

# Marketing in the Era of Artificial Intelligence

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## **Abstract**

Artificial Intelligence has rapidly become a fundamental aspect of modern marketing, giving exceptional opportunities for data-driven marketing, highly personalised approaches, and operational efficiency. This thesis investigates the influence of AI on marketing, seeing a brief historical evolution from traditional methods to the innovative techniques introduced by Marketing 6.0, an era marked by the convergence of AI, big data, and immersive technologies for personalised consumer experiences.

This thesis emphasises the primary applications of AI in marketing, particularly in its role in social media strategies, content creation, and customer service automation, highlighting the transition toward immersive, AI-enhanced experiences.

Although AI presents significant advantages in enhancing marketing performance and customising consumer experiences, ethical and legal issues must be addressed to achieve its full potential. Ethical concerns linked to AI, such as data privacy issues, algorithmic bias, and transparency challenges, are also discussed within European regulations such as the GDPR and the AI Act.

**Keywords:** Artificial Intelligence (AI), Marketing 6.0, Data-Driven Marketing, Big Data, Personalisation, Concerns in AI.

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# 1. Introduction

## 1.1. General Introduction, Purpose and Objectives

The marketing landscape has significantly changed recently, primarily driven by rapid technological advancements. One of the key drivers of this change is artificial intelligence (AI), which has fundamentally transformed how businesses operate. Its integration into marketing strategies has completely reshaped how companies understand and engage with their customer base (Kumar et al., 2024).

Marketing has shifted from traditional methods reliant on intuition and manual analysis to data-driven strategies influenced by machine learning, predictive analytics, and automation (Kumar et al., 2024). Companies can now rapidly process large volumes of consumer data, enabling them to deliver personalised experiences at scale, optimise pricing strategies, and predict market trends with unprecedented accuracy (PC Social, 2023). This transformation has improved the efficiency of marketing operations and strategies, empowering marketers to establish more meaningful connections with consumers and leading to increased engagement and loyalty.

However, AI itself presents a series of concerns that must be considered. Ethical considerations, such as data privacy and the potential for algorithmic bias, have become important issues that the public expects to be addressed, as now the customers are more informed than ever and are more cautious of this. Moreover, AI has some general limitations that must be known (Naz & Kashif, 2023). Additionally, AI must comply with regulations that may vary in each country. The European Union (EU) has made advancements in this regard with the GDPR and the AI Act.

The reason I have chosen this topic is because it is not only of incredible relevance in a modern context but also an incredibly interesting analysis since AI is a major breakthrough that is transforming not only marketing but the majority of fields.

This thesis aims to explore the background of marketing and AI to understand our current standing. It seeks to examine the various types of AI that have been developed and wants to trace the evolution of marketing to provide an appropriate historical context.

The main objective of this thesis is to improve the understanding of how AI is transforming marketing. This will involve examining how companies use AI to their advantage, upgrading marketing campaigns with its help, and assessing its influence on areas such as SEO, social media, and content creation. Additionally, the thesis aims to explore the implementation of AI in data-driven marketing, which is another area of great interest since it is one of the bases that permits the hyper-personalisation of content for each consumer.

However, this thesis also aims to address significant concerns shared by the public and businesses regarding the widespread use of AI. These concerns include issues such as

data protection for consumer information held by companies, as well as how third parties manage this data. Previous scandals have caused the public to become more cautious and some companies to become sceptical.

## 1.2. Work Methodology

This thesis employs a literature-based methodology involving an extensive review of diverse sources to identify and analyse relevant information about the chosen topic. The review encompasses a comprehensive examination of articles sourced from various academic journals, conference papers, and reputable industry reports that are currently pertinent. The selection criteria prioritise articles published within the last five years to ensure the inclusion of recent developments and findings.

Furthermore, to maintain a dynamic and current review, the inclusion of articles from general media sources that are of significant relevance and originate from reputable information outlets published within the past four years has been prioritised.

This approach ensures that the analysis is comprehensive and up-to-date, incorporating both scholarly and popular perspectives. Additionally, the information used will be current and relevant to contemporary marketing practices.

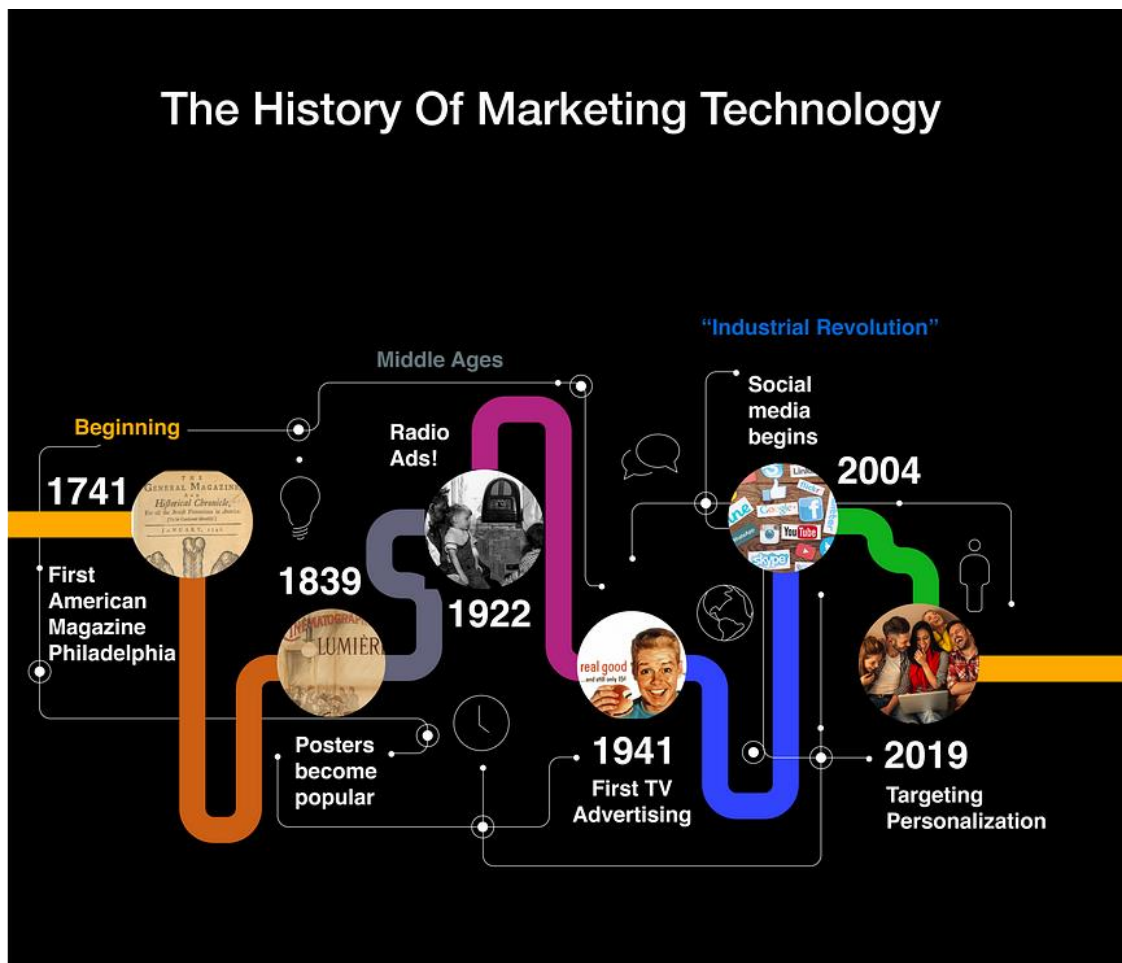
The first chapters will be about the definitions of marketing and AI, along with their historical evolution, and will provide the context we need to understand this topic better. I have used scholarly articles for definitions and context and general media for examples and more current topics.

## 2. Marketing: Principles and evolution to modern marketing

### 2.1. A brief evolution of a discipline: From Ancient Ages to Marketing 5.0

Marketing has gone through a significant evolution throughout history. During different eras, different definitions have been attributed to it that are important to understand to comprehend where we are standing today on the matter, as the article in the Journal of Business & Economics Research states, “*Over the past 100+ years, the discipline of marketing has continued to change and evolve, reflecting the influences of a variety of marketing environmental factors. Similarly, the definition of the discipline and practice of marketing has evolved over time as a reflection of these evolutionary changes. In marketing, there has been a tendency to undervalue the historical perspective in doing research and understanding the role of historical developments in shaping the evolution of this discipline.*” (Brunswick, 2014).

Figure 1: Brief timetable of the History of Marketing since the 18th century



Source: Teitelman, M. (2019, November 9). The History of Marketing Technology: Beginning, Middle Ages, Industrial Revolution. *Medium*.

Although the timetable above starts in the 18th century, Marketing is a practice that has existed since the ancient ages, making it hard to point out a start date, we can look back as far as when merchants of Ancient Rome, China and the Middle East used their charisma to attract customers, which eventually lead to the first markets being established, making it a possible point start to the discipline (Villegas, 2023).

A second breakthrough happened with the invention of the printing press in the 15th century, which over time led to the creation of the first newspapers and magazines in the 18th century with the start of the Industrial Revolution, from 1836 to 1867 witnessed the first paid advertisements in newspapers, the rise of flyers and posters as seen on the timeline above, mass messaging over the telegraph in 1864 and the possibility of renting billboards in 1867, all of this combined with the new society that was emerging and the fact that now the general public could access more products made companies start to brand their products for specific sectors making this era the start of Marketing as a broader discipline (Digital Space Marketing, 2024 & Villegas, 2023).

However, it was in the 20th century that Marketing became more complex, and companies gradually took the discipline to new levels. It started to appear in textbooks, describing sales force, pricing, advertising, and promotion (Kotler, 2024). The definition of what marketing was and what the discipline intended to do changed throughout the entire century due to fast-evolving technological advancements that it could take advantage of and significant social changes. Introducing radio ads, innovative technologies like television and creating a mass consumption market changed what companies undertook as marketing. According to an article in the Journal of Marketing of the American Marketing Association: *“In the 1960s, marketing was a fairly simple discipline. A company would:*

- *Decide the product’s features and set the price,*
- *Seek a strong position in the distribution channels,*
- *Hire an agency to create advertisements and campaigns, and*
- *Run a strong sales force to pursue sales.*

*Students at business schools would choose either finance, marketing, operations, strategy, or information. Mathematically inclined students chose finance or operations. Less mathematically inclined students chose marketing. Marketing was easy to understand and supplied human interest stories.”* (Kotler, 2024).

However, this changed quickly, as stated before, and more importantly during the 1990s with a new wave of groundbreaking technologies, such as the internet, that revolutionised the entire world and the way we communicate with each other, and companies had to adapt their marketing strategies once again, that by this point it was a lot more complex than the concept companies had in the 1960s. Philip Kotler, considered by many the father of modern marketing, defined all the stages that marketing had gone through in this era since the 1950s, he found a correlation between the social and technological changes of each period and how companies used marketing strategies, this definitions are stated on the table below.

**Table 1:** Evolution from Marketing 1.0 to Marketing 5.0

<i>Area of Distinction</i>	<b>Marketing 1.0</b>	<b>Marketing 2.0</b>	<b>Marketing 3.0</b>	<b>Marketing 4.0</b>	<b>Marketing 5.0</b>
<b>Concentration</b>	Product-oriented	Consumer-oriented	Marketing-oriented towards people	Human-centred marketing focused on the consumers’ experience	Humanity that uses artificial intelligence



<b>Aim</b>	Sale of products	Satisfaction and customer retention	Making the world a better place	Inspiring the client to personalise their experience	Increase human connection with the help of artificial intelligence
<b>Communication</b>	Unidirectional	Bidirectional	Multidirectional	Omnidirectional	Omnidirectional
<b>Value proposition</b>	Functional	Functional and emotional	Functional, emotional and spiritual	Functional, emotional, spiritual and self-creative	Functional, emotional, spiritual, self-creative and interpersonal

*Source: Mehta, S. (2022). International Journal of Law Management & Humanities, Volume 5/Issue 6, pages 469-485.*

As we can see in the table above, marketing has evolved through five different periods in the modern era until today's practices. At first, according to Kotler, companies used marketing with the sole purpose of selling the product, companies did not focus on customers' needs or wishes as they did in the next period of *Marketing 2.0*.

But then, with *Marketing 3.0*, companies started to focus on a greater variety of things about humans, like their values, it was in this era when Corporate Social Responsibility started to be necessary, companies were now expected to operate with a commitment to social and environmental responsibility, not just profitability. It is also here where the digital transformation starts to happen. The internet has enabled better communication between companies and customers, and now companies can make more personalised marketing efforts (Grace, 2024; Kotler et al., 2010).

*Marketing 4.0* focused on moving from traditional marketing to a more digital one, which does not mean only using digital channels. In this era, an omnichannel approach took place, with marketing being present both online and offline. The main advances of this era were:

- Social media gained popularity, and broad marketing campaigns on Facebook, Instagram, and Twitter, among others, were set up. Also, social media was essential for brands to engage in conversations with their customers, developing more loyal communities around brands.
- Search Engine Optimisation and Search Engine Marketing (SEO/SEM) practices and strategies were now relevant to marketing as they could increase web or

product reach, making specific brands more visible depending on if they optimised this process.

- Customer Journey was introduced as a form of guidance to lead customers from being aware of a brand to advocating for it, becoming loyal and recommending it to others. This is a human-centric journey because it is designed around human experiences, recognising that customers are incredibly influenced by their social circle as they seek validation from it and ask for advice.

However, the main breakthrough in this era was the introduction and the use of **data-driven marketing**, which uses big data and analytics to understand customer needs, desires, and values to a new level, making the possibility of extreme personalisation for each customer (Grace, 2024; Kotler et al., 2017; Mehta, 2022), a fundamental piece of this project that is the base of where we are now.

With modern technologies like AI, the Internet of Things (IoT) and the consolidation of data-driven marketing as a fundamental tool, *Marketing 5.0* came to light. “Technology for humanity” as Kotler states, Marketing 5.0 emphasises the collaboration between human creativity and technological capabilities, the main idea is to use technology not to replace humans but to enhance human capabilities in marketing, making it more efficient, practical, and personalised, although nowadays this has become a polemic subject. The combination of IoT, AI and data-driven marketing made possible hyper-personalisation for each customer, now each person has a record on the internet depending on what you search for, what you say on social media and other factors, this is called **digital footprint**, and thanks to data-driven marketing, with now the help of AI, customers can be better profiled to offer a better experience and increase the probability of a purchase. In this era, companies must quickly adapt to new technologies, customer behaviour changes and market conditions (Grace, 2024; Kotler et al., 2021; Mehta, 2022).

Many of the concepts introduced are the basis for understanding what period we are in now.

## 2.2. Where are we now? Marketing 6.0

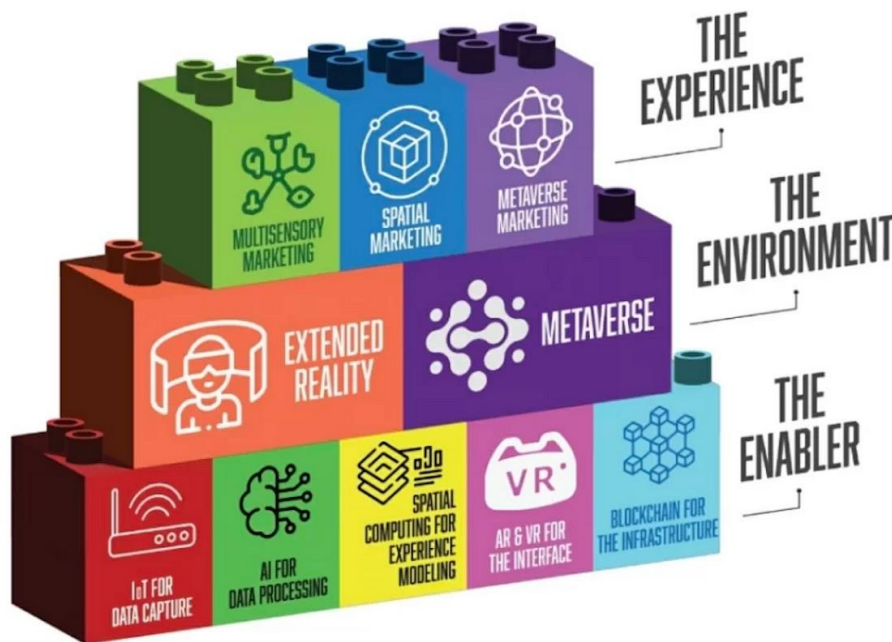
With innovations quickly changing the marketing landscape, Marketing 5.0, in approximately five years, has been substituted by Marketing 6.0. All the tools mentioned earlier are more relevant than ever in this current marketing, but some main characteristics have changed:

- Marketing has transcended from omnichannel to metamarketing, companies now are not only integrated online and offline, but they are also immersive, being online in offline and vice versa. As Kotler describes in his new book Marketing 6.0 for a better understanding of this concept (2024): “*As marketing continues to evolve, we are looking beyond omnichannel marketing to a new approach called metamarketing. Metamarketing takes a step beyond omnichannel by providing an*

*interactive and immersive approach to deliver customer experience. Like multichannel and omnichannel, metamarketing is about unifying physical and customer experience... It involves delivering digital experiences in physical spaces or providing real-life experiences in virtual environments. Although still a relatively new concept, metamarketing shows great potential for businesses seeking to stay ahead of the curve.” (p. 21).*

- The second principal change is that the technologies introduced over the different eras of Marketing, especially in Marketing 5.0, are no longer just tools to use but essential centrepieces of the discipline. Figure 2 shows that the building blocks of Marketing 6.0, AI, and IoT are the basis of this new marketing.

*Figure 2: The building blocks of Marketing 6.0*



*Source: Kotler, P. et al. (2024). Marketing 6.0, figure 1.3 p. 24*

Marketing 6.0 has also introduced innovative technologies, like Augmented Reality (AR) and Virtual Reality (VR). AR allows customers to have an interactive and immersive experience by exploring products virtually and visualising how they would fit in it, meanwhile, VR is used for practical training (Kotler et al., 2024). Another interesting concept that is introduced is spatial computing, it involves a series of technologies, like AR and VR, that facilitate digital interactions in physical spaces, this has been the case, for example, with new fitting rooms that can recognise the items the customers are wearing, or they can try clothes the store does not physically has on stock (Kotler et al., 2024).

So, as we can see, Marketing 6.0 has introduced a wide variety of interesting concepts and technologies that companies are starting to implement in their marketing strategies.

However, the most disruptive technology that has revolutionised society and all industries is AI, introduced in Marketing 5.0 and now made one of the bases of modern marketing. What is it, and what is its influence on the field?

### **3. Artificial Intelligence: Understanding the Mechanism**

A proper, concise definition of AI would be the one made by IBM, which says that AI is a technology that enables computers and machines to simulate human learning, comprehension, problem-solving, decision-making, creativity, and autonomy (Stryker & Kavlakoglu, 2024).

Alan Turing first theorised AI in the 1950s, but it was not until the 1980s that the first AI models came along, this was made possible thanks to *machine learning* (Coursera, 2024). Although it was initially very limited, today, machine learning allows a system to learn and improve from examples without needing all the instructions explicitly but needing some guidelines, that is possible because it finds patterns in large amounts of data that the AI can use to make predictions, the AI can then amend its algorithm based on the accuracy of past predictions (Tobin, 2023).

Then, in the 2010s, *deep learning* was introduced. The major improvement from this new model is its ability to learn without supervision, automatically extract features from large, unlabelled, and unstructured datasets, and make predictions about the data's meaning. Since it does not require the intervention of humans, it enables machine learning at an incredible scale, which makes it a tool well-suited for tasks that involve fast identification of complex relationships between data (Stryker & Kavlakoglu, 2024). Some forms of deep learning power exist in almost all AI applications today, such as natural learning processing (NLP), which enables computers to understand and communicate with human languages better, which is the main base of many AI's of today, like chatbots, digital assistants and search engines, among others (Holdsworth, 2024).

The latest advancement in the field is *generative AI*, which was made possible by NLP and broadly introduced in the 2020s. This AI uses deep learning models to create original content such as long texts, images, videos, and audio, among other uses, in response to user requests. It works by using a simplified version of the data it was trained on and then generates new and similar content that is different from the original data, not making the same content twice. Generative AI has been used for years in statistics to analyse numerical data, but they have evolved to generate more complex data types (Holdsworth, 2024; Stryker & Kavlakoglu, 2024).

Generative AI has three phases that we must understand to provide a better context of how this tool works:

1. It starts with what purpose the AI will have, this is called a foundation model, the most common ones today are large language models (LLMs) created for text

generation applications. But there are foundation models for creating images, videos, sound, and music, as well as models that support different types of content. Using these models requires a lot of data processing and a significant financial investment. However, open-source foundation models now allow new developers to access this technology for free, making AI more accessible to everyone (Stryker & Kavlakoglu, 2024; Stryker & Scapicchio, 2024).

2. Next, the model is adjusted to create specific content. This is a continuous process, carried out in two ways. In the first way, the model is fed specific content labelled data, questions, or prompts it is likely to encounter, and it responds with the desired format. In the second way, a human evaluates the accuracy or relevance of the model's output, enabling the model to refine itself. This iterative process ensures that the audience feels engaged and part of the generative AI journey, even though it may be susceptible to inaccuracies due to public intervention, making it likely to be conducted by an expert (Stryker & Kavlakoglu, 2024; Stryker & Scapicchio, 2024).
3. Lastly, developers evaluate the results produced by their AI apps that generate content with the help of users' feedback and regularly assess and further tune the model. This process is iterative, sometimes as often as once a week, and it is crucial for improving the accuracy or relevance of the AI. In contrast, the foundation model is updated less frequently, every year or 18 months (Stryker & Kavlakoglu, 2024; Stryker & Scapicchio, 2024).

After these phases, an utterly functional AI will be operatable. Two examples of famous AIs are ChatGPT as an LLM model and DALL-E as a text-to-image model, among others, which are accessible to the public. At the moment, deep learning and generative AI are the two most widely used AIs.

Some researchers have also defined two types of AI depending on the level of sophistication:

- **Weak AI**, also known as narrow AI, is designed to perform specific or limited tasks. Some examples can be smart assistants like Amazon's Alexa or Apple's Siri, chatbots, and autonomous cars (Stryker & Kavlakoglu, 2024).
- **Strong AI**, also known as artificial general intelligence (AGI), currently only exists in theory. This type of AI has the potential to understand, learn, and apply knowledge in various areas at a level that exceeds human capabilities (Stryker & Kavlakoglu, 2024).

In conclusion, AI is developing rapidly thanks to the increase in companies' investments in its research due to the incredible profitability that this investment has in companies, and that is expected to grow further in the future, with generative AI as the disruptive force that has changed marketing. According to a study conducted by the IBM Institute

for Business Value in 2023, nearly two out of three CEOs feel pressure from their investors to accelerate the process of integrating generative AI in their businesses, but the study also found out that organisations are still sceptical of its implementations for ethical issues (IBM Institute for Business Value, 2023) as we will see in following chapters.

## **4. The AI in Data-Driven Marketing: The first step for a hyper-personalisation experience**

As mentioned before, AI can present itself in various fields, the introduction of AI in marketing was in the 2010s, but it is now when it has become a standard tool for marketers to achieve diverse objectives (Kotler et al., 2024). Now, companies have massive amounts of information due to the increasing flow across the entire internet. One of the objectives of AI for businesses is to analyse this massive amount of data at a fast pace to answer market trends quickly and improve customer relationship management (CRM) to give a more personalised experience. However, the foundation of what is known as data-driven marketing is big data, something that has existed for years because marketers believe that beneath all the information, there are insights that could boost marketing strategies (Kotler et al., 2021).

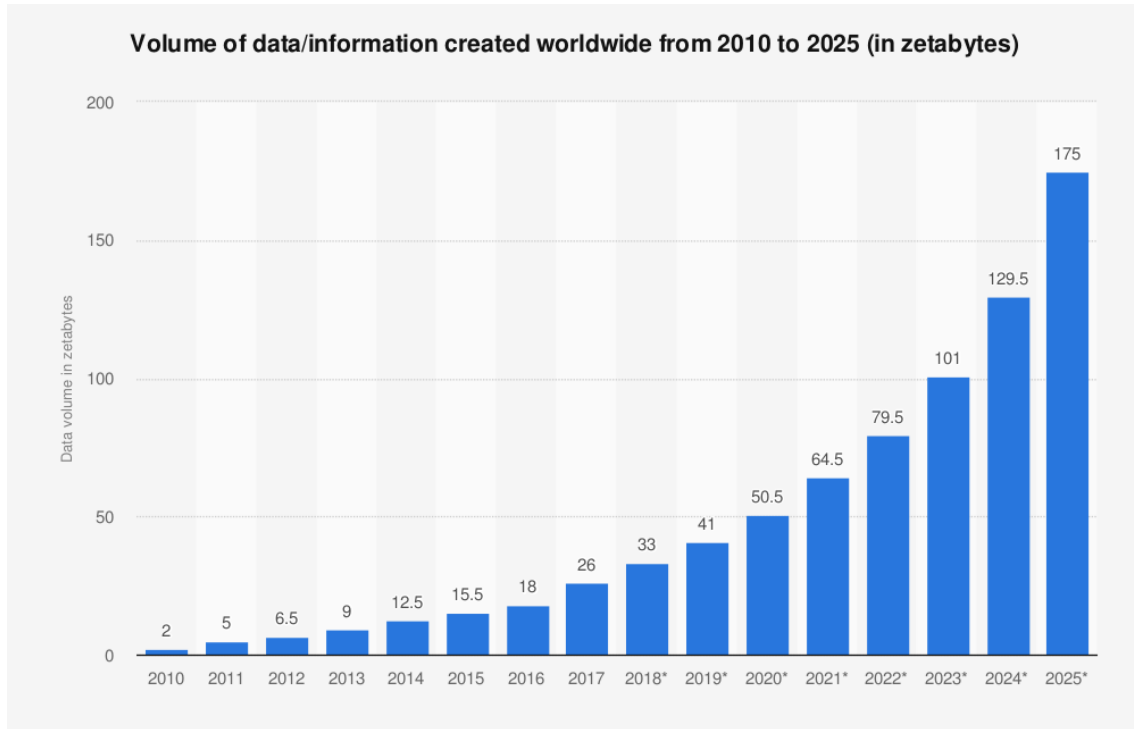
### **4.1. Big Data, the base of Data-Driven Marketing**

Big data refers to large data sets that can be studied to reveal patterns, trends, and associations. The vast number of data collection avenues means that data can now come in larger quantities, be gathered much more quickly, and exist in a greater variety of formats than ever. This new, larger, and more complex data is collectively called big data (Coursera, 2024).

This data comes from a wide variety of sources, including IoT devices like smart home systems, robotic vacuum cleaners, smart TVs, mobile devices, and wearable fitness trackers, as shown in the next chapter; also, social media, what you like, share, comment, post, amount of time looking at specific post, all of that is considered insightful data; websites are also another data source, companies or other website owners can track page visits and general locations of visitors, see how long audiences spend on a page and what links are most clicked; business transactions are also another source data is collected when a customer buys something online or in person; the healthcare field and governmental data are also two other sources of data (Coursera, 2024).

All these data sources are linked to an era of digitalisation of information, which has increased the amount of data produced yearly with exponential growth and is expected to grow even more rapidly, as shown in Figure 3.

**Figure 3: Data volume in zettabytes from 2010 to estimates in 2025**



**Source:** Statista (2021)

With all this data to process, the analysis of big data from previous years before AI was complex because specific software had to be designed for this specific purpose, requiring a significant investment for the company and making it accessible to few SMEs. Many companies were unsure how to do data-driven marketing, leaving many with great expense and without valuable data, although other companies, especially the more important ones, used big data regularly for many marketing campaigns (Kotler et al., 2021). Since it was apparent that humans could not manage big data alone, the urge for AI usage emerged (Gkikas & Theodoridis, 2022), especially for the increase in data production, as shown in Figure 3.

AI has made this task faster, easier, and more accessible for SMEs. By using AI algorithms built on all this data, marketers are more likely to identify interesting customers who are more likely to purchase and have a higher lifetime value. AI can also predict potential popular products and recommend specific products to specific products based on the data collected (Kotler et al., 2024).

AI is used at every step of processing data. Its personalisation, speed, and accuracy give companies a lot of value for their marketing plans. Predictive analytics involves defining the project, collecting data, analysing data, using statistics, creating models, deploying the models, and refining the models. Predictive analytics help marketers acquire knowledge and potential to be ahead of the competition, user modelling and audience segmentation, lead scoring, pricing solutions, effective campaigns, and sophisticated recommendation systems can be game changers regarding user satisfaction and revenues (Gkikas & Theodoridis, 2022).

PepsiCo is an example of a company that has successfully introduced AI in its systems to analyse data over the past few years. For example, PepsiCo has drastically reduced the time it takes to introduce new products to the market, from years to months, by leveraging AI to analyse millions of social media conversations and quickly detect changes in customers' preferences. As a result, products such as Off The Eaten Path's seaweed snacks, Propel's immunity-enhancing bottled water, and Bubbly's flavoured sparkling water were developed with features identified by the AI engine (Kotler et al., 2024).

Ben & Jerry's is another company that successfully has used big data analysis with AI. The company used AI to identify audiences and enhance product development, particularly in creating breakfast-themed ice cream flavours. The Ben & Jerry's team used AI to analyse large amounts of unstructured data from sources such as song lyrics, movies, and social media posts to discover new ways to connect with customers. This analysis revealed that many people talked about "ice cream for breakfast". (Keenfolk, 2024).

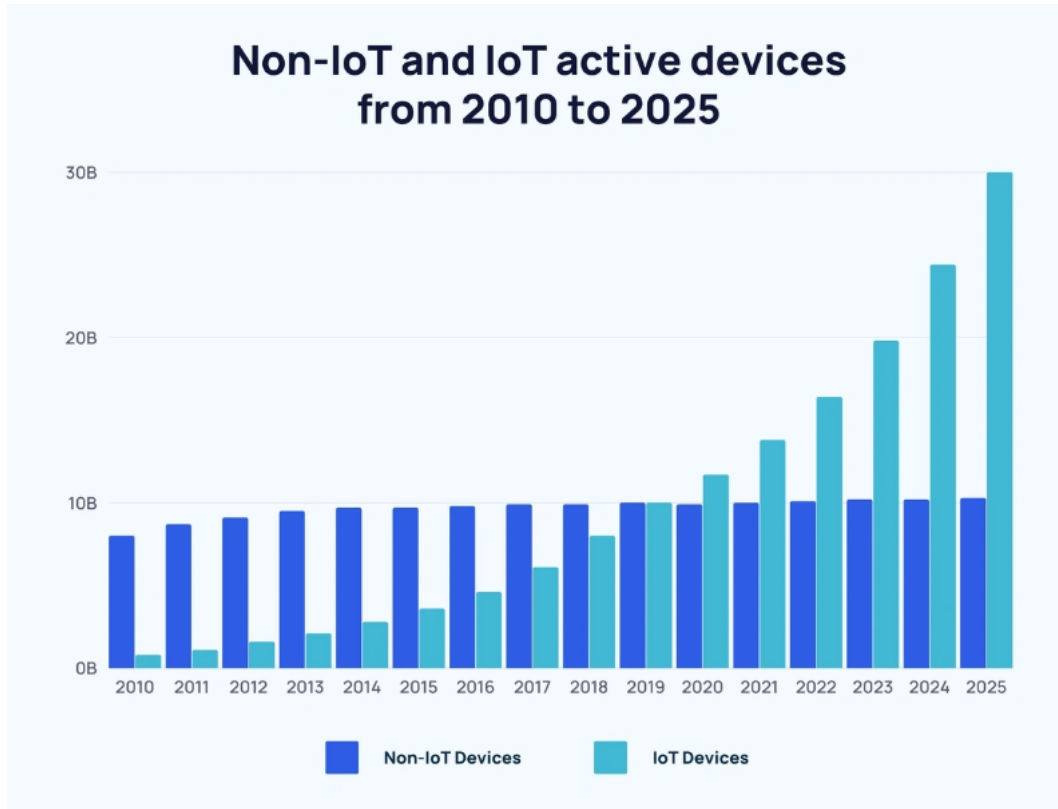
The former Executive Vice President of Unilever, Stan Sthanunathan, said in an interview for Campaign: *"The movies we watch, the books we read, all influence our thinking. If you can analyse every single piece of dialogue in a movie or song, you may be able to unearth something meaningful. Consuming all that content is not a mind-numbing experience for a computer. We started mining unstructured data to get metaphors. We can use those same pieces of information to identify emerging trends to see."* (2019).

#### 4.2.A data capture with IoT as the protagonist

Today, connecting multiple devices to the Internet is possible, extending beyond computers and smartphones to vehicles, smart voice assistants (powered with NLP), machines and home devices like fridges or clocks. The term used for the interconnectivity of all these devices is IoT, which has accelerated automation over the last few years (Kotler et al., 2024). Studies such as the one by Statista in Figure 4 show that the increment of devices is clear.



*Figure 4: Number in billions of IoT vs. non-IoT devices*



*Source: Statista (2022)*

As shown in Figure 4, it is evident that IoT has been integrated into several types of devices. The study separates internet-connected devices into two different categories: non-IoT devices, which are mobile phones, tablets, PCs, laptops, and fixed-line phones, and IoT devices, which are the rest of the internet-connected devices, with this distinction is observable that while more “traditional” internet-connected devices have been stagnant over the last years, IoT has been increasing exponentially reaching the same numbers of devices in 2018 and expected that by 2025 there three times more IoT than non-IoT devices.

IoT devices are significant data collectors since they need sensors or actuators, depending on the device, to gather digital or physical data. In many IoT applications, you need one or more sensors to collect data about the system, once the data is processed, commands can be sent to trigger actions in the system. Also, the sensors collect the data transmitted over the network, and the actuators allow things to work (Kotler et al., 2024; Mouha, 2021). This ability to collect data helps explain the correlation between the growth of volume data in Figure 3 and the growth of IoT devices illustrated in Figure 4. As a result, IoT has become the basis of modern big data, and with the integration of AI, data analysis has accelerated, as previously mentioned. The difference between the data collected by sensors or actuators is essential:

- **Sensors:** They can analyse and convert the surrounding physical environment to valuable information; they have various applications like tracking vehicles and

good locations or monitoring the temperature in smart homes (Kotler et al., 2024; Mouha, 2021).

For example, sensors in retail settings can detect the movements of people and goods within a store. This is incredibly valuable to PepsiCo, they use AI to produce customised planograms for each retail channel partner, containing a diagram detailing the optimal placement of specific retail products on shelves or displays to maximise customer purchases. This is achieved thanks to video cameras, and AI analyses its footage to develop the planogram (Kotler et al., 2024).

- **Actuators:** They convert digital data into physical actions, this allows users to control IoT devices and automate specific actions based on the data collected by the sensors. With IoT, retailers, for example, can deliver instant app notifications about promotions triggered by shoppers walking in the store aisle (Kotler et al., 2024).

Nevertheless, IoT's advantages are not only related to data collection, as one of the enablers of marketing 6.0, it is one technology that allows the merging of physical and digital universes due to its characteristics. Therefore, it is a fundamental technology for creating an immersive experience in retail stores and other physical locations such as customers' homes or offices. IoT can incorporate online features into otherwise offline devices, allowing continuous interactions with digital experiences (Kotler et al., 2024).

However, the most popular use case of IoT for delivering immersive experiences is proximity marketing in retail and food service industries, like both examples mentioned before and some more. American companies like Target, Walmart, and McDonald's use IoT beacons, which are small devices that communicate with nearby devices via Bluetooth and function as micro-location targeting tools, allowing the example mentioned before. However, these devices are more importantly used for data capture, with the strategic placement of these beacons, retailers can track each customer's path and optimise the campaign's timing and the store's layout. This way, physical offline spaces that marketers traditionally had to do extensive market research to optimise can be transformed into online (Kotler et al., 2024).

Another example could be that Hilton uses IBM Watson, a suite of AI-powered technologies, to provide AI-powered concierge services that offer personalised recommendations to guests through in-room devices. By analysing guest preferences, Watson enables Hilton to customise room amenities and services to suit each visitor's unique preferences. Hilton also uses Watson's insights to make data-informed decisions that influence marketing, pricing, and resource allocation based on market trends and customer behaviour (Kumar et al., 2024).

## 5. AI Marketing

With these new possibilities of massive data analysis, a more personalised CRM and the immersion of online and offline spaces, a new term has appeared: AI marketing, which englobes all these practices. CRM can be incredibly improved since AI can optimise marketing campaigns, moderate human error risk, and decrease customer interaction uncertainties. However, human presence is still essential for businesses to connect with their customers since computers cannot yet perform empathy, compassion, human touch, customer support and storytelling and probably never will. Human limitations do not bind AI (Gkikas & Theodoridis, 2022).

The shift away from generic, one-size-fits-all marketing approaches is accelerating. AI in marketing enables precise customer segmentation and dynamic content optimisation, allowing businesses to accurately tailor their messages and offerings. From targeted advertisements to personalised product recommendations, AI algorithms analyse vast amounts of data to understand consumer behaviour and preferences, enhancing engagement, conversion rates, and customer satisfaction (Lee, 2024).

AI can create simulation models and personalise shopping experiences using deep learning technologies to make recommendations and interact with virtual assistants. Many companies use AI to communicate with their clients, such as Amazon, which uses AI to propose goods based on prior purchases, views, and searches (Haleem, 2022).

### 5.1. Customer service: Chatbots and virtual assistants

Marketing 6.0 requires a communication medium that should quickly, systematically, and accurately embody real-time correspondence with the users. After-sales service and customer care are critical, they heavily influence retention and loyalty and can make the customer recommend others, but at the same time, they require a significant investment (IBM iX, 2023).

Generative AI is great for making services more cost-effective and improving customer care. AI can provide clients with smart, easy, and convenient customer support at every step of their consumer journey. The main point is to use AI to solve easy and standard requests precisely and quickly and, therefore, ease the workload of service representatives to focus on more complex and high-value cases in personal interaction with customers (IBM iX, 2023; Haleem, 2022).

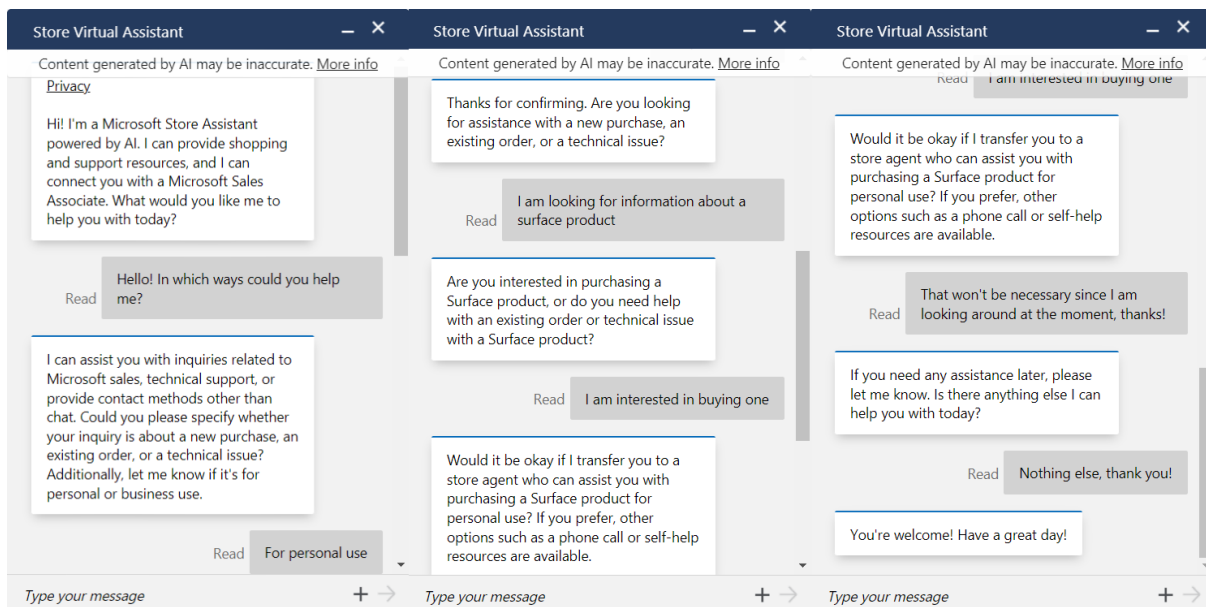
Chatbots were initially developed to minimise costs and reduce the workload that customer service produced overall. Traditional chatbots have been used to handle simple customer service inquiries, such as scheduling appointments or offering easy product details. These chatbots essentially function as interactive FAQ programs, relying on a limited range of standard questions and prewritten responses. However, their keyword-based design makes them susceptible to typos, leading to inaccuracies and resulting in a poor and unsatisfactory customer experience (IBM, n.d.; Lee et al., 2023).

With the emergence of generative AI and the advances in NLP, AI chatbots have significantly improved the customer experience. These chatbots can generate real-time content and engage with users using authentic and tailored responses. AI chatbots leverage various AI technologies, including machine learning to enhance responses over time, and NLP to accurately understand user queries and link them to specific purposes. Through deep learning, AI chatbots continually enhance their accuracy, allowing for more natural and seamless interactions with humans without the risk of misunderstanding (IBM, n.d.; Gkikas & Theodoridis, 2022).

Chatbots can be used on diverse platforms, such as websites, social media, and software such as mobile applications. Many companies are starting to implement this technology, specifically big companies that attend to many customer service support requests, such as Microsoft, as shown in Figure 4. Their chatbot assists in simple and basic services like information about an order or technical support, but when it detects a more valuable interaction, it kindly refers you to a human assistant.

According to a study conducted by IBM (2023), the potential impact of generative AI on customer service could result in an improvement of 25% in conversational AI accuracy thanks to deep learning mechanics, over a 91% accuracy when analysing customer complaints to address emerging issues, and, overall, a 90% reduction in time insight from agent conversations.

*Figure 5: Snapshot of a conversation with Microsoft's Store AI chatbot*



*Source: Created by the author.*

Less than 19% of businesses now use AI chatbot systems for customer service, but approximately 60% plan to introduce this technology. Also, around 69% of customers evaluate their last experience with a chatbot as positive (Fokina, 2024).

In addition to the Microsoft example, the American ticket company Amtrak is another company using chatbots. Amtrak's virtual assistant simplifies ticket booking by enabling users to easily search schedules, check ticket availability, and make reservations. Since chatbots provide continuous customer support and prompt responses to common queries, they improve the overall experience for passengers (Kumar et al., 2024).

## 5.2. AI in Email Marketing

Customers in e-commerce are frequently inundated with emails, many of which are ignored and discarded. However, with the help of AI, it is now possible to generate personalised marketing emails on a large scale, tailored to the user's individual interests (Gkikas & Theodoridis, 2022).

This approach, enabled by AI, allows decision-makers to reach and engage their audience more effectively by identifying new segments, optimising messages through keyword research, and dynamically adjusting marketing strategies. By using specific email marketing campaigns with personalised content, AI can deliver information matching users' past subscriptions and their geographical, demographical, behavioural, or real-time data (Gkikas & Theodoridis, 2022).

AI has a heavy impact on email marketing, particularly in increasing revenues and reducing costs by creating more engaging and easier-to-read content campaigns. AI tools for email marketing also optimise content performance in two main ways. Firstly, they generate better-quality email subject lines for the users by analysing preview email data to train the NLP model. The content generated by AI tends to be better at the rate of opening it and revenues from it. Secondly, NLP models enable the personalisation of content for the email recipient, leading to increased user engagement and conversion rates like personalised product or service recommendations (Gkikas & Theodoridis, 2022).

## 5.3. Content Creation made by AI

When given prompts, generative AI can automatically produce a wide range of content, such as texts, pictures, and videos. This expedites the content creation process and brings about significant efficiency improvements. It can generate campaign ideas, headlines, ads, visuals, and even full-length articles. Furthermore, it assists in exploring innovative and creative concepts with distinctive perspectives, visual elements, and messaging. Integrating these components makes it easier to provide genuinely personalised content on a large scale (IBM iX, 2023).

Computers have become quite reliable in creating content. Content marketing continues to evolve to provide customer-focused articles, engaging web pages, and personalised communication. Businesses use these new possibilities to enhance customer targeting, satisfaction, and conversion. The demand for authenticated, targeted, and engaging content has emerged during this era of interdisciplinary content storming (Gkikas & Theodoridis, 2022).

As previously mentioned, AI is increasingly prevalent in generating various text types, although it still struggles with authenticity. Nevertheless, rapid advancements are being made in this area. The refinement of analytical data allows AI to analyse vast volumes of images across all platforms. Also, new AI systems like Microsoft's Copilot are coming out with impressive abilities to manage multiple tasks. Copilot can create images, work with Windows and Microsoft Office, fix errors, suggest ideas, and respond to requests anytime. As a result, AI can now do highly creative tasks. These advancements might be used in new marketing projects or at least give ideas for them.

Nevertheless, let us get more practical and let us see how AI performs into performing these tasks. I have used the platform DALL-E, the software developed by the famous company OpenAI, to create two sets of posters for two companies, Pepsi and Coca-Cola, with different styles, one retro and the other modern, and giving guidelines or not.

Figure 6 shows two vintage-style posters, I wanted to evaluate if AI could accurately interpret both brands' historical imagery, not just modern visuals. In this case, I gave the AI additional prompts. For the Pepsi poster, I requested, "Create a vintage poster of a Pepsi-Cola promotion for 10 cents.", and it gave an image with slogans that could not be read since the words were blurred entirely and made no sense, so I requested another image with less text in it, it came back with less text, but with the logo being everywhere around the poster, finally the third image (Figure 6) was more acceptable. I requested the same thing for Coca-Cola, resulting in the image shown in Figure 6.

After reviewing the posters, it is clear that AI effectively captured the vintage styles of both companies used by them at the time. Additionally, in an interesting way, the AI met the initial request for Coca-Cola by creating a Christmas poster featuring the iconic figure of Santa in the background, associated with the brand as a symbol of it. Looking at the logos, while the Coca-Cola one looks realistic, it is worth noting that the Pepsi logo, though slightly inaccurate, is still well put together. Both posters are authentic, and the Coca-Cola one could easily pass as an official brand poster.

*Figure 6: AI-generated vintage posters, on the left for Pepsi-Cola and on the right for Coca-Cola*



*Source: Created by DALL-E (2024)*

For the modern posters shown in Figure 7, I did not specify any request, I made the prompt “Do a poster that Pepsi/Coca-Cola could use right now” and used the first posters that the AI generated.

Looking at the posters, it is evident that the AI has fitted them to be a modern portrayal of the brands, incorporating their respective logos and adjusting the visuals to align with each brand's unique current identity. The AI has made a livelier vibe into the Pepsi posters, focusing on the summer ambience, while the Coca-Cola posters project a more sociable experience. Both posters are entirely aligned with each brand. Additionally, the AI has made different slogans for each brand, drawing from a 2016 campaign for Coca-Cola and featuring a new one for Pepsi. However, some things are off, like the logo in the Coca-Cola poster being everywhere and some mistakes in the design of the people in it. Although these posters are not entirely realistic, they offer a more creative approach and could be used for both brands for innovative ideas, especially the Pepsi poster.

*Figure 7: AI-generated modern posters*



*Source: Created by DALL-E (2024)*

Coca-Cola is one company that has used content creation AI in successful marketing campaigns, not once but twice in 2023; Coca-Cola has always been at the forefront of marketing innovation. The first campaign, "Create Real Magic," launched a platform where users from selected countries could generate artwork using DALL-E. The company would select a few to be shown in New York Times Square and London Piccadilly Circus. Over 120000 pieces of artwork were generated, with people spending, on average, more than 7 minutes on the website. This campaign was so successful that Coca-Cola made it again for Christmas that same year, generating personalised Christmas cards. Coca-Cola also introduced the Y3000 flavour, a product of their collaboration with AI, as part of their promotional campaign. They also took advantage of the excitement surrounding the Las Vegas Sphere by launching an engaging campaign that allowed consumers to interact by scanning a QR code with their smartphones (Coca-Cola, 2023; Keenfolk, 2024).

The second campaign, "Masterpiece, " made a remarkable impact with its unforgettable ad featuring renowned artworks that were brought to life using AI-generated animation, like Munch's Skrik (Figure 8) . Coca-Cola collaborated once again with OpenAI to flawlessly blend live action with animated masterpieces. "Masterpiece" presents Coca-Cola's brand identity and pushes the boundaries of AI advertising campaigns (Coca-Cola, 2023; Keenfolk, 2024).

*Figure 8: Snapshot of the campaign video*



*Source: Coca-Cola Masterpiece video released in 2023*

Coca-Cola's utilisation of generative AI demonstrates how the technology can reinforce connections with consumers and craft personalised brand experiences. However, it is essential to understand that companies do not have to rely entirely and solely on generative AI for content production. AI is a very valuable tool for inspiration and content generation, but it has some limitations that will be discussed in the following section.

#### 5.4. The Influence of AI on Social Media

Companies using AI on social media platforms gather significant customer data. This data includes their preferences, the content they share, the timing of their shares, and some demographic and geographical insights. Like Ben & Jerry's ice cream breakfast initiative, this data is leveraged for social listening, sentiment analysis, text mining, and behavioural data processing to reveal new customer behaviour patterns (Gkikas & Theodoridis, 2022).

The use of AI can assist marketers in creating content for social media sharing and distribution. Copywriters and social media analysts can quickly produce targeted content with AI tools. Additionally, AI-powered social media tools can analyse past post data to identify patterns for creating and curating content, such as determining the most effective colours, keywords, and hashtags to boost user engagement. Furthermore, these tools may predict which posts will maximise reach, clicks, shares, conversions, and brand awareness in the future (Gkikas & Theodoridis, 2022).

Marketers can efficiently monitor and analyse their audiences, create content, and engage with clients across various social media channels by using platforms that manage multiple advertisements from various social media accounts all in one place (Gkikas & Theodoridis, 2022).

However, AI can be used in various ways in social media, not only for content creation and data analysis, which are also incredibly influential in the marketing field:

- **Recommendation systems:** Most significant social media platforms now use this data analysis for recommendation systems to categorise and target users with personalised content based on their profile data and online behaviour, such as



shares, likes, comments, purchase history, and browsing activity. These systems help users navigate digital resources and various products and services by providing content that aligns with their interests and preferences (Ahramovich, 2024).

LinkedIn uses these systems to suggest job matches, recommend connections, prioritise relevant posts in users' newsfeeds, and provide access to online courses through its eLearning platform. Additionally, it can evaluate and rank suitable candidates for a job based on their skills and location (Ahramovich, 2024).

- **Image and video analysis:** Social media platforms include lots of visual data, and AI-powered visual search algorithms can examine millions of photos and videos to find useful information. For instance, computer vision is used by data analytics and business intelligence companies specialising in social media marketing to identify logos and monitor brand presence and mentions. Contextual purchasing is another application of this technology that enables consumers to purchase goods mentioned in multimedia content straight from social media platforms. AI can also speed up tagging images and videos, facilitating user content discovery. Also, thanks to NLP, AI can automatically translate content into almost any language, including text, images, and videos (Ahramovich, 2024; Gkikas & Theodoridis, 2022).

YouTube famously uses this technology to autogenerate captions in all videos and translate them into almost any language, helping content creators reach a wider audience. Real-time captions for live streams are currently only available in English (Ahramovich, 2024).

- **Content moderation and bot detection:** Hate speech and bots are historical issues in social media, with different companies giving them a different focus. While Meta enforces strict regulations, other platforms, like X (formerly Twitter), are more tolerant. Companies seek safe spaces free from hate speech to display ads and protect their reputation. Since X revised its policies to allow almost any comment on the platform, many major companies have pulled their marketing campaigns, causing a fiscal crisis for X. Following Elon Musk's acquisition, X's value plummeted by over 70% towards January 2024, leaving the company at a state of incredible debt (Gabbatt, 2024; Hetzner, 2024).

It is clear that moderation is crucial in social media for companies to initiate successful marketing campaigns across various platforms. AI-powered moderation systems are effective in this as they work alongside human fact-checkers, professional moderators, and user reports to identify and remove harmful content efficiently. These tools utilise computer vision to analyse visual information and detect graphic images while also using NLP to monitor comments and posts, searching for hate speech, fake news, spam, and cyberbullying (Ahramovich, 2024).

As mentioned earlier, Meta enforces strict rules. In 2020, they introduced Deep Entity Classification (DEC), a machine-learning software designed to identify

malicious Facebook accounts. Instead of just focusing on individual accounts, the system analyses the behavioural patterns of their connections within the same social network, like their friends. This approach resulted in a 27% decrease in abusive accounts compared to conventional methods (Ahramovich, 2024).

Nonetheless, AI is highly effective for managing social media content and is valuable when companies seek to gather various insights about their online reputation or simply for content management purposes. Nowadays, social media managers and marketing specialists have a great range of AI-powered software to choose from. Some of the applications that offer AI-based solutions for these purposes include:

- *Canva*, a leading graphic design platform for social media, has expanded its scope by introducing AI-based visual and textual content creation tools.
- *Sprout Social* offers a comprehensive suite of social media management and analytics solutions with various AI-powered features to streamline publishing workflows, derive consumer insights, and enhance audience engagement.
- *Hootsuite*, a well-established social media management platform, features advanced AI capabilities for content creation, social commerce, and analytics. These tools aid professionals in launching ad campaigns, scheduling posts, and tracking customer conversations across multiple social networks.
- *Zoho's* wide range of cloud-based software products for businesses includes *Zoho Social*, a specialised service for social media management that has recently integrated *Zia*, a ChatGPT-based tool designed to improve content quality and publishing efficiency.
- *Reputation*, as its name implies, monitors social media sentiment to assess consumer opinion about a brand. Focusing on data analytics, this platform enables social media managers and marketers to transform implicit or explicit consumer feedback into valuable business insights using NLP and deep learning.
- *Meltwater* is an all-in-one SaaS solution for online media monitoring that has served marketing and communications professionals for over 20 years. It encompasses social listening, consumer intelligence, and social media management within an integrated toolset.

Subsequently, social media is significant today and can be a powerful tool for marketing campaigns that can be enhanced with AI's assistance.

#### 5.4.1. AI Influenced Influencers

The rise of social media has made influencer marketing an essential strategy. This strategy works by using the trust and popularity of social media personalities to endorse brand messages. This contemporary marketing method takes advantage of these personalities' influence over their followers, employing their recommendations as powerful tools for persuasion and engaging with customers (Quantum, 2024).

AI has transformed social media, as we have just seen, the different options it offers in social media can help influencers manage their various accounts and analyse their impact

on every platform. With AI data analysis capabilities, influencers can better understand their target audience, create tailored content, and elevate their copywriting. This allows influencers to gain extra time, which they can invest in organising events or simply attending them, potentially boosting their popularity further.

However, AI has created virtual influencers, which are digital models designed to look and act like real people. They have their own social media profiles and share content created by marketers, agencies, or studios. Usually, brands are the ones that use virtual influencers more to connect with customers on social media because they have human-like characteristics and personalities and because they are seen as more reliable and predictable than human influencers, who could act in unpredictable ways. But, although they are created based on AI, there are humans involved in creating the looks, posts and interactions (Gerlich, 2023).

Virtual influencers use human-like traits but are not based on real people. Companies use virtual influencers to create and share content and marketing campaigns on various social media platforms to engage with their target audience. To achieve that these virtual influencers have more credibility and trust in their post, for example, there are clues about their social lives. It is important to note that consumers are generally aware of the use of virtual influencers in these campaigns, as brands explicitly disclose this through introduction videos, captions, and the virtual influencer's visuals. This avoids the uncanny valley effect, that is, the discomfort of a human-looking character that is clearly non-human (Gerlich, 2023).

There are currently many virtual influencers on social media, but only a few are successful. In 2016, the marketing agency Brud created an Instagram account for the virtual influencer Miquela Sousa, better known as Lil Miquela. This project generated significant interest in the market and successfully raised over \$120 million through fundraising efforts within the first year. They established a successful career for her, eventually launching her as a singer on Spotify and having her participate in the renowned Coachella music festival (Ifema, 2022).

After launching her career as a singer, they expanded her presence to other social media platforms like TikTok, YouTube and Facebook. They have achieved to raise over eight million followers across these platforms. As a result of all of this, Lil Miquela has been featured in various campaigns for well-known companies, including Samsung and Calvin Klein, where she was featured alongside Bella Hadid, among others (Gerlich, 2023; Ifema, 2022).

One of the campaigns that gained a lot of popularity is the one made for BMW in 2023. This campaign featured an almost three-minute ad and diverse posters like the one shown in Figure 9. The main message that BMW wanted to transmit is that their new car was a car that transcended realities and was a glimpse into the future (Media Monks, 2023; Reason Why, 2023).

**Figure 9: Lil Miquela x BMW**



*Source: Media Monks (2023). Damos la bienvenida a Lil Miquela a nuestro mundo • Cómo BMW acelera la innovación en el marketing del automóvil*

Virtual influencers may not have as extensive a reach as human influencers, but Statista (2023) reports that around 50% of consumers in the United States follow a virtual influencer.

However, these influencers have some issues. Since they are fictional and perfectly tailored for each campaign, consumers may perceive these influencers as lacking transparency and, more importantly, authenticity. Another issue is that they are incredibly beautiful, making them more appealing but setting unachievable beauty standards for those who may forget that they are not real (Klein, 2023).

### 5.5. Smart Search Engines with AI. How has SEO changed?

SEO involves a series of professional activities to enhance content structure, improve search engine visibility, and drive substantial traffic to the website. Meanwhile, a search engine is a service that enables web search by carrying out three vital functions: crawling, indexing, and ranking, and identifying items in the system record or database that match the keywords specified by the user (Vinutha & Padma, 2024).

Traditionally, search engines match entered keywords with specific profiles, channels, or posts. However, AI-powered systems can understand incorrect or incomplete user input. They can recognise misspelt names or related concepts based on context. Like Google Search's autocomplete feature, these systems can also consider common synonyms, search trends, and user browsing habits (Ahramovich, 2024; Keever, 2024).

Google's RankBrain is the principal AI-based software that, although not new since it was introduced in 2015, with recent advances in AI, has been sophisticated, significantly impacting SEO by improving search result accuracy and personalisation. This has led to

a more complex yet competitive SEO landscape. These algorithms use NLP to understand the user's intent and improve performance (Dean, 2024; Keever, 2024).

RankBrain has two main purposes: understanding search queries with keywords and measuring how people interact with the results. Understanding how Google's software works will help us comprehend how AI has changed the field.

In the past, Google would attempt to match the words in your search query to words on a page. Nowadays, RankBrain strives to understand your intent by correlating new keywords with known keywords in Google's database. For example, if many users search for "grey console developed by Nintendo," RankBrain learns that they are interested in gaming consoles. Therefore, when someone searches for "the grey console developed by Sony," RankBrain associates it with the known keyword ("grey console developed by Nintendo") and displays relevant results about gaming consoles, in this case, the PlayStation (Dean, 2024).

RankBrain analyses search results to predict what will be relevant to you. If many users prefer a specific page in the results, RankBrain will boost that page's rankings. On the contrary, if the page is unpopular, RankBrain will replace it with a different page. RankBrain evaluates the new page's performance when the same keyword is searched again. RankBrain pays close attention to how users interact with the search results by looking at four metrics (Dean, 2024):

1. *Organic click-through rate*: This is the percentage of people who click on a search result and visit a website.
2. *Dwell time*: This is how long a visitor stays on a webpage before going back to the search results page.
3. *Bounce rate*: This is the percentage of visitors who leave a webpage without doing anything, like clicking a link, filling out a form, or purchasing anything.
4. *Pogo-sticking* happens when a person goes back and forth between different search results to find what they are looking for.

These metrics are commonly known as user experience signals (UX signals). For example, if you are looking for a recipe and searching for it, you will probably click on the first result, but since you believe it is not good, leave the page for the second result. In this one, you stay longer but do not like the ingredients, so you leave for the third one, which is what you were looking for; you will read the page and, since it is what you were looking for, not revisit the results page (this is pogo-sticking). If Google realises that people stop pogo-sticking on a specific result, it will move that page up on the results (Dean, 2024).

As search engines become better at understanding user intent, the field of SEO has evolved. AI-powered tools now play a key role in automating SEO tasks by analysing data, providing recommendations, and assisting in taking action to improve a website's search engine ranking (Dean, 2024; Keever, 2024).

Before making any improvements, it is important to thoroughly check the website to find and fix any technical issues. This ensures that the website is prepared for further enhancements. Next, detailed research will be conducted to find the most relevant and important keywords. AI tools help discover these keywords, including those used by competitors. This research provides the foundation for optimising the website's content to meet search engine requirements and user needs (Keever, 2024).

Additionally, it is worth stating that it is important to regularly update the content strategy based on AI tools insights to maintain relevance and quality. It is also crucial to analyse backlinks, a strong backlink profile is essential for SEO success. Using AI tools to monitor and discover opportunities for high-quality backlinks is vital (Keever, 2024).

Several commercial SEO tools are available, such as Ubersuggest, Moz Pro, KWFinder, SEMRush, Google Search Console, Ahrefs, or Serpstat. Most of these SEO tools have the advantage of being cost-free, with the paid tools being based on usage patterns. Many users reported using local SEO tools to optimise localised traffic. These tools are mobile and customer-friendly, and their recommendation services are expert-based. However, SEO changes fast, which causes uncertainty about the consistency of ranks in the future, and the process of generating responses in SEO is quite slow; even after frequent updates to web pages, there is no guarantee of timely results within a tentative duration (Vinutha & Padma, 2024).

It is essential to understand that SEO is an ongoing process, not a one-time task, requiring periodic strategy reviews.

## **6. Limitations and Concerns Issues of AI**

The use of AI for marketing purposes has become general and, with that, problems with the uses of AI that companies do. Businesses, as discussed, increasingly use AI to create personalised customer experiences and improve operational efficiency. However, they are now challenged to balance innovative personalisation techniques with respecting individual privacy and ensuring data security.

According to a study by the IBM Institute for Business Value (2023), executives highlight three top barriers to implementing AI: cybersecurity, privacy and accuracy. In addition, the study also found that four out of five see one of the following issues as a significant concern: bias, trust, safety and explainability. This data aligns with the study conducted by Naz & Kashif (2024), who conducted interviews to discover that customers fear the perpetuation of existing biases, the violation of their privacy and that there was a general sense of untrustworthiness.

Moreover, AI also presents some limitations that should be taken into consideration.

## 6.1. Limitations in AI

Although we have discussed the capabilities of AI in this thesis, we have yet to acknowledge its limitations like any other tool naturally has. AI is a powerful software, but it still needs a human person as its supervisor to make it work. It is essential to understand that AI is not human, and things like empathy, creativity, or intuition are not things AI can comprehend.

Firstly, even though AI is an important tool for businesses to enhance operations and improve customer experience, it is essential to recognise that to some companies, it may be a costly thing to do. Furthermore, because AI is widely accessible and quickly adopted by competitors, it does not provide a long-term competitive edge (Kumar et al., 2024).

Also, AI cannot see the big picture for specific organisations, it does not comprehend the thorough analysis that needs to be done in the context of an organisation to create strategies (Nelson-Bogle & Downey, 2023). Additionally, AI sometimes lacks the proper understanding of customer context situations since AI analyses multiple data sources about a customer and may obtain contradictory information. For example, suppose an AI wants to get information about a customer's location. In that case, it may receive information from their phone and watch simultaneously, with one stationary and the other moving (Alawamleh et al., 2024).

According to Alawamleh et al. (2024), consumers prefer interacting and communicating with humans rather than computers. Therefore, it is unlikely that AI will replace humans. Similarly, customers prefer ads with emotional messages delivered by humans over those created by AI.

Despite the advancements in NLP, AI still struggles to recognise and respond to human emotions. This makes it challenging to establish genuine relationships with consumers and provide empathetic interactions. Chatbots and virtual assistants may require human assistance to comprehend consumer needs and respond appropriately to improve customer service. This can result in customer dissatisfaction and damage their relationship (Alawamleh et al., 2024). AI lacks the human touch necessary to convey genuine empathy, essential for establishing deep connections as human communication does. As AI lacks emotions and consciousness, it is not well-suited for tasks requiring empathy and compassion, basic human qualities that drive our creativity (Nelson-Bogle & Downey, 2023). However, it must be noted that NLP is allowing AI to start understanding human emotions more effectively and Chatbots with the combination of human assistants could be very effective.

AI can help with creative recommendations, as seen in the poster example in Figure 7, but it cannot be creative like a human person. AI may enhance your marketing, but the heart of every great ad is still innovative, surprising, human-led creativity, especially regarding visuals (Nelson-Bogle & Downey, 2023). However, it is worth stating that incredible developments are made in the area, as appreciated in Figure 6 or Coca-Cola's campaign in Figure 8.

Mondelez International is a recent example of a company that changed its entire marketing strategy with human minds. With powerhouse brands such as Oreo, Cadbury, and Belvita, the company experienced firsthand how e-commerce and digital channels revolutionised the consumer packaged goods market, enabling brands to establish more direct connections with consumers instead of relying solely on traditional retailers (Nelson-Bogle & Downey, 2023).

Mondelēz International's marketing team partnered with Google Cloud to combine their separate data and make it easy to analyse. They then adjusted their digital strategy to provide personalised content to customers, standing out from competitors. This digital transformation led to a global ROI increase of over 10% and set the stage for long-term strategic marketing initiatives (Nelson-Bogle & Downey, 2023).

## 6.2. Transparency, Trust and Explainability

Transparency is one of the major concerns regarding AI. In today's digital landscape, consumers are more aware of and interested in how their online activities and digital footprint are tracked. It is crucial for companies to openly communicate the type of data they gather, how it is used, and the AI-driven processes and algorithms that are involved. This enables consumers to grasp how their information is used and empowers them to make knowledgeable choices regarding their privacy. Additionally, it raises trust between companies and consumers, which is crucial for building and sustaining long-term customer relationships (Lee, 2024; Rivas & Zhao, 2023).

However, this is a short answer to a complex problem. Alawamleh et al. (2024) clearly state that AI algorithms, even for their creators, may not be completely transparent. The lack of transparency in AI algorithms can make it difficult for customers to understand the logic behind their decisions, raising concerns about trust and the use of AI. This lack of understanding can lead to mistrust and reluctance in using AI.

One of the ongoing challenges in adopting technology is people's understanding of the outcomes produced by AI systems, also known as the Black Box Problem. Alawamleh et al. (2024) also discovered that the black box effect can complicate the interpretation of AI actions, potentially leading to heightened anxiety and mistrust if people experience negative consequences. Efforts have been made to address this issue by promoting explainable AI (XAI), which comprises processes and methods enabling human users to understand and trust results and output produced by machine learning algorithms. XAI ensures that every process that leads to the answer is entirely trackable and explained (IBM, n.d.).

Therefore, it is indeed important to promote trust in AI. This trust relies heavily on following laws and regulations, transparent corporate practices, and ethical standards. Therefore, building trust in artificial intelligence involves setting and upholding reliable norms, using unbiased methods, and being transparent in decision-making processes (Alawamleh et al., 2024).



### 6.3. Algorithm Bias

It is clear that AI has a more efficient data analysis capacity than humans. However, humans make data, and humans have prejudices. AI may produce prejudiced outcomes for two main reasons:

- The data used for the AI training may have been prejudiced. Since the majority of AI's data is historical, it can inadvertently analyse data based on discrimination (Alawamleh et al., 2024).
- The AI decision-making process may have been affected by prejudice since the developers made the articulation or how formulated criteria that way unintentionally (Alawamleh et al., 2024).

Artificial intelligence algorithms can potentially inherit and perpetuate biases from historical data, as they rely on past information to make decisions. As a result, AI-driven decisions may unfairly impact certain groups, increasing inequality and promoting discriminatory behaviour (Alawamleh et al., 2024).

Efforts to mitigate bias are crucial for building trust in AI. It is important for companies to actively seek out and rectify any biases in their AI through testing and monitoring. This will ensure that AI-generated content is fair and inclusive and does not reinforce existing biases (Rivas & Zhao, 2023).

Various companies have created different software to prevent biases. For example, Accenture has designed AI-powered tools that evaluate AI models for biases and discrimination. These tools can identify prediction variations based on demographics and offer metrics for measuring model fairness, allowing comparisons across different groups. On the other hand, Pymetrics uses AI algorithms based on neuroscience to match job seekers with roles that align with their cognitive and emotional strengths rather than demographic factors (Kumar et al., 2024).

### 6.4. Data Privacy and Security

Data privacy is a major concern when it comes to AI. The capability of AI to process vast amounts of data has significantly increased, leading to discussions about privacy, particularly in how businesses gather, store, and share such sensitive information. AI gives rise to privacy issues as methods like surveillance, facial recognition, and speech recognition collect large volumes of personal data (Alawamleh et al., 2024).

For example, many websites track users' internet activity and history without their consent, collecting data that is then sold to third parties for marketing purposes. This widespread collection and sharing of consumer data with third-party companies poses a significant threat to privacy. AI's capacity to analyse extensive amounts of customer data heightens the risk of re-identifying individuals and turning anonymous data into identifiable private information even after it has been deleted (Alawamleh et al., 2024).

Companies must prioritise protecting personal data and ensure their AI technology complies with relevant privacy laws and regulations so that customers gain more trust in the company and their use of AI so that they are not hesitant to use company products.

Furthermore, cybersecurity is a significant concern, as AI systems are susceptible to data breaches, fraud, and hacking. Some companies, like Sift, have implemented security measures using AI-driven biometric authentication methods such as facial recognition, fingerprint scanning, and voice recognition to prevent unauthorised access and detect fraudulent activity by analysing user behaviour patterns (Kumar et al., 2024).

The concerns about privacy that many people have today and the focus on how companies use consumers' data can be traced back to the Facebook-Cambridge Analytica Scandal of 2018. Cambridge Analytica, a political consulting firm that worked for Trump's 2016 presidential campaign, created a quiz for Facebook users, from which around 270000 people participated. The initial purpose was to gather data from the quiz participants; however, the firm exploited a loophole in Facebook's API, which allowed them to access not only the data of the quiz takers but also that of their friends. This breach affected more than 80 million users. It was reported that Facebook was already aware of this loophole, but they only addressed it by banning the sale of data obtained through it, which did not prevent Cambridge Analytica from doing so anyway. Nevertheless, it is true that Facebook was unaware of the data breach (Chang, 2018).

The CEO of Facebook, Mark Zuckerberg, addressed this scandal five days after it was revealed to the public through a Facebook post; he said that this scandal was completely unprecedented and that he would make sure that it would not happen again. (Stewart, 2018). However, former Facebook employees revealed tension between the security team and the policy team that same year (Chang, 2018). Sandy Parakilas, who worked at the privacy team of Facebook, said to the New York Times, *"The people whose job is to protect the user always are fighting an uphill battle against the people whose job is to make money for the company"* (2018).

Cambridge Analytica did not actually do much to elect Trump as president since the firm's reputation was never incredible. However, this scandal led to the current debate about how companies use consumers' information and, even more concerning, how third parties can access this data without the main company knowing (Chang, 2018).

## 6.5. General Protection of Data Regulation (GDPR) and AI Act in the EU

GDPR is the current legislation regarding data protection and consumer privacy in the European Union; the law was passed in 2016 and became effective in 2018.

AI is not mentioned explicitly in any part of the GDPR. However, this technology must comply with various policies of the regulation. Although there is a conflict between traditional data protection principles and the use of AI and big data, there are ways to apply the GDPR that are consistent with the various uses of AI and big data (Sartor &

Lagioia, 2020). According to the report made for the European Parliament made by Professor Sartor and Dr Lagioia (2020), various principles of the GDPR apply to AI:

- The concept of purpose limitation concerning AI and big data can be adapted to allow for the flexible reuse of personal data if it aligns with the original purposes for which the data were collected. This can come into conflict with the necessity of AI for vast amounts of data analysis (Sartor & Lagioia, 2020).
- The principle of data minimisation can be seen to accommodate the beneficial use of AI. It may involve reducing the identifiability of available data through pseudonymisation to minimise links to specific individuals. Re-identifying data subjects should be treated as creating new personal data, following all relevant regulations. Strict controls should be in place to prevent re-identification unless it complies with the original purpose of the data and meets all legal conditions for collecting personal data. However, this practice is forbidden unless those criteria are met (Sartor & Lagioia, 2020).
- The GDPR requirements can be fulfilled in AI-based processing, but the intricate nature of AI applications must be considered. Information provided to data subjects should facilitate their understanding of the purpose and boundaries of each AI-based processing without unnecessary technical intricacies (Sartor & Lagioia, 2020).
- The GDPR allows for making inferences from personal data with suitable safeguards. Profiling is generally prohibited except in specific instances (such as under contract, by law, or with consent). There are uncertainties surrounding the provision of individual explanations to data subjects and the application of reasonableness criteria to automated decisions (Sartor & Lagioia, 2020).
- The GDPR provisions on preventive measures do not impede the development of AI systems, provided they are designed and implemented correctly. Specifying which AI applications pose high risks and necessitate a data protection assessment is essential (Sartor & Lagioia, 2020).
- Using personal data for statistical purposes presents new opportunities for processing such data without implying new personal information. When conducting statistical processing, it is crucial to implement security measures, including at least pseudonymisation, proportionate to the risks to the data subjects (Sartor & Lagioia, 2020).

Since the breakthrough of generative AI and the start of the widespread use of AI in all fields, more specific regulations and harmonisation of different AI laws have been needed. Especially since the EU central data regulation does not make explicit allusions

to AI. This is why the European Commission proposed in 2021 the AI Act, which was passed in March 2024 and came into force in August 2024.

This new regulation classifies AI into their level of risk to society and safety and security, classifying it into four different levels according to the European Commission (2024):

1. Unacceptable risk: According to the European Commission (2024), this level is defined as: *“These AI systems are considered explicit threats to society and human rights and are banned and forbidden. This could include forms of social scoring by governments or toys that encourage dangerous behaviours.”*
2. High risk: According to the European Commission (2024), this level includes the following: *“These are AI systems that can be used in critical infrastructure (e.g., transport management), educational training (e.g., exam scoring), safety components (e.g., AI applications in robot-assisted surgeries), HR areas (e.g., CV-sorting systems for recruitment procedures), essential private and public services (e.g., credit scoring denying citizens opportunities to obtain a loan), law enforcement (e.g., evaluation of evidence), border control management (e.g., automated visas), and administration of justice and democratic control (e.g., AI solutions for court rulings).”*

Additionally, high-risk AI systems must comply with stringent regulations before being authorised. This entails having a robust risk mitigation system, a high-quality database, traceability of their entire activity, documentation of all processes used by the AI, provision of non-technical information for better understanding, human oversight requirements, and guaranteed security (European Commission, 2024).

3. Limited risk: Limited risk in AI refers to the potential dangers that arise from the lack of transparency in AI use. The AI Act includes specific transparency requirements to ensure that people are well-informed, helping build trust. For instance, when using AI systems like chatbots, it is crucial to inform users that they are interacting with a machine so that they can decide whether to continue or disengage. Providers must also ensure that content generated by AI is identifiable. Furthermore, AI-generated text meant to inform the public about matters of public interest must be clearly labelled as artificially generated. This labelling requirement extends to audio and video content, including deep fakes (European Commission, 2024).
4. Minimal or no risk: The AI Act permits the unrestricted use of AI with minimal risk. This category includes AI-powered video games and spam filters, among others. Most AI systems currently used in the EU fall into this low-risk category (European Commission, 2024).

## 7. Conclusions and Future Scope

In this thesis, I have analysed multiple sources to understand the current context of AI and marketing. AI is a software that will continue to develop as the amount of data exponentially increases, and its applications are incredibly profitable for businesses.

It is clear that AI in marketing has evolved from an external tool to one of the field's bases, giving businesses an incredible number of advantages. We have seen how, thanks to AI-powered data-driven marketing, data can be analysed at a rate we have not seen before, ensuring that a completely personalised experience for each customer is possible, upgrading their loyalty and trust in their favourite brands, investing in AI have very good ROIs and is expected to increase.

We have also seen how different marketing activities have changed due to AI. Marketing campaigns are now more sophisticated than ever, from SEO to content creation. However, with AI's help, marketers' productivity has never been so high since AI can automate processes that require a lot of time investment, like chatbots, which ease the workload of customer service. This also leads to better CRM management since human representatives can focus on more high-value transactions.

AI also improves the management of digital campaigns since new AI systems can give recommendations about creative decisions and general strategies.

However, AI, despite its clear implementation in all fields, has some serious problems that worry businesses and consumers. Apart from general AI limitations, things like data privacy concerns, data biases, and a general lack of trust and transparency still need to be considered. Additionally, regulations are being implemented in various parts of the world, like the GDPR and the AI Act, to protect consumers from such things.

Nevertheless, despite these concerns AI has at the moment, advancements are being made to solve them since AI is expected to increase even further in the future. In contrast, according to Statista (2024), in 2024, AI global revenue is expected to surpass 184 billion US dollars, a figure that is forecasted to be over 800 billion US dollars in 2030.

Additionally, AI is not going to take any of our jobs soon. Although it is true that AI has an excellent capacity for automation and, according to Barclays (2024), 20% of the marketing workload could be automated, AI can only function with human oversight of some kind because overreliance on AI is still something that does not work out well.

In conclusion, AI is now fully integrated into our society and across a wide range of fields and sciences. Marketing, in particular, is evolving rapidly thanks to AI, flourishing in the new era of Marketing 6.0. Despite the general mistrust in AI, efforts are being made to address it by increasing the transparency of algorithms and address other range of problems. AI is the most important breakthrough in technology, and it will develop further.

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