici etkileşimini ve satın alma kararlarını olumlu yönde etkilediğini göstermektedir. Ancak veri gizliliği ve etik kullanım konuları, tüketicilerin bu tür uygulamalara tam anlamıyla güvenmesini engelleyen önemli faktörler olarak öne çıkmaktadır.

Sonuç olarak, YZ destekli kişiselleştirilmiş reklamcılığın, dijital pazarlama etkinliğini artırma, yatırım getirisini yükseltme, müşteri memnuniyetini geliştirme ve veri odaklı karar alma süreçlerini iyileştirme potansiyeline sahip olduğu görülmüştür. Bununla birlikte, bu stratejilerin başarısı; tüketici güveninin korunmasına, şeffaflığa ve etik ilkelere bağlıdır. Bu tez, pazarlamada YZ kullanımına yönelik literatüre katkı sunmakta ve işletmeler için sorumlu ve etkili YZ destekli reklam stratejileri geliştirmeye yönelik pratik öneriler ortaya koymaktadır.

Anahtar Kelimeler: Yapay Zeka, Dijital Pazarlama, Kişiselleştirilmiş Reklamcılık, Tüketici Davranışı, Satın Alma Niyeti, Veri Gizliliği, Etik

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LIST OF ABBREVIATIONS

KPI	Key Performance Indicators
AI	Artificial Intelligence
CRM	Customer Relationship Management
ML	Machine Learning
NLP	Natural Language Processing
ROI	Return On Investment
Tukey HSD	Tukey honestly significant difference
P-value	Probability Value
N-value	Number of Observations Value
Spearman's Rho	Spearman's Rank-Order Correlation Coefficient
ANOVA	Analysis of Variance
Sig.	Significance
N	Number of Observations
Std. Deviation	Standard Deviation
Std. Error	Standard Error
Min	Minimum
Max	Maximum
Df	Degrees of Freedom
Asymp	Asymptotic
LSD	Least Significant Difference

INTRODUCTION

In the rapidly evolving landscape of digital marketing, the integration of artificial intelligence (AI) has led to significant transformations in how businesses engage with consumers. AI technologies have enabled marketers to automate processes, analyze large volumes of data, and deliver highly personalized advertising experiences at scale. As a result, the role of AI in shaping consumer behavior and purchasing decisions has become a subject of increasing academic and practical interest.

One of the most impactful developments within this field is the emergence of personalized AI advertising. This situation refers to marketing activities that utilize machine learning algorithms, data analytics, and consumer profiling to tailor promotional content to individual users. Unlike traditional, mass-market advertising approaches, personalized AI-driven advertising seeks to deliver relevant messages, offers, or product recommendations based on user-specific data such as browsing history, purchase patterns, demographic characteristics, and online behavior.

Personalization in advertising is believed to enhance consumer satisfaction by aligning marketing content with individual needs and preferences. It can lead to improved engagement, stronger brand loyalty, and higher conversion rates. However, this approach raises critical concerns about data privacy, ethical boundaries, and consumer trust. As companies gain access to more detailed personal information, the balance between relevance and intrusiveness becomes increasingly important. The effectiveness of personalized advertising thus depends not only on technological capabilities but also on consumer perceptions and attitudes.

This thesis investigates the impact of personalized AI advertising activities on consumer purchase intentions. The central aim is to examine whether and how AI-enabled personalization strategies influence consumers' willingness to purchase a product or service. In doing so, the study considers key factors such as perceived relevance, privacy concerns, trust in the brand, and user experience. Furthermore, it

contrasts personalized advertising with non-personalized or generic advertising methods to assess relative effectiveness and consumer responses in both contexts.

The research combines theoretical foundations with empirical data to analyze current AI-based digital advertising practices comprehensively. It draws from the disciplines of marketing, consumer behavior, and information technology to explore the mechanisms through which AI personalization operates and its potential to reshape the advertising industry.

Ultimately, the findings of this study aim to contribute to both academic literature and practical applications by providing insights into how AI-driven personalization can be used ethically and effectively to influence consumer purchase decisions. In a digital environment where competition is high and consumer attention is limited, understanding the impact of personalized advertising represents a valuable resource for marketers seeking to develop more targeted, efficient, and consumer-friendly strategies.

These disparate exploratory features form a rich framework for the basis of understanding, which this PhD thesis can hopefully contribute to. It is of great importance to academics, practitioners, and policymakers in the development of innovative, ethical, and effective marketing strategies in an AI-driven world.

The following chapters engage in a structured analysis of AI and digital marketing, the points at which they intersect, and the opportunities and challenges arising from this intersection. The introduction thus provides the base for an in-depth discussion that seeks to bridge the gap between theory and practice in this fast-moving area.

CHAPTER I

THE IMPORTANCE OF ARTIFICIAL INTELLIGENCE

This chapter remains very informative about the basics of Artificial Intelligence (AI), considering the development of technology and the use of AI in almost all aspects of life. It goes back in history to the conceptual beginning of AI in the 1950s and the present times of application in manifold sectors with the involvement of various technologies.

1.1 THE CONCEPT OF ARTIFICIAL INTELLIGENCE (AI)

Artificial Intelligence (AI) is the branch of computer science that enables a computer to learn the ways of human communication and behavior. AI systems aim to make them think, act, and perform like human beings. They imitate human intelligence processes like learning and improvement, reasoning, and self-correction, whereby machines would analyze and understand data and, finally, make decisions. AI also improves business efficiency by processing large amounts of data quickly and accurately. This capability is essential as data volumes grow, making it difficult for humans to handle. AI can identify trends, predict market movements, and make data-driven decisions faster than humans (Haleem et al. 2022: 120).

Machine learning (ML) and deep learning are key components of AI. ML trains algorithms on large datasets to recognize patterns and make predictions. Deep learning, a more advanced form of ML, uses complex neural networks to process data, enabling more accurate recognition of user behavior and predictions (Alkhayyat and Ahmed 2022: 11).

It helps digital marketing analyze users by predicting which groups would most likely become customers. AI programs can identify the best leads, allowing

marketers to concentrate their time and effort on prospects who most deserve it. AI is helpful in the predictions of market trends and user behaviors through the analysis of data already in existence. These insights are valuable for strategic planning and keeping competitive.

1.2 HISTORICAL DEVELOPMENT OF ARTIFICIAL INTELLIGENCE

AI involves transferring human intellect to machines so that machines may carry out activities that are typically associated with human thinking processes. AI in its conceptual framework, was born in the 1950s. One pioneer of this concept was Alan Turing; in a paper titled "Computing Machinery and Intelligence," in 1950 came up with the Turing Test. The Turing Test was meant to check if the machine would have intelligent behavior that is indistinguishable from human behavior (Johnsen 2024).

The term "Artificial Intelligence" was coined by John McCarthy in 1955. McCarthy and colleagues Marvin Minsky, Nathaniel Rochester, and Claude Shannon organized the 1956 Dartmouth Summer Research Project on AI, which is considered by many as the birth of AI as a field of study independent from other disciplines. As they had proposed, the objective was "to make a machine behave in ways that would be called intelligent if a human were so behaving."

Since that time, ups and downs have taken place in AI research. The early euphoria of the 1950s and 1960s gave way to skepticism and reduced research funding; these periods are instead romantically called "AI winters." In the 1970s and 1980s, expert systems were developed. An expert system is a computer program that mimics a human expert's behavior and decision-making capability in some field. They also found applications in medicine, finance, and engineering. Until the discovery of ML in the 1990s, with the particular success of supervised learning algorithms, computers could improve performance with experience. However, breakthroughs in ML, neural networks, and computing power have reignited interest and investment in AI since the year 2000 (Johnsen 2024).

However, in the 21st century, AI began to grow exponentially, powered by the deep learning subset of ML involving the use of many-layered neural networks.

State-of-the-art technologies such as Natural Language Processing (NLP), computer vision, and independent systems have picked up pace and found realistic applications, starting with virtual assistants and reaching self-driving cars.

At present, AI is contributing massively to almost all operations and services for improvement: health, transport, customer care, and digital marketing. The only contribution of AI in digital marketing has revolutionized how things used to be with the provision of a personalized customer experience, predictive analytics, and effective targeting (Johnsen 2024).

1.3 ARTIFICIAL INTELLIGENCE TECHNOLOGIES

AI technologies power many tools and automate many activities, which significantly impact everyday life. Automation technologies, like Robotic Process Automation, leverage AI to control complicated workflows and adapt to new information. ML includes deep learning algorithms to learn from data and make decisions independently without being explicitly programmed. ML includes supervised, unsupervised, reinforcement, and semi-supervised learning and is applied in applications like spam detection and customer segmentation. Thus, it could be applied to anything from medical image analysis to autonomous vehicle applications, enabling machines to interpret anything visually. NLP lets the computer read and understand human language where translation, speech recognition, and conversational AI are possible. Robotics uses AI to further high-level autonomy in decision-making and adaptability, from manufacturing to exploratory applications. Self-driving cars employ AI algorithms to negotiate and make decisions in real time. Generative AI represents a radical departure in how we work with the creation of content, creating new data out of plain text. However, it indeed raises discussion points around copyright and security. Both have been driving innovation and efficiency across industries; each has a place in how we work with and use technology (Johnsen 2024).

1.4 APPLICATION AREAS

AI has entered many industry sectors and research areas with a significant impact on healthcare, business, education, finance, law, entertainment, journalism, software development, security, manufacturing, and transportation. AI in Healthcare: Unlike before, AI enhances outcomes and reduces costs by making diagnoses faster while helping patients with virtual health assistants. Businesses leverage AI in data analytics, customer services, and generative tools to draft documents. AI has automated grading and personalized learning and assisted teachers with teaching materials in education. AI handles decision-making, algorithmic trading, and consumer finance tools in financial institutions. Law firms use automation of document review and AI use for analytics and drafting. Entertainment and media use AI capability to create targeted ads, content recommendations, and generative creation of content. Journalism uses AI in the realms of data analytics and investigative reporting. AI automates processes, predicts maintenance, and helps generate code for software development. The usage of AI in security comes in two forms: anomaly detection and threat analytics. Manufacturing has collaborative robots that uplift safety even further and help in improving productivity. AI is managing traffic flow, predicting flight delays, and optimizing supply chains in transportation (Johnsen 2024).

1.5 DIGITAL MARKETING

The terminology "digital marketing" refers to the practice of promoting products and services using digital platforms like internet web pages, mobile devices, social networking sites, search engines, and other related platforms, which are all used in the marketing of products and services (Peter and Vecchia 2021: 252).

Digital marketing emerged in the 1990s when the world was first introduced to the internet. It suddenly became an essential part of marketing that any business needed. The concepts of digital marketing are similar to those of traditional marketing. However, there are new ideas that businesses use to relate to consumers and better comprehend consumer behavior. Today, many businesses consider both kinds of marketing, traditional and digital strategies, in developing their plans since

each type provides something different. In the digital era, consumers can communicate, voice their opinions, and influence others with an unprecedented level of choice power. Digital marketing does not just add value to business endeavors but enriches consumer experience as well. Brands today try to ponder how one is supposed to build trust and amicable relations with each of their customers, as personalization touches hearts.

Digital marketing has now involved shifting to more humane and user-friendly content than in the past. Users are now able to comment, give their views, and even create and upload content that may break down or build the reputation of any brand. In such an atmosphere, the quality of content, timing, user interface, reviews, speed, and visuals matter. Those brands create a cozy customer-oriented environment where the audience engagers takes the plunge for positive engagement. Digital marketing concentrates on user profiles, target audiences, and consumer behaviors; thus, it gives opportunities for companies to provide quality services, secure substantial revenues, and attain high levels of customer satisfaction (Peter and Vecchia 2021: 252).

1.6 HISTORICAL DEVELOPMENT OF DIGITAL MARKETING

Digital marketing initially started to hold significance with the advancement of technology in the early twentieth century. As a result, an increased demand for digital promotion, advertising, distribution, and customer experience raised its significance. Since the introduction of the term "Digital Marketing" in 1988, radical expansion has taken place throughout the business world, affecting small and large-scale enterprises across the globe. The point at which AI, data mining, and computational analysis achieved new heights was when the purely data-driven approach changed to an integrated approach based on both data and knowledge-based decision support systems for digital marketing.

The term "Digital Marketing" came into being along with the beginning of server/client architecture and popularization of PCs during the 1990s. This era also brought in the development of Customer Relationship Management (CRM) applications that would soon become core marketing technology. With the advent of

the Internet, e-CRM software started offering marketers massive quantities of customer data online, allowing companies to update and prioritize customer needs more accurately. This age also saw the emergence of the world's first clickable banner, the "You Will" campaign by AT&T, 1994-which had a phenomenal 44% click-through rate during its first four months (Desai and Vidyapeeth 2019: 196).

The year 2000 saw even more changes, with the wider diffusion of Internet use and the introduction of a game-changing iPhone that completely changed how customers interacted with digital content. Customers began to research products online and make buying decisions without using the traditional sales network, which presented new challenges for marketing departments as digital marketing became integral to business strategy. It led to integrating digital platforms into daily life and, similarly, into marketing plans, as consumers started depending more on digital devices rather than visiting stores. Thus, it followed that more effective and prevalent digital marketing campaigns flourished.

In 2007, the emergence of marketing automation attempted to respond to these new challenges. Marketing automation allowed businesses to segment customers, create multichannel campaigns, and offer personalized information; however, its utilization on consumer devices was slower in its early stages. The development that has been continuing in digital marketing throughout the years of the 2000s and 2010s was quickened by an increase in devices that could access digital media. In 2012 and 2013, statistics still showed that digital marketing was on an upward trend. The emergence of social media platforms such as LinkedIn, Facebook, YouTube, and Twitter ensconced digital technology in everyday life, with growing expectations from customers for a consistent user experience through multiple touch points while researching product information.

It improved the diversification of marketing technology due to the change in customer behavior. The world is most caught on globally in digital marketing, particularly after the year 2013. Digital media growth was estimated at 4.5 trillion online ads served annually, and digital media spending was at 48% growth in 2010. A growing share of all advertising comes from companies using Online Behavioral Advertising (OBA) to focus advertisements on online users. However, OBA also

increases the concern about consumer privacy and data protection (Desai and Vidyapeeth 2019: 197).

1.7 PROS AND CONS OF DIGITAL MARKETING

Digital marketing has become one important component of how businesses reach and connect with customers. As more companies grow business using online platforms, it is important to discuss the benefits of digital marketing, including those elements that may pose some challenges. One of the most significant advantages of digital marketing is being able to reach the target groups at a relatively affordable cost. Whatever the size of the business, whether huge or tiny, it is guaranteed to reach a broad audience through digital marketing. This helps to reduce production costs and hence gives various people more access to the products regardless of income levels. It also enables businesses to get closer to their customers through more personalized emails and more targeted ads, hence making the relationships stronger (Sepideh and Puttanna 2023:126).

Another advantage of this technology is that it will be able to monitor and measure the effectiveness of marketing campaigns in real-time. Tools like Google Analytics, among other online metrics, will show how customers interact with a website, what products they might be interested in, and how much money is made from these interactions. This kind of information helps businesses enhance their marketing strategies to meet customer needs better. Besides, with businesses operating on social networking websites such as Twitter and Facebook, it becomes quite convenient for consumers to reach an organization. This situation infuses a sense of trust among consumers and boosts the reputation of any particular business house or firm.

Also, there are challenges in digital marketing. It greatly relies on technology, especially the Internet. Poor internet connection may not allow digital marketing to achieve its ultimate goal. There is also immense online competition, where many products and services compete for attention. This may lead to price wars, as well as the risks of product copying and their sale at cheaper prices.

Another problem is that customers may not always trust what they see online. For example, they may want to be sure about the material, color, and size when it comes to clothes. If something is vaguely or even deceptively described, customers could end up with a product other than what they expected. This can lead to dissatisfaction with a low view of the brand (Sepideh and Puttanna 2023:126).

1.8 KEY STRATEGIES IN DIGITAL MARKETING

Digital marketers are responsible for increasing brand awareness and generating leads using the various digital channels available to them. These channels include social media, the company's website, search engines, email, online ads, and the company's blog. For each channel, digital marketers focus on specific Key Performance Indicators (KPI) to measure how well the company performs in that area (Desai and Vidyapeeth 2019: 197).

Experienced digital marketers understand how each campaign they run contributes to their overall goals. Depending on what they want to achieve, they can use both free and paid methods to support more extensive campaigns. For example, a content marketer might write a series of blog posts to attract leads for a new eBook the company has created. The social media marketer could then promote these blog posts through both paid ads and regular posts on the company's social media accounts.

1.8.1 Attribution Modeling

One of the most important methods and tactics in digital marketing is called Attribution Modeling. The principle behind this method is understanding where a customer first interacted with your business online and then tracing how his journey led to the sale. It will make it easier to perceive what parts of your marketing are pulling their weight and which need some tuning. Just by knowing how customers find and buy your product, you could make wiser decisions on where to sink your money into marketing. This, in turn, will enhance the customer journey using digital tools and thereby enhance the results for your business (Desai and Vidyapeeth 2019: 198).

1.8.2 Social Media Strategies

Social media platforms like Instagram, TikTok, and YouTube have changed how businesses and customers interact. They allow people to connect and communicate in new ways. These platforms help build relationships that influence people's buying and recommending products. Social media lets businesses see what customers are talking about and how they are reacting, which helps them make better decisions. The data from social media, including text, images, and videos, helps understand customers and plan new ideas.

1.8.3 pRACE Framework

Digital marketing platforms play a crucial role in executing marketing strategies based on the pRACE framework, which consists of Plan, Reach, Act, Convert, and Engage phases that guide the customer journey from initial awareness to post-purchase engagement. That also involves the use of different digital tools and platforms for the optimization of each step.

The Plan phase begins with analyzing the market for strengths, weaknesses, opportunities, and threats. Tools like Google Analytics allow tracking website traffic, analysis of advertisements, and monitoring of consumer behavior, thus offering insight into where opportunities exist and areas a marketer would need to improve on. Salesforce CRM helps an organization manage all business aspects that deal with customer relationships and interaction; it maps needs, problems, solutions, and opportunities- all needs that fuel planning.

The Reach phase serves as the first step in the customer lifecycle. The focus is to attract potential customers by providing engaging experiences that build brand awareness. Websites are a significant means of reaching internet users and potential customers, offering information on various subjects. Blogger allows users to create blogs, provides multi-user comments, and enables posting; MailChimp assists businesses in engaging potential customers using newsletters, special offers, and surveys. Google Ads creates brand awareness through targeted ads' traffic and engagement (Prokopis et al. 2019: 1323).

The Act phase is about attracting potential customers and influencing them to engage in the company's digital assets. The primary objective of this phase is to generate leads by encouraging site visitors to take some interest in the company's website or social media pages. Hootsuite is one of the primary platforms that manages and schedules posts across numerous social media profiles. It offers insight and tools for content management, social media monitoring, and post-scheduling.

The conversion phase is the process of converting potential customers into actual customers or organization members. Crazy Egg records users' activities on a website and gives insight into user behavior in a visual format. It runs A/B testing for website elements to identify the best place, size, content, buttons, shapes, colors, font types that will engage users and enhance user experience, improving conversion rates.

The Engage phase is cultivating and solidifying the relationship to encourage repeat purchases or attract new customers. This post-sale engagement builds trust and loyalty to your brand, ultimately driving future conversions. Google AdWords Remarketing is one platform that re-engages audiences through remarketing and retargeting techniques, reaching out to those potential customers who left the website without purchase (Prokopis et al. 2019: 1323).

1.9 TOOLS AND TECHNOLOGIES IN DIGITAL MARKETING

Businesses use digital channels to connect with existing customers and prospective customers. This could also be referred to as online marketing, internet marketing, or web marketing. Digital marketing is promoting products or services by companies or brands using digital tools like the Internet. However, it includes mobile phones, display ads, and other digital mediums (Ponomarenko et al. 2024: 158). Many different tools are available for reaching out to customers, each with varied strengths and purposes. An example would be that while search engines help make a business appear for results related to the search of any product, social media sites help brands interact with users and build relationships.

A good digital marketing strategy typically involves a few tools working together. The combination depends on the business's goals, target audience, and

market conditions. For instance, some businesses may build brand awareness via social media, keep existing customers in mind with email marketing, and get new customers with search engine ads. This can be achieved by using a blend of various digital marketing tools, which helps firms reach a bigger audience with more potent chances of converting prospective customers into loyal ones. With time, once the market trends change or the goals of the company change, companies alter or adjust their digital marketing tools and strategies to ensure effectiveness and relevance. Figure 1 summarizes the major digital marketing tools.

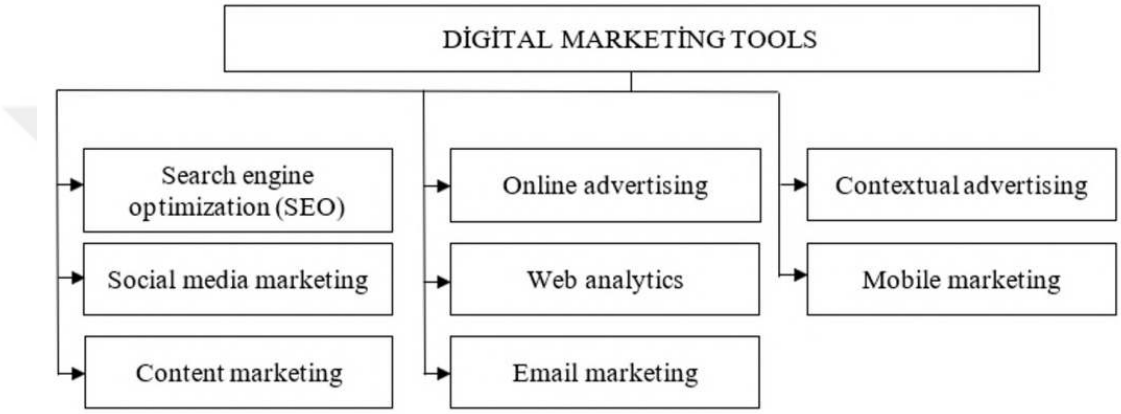

Figure 1: Digital Marketing Tools (Ponomarenko et al. 2024: 160)

Every time businesses employ digital marketing tools, they source information regarding how well their marketing efforts are working out. Digital tools allow firms to collect highly detailed data. Their ongoing data collection and analysis help businesses adjust their marketing strategies to be more effective over time. Businesses stay right on track because of the continuous updating of information; thus, they get better results over a more extended period. It basically helps them understand what is happening around them and be able to make informed decisions. For example, in businesses where ML data analysis is helpful in finding valuable insights, it detects patterns and trends that help them improve their marketing strategies.

The various tools and technologies of digital marketing have gone mainstream in advancing technology, including Search Engine Optimization (SEO),

Search Engine Marketing (SEM), Social Media Marketing, Content Marketing, Email Direct Marketing, and Marketing Automation.

1.9.1 Search Engine Optimization Tools

SEO basically means the activity that aims to enhance a website's visibility in search engine results to increase organic traffic. In other words, through focused optimization tasks, the ultimate goal is to achieve higher ranking positions for a site in the search for targeted keywords to get more visitors. To accomplish such a goal, there are several significant areas of focus in SEO. It enhances user experience in such a way that it allows for easy navigation, fast loading of pages, and quick responsiveness towards cell phone usage. Good user experience keeps the visitors longer and makes them more attentive to whatever is in the content. Better relevance of search results can have a positive effect on your website's ranking. The second most important thing is the creation of high-quality, relevant content. Valuable content for the audience should be provided to help build the site's authority and keep users engaged. It can result in positive signals from search engines. On-page optimization involves refining elements like meta titles and descriptions, keyword usage, and image optimization. These features help the search engines understand the site's relevance estimation. One needs to create high-quality links from reputable sources. Backlinks act as endorsements, showing that the site is credible and an authority to the search engines. Addressing such aspects, SEO offers the visibility of a website, invites more viewers, and dramatically improves the performance of results (Peter and Vecchia 2021: 261).

1.9.2 Search Engine Marketing

SEM enables an organization to reach out to people through ads on search engines. With SEM, one only pays when the users click their advertisement. This can create regular traffic for one and yield a good Return On Investment (ROI) if done correctly. SEM lets firms track their ROI closely, thus making it easier for them to trace what each spend is yielding. Still, with more businesses using SEM, the competition drove up the cost of bidding on popular search terms; many businesses

are now forced to use several search engines and an omnium of keywords to be competitive. Click fraud-parent companies get paid when their search links are clicked on, regardless of whether the visitor loads the linked website-is another significant problem. Though problematic, SEM often offers better returns than other kinds of marketing.

It is excellent for branding purposes and direct responses from customers. Web-based businesses also benefit from SEM because their target consumers are already online. Non-web-based businesses may also take advantage of SEM for broader visibility and brand promotion. There are instances where companies invested heavily in adverts without knowing whether or not the adverts were effective. Where it was never possible to measure the costs and benefits in detail earlier, today, businesses can measure all the costs and benefits of good advertising strategies (Bala and Verma 2018: 329).

1.9.3 Social Media Marketing

Social Media Marketing is all about promoting your brand and its content across different social media channels for brand awareness, traffic, and leads. There are popular platforms like Facebook, X (Twitter), LinkedIn, Instagram, Snapchat, Pinterest, and Google+ to achieve this.

Despite the rise of social media marketing, studies kept their focus on understanding the customer's behavior, purchase intention, and perceived images. Therefore, the pace of development in this regard has been slow and steady. Some studies look at with whom and how people interact on social media and the consequences of those interactions for decision-making. In addition to customer behavior, social media marketing also refers to research on practical brand usage of the medium to reach an audience. This involves analyzing data from social media platforms to see what works and what does not. Again, performance analyses for various content types, like images and videos on different platforms, are done, considering how they influence consumer engagement.

Understanding such dynamics becomes increasingly important as businesses are very likely to continue reaching out to their audiences through social media.

Through the analysis of social media, companies can also refine strategies, improve the content they are releasing for customers, and effectively engage with them in the development of more effective marketing campaigns (Şentürk 2020: 6).

1.9.4 Content Marketing

Content Marketing is basically the art of creating and distributing valuable, relevant content to attract and engage your audience. The ultimate objectives are to increase brand awareness, drive website traffic, capture leads, and convert those leads into customers.

Content marketing can be delivered in a mass of formats. For example, blog posts are ideal for sharing helpful information and insights into your industry. eBooks and whitepapers offer in-depth knowledge about a particular subject and can help establish your brand as an authority in your field. Infographics visually represent information to deliver complex data in simple terms so that it may be shared or enjoyed. Online brochures and lookbooks showcase your products and services in a beautiful format, thus enabling potential customers to know more about what you have to offer. These can be supplemented with videos, podcasts, and social posts. You create videos on tutorials, product demonstrations, customer testimonials, and many more. Podcasts share thought leaders' insights and stories through audio formats. Social media posts can advertise your content and help you speak directly to your audience.

Effective content marketing requires a lot of planning and strategy. That is to say, and one needs to get into a position where he can understand the needs and preferences of a target audience and develop content that addresses those needs. One can gain credibility from an audience and keep them engaged by building continuous trust through the quality of his content production that will make them take action, such as signing up for a newsletter or making a purchase (Peter and Vecchia 2021: 261).

1.9.5 Email Marketing

Email marketing is one of the major tools that help companies stay in close contact with their current and potential customers. It is a direct communication channel via email and can be highly potent for reaching various goals. Many businesses, in turn, use email marketing to send company news, announce special deals, and notify subscribers of events that will happen in the future. You can send a blog subscription newsletter to your audience announcing new posts and news. When someone visits your site and downloads a resource, for example, an eBook, you can follow up with that person via email to offer further information or assistance. Sending relevant and well-timed emails will help top a customer's mind, drive website traffic, and increase sales and loyalty. It can also be done through sending tips or advice in a series of emails. This can help foster better relationships with your customers by adding value to their state through information related to products or services. Your customers will be more engaged and likely to return for more in the future. Welcome emails are another popular email method in marketing. Welcoming new customers after they subscribe to your list or sign up to get your services makes a good impression and gives them useful information about what to expect. This is similar to holiday promotions, which are a great way to reach out to your clients, especially those in your loyalty program. Special discounts or exclusive offers can be used to show appreciation for them via these emails and to keep them continuously engaged (Okay 2023: 138).

1.9.6 Marketing Automation

Marketing automation provides a company with a tool to be more productive in marketing tasks. It provides the company with the capability to automate repetitive activities that were typically done by hand. Instead of issuing each and every newsletter by hand, marketing automation software can do it automatically to retain subscriber traffic on regular updates without much sweat. The same goes for social media posts; you can schedule them to be published at optimal times in advance, saving you from having to post them manually. Marketing automation tracks the performance of your campaigns and generates reports, providing insights into what’s

working and what needs adjustment. This allows you to make informed decisions and refine your strategies to achieve better results. Marketing automation makes your marketing efforts more consistent and effective. Marketing automation helps keep your contact lists up to date by automatically adding new contacts and updating existing ones. It also manages lead-nurturing workflows, sending a series of automated emails based on a potential customer's actions, such as downloading a resource or visiting specific pages on your website. This continuous engagement helps build relationships and guide leads toward making a purchase (Desai and Vidyapeeth 2019:197).

1.10 FUTURE TRENDS IN DIGITAL MARKETING

1.10.1 Voice Search and Smart Assistants

The topic of voice search and its relation to digital marketing is relatively new and underdeveloped in research. Still, major steps have been taken regarding the topics close to it: personal assistants and speech recognition technology development. It grants flexibility and naturalness to the interaction between users and digital systems.

The most relevant marketing research is focused on using personal voice assistants, such as Amazon Alexa, Google Assistant, and Apple Siri. By employing superior speech recognition skills, these listen to user queries and respond correspondingly conversationally and intuitively. The user-system interaction is similar to two people talking with each other, during which both the user and the system can engage actively.

What matters most to marketers is the ability of these systems to provide answers that will be both accurate and clear from voice-based web searches. While more people are now using voice search for information online, businesses increasingly need to understand how to optimize digital content to become easily found by these systems (Nalini et al. 2021:3164).

1.10.2 Artificial Intelligence in Advertising

Unlike traditional advertising, interactive advertising first appeared during the early days of digital advertising-sought to establish a two-way communication between the advertiser and the consumer. Concerning this stage, it emerged with several expressions like "interactive advertising," and even platforms and journals have been established, like the Interactive Advertising Bureau or the Journal of Interactive Advertising, to investigate its potential.

The second layer, programmatic advertising, introduced automation within the process. This allowed digital ads to be bought and sold via software, data, and algorithms, thus making the process efficient while retaining the features of interactivity from the previous level. Programmatic advertising, which successfully laid out a way to organize the buying and selling of ad space, has become widespread and is considered one more step in the development of digital advertising (Ford 2023).

Now, intelligent advertising is seen as the third phase that builds on earlier phases' interactive and automated aspects while introducing new capabilities at the heart of AI technologies. Intelligent advertising goes beyond merely predicting user interests; it can precisely estimate users' needs and wants in various contexts and time frames. This level of personalization is possible through first-party data given by a user with express consent. It relies heavily on the trust between the user and the app. Unlike other forms of ads, intelligent ads are designed to be voluntarily accessed by users instead of being forced down their throats, hence reducing the intrusiveness perceived and actually creating a great user experience.

As an example, Google Assistant utilizes AI technologies like NLP and ML to respond to user requests for information from various types of Google applications. Another platform is TikTok, whose AIs rate how users engage with content and use the information to populate personalized feeds tailored to every user's preference. For example, Alibaba's supermarket app “Hema” leverages AI to track individual shopping behaviors and push personalized promotions. It is an intelligent advertisement example that finds practical use in increasing ultimate consumer engagement. All these examples demonstrate new attributes of intelligent

advertising, which can personalize recommendations and precisely anticipate users' needs. Consequently, by relying on user data and offering a more personalized experience, intelligent advertising can facilitate stronger, longer-term relationships between brands and consumers. By offering control to users to decide when and how they want to engage with ads, this approach significantly reduces ad intrusion, making the experience far more usable (Ford 2023).

1.10.3 Enhanced Customer Experience with Artificial Intelligence

Suppose AI is to be implemented in customer service. In that case, the technology must be trustworthy, easily resolve issues, meet customer expectations, and work at a high efficiency level. These are the very basic functional benefits of AI. However, to reinforce the overall customer experience, human involvement must be strategically sandwiched into place by organizations. Human touch, therefore, becomes critical not only in service delivery but also in the empathetic interaction that may get crippled by machines. Hence, the best approach to digital transformation rests in integrating AI's capabilities with human resources' strengths. Let AI do the regular tasks and processes that are driven by data. The human staff shall attend to more complex issues that require empathy and hence need further understanding of each customer's individual needs. Therefore, it will allow organizations to extend their service experience into a more integrated and broader one by leveraging the best of both worlds: AI and human touchpoints. This needs to be the core of any digitization initiative; technology supports and complements the valuable human components in customer service (Daqar and Smoudy 2019: 25).

1.10.4 Media Content Production with Artificial Intelligence

AI is changing the way online media content is created. With improving NLP, coupled with ML and deep learning, AI today can produce content reasonably similar to what is produced by humans. AI-powered tools accelerate creators' content production faster and more efficiently with higher levels of accuracy, potentially resulting in increased output and lowered production costs for media firms.

One of the prime benefits of AI in content creation is making the content personalized to the individual viewer. By analyzing the data created, users interact with the content, and AI can make personalized material that is much more engaging and likely to hold the audience's attention. As for the future, AI's usage in online media content creation seems very bright. With growing advancements in technology, the use of AI will rise astronomically to automate most areas involved in creating content, including writing, editing, and optimizing content for search engines. AI-driven tools can write content from scratch based on a specific topic or even summarize long articles into concise briefs. AI can analyze the level of reader engagement and make enhancements to future content created for similar audiences. This would hasten the creation and distribution of content, so updates and releases could be faster. While such is the case, AI must not replace the creativity and skill of humans but should serve as support to enhance such ability. While AI technology is still developing, even more advanced and practical applications are expected to be born for online media content production (Nalini et al. 2021: 3164).

CHAPTER II

ARTIFICIAL INTELLIGENCE IN DIGITAL MARKETING

Digital marketing is always changing due to new technologies and the way people act as consumers. In the last few years, artificial intelligence has been of growing importance and is expected to be one of the major variables in changing how brands will converse with their audiences to achieve their marketing goals. This chapter looks at the integration of AI into digital marketing and its different uses, benefits, and challenges. In exploring the role of AI across different aspects of digital marketing, this section seeks to illuminate its capacity for increasing efficiency, refining decision-making, and providing tailored customer experiences amidst the ethical and technical complexities accompanying its use.

2.1 ARTIFICIAL INTELLIGENCE APPLICATIONS FOR DIGITAL MARKETING

AI is a technology that empowers computers to study incoming information, independently make decisions based on findings, and do so without human intervention explaining what to do. AI helps capture and analyze consumer information and their online actions in digital marketing. It can find patterns and create user profiles with tailor-made content for them. For example, it can develop marketing messages based on people's particular tastes or needs; therefore, content will be more targeted and effective. AI also helps identify the right target for messages or advertising and what they may seek. Some other common ways AI is used in digital marketing include Chatbots, Product Recommendation and Content Curation, Customer Segmentation, Personalized Advertising, Email Marketing, Predictive Marketing, Digital Advertising, Online Search Engine, Split Testing etc.

2.1.1. Chatbots

Within a digital marketing context, chatbots are AI-powered programs that have been developed to interact with customers by answering their questions in a natural, conversational manner. These are called chatbots, but they cannot be deployed only for chats; professionals such as those in health and law also deploy them. They raise many concerns involving privacy, data protection, and consumer rights.

Chatbots can be deployed for multiple purposes in businesses. For example, they may be used to provide immediate automatic responses to customers' queries; they may help collect data from customers or keep customers informed about products and services. Chatbots can work continuously with no downtime and store data for future use. Their integration into AI and ML has been redefining the era of business engagement with customers.

Chatbots can be integrated into websites and social media pages. Chatbots improve customer engagement by offering support around the clock and can handle more than one interaction at a time. With increased usage of such social media channels, marketers focus on WhatsApp and Facebook Messenger. Some view chatbots as a means to deliver personalized customer support at scale, though they do not always consider them traditional marketing tools. However, chatbots can make it easier for customers to buy things (Nalini et al. 2021: 3163).

2.1.2 Product Recommendation and Content Curation

The promotion of any business should be done by "showing what you know" through content creation in a manner that is helpful and interesting to a target audience (Gagnon 2014: 69). This will keep your business in memory and will prompt the customers to come to you when they need something.

AI has significantly enhanced content creation and content management. Equipped with technologies such as NLP, chatbots can have real-time conversations with clients, answer their questions, and provide them with information to the best of their ability. AI tools also automate blog posting, social media updates, and email newsletters, accelerating content production.

AI is becoming integral in content curation and product recommendations. Content curation is gathering information and organizing it around a topic or theme. An example would be the e-commerce sites, like Amazon, that use AI to recommend related products as consumers either view or buy items. Similarly, other AI technologies can automatically generate content through Natural Language Generation technology, where raw data is then transformed into readable and engaging stories, from sports updates to financial reports. It can produce thousands of articles in one second, thus helping to make content creation more personalized and effective.

2.1.3 Customer Segmentation

By segmenting the customers, the companies can mark the most profitable groups thereafter, and they can design focused marketing campaigns and thus utilize their resources better. AI does it more accurately through demographic analysis, online behavior, and social media engagement. Segmentation helps marketers build messages that are directly suited for every group by identifying specific segments of customers with particular needs and preferences. Meeting the right audience at the right time with the right product is all-important in online business. AI tools like Google Analytics segment audiences by location, age, gender, education, income, profession, and interests. This helps organizations analyze which group their product or service will reach best (Sepideh and Puttanna 2023: 125).

2.1.4 Personalized Advertising

AI has revolutionized many industries, and this industry is no exception. According to Estrada-Jiménez et al. (2016: 35), personalized advertising means offering an offer tailored for each customer and setting it alongside website content to blend in with what the customer is viewing. According to Jung (2017: 305), using personalized advertisements helps customers view relevant offers from businesses. The advertisers continue investing in ad customization because it pays off.

AI-driven recommendation systems use ML to deliver personalized advertisements. These study user behaviors with the intent of perceiving individual

preferences and display only ads likely to result in a sale. This personalization not only enhances the user experience but also increases conversion rates for businesses.

AI is being vastly utilized in digital advertising to ensure success on platforms like Facebook, Google, and Instagram. It analyzes users' data, age, gender, and interests to show them the most relevant ads. By utilizing AI, marketers will be able to find even the tiniest trends and predict future ones. This would give brands better decisions, reduce ad spending waste, and optimum results (Ford 2023).

2.1.5 Email Marketing

Brands are personalizing emails with AI to target the audience effectively. With AI, they can curate and create content for their customers based on behavior and preference. Through ML, big data analysis determines the best time of day to reach users and how often to email them. Finally, companies get to see what type of content gets the most attention and which subject lines lead to the most clicks.

AI makes the entire campaign of both companies and customers more effective. Large-scale personalization is a major key objective of any marketing strategy, and with the inclusion of AI, this becomes achievable. AI can develop customized emails to each subscriber based on their previous interaction with the brand; it can filter out the content they have consumed, items on their wish list, and websites they have visited. For example, if one clicks a lot on product links from emails and another hardly does, AI can send different messages depending on each user's personal preference (Chittenden and Rettie 2003: 211).

2.1.6 Predictive marketing

Predictive marketing is all about forecasting the success of marketing efforts, and AI plays a significant role in enhancing accuracy in such predictions. Predictive analytics applies techniques such as data mining, ML, and AI to analyze past data. Predictive marketing will help companies optimize their marketing budget by focusing on the most promising customer segments. Understanding who is likely to buy maximizes business resource allocation since each money spent will be more efficient and more impactful (Al Khaldy 2023).

Each time one browses the internet, AI gathers data about one's internet use. These bits of information will, thus, be able to give reasons for the frequency with which they buy things and the brands that appeal most to them. Using this data, AI will be able to analyze what consumers need and what they want. AI helps companies know exactly what customers are looking for by dividing the audience, thus calculating how they will behave when making a purchase. For example, if a customer previously bought a particular type of product, AI would predict when he may be ready to buy it again and even suggest similar products he or she may like. This helps enterprises satisfy not only their customers' current needs but also guess what they might want in the future. Such insight enables companies to build better-focused advertising, save on wasteful effort, and enhance their overall sales (Al Khaldy 2023).

2.1.7 Digital Advertising

AI is being highly used in digital advertising for better results. Companies like Facebook, Google, and Instagram use AI to understand information about users' data regarding gender, age, interest, and more, then flash the related advertisements before them. With AI, even minute details of any trends could be identified, or sometimes even predicted, by marketers. This means they can make smart decisions that ultimately enable brands to reduce waste in ad spend and deliver the absolute best results from any marketing effort. AI further helps optimize the timing and placement of the ads. It may be which times of the day and for what group of users are best to run the ads, ensuring views at just about the right time. This kind of precision in targeting makes sure businesses reach out to people at the most apt time, increasing the chances of conversion. For instance, when a user frequently shows interest in fitness products through web view, AI can help show advertisements regarding similar products to the user for better notice of those ads (Thilagavathy and Kumar 2021: 9900).

2.1.8 Online Search Engine

The way that people search for content online is rapidly changing, and marketers need to adapt their content to fit. Some of the most significant lifts facing modern businesses today in terms of search involve voice searches. New technologies such as Amazon Echo, Apple's Siri, Microsoft's Cortana, and Google Home allow users to search the internet with their voice by either stating a command or simply pressing a button. That is to say, instead of typing out search queries, people now use their voice to get what they want.

The Google algorithm and other AI developers have similarly been upgraded in development to understand these voice searches better. Marketers will need to make these changes, such as optimizing their content for voice search using a more natural and conversational approach to language. Instead of just using generic keywords, like "best running shoes," marketers will have to create content that answers specific questions, like "What are the best running shoes for long-distance running?" The marketers will also have to stay updated on every emerging trend or innovation in search technology. As AI keeps getting smarter, search engines will be more capable of detecting user intent and delivering more personalized results. This means that content must be more relevant and to the point to top any results.

As voice searches increase, so does the need for marketers to consider how they will make their content accessible on the devices. This means ensuring their websites come up well on mobile and people can easily access their content on smart speakers and other voice-activated devices (Thilagavathy and Kumar 2021: 9900).

2.1.9 A/B Testing

A/B testing, in its simplest form, known as split testing or bucket, involves taking a Web page and comparing two versions of the page side by side. Split testing is now considerably faster using AI tools. Traditional A/B testing can be time-consuming because it involves testing one change at a time. While A/B testing by humans tests only one idea against another, AI-based tools test several combinations simultaneously to speed up the results faster than humans can. AI also optimizes conversion rates or, in other words, the number of visitors who do what one wants

them to do, such as making a purchase or signing up for a newsletter. AI can pinpoint which elements yield more conversions using split test data analysis and automatically adjust the webpage for peak performance. For example, AI simultaneously tests different headlines, images, or button placements on a webpage to see how each affects the user's behavior (Nalini et al. 2021: 3165).

2.2 BENEFITS OF ARTIFICIAL INTELLIGENCE IN DIGITAL MARKETING

Artificial Intelligence is changing the way businesses approach digital marketing. Using AI, companies can better understand their customers, predict their wants, and create more personalized experiences. Some of the key benefits of AI in digital marketing include Automation, Minimizing Errors, Cost Savings, Increased ROI, Increased Personalization, Smarter and faster decision-making etc. (Zaman 2022: 353).

2.2.1 Increase ROI

AI helps marketers understand their customers better and create more personalized experiences. Using AI, marketers can predict customer behavior and design more targeted marketing strategies. This approach increases the ROI for each customer interaction.

AI enables marketers to gather deeper customer insights, such as their preferences and behaviors. With this information, businesses can group customers more effectively and guide them through their journey in a way that enhances their experience. This personalized approach leads to better results and a higher ROI, as each customer contact is more relevant and engaging.

AI also improves ROI by helping businesses solve security issues and ensure payments are processed quickly and efficiently. AI can recognize patterns in user behavior and create customized marketing campaigns based on this information. This means businesses can tailor their products and services to meet individual customer needs, boosting sales and revenue (Al Khaldy 2023:367).

2.2.2 Cost Savings

AI can help businesses save money and work more efficiently with fewer needs for expensive and time-consuming tasks. Without relying on traditional methods in which resources are utterly consumed, AI can handle many such tasks quickly and accurately to ensure overheads come down considerably.

Perhaps the biggest advantage of AI is that it automates mundane and repetitive work. This means that such tasks are completed much quicker than if they had to be done by an employee's hand. Automation with AI reduces the number of mistakes, in turn making the work even more reliable. Automation of routine tasks with the help of AI reduces the number of people required to perform specific jobs within an organization. This indicates that organizations will need to invest less money and time in staffing and training people, hence releasing their actual workforce for higher and more strategic work. Therefore, organizations can devote more of their resources to tasks that add more value to the business (Bala and Verma 2018: 329).

2.2.3 Smarter and Faster Decision-making

AI, integrated into the business, makes quicker and wiser decisions by handling data quickly and accurately. While humans take more time to perform such analysis, AI can analyze a large quantum of data in real-time and ensure correctness for security. In this way, a marketing team can pay more attention to the significant strategy rather than getting busy with data handling. AI will, in turn, allow marketers to collect and follow the results of a campaign while it is still in action and not have to wait until the very end to see what worked and what did not. They can make spontaneous decisions with real-time data. For example, if a specific campaign is not going as expected, with the latest data, marketers would change strategy immediately. Their decisions become more objective and substantiated in that respect. AI provides a more extensive, data-driven report on what works and what does not. By analyzing such reports, marketers can determine the most effective actions much faster and then make the necessary changes to optimize their campaigns. This means they will be capable of responding to trends and any issues

appropriately while staying on target with their marketing efforts (Bala and Verma 2018: 329).

2.2.4 Minimizing errors

With the propensity for human beings to make many mistakes, AI is designed in such a manner as to reduce those errors as much as possible. One of the huge areas where AI can create a difference is data security. Many businesses are often paranoid about keeping customers and other important data safe, which is true considering the rise in cyber-attacks today. AI can handle that type of security issue.

It learns past data trends and enhances its capability to protect against cyber threats. While AI systems can analyze significant volumes in minimum time, recognize unusual activity, and trace any potential security breach. This means that AI can act faster when a threat occurs to prevent problems before they get serious. For example, AI detects anomalous behavior, such as suspicious login attempts and data access patterns, and reports related risks to their systems' security to a company. Another positive feature of AI is its ability to learn new forms of cyber threats and adapt measures for cybersecurity. With such a proactive approach, businesses can easily safeguard and shield their data from unauthorized access. AI not only increases the security of data but also reduces the margin of error in processing information about customers or transactions. Automating the operation with the help of AI will reduce the human share of error and ensure that everything goes smoothly (Bala and Verma 2018: 329).

2.2.5 Automation

AI helps make the job of marketing automation more competent. It assists organizations in turning their data into decisions, creating more impactful interactions, and driving better business outcomes. As important as the data is, what counts is how fast and accurate that data is turned into actionable insight. AI accelerates marketing tasks, thus enabling the speed of action required for businesses to act effectively.

AI can help marketers manage and scale many campaigns by analyzing customer data for the best course of action, such as what products to recommend or what messages to send. From there, AI can help determine which campaign best fits each particular customer by ensuring the right message reaches the right person at the right time (Bala and Verma 2018: 329).

AI can automate routine tasks and free marketers to work on higher-level tasks. It will also be able to optimize email marketing, social media posts, and even ad placements for each piece of content to make it most effective. These will save time and resources for businesses while continuing to provide personalized customer experiences (Zaman 2022: 353).

2.2.6. Increased Personalization

AI personalized marketing to each individual consumer. Most companies currently work on creating a more personalized website, email, or video with the advent of AI to engage effectively with customer needs. For example, e-commerce companies tend to perform better with friendlier push notifications on mobile devices. If done right, these notifications tend to be noticed more, as they are perceived as more personal and relevant. Not only does AI increase personalization for present customers, but it also predicts the behavior of present and future ones. Through data management platforms, AI draws user information from various sources on the internet. This is not a one-time visit process; instead, it draws information from several visits collectively, analyzes, and identifies patterns. Through this, the companies get an idea about the needs of their customers and strategize accordingly to communicate with them (Zaman 2022: 353).

2.3 ISSUES AND CHALLENGES OF ARTIFICIAL INTELLIGENCE IN DIGITAL MARKETING

While AI is a great contributor to marketing, there are issues that it brings along. The first of these is high-quality data. The more precise and detailed information is fed into the AI to be analyzed, the better it works. If poor or incomplete data is fed to the AI, then not-so-useful insights and decisions might

emerge from it. Another challenge pertains to privacy. AI might seem very personal, such as when you see advertisements for products you just discussed or thought about. This happens through the analysis of data by AI, which makes predictions based on what you might be interested in.

In most cases, though, this data is used without explicit consent from the customers, which brings in privacy questions. If people start to realize what their information is being used for, it might create distrust, and companies would be in trouble. Also, the customer switching rate to other competitors is straightforward. Negative feedback or bad reviews will keep them away from your brand, with rivals more than eager to point out problems. A few issues and challenges of AI in digital marketing are data privacy and security, ethical concerns, integration with existing systems, transparency, explainability, dependence on quality data, cost and resource investment, etc. (Khatri 2021: 526).

2.3.1 Data Privacy and Security

One of the biggest concerns regarding using AI in digital marketing is handling loads of personal data. AI systems collect and analyze user information to develop effective advertisements and marketing strategies. However, collecting such vast amounts of personal data raises severe privacy issues. If it is not stored well and carefully managed, it may result in data breaches. This would imply that unauthorized people would have come across sensitive information, thereby risking users' privacy. For example, personal data, like e-mail addresses or even pay details, may fall into the wrong hands and cause identity theft cases. For this reason, companies are supposed to consider data protection laws such as the General Data Protection Regulation in Europe. The rules set guidelines on what should be done or not done while collecting, storing, and using personal data. Further, they require that companies be forthcoming with users regarding processing their personal information. Besides legal compliance measures, businesses must ensure that data is secure from theft or misuse. This would cover essential data protection through encryption, periodic updating of systems to maintain security, and staff training on data protection (Vanjare 2023).

2.3.2 Ethical Concerns

Ethical issues with using AI in digital marketing include the fact that a thin line exists between making marketing personal and crossing over into manipulation. AI can predict and influence what people might buy according to their behavior in a way that is intrusive at times.

With AI, marketers must be cautious not to cross the line. For example, personalized ads are great, but they can make them appear to pry into personal lives. If this new technology is used in ways perceived as too invasive, it may anger customers and harm the company's brand.

Another challenge is the influence of AI on consumer choices. The degree to which AI may predict and target specific people's behaviors gives rise to ethical dilemmas to the extent to which companies should affect consumer decisions. For this reason, marketers should know how to handle sensitive issues to avoid damaging public backlash or possible litigation. They should use AI in a manner that does not violate user privacy and allows users to trust them. It means being transparent around data use and ensuring marketing is fair and respectful (Vanjare 2023).

2.3.3 Integration with Existing Systems

Bringing AI into digital marketing often means fitting it into a business's current technology and platforms. This can be challenging, especially if the existing systems are old or not designed to work with AI. Integration of this sort can get very complex. In many instances, that means updating or changing current systems to ensure they can function with new AI tools. This process, while expensive, may also be very time-consuming. It may require a lot of resources, including money and expertise. A business may have to invest in new technology or software to support AI and train its staff or hire new experts to deal with the integration. This adds to the general cost and effort involved (Vanjare 2023).

2.3.4 Transparency and Explainability

One challenge when using AI in digital marketing is that the way AI makes decisions can be unclear. This means marketers often struggle to understand how

particular choices or recommendations are made. This can be a problem sometimes since there will be many times when marketers need to explain these kinds of decisions to stakeholders or customers. There is an increasing demand for effective AI systems that could simultaneously be more transparent and explainable. This means creating AI tools that provide clear insights into how they make decisions. The more open an AI system is to its process, the more trust can be built within the users, who will be able to make out that decisions are based on reliable information they can understand (Vanjare 2023).

2.3.5 Dependence on Quality Data

AI basically works on the quality and quantity of data fed to it in digital marketing. If the data is incomplete or inaccurate, then AI makes wrong predictions, resulting in less effective marketing strategies. This may amount to nothing but a waste of effort and missed opportunities. To ensure AI works effectively, it must have access to clean, high-quality, and well-organized data. This means the data should be accurate, up-to-date, and collected in a way that makes it easy for AI to analyze (Vanjare 2023).

Other challenges include data silos, where business sections keep their data to themselves. This would stop AI from getting the big picture that it actually needs to work. If AI does not have all the information, it simply cannot give its best output.

2.3.6 Cost and Resource Investment

AI in digital marketing can be costly and very time-consuming. The setup, working, and effective maintenance may all need very high costs and waste of resources. This includes paying for technology, hiring skilled people, and spending time on ongoing improvements (Vanjare 2023).

This is a massive challenge for small companies. Finding the funds and resources to start and continue AI-powered marketing efforts may be quite tricky for them. It creates barriers for smaller companies to compete on a level playing field with larger companies that may have more viable resources.

2.4 CASE STUDIES IN DIGITAL MARKETING

Dumitriu and Popescu (2020) developed a comprehensive research paper on the adoption of AI in marketing today. Research shows a strong interest in exploring new ways to use artificial intelligence in digital marketing. They highlighted the importance of digital processes in driving the global economy and the success of individual companies. The authors have proposed a four-stage model for improving the visibility of a company on the web using AI algorithms. This model has focused on improving SEO through ML since ML algorithms can automatically detect high-frequency keywords, and their updates are crucial for effective communication with customers in line with target groups' search habits and preferences.

Shahbaznezhad et al. (2021) explored how social media can be utilized to enable organizations to communicate effectively with their targeted audience. They found that selecting appropriate content and a good content plan may attract users' attention, thus improving product promotion conversion rates. Banerjee's article looks at how AI can help choose social media content, especially in identifying fake information and building trust with followers by presenting them with reliable content.

Balaji et al. (2021) pointed out that social media, being a hub for user interaction, especially for the younger generation that is very active online, will lead to continuous communication between them. This results in big data that, on application, will help the companies upgrade their marketing strategies to act on changing user behaviors effectively and promptly, meeting user demands. They recognized the most successful ML algorithms for social media data processing to make smart business decisions. AI can enable the company to create more followers for social media profiles and develop more interest in the company's products. In a worldwide survey of Salesforce in 2021, 57% of global marketers were currently using AI, and another 25% planned to start within the next few years. In the same year, a report by Google recorded Romania as hosting one of the largest increases in digital advertising budgets within Central and Eastern Europe, with an increase of 18% compared with the previous year. This would mean a steady increase in the use of AI in the digital marketing domain in Romania, whereby companies strive to

evolve their means of strategy towards results. It would also be interesting to be informed through data, such as questionnaires, about the usage of AI in digital marketing in Romania by researching how companies use this technology and their views on it. Identifying research goals and hypotheses that might indicate more effective and responsible digital marketing in the future will also be very useful.

Hamamah et al. (2024) identified how AI in marketing goes from chatbots and virtual assistants to the latest trends and opportunities. Stone et al. (2020) also look into different AI technologies, like ML, neural networks, and natural language processing. The study also provided some real-life examples regarding the practical applications of AI in the field of marketing, such as sentiment analysis, product recommendations, or personalized campaigns.

Verma et al. (2021) reviewed the literature on AI in marketing, largely intending to discuss the benefits and disadvantages of using AI, current trends, and future directions. Nair and Gupta (2021) focused on how AI can be used in social media and digital advertising to help professionals and agencies improve their work and increase their ROI. Still today, many marketers remain oblivious to AI's important role and the use of the concept. Their study serves as a guide for social media marketers looking to incorporate AI into their strategies.

Kumar et al. (2020) described how AI can be integrated into marketing strategies; the authors' main focus was on such technologies as natural language processing and ML. Xu et al. (2020) reviewed personalization in digital marketing: its effectiveness, factors determining success, and technologies. Besides that, they suggested areas for future research, including those dealing with ethical considerations. Alhitmi et al. (2021) have discussed various ethical issues related to AI in digital marketing, particularly regarding the protection and privacy of data. They suggested strategies for companies to use AI responsibly and proposed a framework for assessing its ethical implications, emphasizing transparency, accountability, fairness, and respect for privacy.

Thakur and Kushwaha (2024) performed a bibliometric analysis on 317 artificial intelligence documents in marketing research extracted from the Scopus database. They have discovered four main thematic clusters: Data mining and deep

learning in decision support systems, big data and generative AI in marketing, AI-enabled commerce, and chatbots and marketing Tech that represent the recent research being carried out under AI in marketing. Moreover, the trending topics in the study are marketing algorithms for decision-making, AI-enabled marketing, the Internet of Things (IoT) and marketing, natural language processing and customer service, robotic services, and chatbots.

CHAPTER III

PERSONALIZED VS NON-PERSONALIZED ADVERTISING

This chapter looks into the personalization of modern marketing strategies. In this context, with the growing importance of consumer data, companies can tailor advertising efforts by analyzing individual behaviors, preferences, and demographics. Shifting from mass marketing to personalized advertising thus allows them to better engage with specific audience segments in a manner that increases customer attention, loyalty, and conversion rates. Using data to create useful messages can help businesses make better connections with customers, strengthen brand loyalty, and encourage repeat buying to get ahead in the data-driven market.

3.1 PERSONALIZED ADVERTISING

Personalized advertising has emerged as a cornerstone of modern marketing strategies, which helps businesses contextualize their messages according to individual consumers' unique preferences, behaviors, and needs. For the most part, personalized advertising will enable deepened relations between brands and their consumers, using consumer data for higher engagement and greater conversion rates. This has resulted in increased consumer satisfaction since the consumer is assaulted with content relevant to them. In contrast, the process injects brand loyalty into one through a sense of recognition and appreciation. Personalization has become an essential tool for any business that aspires to stand apart from competitors, as today's consumers increasingly insist their experience be 'their own' (Şentürk 2020: 7).

3.1.1 Personalized Advertising and Consumer Behavior

Personalized advertising has, therefore, become part of every digital marketing strategy, enabling firms to serve personalized content relevant to the user's preference, usage, and browsing behavior. It is also a means through which advertisement is passed using cookies, web beacons, and app interactions that locate a user's digital footprint and present them with advertisements that best fit their interest (De Keyzer et al. 2015: 126). The principle behind personalized advertising, then, is increased relevance, which will lift consumer engagement and improve the effectiveness of marketing efforts.

As far as social networking sites are concerned, where people share all personal information without reservations, the advertisers have rich data sets as a part of micro-targeting, facilitating more precise segmentations. Microtargeting is the practice of narrowing down one's audience by using highly detailed data so an advertisement can reach an audience that is most appropriate and responsive towards it (Barbu 2014: 47). Retargeting, therefore, is one variety of the greater phenomenon of personalized advertising in that it serves users who have previously engaged with one's brand by reinforcing their interest in making a conversion.

Personalized advertising relies heavily on consumer behavior. From knowing what consumers want to predict what they will do in the future, each of these dimensions greatly helps marketers frame messages that more deeply connect with potential customers. With advanced data collection and analytics techniques, businesses could anticipate consumer needs and deliver timely, relevant ads. It is evident that such contextual alignment of advertising content with the needs of every single person not only creates better opportunities for receiving attention from a consumer but also brings about long-term brand loyalty and satisfaction. Personalized advertisements can become more valuable, relevant, and entertaining for buyers, increasing their response and conversion rates (Murthi and Sarkar 2003: 1346).

This relationship between personalized advertising and consumer behavior is nonetheless complicated. While personalized ads have the potential to create positive consumer experiences, at the same time, they undermine one traditional method of

advertising in lieu of another method that is based on substantial data about the consumer. With increasing awareness related to the use of data among consumers, personalized advertising must be represented with care, balancing transparency and ethical data collection so as not to break the trust and build negative perceptions of manipulation and surveillance.

With these challenges, the rising dependence on digital platforms and the sophistication of data analytics tools make personalized advertising a significant strategy in engaging highly informed, digitally active consumers today. As digital behavior continues to evolve, the heart of successful marketing campaigns will always rest on a thorough understanding of consumer needs and preferences through personalized advertising.

3.1.2 Data Collection Strategies for Personalized Advertising

Personalized advertising has a lot to do with collecting data and analysis of consumers to personalize their experience and deliver relevant content. Two major methods are used in this process: overt and covert collection.

Overt collection means data collection that is aboveboard, where there is an explicit notice to the consumer. One of the more common manifestations is cookies or other website notices that ask a user to consent to be tracked by a given website regarding user behaviors and preferences. In this case, the assumption behind overt collection is that because the consumer is being explicitly informed of the collection, they will consent to further use of the service. While this promotes transparency and gains trust, it can sometimes be invasive to the user experience. An example of this is when, in the Netherlands, there was an implementation of the "cookie law," which repeatedly asked users if they agreed to give cookies; users were frustrated with it. On the other hand, overt collection can have advantages in developing better relations among consumers and businesses because users feel more in control and informed about how their data is to be used, thus leading to better interaction with personalized ads (Holvoet 2022).

Covert collection, on the other hand, involves the collection of consumer data without making them overtly aware. Through this technique, advertisers will be able

to track user behavior across devices and may include website visits, search, and use of applications. Covert data collection offers a frictionless user experience as consumers are never disrupted asking for consent. However, this approach presents several risks, more so if the consumers find out that data about them is collected without their knowledge. This might turn into adverse reactions, for the users may have violated their private space in opinion, which diminishes trust in the brand and reduces their engagement with personalized ads (Grigorios 2022).

This tension between overt and covert data collection practices generates the personalization paradox. While personalization can be highly effective in enhancing the user experience by providing relevant and tailored content, covert data collection may critically dampen the effectiveness of personalization. When consumers become cognizant of the fact that their information is being used without consent, they may feel vulnerable, which could impact their perception of personalized adverts. On the other hand, when data collection practices are overt but transparent, with obvious messages regarding how the data will be used, it may engender trust and make consumers more willing to engage with a personalized ad.

It is now in the interest of businesses to balance overt with covert ways of collecting data to maximize personalized advertising without affecting citizens' growing concern about privacy. The transparency that builds trust means that companies should be upfront with users by providing adequate notice regarding how their data will be used without interfering with the user's browsing experience. The precise consent forms or integration of privacy icons explaining data usage will ease your concern and make consumers more comfortable with personalized content. If implemented correctly, customer satisfaction will rise with ad relevance, and the relationship between the consumer and the brand will be much stronger despite the rapid growth in privacy concerns in the digital era (Aguirre et al. 2015: 36).

3.1.3 The Benefits of Personalized Advertising

It has become a powerful tool for marketers, with several advantages in improving both the consumer experience and tangible business outcomes. By personalizing content and messages to individual tastes and preferences, personalized

ads can raise the bar on engagement and marketing performance. Among the key benefits that personalized advertising offers is customer satisfaction. When businesses serve ads that align with interests and needs, consumers receive a much more relevant, meaningful experience. This reduces the chances that various irrelevant ads would aggravate consumers and ups the ante that they will engage with the content for higher satisfaction. This makes one feel that there is some understanding and attentiveness on the part of the brand for the customer experience through personalized advertising. Personalized advertising, therefore, enhances customer loyalty. When customers get content, they relate to or like, they build a positive relationship with the brand. This personalization builds trust in that a consumer feels the brand understands him or her, valuing his or her unique needs. This will make them more likely to repurchase, engage with the brand on social media, or recommend it to others. Over time, personalized advertising cultivates long-term customer relationships and turns one-time buyers into loyal advocates. In addition to customer satisfaction and loyalty, there is significant profitability to businesses lying beneath personalized advertising. Because personalized ads are more relevant to the target audience, they usually drive higher conversion rates. Be it to buy, subscribe to a newsletter, or see a website, consumers tend to act more when the ad is directly related to their interests. This increased interaction results in a higher ROI for marketers because they can achieve more with less. This may also mean that businesses, through personal outreach to the right people with the right message, can be more efficient in marketing and reduce wasted ad dollars (Grigorios 2022).

Another great value of personalized advertising is providing a differentiation advantage to firms in highly competitive markets. In a world of thousands of ads consumers see daily, personalization gives them a differentiator for their brand. With something unique and tailored, a business can distinguish itself from competitors and, therefore, get the target audience's attention. This is very important in those industries where different products or services are highly alike, and such personalization will hopefully make the consumer decide to favor your product or service.

Personalized ads have also been proven to be more engaging than generic, non-personalized content. Studies have shown that a personalized ad is twice as effective as a non-personalized one in moving consumers to action. Personalized ads seem more interesting and more valuable, thus yielding higher click-through rates for their campaigns. As personalization methods evolve, advertisers can fine-tune their audience targeting strategies even more and deliver content that resonates with their target audience on a deeper level (Grigorios 2022).

Ultimately, personalization retains several very real benefits for consumers and businesses alike. For consumers, it increases relevance and enjoyment in their online experiences- or at least makes them feel understood and valued. From a business perspective, that equated to better efficiencies in marketing, improved customer relationships, and a more competitive position within the marketplace. By leveraging data to deliver personalized ad experiences, companies can drive engagement and their bottom line for long-term success in an increasingly digital and data-driven world (Aguirre et al. 2015: 35).

3.1.4 Privacy Concerns and Invasiveness

The more personalized the advertising becomes, the greater the concern with privacy and the invasive nature of data gathering. While personalized advertisements can provide a consumer experience that's much more relevant and targeted, the tactics or methods through which the consumer data is collected and then analyzed usually raise quite serious ethical or legal issues.

The core problem with personalized advertisement is the heavy tracking of a user's digital footprint. Marketers collect loads of data on consumer online behaviors, including which websites they visit, which products they stop gazing at, and how long they use each platform. Sometimes, this can be via cookies, beacons, and app engagement, allowing advertisers to understand the individuals in tremendous detail. Based on this information, ads can be more relevant to the viewer. However, they also greatly raise concerns about privacy, the extent of the data collected, and consumers' awareness of such practices (Grigorios 2022).

Personalized advertising, when done without the knowledge of the consumer to the extent this information has been collected, is invasive. Not so many of them realize that tracking is something normal online, and very often, it happens in the background. They may even be unaware of what kind of data is collected based on their activities. A situation like this provides a lack of transparency, where people feel vulnerable and ineffective because their personal information is not under their complete control. This feeling of intrusion-that something private about them is violated-comes when users understand that their online behavior is used for targeted advertising. That was how the Cambridge Analytica scandal showed that misuse of personal data goes beyond just advertising to include using it to influence political opinion. In this case, data on Facebook users were harvested without users' consent and then used for political campaigning. The scandal thus catalyzed widespread debates in the public eye concerning ethical practices concerning the use of personal data and further underlined the dangers of personalized advertising. It exposed just how data could be used for purposes other than those that consumers have agreed upon, which more deeply ingrained the concern that personal information can be manipulated for financial and political purposes.

More than this, personalized advertising is increasingly associated with ad resistance, which is growing as many consumers install ad-blocking software to block the gathering and dissemination of personalized ads. The more consumers are aware of the methods of data gathering and the extent to which they are tracked, the greater their desire will be for privacy. This resistance is far from just a response to the perceived invasiveness of personalized ads; it is also about taking back control of their personal data. The rise of ad blockers testifies to a tussle between a marketer's interest in personalization and the rise of consumers' concerns about privacy (Holvoet 2022).

The issue of ethics regarding using personal data for advertising also involves the possibility of discrimination. By tracking consumer behavior, advertising may also isolate vulnerable groups of the population or those with specific preferences that could be related to unique products, services, or even political messages. In this respect, micro-targeting is an effective form but also carries a danger in terms of

exploitation and, as such, unintended consequences in relation to reinforcing stereotypes or creating unfair advantages for particular groups. This also brings in several equity and fairness issues if such data is used to discriminate against people based on their browsing behavior. Overall, though there are clear advantages to personalized marketing advertising, it is impossible to overlook the privacy issues and intrusiveness that data collection practices raise. This balance is required to be delivered with ethics, considering the tracking of users' behaviors for misuse of personal information. In all, transparency, better data protection, and full disclosure to the consumer about their data usage will be imperative in the years to come for firms operating in the digital advertising industry. Without these efforts, the trust- the foundation on which personalized advertising must thrive- will erode, taking consumer engagement with it and engendering a backlash against digital advertising in general (Gironda and Korgaonkar 2018: 68).

3.1.5 Balancing Personalization with Privacy Concerns

Personalized advertising creates a very sensitive balance between personalized content for users and maintaining their privacy at the same time. While personalized advertising can improve customer experience and drive better results for marketing campaigns, it also raises serious privacy issues that must be managed carefully. As advertisers continue to take full advantage of consumer data in creating and developing targeted campaigns, finding the balance between personalization and privacy has become one of the biggest challenges facing the digital advertising industry (Şentürk 2020: 8).

Personalized advertising is basically based on the data collected, anything from tracking online behavior, browsing habits, or search history to the more intrusive ways of collecting data via cookies and web beacons. This, in turn, enables advertisers to compile extremely detailed consumer profiles and push highly relevant ads. With their increasing usage at a rapid pace, however, the quantum of personal information collected, its usage, and whether this is genuinely accomplished in an informed way by the consumers have raised several concerns. Among the major concerns that arise, transparency in data collection is key. Many consumers either do

not realize their data is being tracked or do not fully understand how their digital footprint is used for advertising. Some companies may implement notifications of cookies or privacy notices; still, consumers may feel confused or queasy about using their personal information. A lack of transparency can make people believe that there is some intrusion into the privacy of their life for convenience or profit, creating a false feeling of security and trust (Sajjad and Shujaat 2024).

Informed consent is, therefore, considered a fundamental concept in balancing personalization and privacy. Individuals must be given easy access to information about what data is collected, for what reason, and how they have options to attempt to control such data. This can be partly assuaged through overt data collection- when a consumer is very aware of what data is being collected. Again, transparency is important, but it needs to be balanced and considered so as not to interfere with the user experience and create friction. Take user consent requests to the extreme level or load them up with so many notices that they become frustrated with using digital platforms (Grigorios 2022).

Meanwhile, one should point out that convert data gathering- in cases where the consumers' data are collected without them knowing about it- may lead to feelings of vulnerability and exploitation. When users find out their actions are tracked and they do not know anything about them, they may feel violated or manipulated, seriously affecting a brand's reputation. This creates a privacy paradox whereby customers who appreciate personalized advertisements' relevance and convenience often oppose how companies collect the data, especially when they are not transparently aware of it.

Given this scenario, businesses must think of a strategy to weigh the benefits of personalization against protecting privacy. This, again, can be balanced by data minimization, straightforward consent practice, and user empowerment. Data minimization implies gathering only that amount of information that will be necessary for personalization, therefore making the volume of personal data at risk as low as possible. Moreover, businesses can include mechanisms like privacy-by-design in developing their digital marketing strategies, ensuring that users' data is treated with respect and safety from the very first touch.

The other powerful strategy would be to inspire trust. Companies could also facilitate greater trust in personalized ads through transparency icons, privacy settings, or user-controlled data preferences to enable consumers to control the information they want to share. Empowering users to take more control of their personal data will, therefore, alleviate several concerns about privacy invasion but still allow effective personalization. This may also be fostered by the presence of trust cues, such as secure connections or even clearly spelled-out privacy policies, which could increase the comfort and predisposition of users toward personalized advertising (Sajjad and Shujaat 2024).

Conclusion: A balance between personalized advertising and privacy concerns involves an ongoing dialogue between businesses, consumers, and regulators. Marketers will have to emphasize transparency, consent, and data protection if they are interested in a more ethical and responsible environment for digital advertising. In return, this will help companies meet consumer expectations for relevant content and try to alleviate the growing concerns over privacy as a means of trusting and engaging long-term with the audiences. Companies' ability to navigate these privacy challenges while ensuring the consumer's rights are protected will be the future of personalized advertising (Şentürk 2020: 8).

3.1.6 Personalization and its Effect on Social Media

There is no leaving personalization out of the experience that comes along with social media, as personalization informs user experience and how well advertisers can reach their intended audiences. Social media platforms like Facebook, Instagram, Twitter, and LinkedIn are affording marketers more significant ways to distribute personalized content and make the ads users see more relevant. This shift to personalization has transformed social media from a simple networking tool into a vibrant advertising platform, where the content has begun to show up according to the users' interests, behavior, and interactions (Park 2014).

One of the main effects of personalization in social media is to influence the user's experience powerfully. Algorithms keep track of likes and comments, even browsing history, to curate more personalized content for social media users. With

such customization, users can discover content that aligns with their interests from friends, influencers, or brands. This, in turn, increases the users' likelihood of investing more time in the platform, consuming more content, and thus eventually relating more to the community.

From a marketing point of view, personalized ads completely changed how brands spoke to their audiences on social media. Through the billions of pieces of information gathered from users' online activities, advertisers can create particular advertisements that speak directly to the needs and preferences of particular individuals. This ability to micro-target audiences based on demographic, psychographic, and behavioral data makes social media one of the best areas for personalized ads. Advertisements have ceased to be impersonal messages passed down the throat of an insensitive mass but were customized to make each one appear relevant to him so that the drawing of his attention, interest, and action was more or less guaranteed (Park 2014).

Still, as applicable as this development may be, it has also woken several privacy and surveillance concerns. As social networking portals collect and process sheaves of personal data from users, some may believe their privacy is being invaded. For instance, data on users' activities in social networks often provide the backbone for targeted advertisements due to the detailed profiling of consumers. While such information is used in initiatives meant to make our lives more exciting, it raises a very relevant question on the personal information one should share and who should have access to that information. With increased awareness among users about their data usage, there is a growing demand for more transparency and control regarding data sharing. This begets an increased interest in the usage of tools such as privacy settings and ad-blockers as ways of users' retrieving some control over their online presence.

The effect of personalization on social media further extends to content creation and how users interact with posts. Algorithms that decide what content to show users tend to favor posts that are most likely to engage them based on their past interactions. It reinforces existing interests and preferences, leading to so-called "filter bubbles," where a user will be exposed primarily to content that aligns with

their points of view and behaviors. While this might improve users' satisfaction with the content delivery they are likely to like, it decreases the user's exposure to other opinions and contributes to the polarization of opinions. Users may get caught up in echo chambers where their beliefs are constantly reinforced without being challenged (Aguirre et al. 2015: 35).

Personalization of content in social media might also be emotionally manipulative. In this way, such an enhanced capability to address users with particular ads or content may create some sort of urgency or desire in them and make them feel that they should do something right now or purchase some product that corresponds to their preferences. In this regard, such manipulation of consumer behavior can be regarded as a disadvantage of personalization, particularly if this crosses the line of ethical boundaries or takes advantage of the emotional susceptibility of users.

It follows, therefore, that personalization through social media has various positive and negative impacts. It improves user experience by delivering them more relevant content and ads, driving more engagement and satisfaction. However, personalization through social media raises many other concerns regarding privacy, data security, and possible emotional manipulation. In the meantime, as social media continues to evolve, a balance that marketers and users find optimal for personalization with reduced risks from privacy invasion or content manipulation will have to be struck. The future of social media will be determined by how well it balances this tightrope between personalization and user autonomy. The services should be designed so that the users feel they are in control of their data and, simultaneously, their online experience is pleasant and respectful of their privacy (Aguirre et al. 2015: 35).

3.1.7 Examples of Personalized Ads

Personalized advertising has proven to be a very effective brand strategy to connect with target audiences on a more personalized level. Using consumer data, businesses can tailor messages and offers to engage users in a more relevant and meaningful way. Personalized advertising techniques have often proved successful

for many brands, which reap the benefits of much stronger consumer engagement, higher conversion rates, and even brand loyalty.

That finds an illustrative application in Amazon, which applies personalized advertisement by recommending products to users based on their browsing history, past purchases, and stated preferences. The recommendation engine at Amazon stands out as the best example of personalization in action: offering a customer items he or she is likely to purchase due to his or her behavior and interaction with the platform. These personalized recommendations guide the customers to find new products and make the shopping experience smooth, which eventually converts into sales. The effectiveness of Amazon's personalized advertising is that it can increase sales, with studies showing that about 35% of Amazon's overall revenue comes from its recommendation engine.

Another success story is Spotify, which, through its personalized advertising, caters to the individual tastes of its music subscribers. It then targets advertisements according to the users' habits, preferences, and playlists. The strong differentiators at Spotify include the Spotify Wrapped campaign, which personalizes an annual review that creates a sense of nostalgia and emotional connection with their music preferences. This personalization is not just a strength in user engagement but also in the fact that users are super willing to share their Wrapped experience on social media, thus creating interest in potential new users. Spotify aligns ads with a user's musical tastes, which are far less intrusive yet far more relevant to users' interests, thus enabling Spotify to create an advertising experience.

Facebook has also been able to create success with targeted advertising, given the volume of user data at its disposal. Such advanced advertising algorithms on Facebook allow brands to target specific demographics, interests, and behaviors, making it one of the most efficient platforms for personalized advertising. For example, a small business dealing in green products can target users who have shown an interest in sustainability or people who have previously engaged with other such green brands. This hyper-targeting increases the relevance of the ads, leading to higher engagement rates and more conversions. Moreover, Facebook's retargeting keeps people who previously showed interest in interacting with a brand in contact

with the products or services they were interested in, boosting their likelihood of purchasing.

Personalized advertising is also done pretty well by Netflix in its way. Because Netflix is a subscription-based service, there are no traditional ads; personalized content recommendations keep users constantly engaged. Netflix's approach uses data from users' viewing habits to recommend TV shows and movies that most closely align with the viewers' perceptions. By personalizing it to this extent, the platform maximizes the user experience, retaining more customers since the content remains fresh and relevant to individual tastes. Success means it holds the power to create a niche in the viewer's mind, which feels that the content recommendations are chiseled out of stone only for them and that they grow closer to the service. One such brand that successfully puts personalized ads into its fashion marketing strategy is ASOS. Using browsing and purchasing history data, ASOS lets suggestions pop up for items such as clothes, accessories, and shoes that best fit a user's style. This personalization is further extended by sending email campaigns related to products that users may want, per their interactions in the past. Personalized ads on ASOS make it seem like they are shopping for you. This increases conversions while making repeat purchases more common since people are likelier to click ads showing their style.

Last but not least, Google Ads is also one of the leading personalized ad providers, thanks to the help of a search engine and display network. Using different data points, such as search history, location, and more, conveys highly targeted and personalized ads appearing on search results pages or across other websites. This form of targeted advertising is highly effective, as it is aligned with the immediate intent of the user by offering products or services relating to what the user is searching for. For example, if people search for "best running shoes," they will likely see advertisements for specific running shoe brands aligned with their search query. This personalized ad drives huge click-through rates and conversions because users see exactly what they are actively searching for (Haleem et al. 2022: 127).

3.1.8 The Future of Personalized Advertising

Advances in technology, especially in AI, data analytics, and ML, promise to shape the future of personalized advertising. Consumer behavior is forever changing, and expectations for more relevant, timely, personalized experiences are growing accordingly. The role of personalized advertising in marketing is likely to intensify even more in the coming years, wherein companies that can use these technologies efficiently to create seamless and meaningful connections with consumers will be leading the way.

One of the most significant trends in personalized advertising is AI and ML's increasingly important roles in consumer data analysis. These technologies make it possible for brands to understand consumer behavior deeper than before and predict future behaviors accurately. As AI can process large volumes of data in real-time, the role of personalized advertising will enable targeting consumers in ways previously unimagined. It can analyze individual user preferences, past interactions, and real-time actions to build hyper-targeted ads that may even anticipate consumer needs before they become consciously realized. This predictive capability will be translated into more intuitive and dynamic marketing campaigns responding to the consumers' needs in real-time.

Data privacy and consumer consent are going to be a big deal in the future of personalized advertising. With the increasing emphasis on privacy regulations, such as the General Data Protection Regulation in Europe and other similar laws worldwide, there will continue to be tension between desires for personalization and requirements for user consent and data protection. Innovations in advertising could mean more transparency, giving consumers more control over how their data is used and ensuring companies respect privacy while still providing personalized content. Personalized advertising will require trust among consumers in the future, especially when data privacy and security remain huge concerns.

Besides better AI, augmented reality (AR) and virtual reality (VR) are two other future-bright technologies in personalized advertising. These immersive technologies let consumers interact with personalized ads in ways that have never been imagined. For instance, AR could let customers virtually try products from

clothes to makeup before buying, while personalized recommendations could elevate decision-making to higher conversion rates. Similarly, VR could create completely immersive brand experiences that adapt to a user's preferences and behaviors, offering a highly personalized form of advertising that extends beyond traditional methods.

Another factor that will shape the future of personalized advertising is the growth of voice-activated technology and smart devices. With the continuous growth of voice assistants such as Amazon's Alexa, Google Assistant, and Apple's Siri, there will be a new frontier in voice-based interaction regarding advertising. With expanded capabilities, these devices are already collecting user data, which will open up more avenues for personalized advertising through voice searches and recommendations. For example, the user will be given a unique offer based on his voice command or the content requested; this furthers the consumer experience even more.

Also, moving to a mobile-first world will likely accelerate the use of personalized advertising across all mobile devices. In the future, as mobile usage continues to soar, brands will increasingly reach out to users through apps, social media platforms, and mobile websites with contextual ads that cater to a user's individual preferences in real-time based on location, activity, and past behavior. Mobile advertising will become much more integrated into users' lives, offering more contextual and personalized interactions in a natural and frictionless way.

Another critical area where the future of personalized advertising will play out is across channels. As consumers continue engaging with brands across websites, social media, mobile apps, and brick-and-mortar stores, personalized advertising will be forced to create a unified experience beyond separate channels. Brands will continue reaping the power of data to ensure consistency in personalized messaging across all platforms by providing consumers with a single brand experience however they want to engage with that product or service. It follows, therefore, that such cross-channel personalization will require more sophistication in the level of integration and analysis of data to meet consumers' expectations but will yield a better-connected and enriching experience for the consumer. The last is that hyper-

personalization will continue going forward from the basic demographic and behavioral information to a more sophisticated version of consumer identity, including emotional and other psychological attributes. Marketers will use this to personalize offers and craft messaging that resonates on a deeper level and addresses the emotional triggers and personal preferences of individual consumers. Companies leverage data from social media, purchase history, and online behavior to create highly individualized and contextually relevant ads that engage consumers better.

Thus, technological innovations would mold the future of personalized advertising, coupled with consumer trust and data privacy concerns and continuous development or improvement in data analysis. As brands keep innovating their offerings through AI, AR, VR, and mobile-first, personalization will continue to get smoother and easier for both consumers and marketers alike. This means that only companies that best adapt to these changes and focus on consumer-oriented approaches will prosper in the face of the rapidly changing world of digital marketing.

3.2. NON-PERSONALIZED ADVERTISING

Non-personalized advertising is advertising to a broad, undifferentiated audience through mass media channels. Contrary to personalized advertising, which would reach audiences based on their preferences or behavior or some other demographic points, non-personalized advertisements were designed to reach the broadest possible consumer base with little or no adaptation to the viewing individual. Conventionally, this has been the mainstay of traditional advertising, including media such as television and radio, print, and online display advertisements (Yılmaz 2021).

3.2.1 Characteristics of Non-Personalized Advertising

The main characteristic of non-personalized advertising is the fact that it appeals to the masses. Such advertising does not target particular needs or tastes but is instead used to converge on larger groups. It relies highly on general messages and pictures that easily impress many people. Non-personalized ads usually rely on

catchy slogans, jingles, and memorable visuals that create awareness for the brand and stimulate consumption across different consumer segments (Yılmaz 2021).

Such ads are also typically one-way, where the advertiser is broadcasting some message to the audience without expecting any sort of direct response or engagement. The purpose here would be mainly to increase visibility and reiterate brand presence within a wide audience; this channel is especially effective for companies selling mass-appeal products, such as food and beverages and household items. Compared with personalized advertising, in general, non-personalized ads require less analysis and targeting of data and, hence, are less costly to the advertiser (Yılmaz 2021).

3.2.2 Types of Non-Personal Advertising Channels

Non-personal advertising channels come in handy insofar as they help companies reach bigger groups, create awareness, and thereby promote their products or services to larger masses. These tools are effective for businesses trying to reach wide demographic groups or market products that appeal to the masses. On the other hand, non-personal advertising is a form of communication intended for large groups of consumers with some general message. In contrast, personalized advertising targets a certain individual according to his or her data. Below, we investigate some of the most common kinds of non-personal advertising channels and their relevance in the present marketing landscape (Yılmaz 2021).

3.2.2.1 Television Advertising

Television is still the most effective and powerful non-personal advertising channel. It combines visual and auditory elements into one medium and serves as an excellent way to convey your message entertainingly to a huge audience. Television advertising is more effective for reaching many people across different demographic categories. Still, with this channel, be it advertisements during the most-watched television shows or even a live sports broadcast, other high viewership broadcasts can capture the attention of millions of viewers at one time. One of the high points of television is that the production value is high, which allows creativity in storytelling

and can sometimes leave an indelible mark on the audience's minds. For mass-market products, household goods, consumer electronics, or fast food, TV ads create nationwide brand recognition and awareness (702 Pros, 2023).

3.2.2.2 Radio Advertising

Still not as potent as television, radio is a powerhouse channel to reach local and national constituencies. The added value of radio advertisements is that these targeted groupings can be reached at any time of the day, in the mornings or evenings, when these people are en route to and from work. This makes it all the more important that businesses reach their customers when listenership is high. Radio advertising can also be utilized to establish a close rapport with the audience because people often become attached to certain radio personalities and stations. Therefore, it is most useful for advertisers to mimic their messaging style and audience to the station. Radio ads are much cheaper than their television counterparts, making them very attractive for businesses that must work within tight budgets (702 Pros, 2023).

3.2.2.3 Print Advertising

Print advertising comprises all advertisements in newspapers, magazines, pamphlets, and other printed media. Still, through the beginning of digital media, print advertising, one of the crucial non-personal media, has held a safe place to suit some target groups' traditional usage best. The print advert enables an organization to reach only a portion of the audience through selective publications, like industry journals or local newspapers, hence becoming a device for mass and direct marketing. The tangibility of print ads, whether a full-page ad in a magazine or a local newspaper flier, often creates higher engagement and retention among readers. For products such as luxury goods, real estate, or local services, print advertising helps create an effective, long-lasting brand impression in a more focused way than other mass media channels (702 Pros, 2023).

3.2.2.4 Outdoor Advertising

It describes all forms of billboards, posters, and other forms of digital signage or out-of-home advertising erected in places where people generally spend their time. This is quite efficient for any brand seeking to make awareness within a location or region. Billboards, for example, are placed along highways, busy junctions, and city centers, where commuters and pedestrians can easily see them. Outdoor advertising shows its strength through graphics, using large images and bold text to drive home a point quickly. Its advantage is its strong visibility with an audience that will not be interrupted. Outdoor advertising serves well in national campaigns and local efforts targeting a particular city or region (702 Pros, 2023).

3.2.2.5 Online Advertising

Online advertisements will be done in several forms: social media ads, SEM, display, and banner ads. Due to the increased use of the internet and digital devices, online advertisements have become one of the strongest ways to address big audiences in modern marketing. Even though web-based advertisement is customizable per data analytics, it also allows non-personalized ad campaigns whereby organizations can pass on general messages to diverse users. Display ads could be shown on high-traffic websites, and at the same time, search engines will show ads on broader terms. Advertisements can be delivered through social media networks, like Facebook, Instagram, and Twitter, to all users of those platforms, even though the ad's content may not have been tailored to that particular individual. While personalized advertising is becoming increasingly common, digital channels still represent a very effective way to reach or deliver mass-market campaigns for brand awareness, capture new customers, and retain current customers (702 Pros, 2023).

3.2.3 Advantages of Non-Personalized Advertising

One of the major advantages of non-personalized advertising is its economy. Since it does not apply the elaborate collection and data segmentation involved in personalized advertising, businesses with meager marketing budgets often subscribe

to non-personalized advertising to reach as many customers as possible without bearing the expensive costs of targeted advertising campaigns. Thus, this is a better channel for brands looking to reach more people in the shortest time possible.

Another key merit is that non-personalized advertising might be spread broadly. In fact, while focusing on generic messaging, an enterprise can extend its brand presence and awareness across large consumer segments. Such initiatives are important when businesses seek to introduce innovative products or establish their brands in highly competitive market conditions.

Moreover, non-personalized advertising can ensure that messages are consistent across all touchpoints. In this respect, brands can repeat the same message via TV ads, radio spots, or billboards to the same audience to reinforce the brand's identity and values. This is extremely important in long-term brand loyalty, especially in those commoditized markets where the active differentiation of a brand will be more important (702 Pros, 2023).

3.2.4 Challenges and Limitations of Non-Personalized Advertising

Even with all its benefits, non-personalized advertising has several drawbacks, particularly in the context of the digital era. As consumers grow more accustomed to receiving personalized experiences, so too have their expectations increased that advertisements will be relevant to their individual preferences. Given their nature, non-personalized ads cannot fulfill this increasing need for personalization, which is liable to foster consumer disengagement. So many advertisements compete for attention every day; in most cases, a generic ad hardly gets any attention. According to the studies, people perceive thousands of advertisements daily; however, most of these ads are not remembered because they lack personalization.

Another drawback of targeting is the fact that it is not effectively targeted. Because non-personalized ads are just sent out a message, without targeting the interest of an individual, they tend to miss the mark on a large scale with most of the audience. Consumers not interested in the product will, in all probability, not take any action toward it and, in many instances, may completely ignore or block those

ads. This leads to a waste of advertising dollars and lower returns for brands, even potentially harming the brand's reputation.

Also, non-personalized advertisements often lack the segregation that reaches the right consumer at the right time. In today's digital world, the behavior of consumers is increasingly dictated by their online interactions. Advertisements matched individual preferences, and surfing histories became rule number one. Non-personalized ads, which cannot reach such a level of targeting, may appear irrelevant and intrusive, fostering negative consumer experiences.

3.2.5 Non-Personalized Advertising in the Digital Era

Non-targeted advertising has evolved in the digital age to include online display ads, social media campaigns, and search engine marketing. Digital platforms offer organizations a range of sophisticated targeting options; however, non-personalized ads continue to be shared in many contexts. For instance, a website displaying an ad, for that matter, even a banner ad on social media, will be seen by a vast audience, the majority of whom it may or may not be relevant to.

However, with a heightened focus on data privacy and consumer choice, the effectiveness of non-personalized ads across digital platforms has declined. Consumers are increasingly expecting relevance and personalization from brands and, as a result, may eventually tune out non-personalized ads altogether. That said, non-personalized ads can continue to drive notable value for companies featuring mass-market products or needing to create a broad presence.

3.3 COMPARISON OF PERSONALIZED AND NON-PERSONALIZED ADVERTISING

Core activities in the digital marketing space include personalized and non-personalized advertising. Both have their set of characteristics, strengths, and challenges. Personalized advertising targets specific individuals by showing content tailored according to their preferences and behaviors through demographic data. It follows then that such a level of precision will be able to allow brands to communicate with their audiences on a deeper level by creating highly relevant

content, which in turn creates more interest, click-troughs, and conversions. Therefore, personal advertising can build better consumer relations by delivering an experience conditioned to each individual's wants and needs. However, this does beg some serious questions about data privacy and security, given the reliance upon immense consumer data volumes. Personal information collection and usage is under suspicion by many consumers as the practice has an element of invasion. The second reason is that personalized advertisement tends to be more expensive to run, given the advanced data analytics, segmentation strategies, and creative content development beyond the resource capabilities of thin-budget brands.

On the contrary, non-personalized advertising spreads influence very widely over most people, with broadly targeted messages that may not align with every individual's preference. Non-personalized advertising traditionally occurs via television, radio, print, and outdoors, sometimes on online display. Non-personalized advertising does not have the specificity and precision of personalized ads, but it has the advantage of simplicity and low cost. Brands could reach massive numbers of people without much data collection or complex targeting mechanisms. This has made it a promising avenue for companies with mass-market products or businesses wanting to build brand awareness and recognition across diverse demographic groups. Non-personalized advertising has the advantage of broad visibility. It is often associated with positive brand attributes, especially if the ad creative is highly creative or memorable or evokes strong emotional bonding. However, the biggest challenge with this approach will be non-targeting accuracy. Because non-personalized ads do not target the specific preferences or behaviors of one individual, they might not catch the attention of those less likely to be interested in the product or service on offer. This has very thoughtful consequences: it wastes advertising dollars because there is high reach and very poor relevance, translating into poor returns on investment.

The newer dynamics of the digital era involve personalized and non-personalized ads targeting people through social media, search engines, and websites. In digital platforms, personalized advertisements can get insights provided by data to make sure that brands serve tailored messages while watching the user's behavior and

browsing history. On the other hand, non-personalized ads in the digital space still rely on broad targeting, such as placing display ads on high-traffic websites or serving banner ads on social media without personalization. While non-personalized digital ads drive fewer targeted actions, they remain an effective means of reaching mass audiences, especially for products or services with broad appeal.

A key difference between the two approaches rests on the realm of consumer expectations. Consumers today are accustomed to experiences that have been personalized, at least not just in advertising but in every other respect of their digital lives. Indeed, for any message of marketing to cut through in a digital context, there is a pressing need to transcend the unimaginative, non-personalized ad; ad blockers keep going up, as does skepticism about data privacy. Consumers expect brands to understand their preferences and provide relevant, engaging content. Non-personalized ads can feel creepy or irrelevant to others; thus, they do not hold their own against the intense levels of engagement that personalized ads can create. In any case, for businesses whose products have mass-market appeal, the real value in creating initial awareness or early in a brand's days of market presence can come from non-personalized advertising.

Non-personalized ads have continued to shape the perceptions and behaviors of consumers with memorable campaigns that have stood the test of time. Iconic campaigns such as Coca-Cola's "Share a Coke" and Nike's "Just Do It" have shown how broad-based messaging is deeply ingrained in culture, driving brand recognition and consumer loyalty. They have humor, relatability, and emotional appeal, making these ads memorable across a wide audience despite the lack of personalization.

Other examples are Apple's "Get a Mac" campaign and the Old Spice "The Man Your Man Could Smell Like" campaign. These also did not have to personalize ads to get an entire population to take great notice—advertisements cut through the clutter by being funny, relatable, and an appealing story to remember.

CHAPTER IV

IMPACT OF PERSONALIZED AI ADVERTISING ACTIVITIES ON CONSUMER'S PURCHASE INTENTIONS

In today's data-driven world, artificial intelligence (AI) has profoundly reshaped advertising strategies by enabling companies to tailor marketing messages to individual customer preferences and behaviors. The topic of using AI tools in personalized advertising, contrasted against non-personalized approaches, holds significant relevance because it reflects a rapidly evolving landscape where consumer expectations for relevant, timely, and engaging ads continue to increase. Through the integration of AI algorithms, advertisers can analyze vast amounts of user data and deliver content that resonates deeply with specific audience segments. Consequently, businesses witness enhanced conversion rates and stronger customer loyalty as messages align more with individual needs.

However, this personalization revolution is not without challenges. Concerns regarding data privacy, ethical standards, and potential consumer alienation underscore the importance of carefully examining how AI-driven personalization is designed and deployed. While non-personalized advertising remains prevalent, offering broad, sweeping messages to large audiences, its comparatively limited targeting capacity may render it less effective in a marketplace increasingly shaped by real-time data analytics.

By focusing on personalized and non-personalized product categories, this research illuminates the tangible benefits of AI-enabled advertising and highlights the potential pitfalls when consumer data is mismanaged. The findings aim to provide valuable insights for marketers, policymakers, and academics seeking to balance innovation with responsible data handling. Ultimately, this thesis contributes

to a more nuanced understanding of how AI applications can strengthen advertising outcomes while respecting consumer rights and maintaining public trust.

4.1 PURPOSE OF THE RESEARCH AND RESEARCH QUESTIONS

This thesis explores the role of AI-driven (Artificial Intelligence) applications in digital marketing strategies, focusing on the distinctions between personalized and non-personalized products. For participants who respond negatively to questions about encountering personalized ads, it will be assumed they have been exposed to non-personalized advertisements, and findings will be interpreted accordingly. The research centers on how AI influences marketing efficiency, how it shapes consumer purchasing behavior, and how ethical concerns arising in this process can be effectively managed.

a. Impact of Personalized Advertisements on Consumer Behavior:

Examine how personalized advertising practices influence consumers' purchase intentions and brand perceptions by considering various psychological and behavioral factors.

b. Effect of Demographic Variables on AI-Based Marketing Applications:

Analyze how socio-demographic factors such as age, gender, education level, and income shape the perception and adoption of AI-supported marketing activities.

c. Comparison of Advertising Efforts in Personalized vs. Non-Personalized Product Categories:

Investigate how the target audience's expectations and attitudes toward personalized products compare with those for non-personalized products, thereby revealing how AI-focused marketing strategies differ across these two categories.

d. Balancing Ethics and Data Privacy:

Determine how businesses can leverage AI's personalization capabilities while complying with data privacy and ethical standards to maintain consumer trust.

In line with these objectives, the study seeks to answer the following core questions:

- How do AI-driven applications influence the efficiency of digital marketing strategies?

- How does personalized advertising impact consumers' purchasing behavior?
- How do demographic variables affect AI-driven marketing applications?
- How do personalized advertising efforts differ between personalized and non-personalized products?
- How could personalized products balance leveraging AI-driven marketing applications and maintaining ethical practices?

Within this scope, the analyses aim to contribute academically and practically by providing insights into the effectiveness of AI-enhanced marketing activities. Ultimately, the goal is to recommend developing more responsible, innovative, and consumer-friendly advertising strategies in the future.

4.2 RESEARCH MODEL AND HYPOTHESES

The research model developed in this study aims to illustrate how AI-driven marketing applications, particularly personalized advertising strategies, shape consumers' positive attitudes and, in turn, affect purchase behavior or intentions. It also examines demographic factors (social media activity, education, income, gender) and ethical considerations in order to understand their influence on the effectiveness of advertising across both personalized and non-personalized product categories.

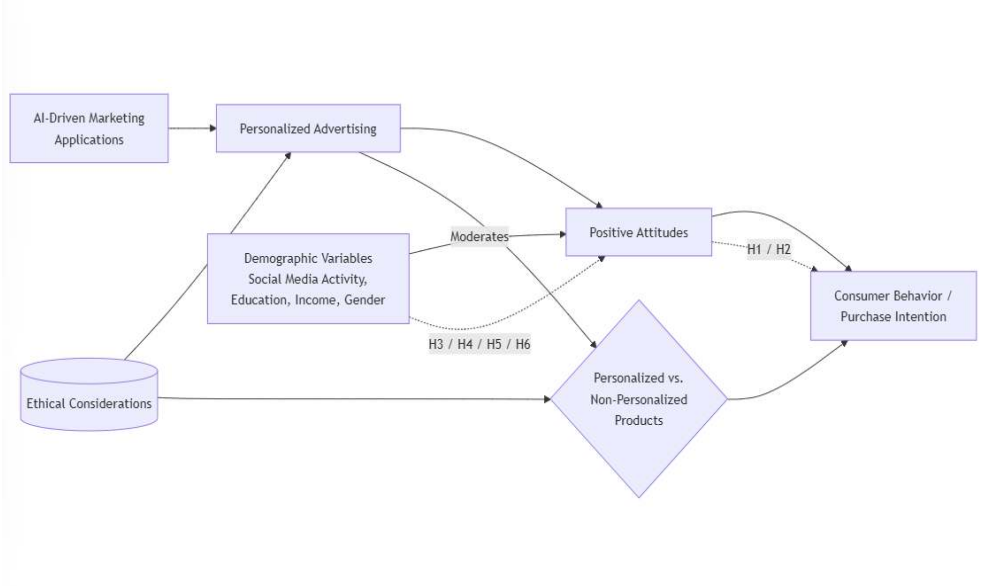

Figure 2. Research Model

As shown in the figure, AI-focused marketing applications and ethical concerns form the basis of personalized advertising strategies, which can help consumers develop favorable views toward a product or service. However, these attitudes are also influenced by participants' demographic profiles. For instance, factors such as social media usage, education level, income, and gender determine how strongly or in what direction individuals respond to personalized advertising.

Moreover, the model posits that consumers' positive attitudes directly correlate with their purchase behavior/intentions. At the same time, the personalized or non-personalized product category may strengthen or weaken this relationship as an additional factor.

Table 1: Research Hypotheses

H1: Participants' positive attitudes toward personalized advertisements positively influence consumer behavior (or purchase intention).
H2: Participants' perception of personalized ads as trustworthy significantly increases their purchase intentions
H3: Participants' positive attitudes toward personalized ads differ significantly based on their social media activity level.
H4: Participants' positive attitudes toward personalized ads differ significantly according to their educational background.
H5: Participants' positive attitudes toward personalized ads differ significantly according to their income level.
H6: Participants' positive attitudes toward personalized ads differ significantly by gender.

In summary, this model guides the study toward:

- Exploring the role of AI-supported marketing applications in delivering personalized advertising,

- Analyzing how demographic variables and ethical considerations moderate (or differentiate) this process and Investigating how positive attitudes ultimately impact purchase intentions across varying product categories. By doing so, the research aspires to offer a comprehensive theoretical and practical perspective on how personalized advertising can be effectively managed.

4.3 RESEARCH METHOD

This study adopted a quantitative research design, collecting data through an online survey. The questionnaire focused on AI-driven marketing applications and personalized advertising, measuring participants' attitudes, purchase intentions, demographic characteristics (e.g., gender, age, income, education), and social media activity levels. A 5-point Likert scale was primarily used for measurements. All responses were then transferred to SPSS (Version 23) for statistical analysis.

Regression analysis was utilized to examine the impact of positive attitudes toward personalized advertisements on consumer behavior, the effect of the reliability of personalized advertisements on purchase intention, the influence of activity levels on social media platforms on purchase intention, and the effect of participants' educational background, annual income, and gender on purchase intention.

These combined methods allowed for a comprehensive understanding of how participants' attitudes toward personalized advertising, their demographic profiles, and social media usage levels relate to purchase intentions in AI-powered marketing.

4.3.1 Data Collection Instruments

In order to examine the relationship between personalized digital advertising and privacy perceptions in-depth, this study employed quantitative data collection methods. In line with the experimental design, quantitative data were gathered from participants through a questionnaire. This questionnaire was developed based on scales identified in the literature review that align with the theoretical framework of the research, and it also included demographic questions. In particular, various scales

and questions were utilized to assess perceptions of personalized advertising, privacy concerns, and attitudes toward advertising in metaverse environments.

The survey questionnaire is divided into several sections. The first section addresses demographic information (such as age, gender, education level, and income). These data help outline the overall profile of the sample and allow for an examination of how different demographic factors may influence attitudes and behaviors toward personalized advertisements. Participants were asked about their digital and social media usage habits following these demographic questions. This part is essential for evaluating participants' internet and social media experience, especially in understanding their potential engagement with advanced technologies like the metaverse.

At the core of the measurement tools are multidimensional scales whose validity and reliability have been established in prior research.

The items in the questionnaire were subjected to a pilot study to ensure linguistic and semantic consistency. Each scale allows participants to rate their corresponding attitudes, perceptions, or behaviors on a Likert-type scale (for example, "1 = Strongly Disagree" to "5 = Strongly Agree"). Validity and reliability analyses (such as Exploratory and Confirmatory Factor Analyses and Cronbach's Alpha) were conducted comprehensively during the research implementation phase.

In conclusion, these data collection instruments made it possible to holistically measure participants' demographic information, levels of digital experience, and perceptions regarding personalized digital advertising and metaverse scenarios. Consequently, the study obtained the necessary statistical data to test the proposed relationships within its theoretical model. By using these scales collectively, it was possible to conduct an in-depth examination of the interaction dynamics between personalized advertising and privacy.

The questions used in the survey were designed to examine four main areas: the participants' intention to purchase as influenced by personalized ads, their positive attitude towards personalized ads, the perceived reliability of personalized ads in the purchasing experience, and the impact of time spent on platforms where personalized ads are displayed on purchase outcomes.

Table 2: Measurement Scale

Constructs	Measurement items	Adapted from
Personalization	- I feel that advertisements on E-Commerce Platforms are tailored to me.	Xu et al. (2008) and Ünal et al (2011)
	- I feel that the content of advertisements on E-Commerce Platforms is personalized.	
	- I feel that advertisements on E-Commerce Platforms are personalized for my usage.	
	-I feel that advertisements on E-Commerce Platforms are delivered in a timely way.	
Advertising value	-I feel that advertisements on E-Commerce Platforms are helpful.	Ducoffe (1995) and Liu et al. (2012)
	-I feel that advertisements on E-Commerce Platforms are valuable.	
	-I feel that advertisements on E-Commerce Platforms are essential.	
Active use	- I feel disconnected from my friends when I have not logged into E-Commerce Platforms.	Ellison et al., (2007) and Jenkins-Guarnieri et al. (2013)
	-I would like it if everyone used E-Commerce Platforms to communicate.	
	-I would be upset if I could not use E-Commerce Platforms at all.	
	-E-Commerce Platforms play an essential role in my social relationships.	
	-I respond to content that others share using E-Commerce Platforms.	
	- I enjoy sharing my thoughts and feelings on E-Commerce Platforms.	
Purchase intention	-I would consider purchasing goods or services with advertisements on E-Commerce Platforms.	Ducoffe (1995), Hong and Cho (2011), and Wuet al. (2011)
	-I intend to purchase goods or services through advertisements on E-Commerce Platforms.	
	-I would probably buy goods or services through advertisements on E-Commerce Platforms.	

The constructs of personalization, advertising value, active use, and purchase intention have been adapted based on previous literature, including Xu et al. (2008), Ünal et al. (2011), Ducoffe (1995), Ellison et al. (2007), and Wu et al. (2011). They are used to assess users' interactions with advertisements. The results of the study were derived using these constructs. The questions posed to participants were categorized and interpreted in alignment with the works referenced in the literature.

4.3.2 Analysis and Findings

Given the universal scope of the research topic, the main study did not impose any country-specific limitations. Participants were selected from Turkey, the United States, Germany, Bulgaria, and the United Kingdom. The age of the respondents ranged from 17 to 68, and their responses to the online survey formed the empirical basis of this research. As a result of an agreement made with a leading airline company in the sector, we obtained the data through surveys distributed to passengers during the flights.

4.3.2.1 Descriptive Statistics on Participants' Demographic Characteristics

In the study, seven demographic characteristics were measured through multiple-choice questions.

The tables below present the frequency and percentage distributions of the participants' responses regarding their demographic characteristics.

A total of 417 individuals participated in the study, but the incomplete responses from 27 participants were excluded. The analysis was conducted based on the responses of 390 participants who had experience with personalized advertisements and made purchases from online platforms.

Table 3: Distribution of Users' Monthly Online Shopping Expenditure

How much do you spend on online shopping every month?	Frequency	Percent
0-20.000 TL (0-600$)	157	37.60%
20.001-40.000 TL (601-1.200)	190	45.60%
40.001-100.000 TL (1.201-3.000)	39	9.40%
100.001 TL + (3.001$+)	4	1.00%
Total	390	93.50%

The data shows that the majority of participants spend either below 20,000 TL ($600) or between 20,001-40,000 TL ($601-$1,200) on online shopping. The largest group consists of those spending between 20,001-40,000 TL, making up 48.7% of the total. The proportion of higher spenders is quite low, with only 11% spending more than 40,001 TL ($1,201). Additionally, 6.5% of the responses are missing. This distribution suggests that online shopping is concentrated within a specific income group, while high spenders remain very limited.

Table 4: Gender Distribution of Respondents

What is your gender?	Frequency	Percent
Female	221	53%
Male	150	36%
Other	19	4.60%
Total	390	93.50%

Female participants comprise the largest group (56.7%), suggesting that women are either more interested in online shopping or more likely to participate in such surveys. Male participants accounted for 38.5%, while 4.9% selected the "Other" option. Overall, women appear to be the dominant group in online shopping. Based on this data, e-commerce strategies targeting women could be more effective. However, since male and other gender groups have a lower representation, developing specialized marketing strategies for these groups may also be necessary.

Table 5: Age Distribution of Respondents

What year were you born ?	Frequency	Percent
14-25	18	4,3
26-37	246	59
38-49	99	23,7
50-61	18	4,3
>62	5	1,2
Total	390	93,5

The survey results show the age distribution of participants. The 26-37 age group makes up the largest portion (63.1%), indicating that online shopping is most concentrated within this range. The 38-49 age group follows with 25.4%, meaning that a significant majority of online shoppers (88.5%) fall between the ages of 26 and 49. Younger participants (14-25) and older age groups (50+) have a much lower representation. The 14-25 age group accounts for only 4.6%, while those aged 50 and above make up a total of 5.9%. This suggests that younger and older individuals engaged less in online shopping or were less likely to participate in the survey.

Table 6: Distribution of Respondents by Employment Status

Which of the following categories best describes your employment status?	Frequency	Percent
Employed, working 1-39 hours per week	50	12%
Employed, working 40 or more hours per week	279	66.90%
Not employed, looking for work	24	5.80%
Not employed, NOT looking for work	20	4.80%
Retired	16	3.80%
Disabled, not able to work	1	0.20%
Total	390	93.50%

The data shows the employment status of participants. The largest group consists of those working 40 or more hours per week (71.5%), indicating that many online shoppers are full-time employees. Those working 1-39 hours per week make

up 12.8%, bringing the total percentage of employed individuals to 84.3%. This suggests that working individuals primarily drive online shopping. Meanwhile, 6.2% are unemployed and looking for work, while 5.1% are not actively seeking employment, making up a combined 11.3%. Retired individuals account for 4.1%, and those unable to work due to disability represent only 0.3%, a very small fraction.

Table 7: Annual Income Distribution of Respondents

How much money did you earn this year?	Frequency	Percent
$0 – $9,999	62	14.90%
$10,000 – $39,999	102	24.50%
$40,000 – $69,999	166	39.80%
$70,000 – $99,999	52	12.50%
$100,000 or more	8	1.90%
Total	390	93.50%

The data shows the annual income distribution of participants. The largest group falls within the $40,000 – $69,999 range (42.6%), meaning nearly half of the respondents earn within this bracket. Those earning between $10,000 – $39,999 make up 26.2%, ranking as the second-largest group. Participants with an annual income of $0 – $9,999 account for 15.9%, indicating a significant portion of low-income individuals. Meanwhile, 13.3% earn between $70,000 – $99,999, and only 2.1% have an income of $100,000 or more, making them the smallest group in the survey.

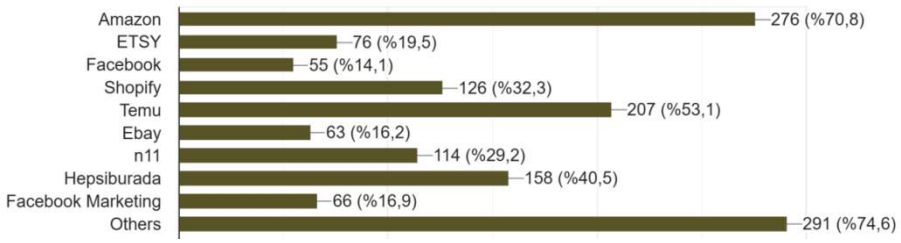

Figure 3: Most Frequently Used E-Commerce Platform by Respondents

Amazon (70.8%) is the most preferred platform, with the majority of participants actively using it. Amazon's wide product range, strong customer service, and reliability likely influence this preference. The "Others" category (74.6%) has the highest percentage, indicating that many alternative platforms are also being used. This suggests that users do not stick to a single platform but instead explore various options. Temu (53.1%) and Hepsiburada (40.5%) also have high usage rates. Temu's competitive pricing and aggressive marketing strategies may have attracted users, while Hepsiburada holds a strong position in the Turkish market, making it a significant player. Shopify (32.3%) and n11 (29.2%) have a moderate user base, reflecting interest in both local and global e-commerce alternatives. Etsy (19.5%), Facebook (14.1%), and eBay (16.2%) are less commonly used, likely because they cater to niche markets, resulting in a smaller overall share. The use of Facebook Marketing (16.9%) is noteworthy, highlighting that social media advertising remains a crucial sales channel.

4.3.2.2 Mean and Standard Deviation Values of the Scales Used in the Study

Table 8 presents the means and standard deviations of the participants' responses to the 5-point Likert scale survey questions.

According to Table 8, among the questions measuring purchase intention, the statement *"I would consider purchasing goods or services with advertisements on E-Commerce Platforms."* received the highest average score of 4.23, which is closest to the response *"Strongly Agree."*

Table 8: Mean and Standard Error of Responses to Likert-Scale Items

		Avg.	Std. Deviation
Purchase intention	*I would consider purchasing goods or services with advertisements on E-Commerce Platforms.	4,23	1,15
	*I intend to purchase goods or services through advertisements on E-Commerce Platforms.	4,18	1,17
	*I would probably buy goods or services through advertisements on E-Commerce Platforms.	4,16	1,16
Positive attitudes	*I feel that advertisements on E-Commerce Platforms are tailored to me.	4,21	1,12
	*I feel that the content of advertisements on E-Commerce Platforms is personalized.	4,16	1,12
	*I feel that advertisements on E-Commerce Platforms are personalized for my usage.	4,06	1,19
	*I feel that advertisements on E-Commerce Platforms are delivered in a timely way.	4	1,18
	*I feel that advertisements on E-Commerce Platforms are helpful	4,14	1,17
	*I feel that advertisements on E-Commerce Platforms are valuable.	4,1	1,18
	*I feel that advertisements on E-Commerce Platforms are essentia	3,99	1,24

Table 8 Continued

Advertising reliability	*I feel that advertisements on E-Commerce Platforms are tailored to me.	2,79	1,49
	*I feel that the content of advertisements on E-Commerce Platforms is personalized.	2,97	1,52
	*I feel that advertisements on E-Commerce Platforms are personalized for my usage.	2,86	1,5
	*I feel that advertisements on E-Commerce Platforms are delivered in a timely way.	2,83	1,54
Social media activity	*I feel disconnected from my friends when I have not logged into E-Commerce Platforms	2,88	1,47
	*I would like it if everyone used E-Commerce Platforms to communicate.	3,3	1,63
	*I would be upset if I could not use E-Commerce Platforms at all.	3,46	1,5
	*E-Commerce Platforms play an essential role in my social relationships.	2,91	1,45
	*I respond to content that others share using E-Commerce Platforms.	2,96	1,49

* 1=**Strongly Disagree,** 5= **Strongly Agree**

4.4. Regression Analysis

The regression analysis method examines the effect of the relationship between at least two variables. The method aims to identify the changes in the dependent variable caused by a modification in the independent variable and to define the impact of these changes (Kurtuluş 2010).

This study calculated the means for statements related to each factor, and regression analysis was applied to the obtained mean values.

H1: Participants' positive attitudes towards personalized advertisements positively influence consumer behavior.

A regression analysis was conducted to examine the impact of positive attitudes toward personalized advertisements on consumer behavior. In the analysis,

the dependent variable was consumer purchase intentions, while the independent variable was positive attitudes toward personalized advertisements.

The analysis calculated and included the total scores of responses to five-point Likert scale variables measuring purchase intention and positive attitudes toward personalized advertisements.

Table 9: Regression Analysis of Personalized Ads & Consumer Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
1	.886[a]	.785	.785	1.56147

According to Table 9, 78% of the positive impact of personalized advertisements on consumer behavior can be explained by positive attitudes toward personalized advertisements.

Table 10: ANOVA for Regression on Personalized Ads and Consumer Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
1	Regression	3237,985	1	3237,985	1328,022	,000[b]
	Residual	885,067	363	2,438		
	Total	4123,052	364			

According to the results in Table 10, since the F-value is 1328.022 and the significance level is 0.000, the regression model is considered significant.

Table 11: Regression – Positive Attitudes & Consumer Behavior

Model 1	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	0,509	0,338		1,505	0,133
Positive Attitudes	0,42	0,012	0,886	36,442	0

Examining the values in Table 11, it is observed that the p-value for positive attitudes is 0.000, indicating a statistically significant relationship. Based on these

results, it can be concluded that positive attitudes toward personalized advertisements positively affect consumer behavior. This relationship can be expressed with the following regression equation:

Positive Consumer Behavior = 0.509 + 0.420 * (Positive Attitudes Toward Personalized Advertisements).

In this regression model, the $\beta_0 = 0.509$ intercept represents the expected baseline level of positive consumer behavior when positive attitudes toward personalized advertisements are zero. The $\beta_1 = 0.420$ coefficient indicates that for each unit increase in positive attitudes toward personalized advertisements, positive consumer behavior increases by 0.420 units. This suggests that more positive attitudes toward personalized advertisements lead to a stronger positive impact on consumer behavior.

According to the findings, the H1 hypothesis is accepted, confirming that positive attitudes toward personalized advertisements significantly influence consumer behavior.

H2: Participants' attitudes that personalized ads are trustworthy significantly affect their purchase intentions.

A regression analysis was conducted to examine the impact of the trustworthiness of personalized advertisements on purchase intention. The dependent variable was consumer purchase intentions, while the independent variable was the perception of personalized advertisements as trustworthy.

The analysis calculated and included the total scores of responses to five-point Likert scale variables measuring purchase intention and trust in personalized advertisements.

Table 12: Regression – Trust in Personalized Ads & Consumer Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
2	0,864[a]	0,746	0,745	169,.993

According to Table 12, 74% of the positive impact of trustworthiness in personalized advertisements on consumer behavior can be explained.

Table 13: ANOVA – Trust in Personalized Ads & Consumer Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
2	Regression	3135,694	1	3135,694	1085,107	,000b
	Residual	1069,209	370	2,89		
	Total	4204,903	371			

According to the results in Table 13, the regression model is considered significant since the F-value is 1085.107 and the significance level is 0.000.

Table 14: Regression – Trustworthiness & Consumer Behavior

Model 2	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	1,117	0,356		3,136	0,002
Ad Trustworthiness	0,695	0,021	0,864	32,941	0

Examining the values in Table 14, it is observed that the p-value is 0.000. Based on these results, it can be stated that the trustworthiness of personalized advertisements positively influences consumer behavior.

Based on the values in Table 14, the trustworthiness of personalized advertisements can be formulated as follows:

Positive Consumer Behavior = 1.117 + 0.695 * (Trustworthiness of Personalized Advertisements)

In this regression model, the $\beta_0 = 1.117$ intercept represents the expected baseline level of positive consumer behavior when the trustworthiness of personalized advertisements is zero. The $\beta_1 = 0.695$ coefficient indicates that for each unit increase in the trustworthiness of personalized advertisements, positive

consumer behavior increases by 0.695 units. This suggests that higher trust in personalized advertisements significantly enhances positive consumer behavior.

According to the findings, the H2 hypothesis is accepted.

H3: Participants' positive attitudes towards personalized advertisements differ significantly depending on their activity status on social media platforms

A regression analysis was conducted to examine the effect of activity status on social media platforms on purchase intention. In the analysis, the dependent variable was consumers' purchase intention, while the independent variable was their activity status on social media platforms.

The analysis calculated and included the total responses to the five-point Likert scale variables that constitute purchase intention and activity status on social media platforms.

Table 15: Regression – Social Media Activity & Consumer Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
3	.035[a]	1	-2	684.655

According to Table 15, the activity status on social media platforms explains only 0.1% of the positive effect on consumer behavior.

Table 16: ANOVA – Social Media Activity & Consumer Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
3	Regression	20,192	1	20,192	0,431	,512b
	Residual	16593,839	354	46,875		
	Total	16614,031	355			

According to the ANOVA Table in Table 16, the resulting regression model is not considered significant since the F-value is 0.431 and the significance value is 0.512.

Table 17: Regression Coefficients – Social Media & Consumer Behavior

Model 3	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	15,247	1,495		10,198	0
Ad Trustworthiness	-0,033	0,0511	-0,035	-0,656	0,512

When the findings in Table 17 are examined, it is observed that the p-value for the variable "activity level on social media platforms" is 0.512. Since this value is above the 5% significance level, it is concluded that the effect of the related variable within the model is not statistically significant. Although the overall model is significant (p = 0.000), indicating that the regression analysis confirms the general validity of the model, the activity level on social media platforms does not have a positive and significant effect on consumer behavior. According to the equation obtained from the regression analysis, the relationship between the reliability of personalized advertisements and positive consumer behavior can be expressed as follows:

Positive Consumer Behavior = 15.247 - 0.033 × Activity Level on Social Media Platforms.

In this regression model, the β_0 = 15.247 intercept represents the expected level of positive consumer behavior when the activity level on social media platforms is zero. The β_1 = -0.033 coefficient indicates that for each unit increase in social media activity, positive consumer behavior decreases by 0.033 units. This suggests that higher activity on social media platforms is associated with a slight reduction in positive consumer behavior.

Accordingly, the H3 hypothesis, which suggested that participants' activity levels on social media platforms positively reflect consumer behavior, has been rejected.

H4: Participants' positive attitudes towards personalized advertisements differ significantly according to their educational background.

A regression analysis was conducted to examine the impact of differences in participants' educational backgrounds on their purchase intention. In the analysis, the dependent variable was consumers' purchase intention, while the independent variable was their educational background.

The total score of responses given to the five-point Likert scale for purchase intention was calculated. Since education level (Less than a high school degree, High school degree or equivalent, College/Associate degree, Bachelor's degree, Graduate degree) is an ordinal variable, the dummy variable method was applied in the regression analysis. Less than a high school degree was taken as the reference category.

Table 18: Regression – Education Level & Consumer Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
4	.278[a]	.077	67	689.158

According to Table 18, differences in participants' educational backgrounds explain 7.7% of the positive effect on consumer behavior. The Adjusted R^2 value indicates that the model has a low explanatory power overall.

Table 19: ANOVA for Educational Background and Consumer Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
4	Regression	1.433.731	1	358.433	7.547	,000b
	Residual	17.145.307	361	47.494		
	Total	18.579.038	365			

According to the results in Table 19, since the F value is 7.547 and the significance (p) value is 0.000, the regression model is considered statistically significant.

Table 20: Regression Coefficients – Education & Consumer Behavior

Model 4	Unstandardized Coefficients		Standardized Coefficients		
	B	Std. Error	Beta	t	Sig.
(Constant)	22,533	1,779		12,663	0
High school degree or equivalent	3,418	2,08	0,151	1,644	101
College/Associate degree	5,442	1,937	0,317	2,809	5
Bachelor’s degree	7,432	1,845	0,519	4,029	0
Graduate degree	3,431	2,205	0,128	1,556	121

An examination of Table 20 reveals that participants with a high school degree or equivalent and those with a graduate degree demonstrate a positive but not statistically significant effect on consumer behavior ($p > 0.05$). In contrast, participants holding a college/associate degree or a bachelor's degree exhibit a positive and statistically significant impact on consumer behavior ($p < 0.05$). These findings suggest that educational background influences consumers' purchase

attitudes to varying degrees. The relationship can be expressed with the following regression equation:

Positive Consumer Behavior = 22.533 + 3.418 (High School Degree or Equivalent) + 5.442 (College/Associate Degree) + 7.432 (Bachelor's Degree) + 3.431 (Graduate Degree).

In this regression model, the β_0 = 22.533 intercept represents the expected level of positive consumer behavior for participants with no formal educational background (baseline group). The coefficients for the different educational levels indicate the additional effect on positive consumer behavior compared to the baseline group. Specifically, β_1 = 3.418 for high school degree or equivalent, β_2 = 5.442 for college/associate degree, β_3 = 7.432 for bachelor's degree, and β_4 = 3.431 for graduate degree suggest that higher educational attainment is associated with increased positive consumer behavior. The highest increase in consumer behavior is observed for participants with a bachelor's degree. In light of these results, the H4 hypothesis is accepted, confirming that participants' educational background positively affects consumer behavior.

H5: Participants' positive attitudes towards personalized advertisements differ significantly according to income level.

A regression analysis was conducted to examine the impact of differences in participants' annual income levels on their purchase intention. In the analysis, the dependent variable was consumers' purchase intention, while the independent variable was annual income levels.

The total score of responses given to the five-point Likert scale for purchase intention was calculated. Since annual income levels ($0 – $9,999, $10,000 – $39,999, $40,000 – $69,999, $70,000 – $99,999, $100,000 or more) are ordinal variables, the dummy variable method was applied in the regression analysis. The income range of $0 – $9,999 was the reference category.

Table 21: Regression – Income Level & Consumer Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
5	.266[a]	.071	.061	691.473

According to Table 21, differences in participants' annual income levels explain 7.1% of the positive effect on consumer behavior. The Adjusted R^2 value indicates that the model has low explanatory power overall.

Table 22: ANOVA – Income Level & Consumer Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
5	Regression	1.318.356	1	329.589	6.893	,000[b]
	Residual	17.260.682	361	47.814		
	Total	18.579.038	365			

According to the results in Table 22, since the F value is 6.893 and the significance (p) value is 0.000, the regression model is considered statistically significant.

Table 23: Regression Coefficients – Income & Consumer Behavior

Model 5	Unstandardized Coefficients			
	B	Std. Error	t	Sig.
(Constant)	24.78	1,665	10,266	0
$10,000 – $39,999	2.816	2,167	1,458	14
$40,000 – $69,999	5.135	1,837	2,652	0
$70,000 – $99,999	5.158	1,735	4,021	0
$100,000 or more	5.22	2,067	1,507	0.06

An examination of Table 23 shows that:

Participants with a $100,000 or more income have a high but not statistically significant positive effect on consumer behavior ($p > 0.05$).

Participants with an income range of $10,000 – $39,999, $40,000 – $69,999, and $70,000 – $99,999 show a positive and statistically significant effect on consumer behavior ($p < 0.05$).

Based on the findings, the impact of participants' annual income levels on positive purchase attitudes can be formulated as follows:

Positive Consumer Behavior = 27.780 + 2.816 (Income: $10,000 – $39,999) + 5.135 (Income: $40,000 – $69,999) + 5.158 (Income: $70,000 – $99,999) + 5.220 (Income: $100,000 or more)

In this regression model, the $\beta_0 = 27.780$ intercept represents the expected level of positive consumer behavior for participants with an income below $10,000 (baseline group). The coefficients for the different income brackets indicate the additional effect on positive consumer behavior compared to the baseline group. Specifically, $\beta_1 = 2.816$ for incomes between $10,000 and $39,999, $\beta_2 = 5.135$ for incomes between $40,000 and $69,999, $\beta_3 = 5.158$ for incomes between $70,000 and $99,999, and $\beta_4 = 5.220$ for incomes of $100,000 or more suggest that higher income levels are associated with increased positive consumer behavior. The positive effect on consumer behavior increases as income levels rise, with the highest increase seen in the highest income group.

According to the findings, the H5 hypothesis is accepted, indicating that participants' annual income levels positively affect consumer behavior.

H6: Participants' positive attitudes towards personalized advertisements differ significantly according to gender.

A regression analysis was conducted to examine the impact of participant gender differences on their purchase intention. In the analysis, the dependent variable was consumers' purchase intention, while the independent variable was gender.

The total score of responses given to the five-point Likert scale for purchase intention was calculated. Since gender is a nominal variable, the dummy variable

method was applied in the regression analysis. The nonbinary gender category was taken as the reference variable.

Table 24: Regression – Gender & Consumer Behavior

Model	R	R Square	Adjusted R Square	Std. Error of the Estimate
6	.169[a]	.029	.023	705.096

According to Table 24, differences in participants' gender explain 2.9% of the positive effect on consumer behavior. The Adjusted R^2 value indicates that the model has low explanatory power overall.

Table 25: ANOVA – Gender & Consumer Behavior

Model		Sum of Squares	df	Mean Square	F	Sig.
6	Regression	532.124	2	266.062	5.352	,005[b]
	Residual	18.046.914	363	49.716		
	Total	18.579.038	365			

According to the results in Table 25, since the F value is 5.352 and the significance (p) value is 0.005, the regression model is considered statistically significant.

Table 26: Regression Coefficients – Gender & Consumer Behavior

	Unstandardized Coefficients			
Model 5	B	Std. Error	t	Sig.
(Constant)	24.833	1.662	14.942	0
Female	4.58	1.734	2.641	.009
Male	2.753	1.762	1.562	.119

An examination of Table 26 shows that:

The male gender has a high but not statistically significant positive effect on consumer behavior ($p > 0.05$). The female gender has a high and statistically significant positive effect on consumer behavior ($p < 0.05$). Based on the findings, the impact of participants' gender on positive purchase attitudes can be formulated as follows:

Positive Consumer Behavior = 24.833 + 4.580 (Gender = Female) + 2.753 (Gender = Male)

In this regression model, the $\beta_0 = 24.833$ intercept represents the expected level of positive consumer behavior for participants whose gender is not specified (baseline group). The $\beta_1 = 4.580$ coefficient for female participants indicates that, compared to the baseline group, female participants are expected to exhibit 4.580 more units of positive consumer behavior. Similarly, the $\beta_2 = 2.753$ coefficient for male participants suggests that male participants show 2.753 more positive consumer behavior units than the baseline group. This implies that gender differences exist, with females exhibiting higher positive consumer behavior than males.

According to the findings, the H6 hypothesis is accepted, indicating that participants' gender positively affects consumer behavior.

HYPOTHESES	
H1: Participants' positive attitudes towards personalized advertisements positively influence consumer behavior.	Accept
H2: Participants' attitudes that personalized ads are trustworthy significantly affect their purchase intentions.	Accept
H3: Participants' positive attitudes towards personalized advertisements differ significantly depending on their activity status on social media platforms.	Reject
H4: Participants' positive attitudes towards personalized advertisements differ significantly according to their educational background.	Accept
H5: Participants' positive attitudes towards personalized advertisements differ significantly according to income level.	Accept
H6: Participants' positive attitudes towards personalized advertisements differ significantly according to gender.	Accept

CONCLUSION AND SUGGESTIONS

This thesis investigates the impact of personalized artificial intelligence (AI) advertising activities on consumers' purchase intentions. With AI technologies' rapid advancement and integration into marketing strategies, the advertising landscape has evolved significantly, especially in how companies target, communicate with, and influence consumers. The study employed a quantitative research design to analyze the role of personalized AI advertising in shaping consumer perceptions, attitudes, and behaviors, mainly focusing on trust, relevance, privacy concerns, and interaction through social media platforms.

The results of the study underscore several important insights. Firstly, the findings indicate that when perceived as relevant and trustworthy, personalized AI advertising has a statistically significant positive effect on consumer purchase intentions. This confirms the widely held assumption that aligning advertisement content with personal preferences, needs, and online behaviors enhances advertising effectiveness and consumer engagement.

However, the analysis also revealed that not all elements assumed to contribute to consumer decision-making were found to be significant predictors. The activity level on social media platforms did not statistically affect consumer behavior within the model. Despite the growing use of social media as a marketing channel, mere activity on these platforms does not inherently influence purchase decisions when mediated through AI-powered advertising. This finding suggests that the quality of engagement and the nature of content exposure might be more critical than the frequency or volume of social media usage.

In terms of broader implications, this study affirms that AI technologies hold substantial promise for the future of marketing. They enable businesses to deliver hyper-personalized content, optimize advertising expenditure, and enhance the customer journey. However, this potential is accompanied by serious challenges, particularly regarding data privacy, ethical considerations, and user consent.

Consumers are increasingly aware of how their data is being collected and used, and this awareness impacts their willingness to trust and engage with personalized content. Therefore, transparency, consent-based data practices, and responsible AI design are essential to maintaining consumer trust and ensuring the long-term viability of AI-driven marketing.

The thesis also highlights the crucial role of trust as a mediating factor. Regardless of how advanced AI systems become, if consumers do not feel secure or respected in how their data is utilized, they are unlikely to respond positively—even to highly tailored advertising messages. Thus, it becomes clear that personalization must be balanced with transparency and user autonomy.

Furthermore, the study suggests that while personalized advertising can positively impact purchase intentions, over-personalization may result in perceived invasiveness, leading to resistance or avoidance behaviors. Marketers must, therefore, balance relevance and intrusiveness to ensure that personalization enhances rather than undermines the consumer experience.

Practical Suggestions for Businesses:

Ensure Transparent Data Practices: Marketers should adopt a transparent and user-centric data collection and usage approach. Clear communication regarding handling user data can increase trust and reduce resistance.

Integrate Ethical AI Frameworks: Organizations must develop AI strategies that comply with ethical guidelines, emphasizing fairness, accountability, and explainability.

Balance Personalization and Privacy: Over-personalization may be counterproductive. Businesses should personalize with restraint, ensuring users do not feel excessively monitored or manipulated.

Invest in Trust-Building Campaigns: Brands should continuously reinforce trust through consistent, ethical, and user-friendly interactions. Trust plays a central role in converting personalized experiences into actual purchases.

Segment and Customize Thoughtfully: Personalized strategies should be developed by deeply analyzing customer segments rather than relying solely on superficial behavior like platform activity.

Recommendations for Future Research:

Mixed-Method Approaches: Future studies could combine quantitative surveys with qualitative interviews or focus groups to capture more profound insights into consumer motivations and feelings toward personalized AI ads.

Cross-Cultural Comparative Studies: Investigating how cultures perceive AI personalization can offer a global perspective on acceptance and resistance factors.

Platform-Based Research: Analyzing the effectiveness of AI personalization on specific platforms (e.g., TikTok vs. Amazon) could provide more granular insights.

Longitudinal Studies: Observing how consumer attitudes and purchase behaviors evolve in response to sustained, personalized advertising efforts would add valuable knowledge to the field.

Experimental Research Designs: Testing various levels of personalization, privacy notices, and transparency messages in controlled environments could reveal the optimal balance between personalization and perceived intrusiveness.

Final Thoughts:

This research contributes to the growing academic and practical discourse on the role of AI in marketing by providing empirical evidence on its impact on consumer behavior. While the integration of AI into personalized advertising is likely to deepen with future technological progress, its effectiveness will ultimately depend on marketers' ability to respect consumer boundaries and build trust. The future of advertising lies not only in being innovative and automated but also in being ethical, user-centered, and genuinely value-driven. Businesses that manage to

harmonize AI capabilities with human-centric marketing principles will likely lead the next generation of customer engagement.

In addition to that, I want to share my own experiences about that thesis topic; one of the key reasons behind the selection of our hypotheses was the intention to address current and pressing issues that e-commerce businesses are actively working to understand and resolve. In today's digital marketplace, establishing a strong relationship between the seller and the customer is directly linked to increased sales and greater consumer trust. Building this trust can be considered a primary objective, as it not only reflects ethical considerations but also requires understanding customer needs and preferences and offering products or services that align with them.

From this perspective, the central aim is to connect with customers or potential customers by providing personalized products or services strengthening emotional and psychological bonds. For instance, while every product has a potential customer base, expanding that base requires creating a perception of personalization, evoking a sense of need, or triggering real-life associations, memories, or emotions. As each individual has unique cultural, ethical, and experiential values, sellers also do. These differences can be better understood and addressed by leveraging artificial intelligence tools, allowing businesses to tailor their offerings to a broader and more diverse audience.

However, as human perception is dynamic and ever-changing, creative and innovative advertising strategies supported by A/B testing are increasingly important. Many leading companies already recognize this need and implement such practices effectively. A well-known example of this is Netflix, which uses multiple cover images for the same movie or series. The goal here is to shape perception and market content more effectively. With AI-based technologies, generating such visual assets quickly and efficiently is now possible.

One of the more surprising findings from our study was the effect of social media usage on purchasing behavior. Initially, I believed that the more people were exposed to advertisements on social media, the more likely they would be to make a purchase. I assumed that constant exposure would draw users in. However, the results suggested otherwise and prompted a new line of thinking. I also noticed this

in my own experience; when an advertisement appears on social media, I tend to skip it unless it is highly captivating. This highlights the growing importance of creative strategies designed to meet needs, capture interest, and encourage users to engage. Moving forward, I plan to explore such strategies in my own work.

As a practical example from my own experience, we once attempted to sell a necklace featuring a simple number design. At first glance, numbers may seem to lack emotional value. However, with the help of AI tools and creative marketing, we discovered that people associate numbers with deeply personal meanings—a lucky number, a special date, or a jersey number from a sports team, for instance. We managed to attract a customer base around this concept. Eventually, we encountered higher costs due to increased personalization, so we simplified the product without losing its emotional appeal. This led to the development of our “angel number” necklace series, featuring numbers like 111, 222, and 333. We supported these products with visuals and content explaining the symbolic meanings behind the numbers, which resonated with customers and created a unique emotional connection.

Although we, as sellers, initially created these products without assigning any particular meaning, we enabled customers to attribute their own stories and significance to them. It is clear that the most successful products on e-commerce platforms today are those that carry personal meaning for the buyer. While the product may be fixed or standardized from the producer’s perspective, it becomes personalized through the customer's lens. The ability to create this emotional bridge between the product and the consumer is a key factor in its popularity. This observation highlights the growing importance of emotional resonance in product marketing and underscores the role of personalization in driving consumer engagement and loyalty.

We hope this study will offer valuable insights and guidance for businesses and consumers navigating the evolving landscape of AI-powered personalized advertising.

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APPENDICIES

APPENDIX A: SURVEY QUESTIONNAIRE

	Strongly Disagree	**Disagree**	**Neither Agree or Disagree**	**Agree**	**Strongly Agree**
Please respond to each of the following statements about how personalized advertisements create purchase intention for you:					
I would consider purchasing goods or services with advertisements on E-Commerce Platforms.					
I intend to purchase goods or services through advertisements on E-Commerce Platforms.					
I would probably buy goods or services through advertisements on E-Commerce Platforms.					
Please respond to each of the following statements about how personalized advertisements are to you:					
I feel that advertisements on E-Commerce Platforms are tailored to me.					
I feel that the content of advertisements on E-Commerce Platforms is personalized.					
I feel that advertisements on E-Commerce Platforms are personalized for my usage.					
I feel that advertisements on E-Commerce Platforms are delivered in a timely way.					

Please respond to each of the following statements about how valuable personalized advertisements are to you:					
I feel that advertisements on E-Commerce Platforms are helpful.					
I feel that advertisements on E-Commerce Platforms are valuable.					
I feel that advertisements on E-Commerce Platforms are essential.					
Please respond to each of the following statements about how active you are in terms of using E-Commerce Platforms:					
I feel disconnected from my friends when I have not logged into E-Commerce Platforms					
I would like it if everyone used E-Commerce Platforms to communicate.					
I would be upset if I could not use E-Commerce Platforms at all.					
E-Commerce Platforms play an essential role in my social relationships.					
I respond to content that others share using E-Commerce Platforms.					
I enjoy sharing my thoughts and feelings on E-Commerce Platforms.					
Please respond to each of the following statements about when I encounter personalized ads on E-Commerce Platforms:					
I think it provides a practical shopping experience.					
This situation does not bother me, and I do not find it very important.					

I worry about how my personal information is used.					
This makes me feel that my privacy has been violated.					
I don't have an opinion about this and didn't notice.					

What year were you born? _____

What is the highest level of school you have completed or the highest degree you have received?

- Less than a high school degree
- High school degree or equivalent
- College/Associate degree
- Bachelor's degree
- Graduate degree

Which of the following categories best describes your employment status?

- Employed, working 1-39 hours per week
- Employed, working 40 or more hours per week
- Not employed, looking for work
- Not employed, NOT looking for work
- Retired
- Disabled, not able to work

How much money did you earn this year?

- $0 – $9,999
- $10,000 – $39,999
- $40,000 – $69,999
- $70,000 – $99,999
- $100,000 or more
-

What is your gender?

- Female
- Male
- Nonbinary

- Decline to state

Besides work, how much time do you spend on the Internet (browsing, entertainment, shopping, etc.)?

- 1 hour or less per day
- 2-4 hours a day
- 4-6 hours a day
- 6-8 hours a day
- More than 8 hours a day

How much do you spend on online shopping every month?

- 0 - 20.000 TL (0 - 600$)
- 20.001 - 40.000 TL ($601 - $1200)
- 40.001 - 100.000 TL (1201$ - 3000$)
- +100.001TL (+$3001)

Please mark the social media platform you use most frequently.

- Amazon
- ETSY
- Facebook
- Shopify
- Temu
- Ebay
- n11
- Hepsiburada
- Facebook Marketing
- Other:

Through which device(s) do you most frequently connect to E-Commerce Platforms? (You can select one or more options.)

- Smart Phone
- Laptop/Desktop Computer
- Tablet
- Smart TV

Which of your data do you think personalized ads on E-Commerce Platforms target you the most? (Check only one option.)

- According to my interest
- According to my location
- According to my previous purchase history
- According to my browsing history in the Internet browser
- According to my demographic characteristics (age, gender, education, occupation, etc.)
- According to my friend's list or the accounts I follow on my social media accounts