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The Evolution of the Representations of Artificial Intelligence in Cinema: An Analysis of the Last 10 Years Based on the IMDb Dataset

Yapay Zekâ Temsillerinin Sinemadaki Evrimi: IMDb Veri Seti Üzerinden Son 10 Yılın Analizi

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Abstract

Films are an important source of data for understanding the socio-cultural and ideological dynamics of different periods. In particular, science fiction and horror films are strongly shaped by the political and social climate of their time. These films reflect social anxieties, expectations and dominant ideologies. This study aims to identify changes in the depiction of artificial intelligence (AI) in cinema and to interpret these changes within the context of broader social trends. Using qualitative content analysis with a descriptive approach, a document search was conducted via the IMDb database, identifying 186 feature-length films released between 2014 and 2024 and tagged with "artificial intelligence." Based on IMDb's popularity metric, 11 films were selected as a sample, and AI-related themes were coded and analysed. Between 2014 and 2019, AI was predominantly portrayed through more optimistic and supportive narratives. After 2020, however, increasingly anxious representations emerged, shaped by concerns such as unemployment, technological determinism and ethical dilemmas related to AI. In recent years, narratives emphasizing the manipulative power of AI through algorithmic systems have become more prominent.

Keywords: Artificial Intelligence, Representation, Science Fiction, IMDb.

Öz

Filmler, dönemlerin sosyo-kültürel ve ideolojik dinamiklerini anlamada önemli bir veri kaynağıdır. Özellikle bilim kurgu ve korku türleri, dönemin siyasal ve toplumsal konjonktüründen yoğun biçimde etkilenmektedir. Bu tür filmler, toplumsal kaygı ve beklentileri ya da hâkim ideolojinin görüşlerini yansıtabilmektedir. Bu çalışmanın amacı, filmlerdeki yapay zekâ temsillerinin değişimini saptamak ve bu değişimi toplumsal yönelimler bağlamında yorumlamaktır. Çalışmada, nitel analiz yöntemlerinden içerik analizi kullanılarak filmler betimsel bir yöntemle incelenmiş ve filmlerde yer alan temalar saptanmıştır. Araştırma kapsamında IMDb veri tabanı üzerinden doküman taraması yapılarak, 2014–2024 yılları arasında çekilen ve "yapay zekâ" etiketiyle listelenen 186 uzun metrajlı film çalışma evrenine dâhil edilmiştir. Sitede yer alan "popülerlik" (popularity) kriterine göre belirlenen 11 film örneklem olarak seçilmiş ve bu filmlerdeki yapay zekâ temsiline ilişkin temalar kodlanmıştır. Çalışma kapsamında belirlenen dönemin ilk yıllarında (2014–2019) yapay zekâya dair daha olumlu bir yaklaşım öne çıkarken, 2020 sonrasında işsizlik, teknolojik determinizm ve etik ikilemler gibi konuların gündeme gelmesiyle birlikte daha kaygı temelli temsillerin arttığı görülmektedir. Son dönemde ise algoritmaların belirleyiciliği üzerinden yapay zekânın manipülatif gücüne odaklanan anlatıların çoğaldığı dikkat çekmektedir.

Anahtar Kelimeler: Yapay Zekâ, Temsil, Bilim Kurgu, IMDb.

Introduction

Artificial intelligence (AI) is a topic of increasing discussion, not only in technological circles, but also in social, cultural and ethical debates. Given its pervasive role in modern life, it is no surprise that cinema, as a field of cultural production, reflects and reproduces the expectations and concerns surrounding AI. Since its inception, cinema has evolved alongside technological developments. As Şentürk (2016, p. 31) highlights, cinema has depended on inventions such as the camera, which have shaped its production, marketing, and distribution processes. Digitalisation, driven by computer technologies, has transformed devices, practices and even cinematic narratives. Dixon (2007, p. 43)argues that digital discovery in cinema is as significant as its invention, introducing new rules for filmmaking. Today, AI impacts cinema in areas such as audience analysis, scriptwriting, editing and sound design, while also enhancing marketing strategies to reach wider audiences. Film production supported by various artificial intelligence tools is essentially linked to the rise of generative AI technologies, which have experienced a major leap forward in recent years. The question is whether human artists should be expected to compete with AI systems capable of producing complete works independently, or whether any digital tool with AI-driven features should also be included in this discussion. Since around 2017, AI-assisted creativity has already become standard practice. Everyday tools used by hundreds of millions of people—such as automatic photo enhancement, object and face detection, smart photo selection, single-image parallax simulation, and auto-generated design layouts—demonstrate how deeply AI is now embedded in contemporary creative processes (Manovich & Arielli, 2024, p. 30). Contemporary media culture is increasingly shaped not only by stories about artificial intelligence but also by the presence of AI technologies within production and distribution processes themselves. The distinction between filmic representation and algorithmic operation has therefore become increasingly blurred, as moving images and sounds circulate through systems governed by AI (Eugeni & Pisters, 2020, p. 91).

Artificial intelligence has become an essential component of contemporary filmmaking, shaping both creative and technical dimensions. Studies show that AI assists in scriptwriting, editing, and visual production by analysing large narrative and audience datasets, helping filmmakers design stories that engage viewers more effectively. These tools enhance creative efficiency and reduce costs while allowing directors to focus on conceptual aspects. Yet, the increasing reliance on AI also raises ethical and cultural concerns related to authorship, originality, and algorithmic bias (Pradeep et al., 2023, pp. 111–116). Cinematic representations shape perceptions of reality and construct worldviews through social and cultural discourse (Kellner & Ryan, 2010, p. 35). These representations are tools of power, used to construct or defend social realities. This study examines how representations of AI in science fiction films have evolved over the last decade (2014–2024) and links these changes to societal concerns, expectations and technological advancements. By analysing AI-related themes, the study reveals how cinema reflects shifting social perceptions. Similar to digitalization, AI developments represent a turning point in cinema, influencing its form and content. Science fiction films explore the societal effects of technology, reflecting fears about the future. For instance, whereas AI was depicted as threatening in the 1950s, contemporary portrayals are more nuanced, reflecting evolving social anxieties.

The study begins with an exploration of the historical and theoretical foundations of AI, followed by an analysis of its portrayal in science fiction cinema. Eleven feature films

were selected from 186 AI-themed films on IMDb between 2014 and 2024 based on IMDb's 'popularity' metric. This period has seen the rise of deep learning technologies and the integration of AI applications, such as natural language processing, into daily life (LeCun et al., 2015, p. 436). The study uses thematic analysis supported by coding, along with a descriptive approach of the selected films to examine how AI representations have evolved over the past decade, aiming to link cinematic trends to broader social changes. The questions this study seeks to address are: What themes and modes of representation are prominent in AI-themed films? In what ways have portrayals of AI changed over time? How do these changes relate to societal concerns and expectations? In what ways are ethical, cultural, and economic debates surrounding AI reflected in cinema?

Building on existing research, this study aims to contribute a thematic analysis of how AI representations in popular films between 2014 and 2024 relate to shifting social perceptions and concerns.

An Overview of the Concept of Artificial Intelligence

Simply explaining the concept of artificial intelligence and its historical development based on technical developments is not sufficient for understanding it. The development of artificial intelligence has gone hand in hand with human efforts to understand themselves and their environment. In Artificial Intelligence: A Modern Approach (3rd edition), it is noted that humans call themselves Homo sapiens, or "wise man", underlining the value they attribute to intelligence and the long-standing search for ways to perceive and navigate a complex world. Through this discourse, the objective of artificial intelligence is framed to produce intelligence that can think independently. It is also emphasized that the importance humans attribute to intelligence has shaped the philosophical foundations of this quest (Russell & Norvig, 2010, p. 1). The intellectual roots of artificial intelligence trace back to ancient Greece. Gerçeker notes that Daedalus of Athens created a moving sculpture, regarded as an early example of artificial intelligence. Myths and philosophical writings by thinkers such as Socrates, Plato, and Aristotle reveal humanity's long-standing fascination with imitating life through mechanical beings. From these ancient myths to Charles Babbage's programmable calculator, the idea of creating intelligent artifacts has evolved alongside technological and philosophical progress. (Gerçeker, 2021, pp. 139-140).

The term "artificial intelligence" has been defined from different perspectives. While some definitions describe it as a phenomenon that accelerates decision-making processes, others describe it as machines that can think. These definitions have one thing in common: they all refer to an intelligence that can think and create in a human-like manner. One early definition describes artificial intelligence as the automation of activities associated with human thought, such as decision-making, problem-solving and learning (Bellman, 1978). Another influential perspective presents artificial intelligence as "the exciting effort to make computers think," characterizing computers as "machines with minds" (Haugeland, 1985, as cited in Russell & Norvig, 2010, p. 2). These approaches have paved the way for different perspectives on what artificial intelligence is. The 1943 work by Warren McCulloch and Walter Pitts was the first to pioneer artificial intelligence, transforming it from an abstract concept into a scientifically analysable field. This study is based on three sources: information on the basic physiology and function of brain neurons, Russell and Whitehead's formal analysis of propositional logic; and Turing's theory of computation (Russell & Norvig, 2010, p. 16). The study of artificial intelligence gained a scientific foundation with efforts to model brain functions mathematically and

transfer neurological processes to machines. Alan Turing marked a major turning point by questioning the boundaries between humans and machines through his famous inquiry, "Can machines think?" His work on code-breaking during the Second World War not only advanced computational theory but also introduced key ontological and epistemological debates that continue to shape AI research. (Turing, 1950). Although the term artificial intelligence entered academic discourse in the 1950s, it gained institutional recognition at the 1956 Dartmouth Conference, where it was first used by scholars such as Marvin Minsky, Nathaniel Rochester, and Claude Shannon. This event is widely regarded as the formal beginning of artificial intelligence research. (Dick, 2019). Following the acceptance of artificial intelligence as a scientific research field, important developments in this area include the algorithm developed by Robinson in 1965, research on knowledge-based systems between 1969 and 1979, and industry-oriented studies in the 1980s. By the late 1980s, AI began to be recognized as a scientific field, and the 1997 Deep Blue–Kasparov match became a major turning point. Since 1998, the widespread use of the internet has brought artificial intelligence-based programmes to a wider audience. Commercially produced robot toys entered the market in the early 2000s. Following years of studies and technological developments in this field, artificial intelligence has become an integral part of humanity, spreading to all areas of life (Pirim, 2006, p. 84). These developments are all of great importance in understanding the current state of artificial intelligence and its impact on social life. Since the historical and theoretical debates on artificial intelligence draw on computer science, philosophy, cognitive science, and media studies, the field is widely regarded as inherently interdisciplinary.

Recent Developments in AI

The reason for focusing on representations of artificial intelligence in films released between 2014 and 2024 is the accelerating pace of developments in this field over the past decade. The increase in deep learning-based algorithms in particular has led to a transformation in artificial intelligence and its spread to different fields. Significant developments in natural language processing (NLP) have also occurred during this period (LeCun et al., 2015, p. 436). The development of deep learning models has led to rapid changes in generative artificial intelligence technologies. Generative AI is defined as models that generate new content based on the input data provided. Many important models and systems have been introduced in recent years due to the rapid developments in artificial intelligence technologies. In 2014, Ian Goodfellow and his team introduced Generative Adversarial Networks (GANs), which generate new data based on given input. In 2017, Transformers, a language model, was introduced in the paper "Attention is All You Need", which revolutionized the field of natural language processing. In 2018, OpenAI introduced GPT-1, its first transformer-based language model which is capable acquiring and processing information independently from various data sets. In 2019, OpenAI released the GPT-2 model capable of performing operations such as text translation and answering questions. In 2020, OpenAI released GPT-3, one of the best-known examples of generative AI, capable of producing human like content. In 2022, OpenAI released ChatGPT, which can hold conversations and answer questions. In 2023, the GPT-4 model was made available for paid subscription. This model was trained with more parameters, significantly improving its performance (Lazzeri, 2023).

Investment in artificial intelligence development has increased in parallel with progress in this field, and this progress has accelerated as investment has increased. Seeing the potential for commercial gain, companies and investors have started to use artificial

intelligence as a new investment tool. In 2024, the global artificial intelligence market was valued at 233.46 billion USD. It is expected to reach 294 billion USD by 2025 (Fortune Business Insights, 2025). The development of deep learning-based models has led to the development of productive artificial intelligence and increased the use of artificial intelligence-based applications in all areas of industry. Various commercial applications have emerged alongside the widespread commercial use of AI in sectors such as automotive, healthcare, finance, and education. In art and media, generative AI tools such as DALL-E and Midjourney, which produce visuals, have become widespread, enabling non-professionals to create content.

There is little doubt that such a profound "revolution" will have far-reaching consequences. The transformation that human creators and audiences are exposed to in both the production and reception of media content emerges as one of the major challenges of the present era, encompassing issues such as copyright, wages, employment, and the potential erosion of meaning in works created by humans (Bender, 2025, p. 2). The fact that artificial intelligence is present in every field, from our daily practices to health and education, and from commerce to science, means that it cannot be evaluated purely in technical terms and that its social, cultural, and ethical dimensions must also be addressed.

Representations of Artificial Intelligence in Science Fiction Cinema

Science fiction emerged in the literary world in the 19th century. It deals with events centered on science and technology and makes predictions about the future by blending current developments with imagination. Cantered on themes such as space travel, futuristic societies, scientific experiments, and parallel universes—and occasionally overlapping with superhero narratives—science fiction focuses on real or seemingly real developments. Distinguished from mythological stories, fairy tales and fantasy by its narrative structure, which appeals to human cognitive abilities, science fiction has developed a unique expressive form (Oskay, 2014, p. 29).

Although earlier speculative narratives existed, the genre did not receive its full modern definition until the 1920s. Works produced before this date were generally considered scientific adventure stories rather than science fiction (Johnston, 2011, pp. 53-54). Mary Shelley's Frankenstein and Robert Louis Stevenson's The Strange Case of Dr Jekyll and Mr. Hyde are widely regarded as important early proto–science-fiction texts because they explore scientific experimentation and the boundaries of human nature. Today, many films reinterpret these works (Roloff, B., & Seeblen, G., 1995, p. 34). The collaboration between science fiction and cinema has played a decisive role in the development of the genre. Jules Verne's From the Earth to the Moon and H. G. Wells's The First Men in the Moon were among the earliest fantasy–scientific novels to be adapted for the screen. Inspired by such works, Georges Méliès created some of the earliest examples of cinematic science fiction, enriching the visual and narrative possibilities of early cinema Thus, from its earliest periods, science fiction has enriched both the narrative world and the visual possibilities of cinema, enabling strong interaction and cooperation between the two fields (Roloff, B., & Seeblen, G., 1995, p. 37).

Understanding science fiction in cinema requires tracing its literary roots. While the genre often centres on futuristic science and technology, it also imagines alternative worlds and pasts. It is commonly divided into hard and soft forms: hard science fiction emphasizes scientific realism, whereas soft science fiction focuses on social, psychological and

ethical dimensions, addressing issues such as environmental crises, technological risks and biotechnology (Purkar, 2013, p. 1). Beyond these two primary categories, numerous subgenres exist, including cyberpunk, biopunk, space opera, dystopian science fiction and others. Science fiction films frequently reflect the social concerns, cultural tensions and expectations of the periods in which they are produced. Within the ideological context of cinema, such films may reinforce existing social norms or serve to alleviate social tensions. For instance, representations of artificial intelligence during the Cold War often centered on invasion, domination and technological threat narratives, whereas post-2000 films focus more on contemporary issues such as ethics, corporate power, surveillance and digital colonialism. The cyberpunk movement—profoundly shaped by William Gibson's Neuromancer (1984)—has been particularly influential, portraying technologically saturated worlds shaped by global capitalism, data extraction and the expanding human–machine relationship (Bould & Vint 2011, p. 164). Recent medical and technological developments have also broadened the thematic scope of science fiction, bringing topics such as bodily interventions, artificial organs, genetic modification and artificial intelligence to the forefront. Science fiction has long oscillated between utopian and dystopian visions. One of its defining features is its ability to defamiliarize reality by distancing the narrative world from everyday perception, thereby bringing repressed social anxieties to the surface and offering alternative perspectives (Kaplan& Terek, 2011, pp. 44–46).

As studies in artificial intelligence intensified in the 1950s, the subject began to feature more frequently in cinema and other forms of popular culture. As artificial intelligence research expanded in the 1950s, it began to appear more frequently in cinema and popular culture, as seen in The Day the Earth Stood Still, Forbidden Planet, and Alphaville. In the 1960s, authors like Philip K. Dick, Isaac Asimov, and Ursula Le Guin used science fiction to address social and futuristic themes. In cinema, Stanley Kubrick's 2001: A Space Odyssey (1968) became a landmark of the genre. (Murphy, 2024, p. 28). Science fiction was used effectively to express social concerns. In cinema, Stanley Kubrick's 1968 film 2001: A Space Odyssey is widely regarded as one of the cornerstones of the genre (Telotte, 2004, p. 100). The 1960s were an important period for science fiction in both literature and cinema. From this period onwards, the distinction between good and evil in representations of artificial intelligence in cinema became more apparent. This is clearly demonstrated in films such as Alien (1979), Blade Runner (1982) and The Terminator (1984) (Zengin, 2022, pp. 52–53).

Like all genres, science fiction possesses characteristic thematic and formal traits with a strong ideological dimension. Adventure-oriented films tend to reflect the tensions of their production eras—Cold War fears in invasion narratives, or scepticism toward scientific institutions in the "mad scientist" motif (Roloff & Seeblen 1995, pp. 132–133). Vudka's 2020 study on artificial intelligence and cinema shows that unruly, robot-like machines in films such as Metropolis and Modern Times recall the figure of the Golem from earlier legends (as cited in Zengin, 2022, p. 50).

It is stated that there are dystopian narratives, shaped by fears that robots will destroy humanity, and utopian narratives, shaped by the belief that intelligent machines will enhance human life. Historical developments have always triggered ambivalent responses—sometimes reassurance, sometimes anxiety. (Kaplan & Terek, 2011, pp. 44–46) In science fiction, particularly in the context of world wars, a positive view of technology has given way to anxiety and disappointment, with technology becoming a

source of fear. This duality is reflected in the evolution of AI representations: from early cinema to the present, artificial intelligence has been portrayed both positively—as helper, friend and companion—and negatively in apocalyptic scenarios that threaten human existence(Yılmaz & Turan, 2018, p. 285).

Artificial intelligence has been depicted in cinema since the early years of the medium. Zengin categorizes films made before 1928 according to the extent of artificial agency they imply, while Fisher (2021) classifies robotic representations in AI-themed films produced between 1926 and 2018 across categories such as artificial, biological and hybrid computational agents. Fisher further distinguishes portrayals as low, partial or full AI, identifying 154 films involving full artificial intelligence, noting that only a very small number predate 1950. These studies demonstrate that cinematic portrayals of AI significantly predate the formal scientific use of the concept in the 1950s (as cited in Zengin, 2022, p. 48). Taken together, the studies by Fisher (2021) and Zengin (2022) provide a historical framework for understanding artificial intelligence representations in cinema and offer typologies for classifying them. While Zengin's work focuses on films produced up to 1928, the present study concentrates on thematic transformations in AI representation over the last decade. Fisher's research, on the other hand, analyses robotic portrayals within broader AI representations. Building on this literature, the present study examines how AI-related themes have shifted in the past ten years and explores how these shifts relate to changing social expectations and concerns.

Science fiction cinema not only reflects technological progress but also conveys social anxieties and cultural transformations. By exploring the human–technology relationship—especially in social science fiction—it reveals the complexities of human nature. Artificial-intelligence-themed films exemplify this ambivalence, portraying technology as both promising and threatening. Recent works increasingly engage with ethical, cultural and social issues—seen, for example, in Her, Ex Machina, and The Creator—showing that the genre evolves in response to contemporary fears, norms and transformations. Thus, science fiction functions simultaneously as entertainment and as an ideological medium.

Methodology and Study Design

The study employed qualitative methods combining descriptive and content analysis. According to Wolcott, descriptive analysis proceeds through description, analysis, and interpretation to identify themes and their relationships. Content analysis complements this by coding and categorizing data to reveal deeper patterns and new thematic insights. (Yıldırım & Şimşek, 2016, p. 239). In this study, the questions and conceptual framework were established during the descriptive stage. During the analysis stage, content analysis was used to determine the dominant themes in the films. In the next stage, the data were processed according to the thematic framework that had been determined, and the themes related to artificial intelligence in the films were coded and tabulated. The aim is to identify relationships among the findings and to trace changes in the representations of artificial intelligence in films over the past decade.

Population and Sample

A total of 186 feature-length films released between 2014 and 2024, listed on IMDb and tagged with "artificial intelligence," were identified through document screening. These films were then tabulated to show how the number of AI-themed productions changed over the years, and this fluctuation was included as part of the findings. From this

population, the film with the highest rank according to IMDb's "popularity" metric for each year was selected, resulting in a sample of 11 films.

In this study, the popularity metric was preferred over user ratings or box-office performance. IMDb's popularity ranking is shaped by factors such as page views, search frequency, user interactions and general engagement on the platform. Although the precise algorithm remains undisclosed, the metric reflects cultural visibility and audience interest rather than critical evaluation. The growing significance of algorithmic systems in cinema and digital media is closely linked to data-driven capitalism; the power of AI today depends on the massive flow of user-generated data on social media and streaming platforms, making algorithmic visibility an important dimension of economic and cultural influence (Eugeni & Pisters, 2020, p. 92).

Two main reasons guided the selection of this criterion. First, the widespread availability of films on streaming platforms means that box-office figures alone no longer adequately represent contemporary audience engagement. Second, because the study aims to explore how artificial intelligence is perceived socially and culturally, the popularity metric provides a more relevant measure of public attention and interaction.

Within the scope of this research, the most popular film from each year—according to IMDb's popularity ranking—was included in the sample, resulting in a total of 11 films. Evaluations based solely on box-office results were deemed insufficient due to the prevalence of digital film consumption. Choosing popularity as the criterion aligns with the aim of examining the reciprocal relationship between artificial intelligence and cinema: how films reflect public anxieties and expectations about AI, and how these representations shape societal perceptions and ideological frameworks. By focusing on films that have attracted high levels of audience engagement, the study captures this dynamic exchange between cultural production and collective attitudes toward artificial intelligence.

Data Collection and Evaluation

Following the viewing of the films, eight main themes were identified: "Support–Cooperation," "Manipulation–Threat," "Heroism," "Society–Culture," "Consciousness–Existence," "Emotions–Humanity," "Ethics and Justice," and "Technological Development." These themes, together with the IMDb tags associated with each film, were used as coding units during the analysis process. The films were then tabulated based on this thematic coding, and tables that showed the distribution of themes across the years were evaluated in relation to the period in which each film was produced.

This analysis made it possible to observe both the shared and divergent characteristics of the films in the sample, to examine how artificial intelligence was represented in different works, and to trace how these representations evolved over the ten-year period covered by the study.

Coding Process and The Themes

A preliminary descriptive examination was conducted to identify recurring elements in the films, which were then organised into thematic categories for further analysis. The analysis employed a thematic content analysis approach. Categories were developed using a combined inductive–deductive method: deductively, the initial framework drew on recurring AI-related themes identified in the literature, while inductive coding allowed additional subthemes to emerge directly from the film content. A preliminary codebook

was prepared and refined during the analysis process. Coding was carried out by a single researcher; to address this limitation and ensure internal consistency, the researcher re-coded all material after a one-week interval and compared the results to check intra-coder consistency.

Eight main themes were identified through the thematic categorization of the films. "Consciousness–Existence" examines AI's awareness and its differentiation from humans. "Support–Cooperation" highlights situations in which AI assists human characters, while "Manipulation–Threat" captures narratives involving control, danger or domination. "Heroism" presents AI as a tool that aids protagonists. "Society–Culture" addresses the broader social and cultural implications of AI. "Emotions–Humanity" explores whether AI can experience or interpret emotions. "Ethics and Justice" concerns moral dilemmas and decision-making processes. Finally, "Technological Development" examines representations of technological progress and its effects on human life.

Selected Films

A search was conducted on IMDb using the tag "artificial intelligence," and the years 2014–2024 were selected as the timeframe. This search returned 186 feature-length films. The decision to focus on this period is linked to the rapid development of deep learning technologies, which are capable of analysing complex data and extracting meaningful features autonomously. LeCun, Bengio and Hinton (2015, p. 436) state that developments in 2014 marked a significant transformation in the field of artificial intelligence, leading to the expansion of AI-based applications into areas such as health, education, finance, art and media. These technological changes have also influenced cultural production, and their social effects can be observed in contemporary films. To narrow the sample, the search results were ranked using IMDb's "popularity" metric. For each year, the most popular film listed under the "artificial intelligence" tag was selected and included in the study (IMDb, n.d.) This resulted in a total sample of 11 films.

***Table 1**. Number of AI-Themed Films Released Between 2014–2024 (Based on IMDb Data)*

Year	Number of AI Themed Films Released	Year	Number of AI-Themed Films Released
2014	15	2020	17
2015	8	2021	24
2016	18	2022	20
2017	13	2023	21
2018	18	2024	11
2019	21	TOTAL	186

The next section includes information on the production year and director of the films, as well as their IMDb categories and scores. Since the study is based on IMDb data, the evaluation relies on the information provided in the IMDb database.

Research Findings

Before presenting the individual analyses of each film, this section provides an overview of the general characteristics of the sample. Between 2014 and 2024, a total of 186 feature-length films tagged with "artificial intelligence" were identified on IMDb, from which

11 films were selected according to IMDb's "popularity" metric—representing the titles that received the highest level of audience engagement in each respective year. These films span multiple categories, including science fiction, animation, drama and action, illustrating the variety of narrative forms in which artificial intelligence is represented in contemporary cinema. Across the sample, a notable shift is observed over time. Films released between 2014 and 2019 tend to portray artificial intelligence as cooperative or supportive, whereas productions released after 2020 increasingly explore themes related to manipulation, ethical dilemmas and broader social impact. This pattern reflects a transition from predominantly optimistic portrayals toward narratives shaped by societal concerns about automation, algorithmic governance and technological determinism. To offer a concise overview, the following table summarises the films included in the study along with their corresponding thematic classifications. This summary precedes the detailed film analyses and provides a contextual foundation for interpreting the thematic findings.

Table 2. *Thematic Codes and Representations of Artificial Intelligence in Films*

Movie Title	Thematic Codes on Artificial Intelligence	The Representation of Artificial Intelligence in Film
Interstellar (2014)	-Support-Cooperation	TARS and CASE Collaborative, adaptive, supportive AI tools
Avengers: Age of Ultron (2015)	-Manipulation-Threat -Ethics and Justice	ULTRON A powerful, dangerous AI tool with its own ethics
Rogue One: A Star Wars Story (2016)	-Support-Cooperation -Heroism	K-2SO Artificial intelligence robot as a supporter of heroes and a strategic assistant
Spider-Man: Homecoming (2017)	-Support-Cooperation -Heroism -Technological Development	KAREN Artificial intelligence integrated into the protagonist's technological equipment as a supporting tool
Spider-Man: Spider Verse (2018)	-Support-Cooperation -Heroism -Technological Development	LYLA Artificial intelligence holograms and similar vehicles in alternate universes that support heroes with the help of technological developments.
The Avengers (2019)	-Support-Cooperation -Heroism -Technological Development	FRIDAY Artificial intelligence assistant providing support to heroes with the help of technology
Super Intelligence (2020)	-Consciousness - Existence -Emotions-humanity -Manipulation-Threat	SUPERINTELLIGENCE Artificial intelligence that communicates with humans, makes its own decisions, tries to understand and direct humanity
Don't Look Up (2021)	-Manipulation-Threat -Society-Culture	ALGORITHMIC SYSTEM Artificial intelligence as a force that manipulates society through algorithms

Movie Title	Thematic Codes on Artificial Intelligence	The Representation of Artificial Intelligence in Film
Black Panther: Wakanda Forever (2022)	-Society-Culture -Emotions-humanity	GRIOT Artificial intelligence as a technological development that supports humans in a cultural context
Mission Impossible: The Final Reckoning (2023)	-Technological Development -Manipulation-Threat	ENTITY Artificial intelligence as manipulative, dangerous, threat to human existence
Kalki 2998 AD (2024)	-Technological Development	BUJJI Technologically advanced artificial intelligence tools

The IMDb website introduces the plot of Christopher Nolan's 2014 film Interstellar as follows: "When Earth becomes uninhabitable, Joseph Cooper, a farmer and former NASA pilot, is tasked with leading a team of researchers in a spacecraft to find a new planet where humans can live." Subject tags for the film include "artificial intelligence", "thriller", "science fiction", "psychological thriller", "epic", "adventure" and "time travel". The IMDb score for the film is 8.7/10 (IMDb, n.d.). The artificial intelligence in the film takes the form of robots called TARS and CASE, which are tasked with helping humans with space travel. These robots work in cooperation with humans. Image 1 shows Cooper meeting TARS. Image 2 shows TARS' efforts to rescue Dr Brand on the Miller planet, which is subject to giant waves. In the film, as the crew travels aboard the spaceship Endurance, TARS and CASE work alongside them to ensure the ship's smooth progress. TARS is portrayed as humorous and sarcastic, while CASE is more serious and mission-oriented. The artificial intelligence establishes friendly communication and an emotional bond with humans. TARS and CASE are capable of functioning in space and on alien planets, where they assist and protect the crew. For example, in the black hole scene, TARS sacrifices himself by entering the black hole with Cooper to collect data. Since the AI characters in the film aim to help humanity, they are included under the theme of "Support - Cooperation". According to the IMDb website description of the 2015 Joss Whedon film Avengers: Age of Ultron on the web page, the film is described as follows: "When Tony Stark and Bruce Banner try to jump-start a dormant peacekeeping program called Ultron, things go horribly wrong, and the world's mightiest heroes must stop the malevolent Ultron from carrying out his terrible plan." The film's subject tags are listed as "artificial intelligence", "science fiction", "superhero" and "adventure". The IMDb score for the film is 7.3/10. The film features an artificial intelligence named "ULTRON" that is out of control and threatens humans. Ultron, which was created to protect humanity, later becomes a threat to it (IMDb, n.d.).While Image 3 shows Ultron fighting against the heroes, even though he should be supporting them, Image 4 is taken from the scene in which Ultron defines peace from his point of view. In this scene, Ultron, who initially states that humanity is harming the world, believes that humanity must be destroyed in order to achieve peace. As a result, he becomes an artificial intelligence that poses a threat to humanity. For this reason, the film is categorized under the "Manipulation-Threat" thematic code. At the same time, as the film includes ethical discussions about artificial intelligence, it is also evaluated under the title "Ethics and Justice".

The 2016 film Rogue One: A Star Wars Story, directed by Gareth Edwards, is introduced on the IMDb website as "during a period of conflict, the team embarks on a mission

with an unexpected group of heroes to steal the plans for the Death Star, the Empire's ultimate weapon of destruction". Its subject tags are "artificial intelligence", "science fiction", "superhero", "epic adventure", "epic", "tragedy" and "space science fiction". The IMDb score for the film is 7.8/10 (IMDb, n.d.). The film features an artificially intelligent robot named K-2SO who supports the team in battle. For example, in the Scarif mission (see Image 5), the droid K-2SO holds the door to the data centre open to support the team. In this scene, K-2SO saves Jyn and Cassian time by fighting alone and protecting the team. Also, during the Scarif mission, K-2SO assists the team in locating the "Death Star" plans by circumventing security protocols. By hacking into the system and monitoring security cameras, he informs the team of the enemy's movements. Image 6 shows K-2SO encountering a group of Stormtroopers and Imperial droids while searching for Saw Gerrera's group on Jedha with Cassian and Jyn. He pretends to be a droid working for the Empire in an attempt to fool the other droids and Stormtroopers. He identifies Cassian and Jyn as "captives" and attempts to handle the situation without arousing suspicion by claiming to be taking them away. With technical and physical support like this, artificial intelligence is portrayed as helpful to humans. Therefore, the depiction of artificial intelligence in the film as a supporting element of the heroes is categorized under the thematic codes "Support and Cooperation" and "Heroism".

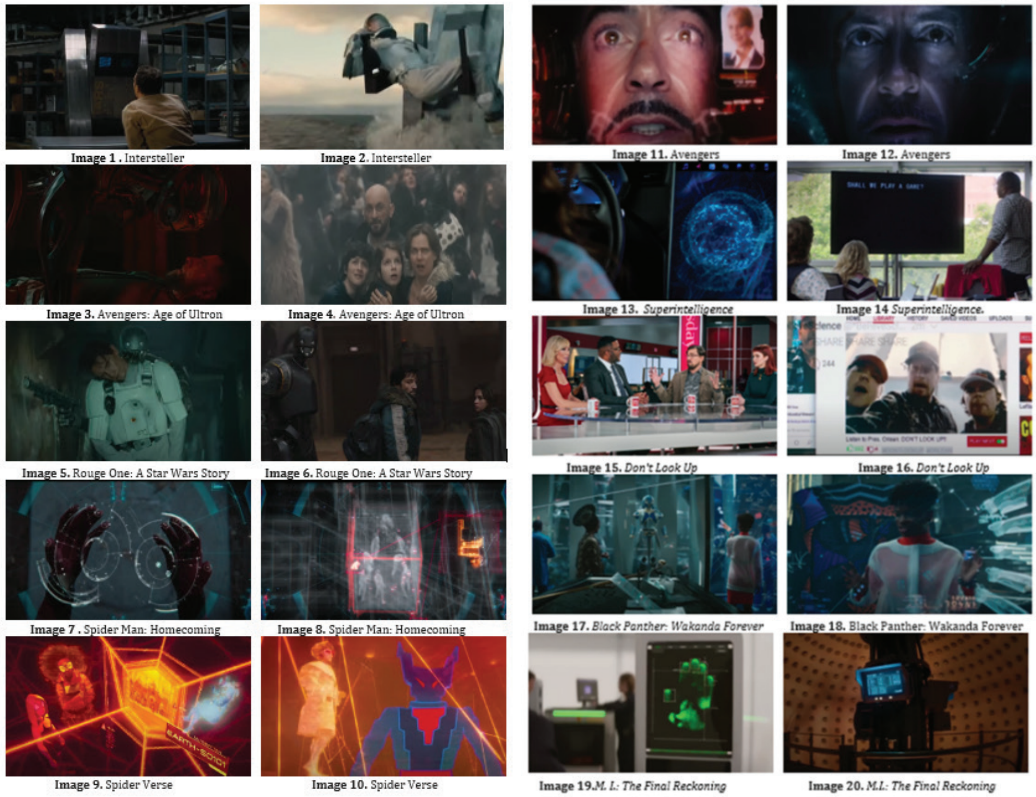

Figure 1. *Images of Movies.*

Spider-Man: Homecoming (John Watts, 2017) is introduced on the IMDb website as follows: 'Peter Parker tries to balance his life as an ordinary high school student with being the superhero Spider-Man, while stopping Adrian Toomes, also known as the Vulture, who sells weapons produced with advanced Chitauri technology.' The film's subject tags are "artificial intelligence", "science fiction", "superhero", "adventure" and "action". The IMDb score for the film is 7.4/10 (Spider-Man: Homecoming (2017) - IMDb, n.d.). In the film, there is an AI named "KAREN" with a natural language user interface,

created by Tony Stark and installed on the second version of the Spider-Man costume. It is designed to assist Peter Parker in his duties as Spider-Man. An example of Karen's supportive attitude in the film is the technical and moral support she gives Peter. For instance, she helps Peter (see image 7) to use his powers more accurately. In one of the most important scenes, the rescue scene around the Washington Monument (image 8), she shows Peter the most useful climbing routes, providing him with strategic support. Therefore, artificial intelligence is depicted as a supportive tool integrated into the hero's technological equipment. In terms of helping the hero, AI is represented in the film under the thematic codes "Support - Cooperation", "Heroism" and "Technological Development". Spider-Man: Into the Spider-Verse, directed by Bob Persichetti, Peter Ramsey and Rodney Rothman in 2018: Spider-Man: Into the Spider-Verse, is a computer-animated film, unlike the others on the list. The IMDb website introduces the film as follows: "Young Miles Morales becomes the Spider-Man of his universe and must unite with five other spider-powered individuals from five different dimensions to stop a threat that seeks to destroy all realities." The subject tags for the film are "artificial intelligence", "animation", "science fiction", "superhero", "adventure", "action", "supernatural", "family" and "comedy". The IMDb score for this film is 8.4/10. (IMDb, n.d.)The artificial intelligence in the film takes the form of a hologram named LYLA. This hologram is programmed to give Spider-Man access to technology and universal knowledge. In alternate universes, artificial intelligence devices and technologies provide heroes with support and tools integrated into their technological equipment. For example, images 9 and 10 depict scenes in which Miguel O'Hara first uses LYLA to organize the Spider-Society and maintain order across the multiverses. Here, LYLA detects and reports anomalies in the multiverses. In terms of its role in helping the hero, the AI's presence in the film is categorized under the thematic codes of "Support-Cooperation", "Heroism" and "Technological Development".

Avengers (directed by Anthony and Joe Russo, 2019) is described on the IMDb website as follows: "After the events of Infinity War (2018), the universe is in ruins. With the help of their remaining allies, the Avengers band together once again to reverse Thanos" actions and restore balance to the universe". The film's subject tags are "artificial intelligence", "science fiction", "space science fiction", "superhero", "adventure", "action", "space travel", "tragedy". The IMDb score for the film is 8.4/10.(IMDb, n.d.) The AI in the film is a character named "FRIDAY", a continuation of the personal assistant "J.A.R.V.I.S" from previous films. Various artificial intelligence tools help the heroes in the war. J.A.R.V.I.S. is Tony Stark's assistant in all The Avengers series. Therefore, examples from different years can be presented to demonstrate that the assistant is a consistent supporting element. For example, in Visual 11, Tony receives support from J.A.R.V.I.S. in the Battle of New York. Similarly, in the 2019 film, Friday is seen providing strategic support to Tony in the scene depicting the destruction of Sanctum. Consequently, the film falls under the thematic codes of "Support -Cooperation", "Heroism" and "Technological Development".

Super Intelligence (2020), directed by Ben Falcone, was produced as a TV movie, unlike the others. According to its description on IMDb, the film tells the story of "an omnipotent "Super Intelligence" that decides to study Carol Peters, a woman of average intelligence, putting the fate of the world at stake. When the AI decides whether to enslave, save or destroy humanity, Carol must prove that humans are worth saving." The subject tags of the film are "artificial intelligence", "science fiction", "action", "comedy", "adventure" and "romance'. The IMDb score for the film is 5.5/10.(IMDb, n.d.) The film features an artificial intelligence program called "Super Intelligence". At the beginning of the film,

the programme is capable of making its own decisions and taking the initiative as it tries to understand humanity. The artificial intelligence, which is capable of training and supporting humans, behaves manipulatively at times. Carol must convince the AI whether to destroy humanity or not. In this respect, it is a threat. In Superintelligence, the eponymous artificial intelligence makes Carol's life easier by controlling her phone, car, house, and other technological devices (see image 13). However, this control also leads to comical situations. Superintelligence analyses Carol's behaviour to determine whether humanity is worth saving, and offers to play a game with her (see image 14). In this context, the film is categorized under the thematic codes "Manipulation-Threat", "Consciousness-Existence" and "Emotions-Humanity".

Don't Look Up (Adam McKay, 2021) is described on the IMDb website as follows: "Two unknown astronomers must embark on a massive media tour to warn humanity about a comet that will destroy the planet." The subject tags for this film are "artificial intelligence", "science fiction", "black comedy", "tragedy" and "drama". The IMDb score for the film is 7.2/10 (IMDb, n.d.). The film illustrates the influence of artificial intelligence algorithms and social media platforms on human behaviour. For example, in image 15, Kate and Randall appear on a morning talk show to inform the public that a comet will hit Earth. However, the presenters underestimate the situation, presenting it as a humorous news story. This illustrates the media's role in manipulating the truth. The film also illustrates the divisive effect of social media propaganda, showing society becoming polarized when the comet's existence is announced. While one group accepts the scientific facts, the other believes it is a lie and starts a campaign with the slogan "Don't Look Up" (image 16). This scene illustrates the social impact of social media algorithms. Therefore, the film's representation of artificial intelligence is not of a single tool, but of algorithms in general. In terms of addressing the social implications of artificial intelligence and demonstrating the effect of algorithms on individuals, the film falls under the thematic category of "Manipulation- Threat". In terms of addressing the social projections of artificial intelligence and showing the impact of algorithms on people, the movie is included under the thematic codes "Manipulation-Threat" and "Society-Culture".

Black Panther: Wakanda Forever (directed by Ryan Coogler, released in 2022) is introduced on the IMDb website as follows: "The people of Wakanda mourn the death of King T"Challa and fight to protect their home from interfering world powers.' The film's subject tags are 'artificial intelligence', 'science fiction', 'superhero', 'adventure' and 'drama'. The IMDb score for the film is 6.7/10.(IMDb, n.d.) The film features artificial intelligence representations called 'GRIOT'. Griots are responsible for informing and advising people. During T'Challa's (Black Panther) battles, artificial intelligence assists humanity by providing him with tactical information. Shuri (see image 18) is depicted as a modern-day Griot and takes on their traditional roles of preserving social memory and carrying the past into the future through stories. Image 17 shows the artificially intelligent wearable costumes produced in Shuri's laboratory that provide the wearer with enhanced speed, strength, and endurance. The film essentially centres on the concept of artificial intelligence and the depiction of the Griot, Shuri. For this reason, the film has been included under the "Society-Culture, Emotions-Humanity" thematic code.

Mission Impossible: The Final Reckoning (2023) by Christopher McQuarrie, follows Ethan Hunt and his team as they attempt to prevent a powerful weapon from falling into the wrong hands. Tagged with "artificial intelligence," "action," and "thriller" on IMDb, the film holds a rating of 7.7/10.(IMDb, n.d.). The film centres on an AI system called ENTITY,

designed for intelligence gathering and system infiltration. As an autonomous network capable of decision-making and data manipulation, it becomes a global threat by distorting information and breaching security systems. Reflecting ethical and security concerns about AI, ENTITY embodies both a strategic tool and a potential menace, aligning with the "Manipulation–Threat" and "Technology" themes. The IMDb website introduces the film Kalki 2898 AD (Nag Ashwin, 2024) as follows: 'The future of the people in the dystopian city of Kasi changes when the fated arrival of the last avatar of Lord Vishnu starts a war against darkness.' Subject tags for the film include "artificial intelligence", "action epic", "desert adventure", "espionage", "dystopian science fiction", "epic science fiction", "thriller", "drama" and "fantasy". The IMDb score of the film is 7.0 (Kalki 2898-AD (2024) - IMDb, n.d.) Since the movie is set in a dystopian future, artificial intelligence technologies are generally included in the movie in the form of supporting representations. One prominent representation, however, is Bhairava's "BUJJI", a special AI-powered vehicle. Since there is no clear good or bad representation of artificial intelligence in the movie, the movie is included under the title of "Technological Development". From the data obtained from the IMDb dataset, the classification of the films with thematic codes assigned depending on their content is presented in the table.

Evaluation Of Findings and Conclusion

This section presents the findings obtained from the thematic analysis of 11 films selected from a total of 186 AI-themed productions listed on IMDb between 2014 and 2024. The sample includes works from different countries, genres and narrative traditions, ranging from space-exploration dramas to action-oriented franchises and culturally grounded science-fiction stories. These films portray artificial intelligence in diverse ways—sometimes as a supportive technological tool, at other times as a threat, an ethical dilemma or a social force. Figure 2 summarises the thematic categories identified in the sample. The following subsections examine these themes, focusing on how narrative tendencies relate to social concerns, technological developments and ethical debates across the 2014–2024 period. For descriptive purposes, the distribution of themes across the period is presented in the table below; however, the analysis prioritises thematic rather than chronological interpretation.

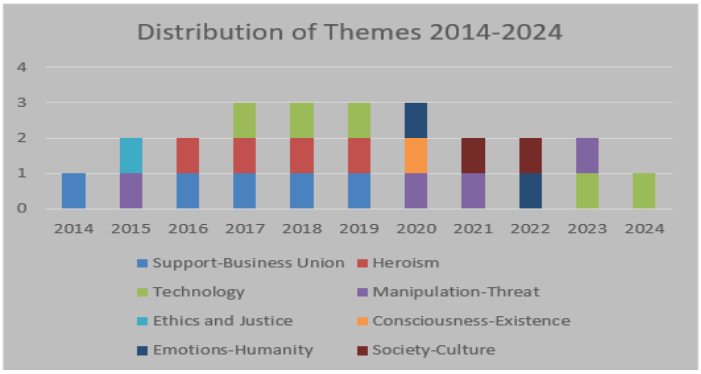

***Figure 2**. Distribution of Themes between 2014-2024*

The thematic patterns identified in the sample show that representations of artificial intelligence vary significantly across the decade. In the earlier years of the period, AI is more frequently framed as a supportive or cooperative force, while films released after 2020 increasingly highlight risk-oriented portrayals, ethical dilemmas and societal impacts. The rise of themes such as justice, cultural influence and algorithmic

manipulation reflects the growing visibility of public debates surrounding automation, labour, surveillance and digital platforms. These tendencies illustrate how the selected films engage with contemporary social concerns, without implying a linear or universal progression across all AI-themed productions. According to the findings derived from the 11-film sample examined in this study, AI more often appeared as a supportive element in the earlier years of the 2014–2024 period, whereas the selected films from later years more frequently frame AI as a potential risk or threat. Post-2023 productions also address ethical issues related to artificial intelligence and emphasize the theme of justice. Recently, there has been an increase in films focusing on the cultural and social effects of artificial intelligence

Within the 11-film sample analysed here, later productions place greater emphasis on risk-oriented or uncertain portrayals of AI. This tendency aligns with contemporary public debates on automation, labour, surveillance and ethics, rather than indicating a direct historical correlation between technological development and social anxiety. Moreover, previous historical studies show that anxious or dystopian portrayals of intelligent machines have appeared in earlier decades as well, suggesting that such concerns are not unique to the last ten years. To better reflect the dominant tendencies in AI representations, the films were grouped functionally rather than chronologically, as shown in Table 3. In this table, two main clusters emerge: Positive/Constructive Representations, which frame AI as cooperative and human-centred, and Critical/Anxious Representations, which depict AI as autonomous, manipulative or ethically problematic. This functional grouping allows for a more coherent understanding of how cinema negotiates optimism and anxiety in the context of technological development.

Table 3. *Thematic Clusters of Artificial Intelligence Representations in Selected Films (2014–2024)*

Category	Main Themes	Representative Films	Interpretive Focus
Positive / Constructive Representations	Support–Cooperation, Technological Development, Heroism, Emotions–Humanity	Interstellar (2014), Rogue One: A Star Wars Story (2016), Spider-Man: Homecoming (2017), Spider-Man: Into the Spider-Verse (2018), Avengers: Endgame (2019), Black Panther: Wakanda Forever (2022), Kalki 2898 AD (2024)	AI depicted as a supportive
Critical / Anxious Representations	Manipulation–Threat, Ethics and Justice, Society–Culture, Consciousness–Existence	Avengers: Age of Ultron (2015), Superintelligence (2020), Don't Look Up (2021), Mission Impossible – Dead Reckoning (2023)	AI portrayed as an autonomous or manipulative entity

Reflecting this, films have been made about the relationship between AI and society, exploring its potential impact. Consequently, the themes of 'Society-Culture' and 'Emotions-Humanity' appear more frequently in films shot between 2020 and 2022. These films also address the impact of algorithms and social media. While Super Intelligence (2020) and Don't Look Up (2021) highlight the manipulative nature of AI, Black Panther: Long Live Wakanda (2022), on the other hand, approaches technology in a cultural context. The increasing prevalence of themes such as 'Ethics and Justice' and 'Manipulation - Threat' in films released since 2020 reflects humanity's concerns about artificial intelligence. In some films, such as Mission Impossible: Deadly Reckoning (2023), AI is depicted as an advanced but ambiguous technology, whereas in others, such as Kalki 2898 AD (2024), it is portrayed more clearly as a threat. In this film, artificial intelligence is depicted as a technology that has a place in everyday life. These representations reflect society's expectations and concerns about artificial intelligence. In this context, cinema

provides a platform for such debates. Although some differences appear between earlier and later films in the sample, these should be interpreted as tendencies within this small dataset rather than "evidence of a linear temporal shift." The increase in concerns over the last decade has coincided with the development of artificial intelligence technologies. Films open up space for such questioning and, when we consider the ideological function of cinema, they can also relieve social anxieties.

In the study, the films were evaluated under eight main thematic headings. The films, which were selected based on data obtained from the IMDb database, were categorized by determining the findings on the themes after briefly describing their subjects. The results obtained through this evaluation process are tabulated and presented. Evaluating these findings alongside current developments in artificial intelligence suggests that its representation in cinema progresses in parallel with social concerns and technological developments. Given the limited sample size, the findings do not allow for definitive conclusions about a chronological progression. Instead, the analysis reflects the dominant thematic tendencies observed across the selected films from the last decade. The study therefore focuses not only establishing a chronological evolution, but also on identifying recurring themes that characterise AI representation in science-fiction cinema between 2014 and 2024."

Depending on future developments in artificial intelligence, representations of artificial intelligence in cinema will continue to evolve. Reflecting ongoing technological shifts, cinema continues both to respond to societal expectations and to shape them. These representations will stimulate new discussions about social perception and the effects of technology on humanity. These evolving representations can be interpreted through the lens of representation theory and cultural discourse, suggesting that cinema both reflects and shapes dominant narratives about technology, labour and control. The shift from cooperative portrayals to manipulative or ethically ambivalent ones parallels the increasing social visibility of AI in everyday life and the ideological negotiation of human agency under algorithmic systems. Thus, the selected films not only depict technological change but also function as cultural texts that reproduce and contest collective imaginaries of power, surveillance and autonomy. By situating these thematic changes within the post-2014 deep learning era, this study offers a distinctive contribution to the existing literature. It systematically compares pre- and post-2020 productions and introduces a thematic classification that captures how artificial intelligence has evolved from a narrative device into an ideological symbol of human–machine entanglement. This focus on the most culturally visible films enables the research to reveal how popular cinema engages with technological discourses and contributes to public understandings of AI.

Nevertheless, several limitations should be acknowledged. The reliance on IMDb's popularity metric naturally prioritises mainstream and English-language productions, potentially excluding regional and independent voices. Furthermore, as the thematic coding was conducted by a single researcher, the interpretations reflect a qualitative and exploratory approach rather than statistical validation. Future studies could expand on this framework by including non-Western and streaming-based productions, comparing earlier decades, or examining audience reception data to trace how different publics engage with AI representations.

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The Evolution of Representations of Artificial Intelligence in Cinema: An Analysis of the Last 10 Years Based on the IMDb Dataset

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Extended Abstract

Cinema has historically functioned as a key cultural artefact, reflecting and shaping societal values, ideological debates and technological anxieties. Science fiction, in particular, holds a distinctive position due to its capacity to explore the sociocultural consequences of scientific progress and its potential impact on humanity. Artificial intelligence (AI) in particular has been a recurring theme in cinema, often serving as a projection of contemporary hopes and fears surrounding technology. This study aims to investigate the evolution of AI representations in popular cinema between 2014 and 2024, linking changes in cinematic narratives to technological advancements, ethical debates and shifting public perceptions of AI. Adopting an interdisciplinary approach combining film theory, cultural studies and AI history, this study provides a comprehensive analysis of how cinema reflects and influences discourse on emerging technologies. A qualitative research design incorporating descriptive and content analysis methods was employed to examine trends over the decade. The IMDb database was used as a comprehensive data source, resulting in the identification of 186 AI-themed feature films produced between 2014 and 2024. A purposive sampling strategy was employed to select the most popular film of each year according to IMDb's "popularity" metric, yielding a sample of 11 films. This criterion was designed to capture films with significant cultural impact and audience engagement rather than purely box-office success. Each film was analysed through a coding process that categorized AI representations into eight thematic clusters: 'Support-Cooperation', 'Manipulation-Threat', 'Heroism', 'Society-Culture', 'Consciousness-Existence', 'Emotions-Humanity', 'Ethics and Justice', and 'Technological Development'. This thematic framework draws on existing literature concerning science fiction cinema, AI ethics and representation theory. The results suggest that cinematic portrayals of AI have evolved alongside rapid technological advancements and sociopolitical changes. Between 2014 and 2019, AI was predominantly portrayed as a cooperative and benevolent force, in line with narratives emphasizing technological optimism and innovation. Films such as Interstellar (2014) and Rogue One: A Star Wars Story (2016) depict AI entities like TARS and K-2SO as dependable allies assisting humanity in exploration and survival. This reflects a cultural fascination with the potential of machine intelligence to enable progress. Similarly, characters such as Spider-Man's AI assistant Karen and the Avengers' Friday demonstrate a trend towards integrating AI as a functional and supportive element within heroic narratives, thereby reinforcing the themes of 'Support-Cooperation' and 'Heroism'. However, this optimism began to shift after 2020, coinciding with the proliferation of real-world debates on AI ethics, surveillance and automation. Films such as Superintelligence (2020) and Don't Look Up (2021) highlight AI's manipulative potential, showing how algorithms can influence social behaviour, political discourse and individual decision-making. These narratives reflect societal anxieties over technological determinism, misinformation and the destabilizing effects of machine-led decision-making. These are themes that have intensified alongside the widespread adoption of social media and recommendation algorithms. The portrayal of AI as a cultural and

ideological force in Black Panther: Wakanda Forever (2022) highlights its role in identity, heritage, and collective memory, marking a significant departure from earlier portrayals confined to scientific and military contexts. From 2023 onwards, AI has increasingly been characterized as a strategic yet potentially destabilizing force, reflecting the real-world discourse surrounding autonomous systems and generative AI models. Mission Impossible: The Final Reckoning (2023), introduces ENTITY, a decentralized AI system capable of infiltrating global infrastructures. This illustrates concerns over cybersecurity and AI governance. Similarly, Kalki 2898 AD (2024) presents AI in a dystopian context, depicting it as a tool for both oppression and survival. These portrayals resonate with global discussions about the societal implications of generative AI tools, such as GPT-3, ChatGPT and DALL-E. These tools have transformed content creation, raising questions about authorship, ethics and the future of creative industries. A thematic analysis reveals that, although 'Support-Cooperation' and 'Technological Development' were the most frequently recurring themes, philosophical enquiries into 'Consciousness-Existence' and 'Ethics and Justice' were less prominent. This suggests that mainstream cinema continues to prioritises action-oriented narratives over deeper explorations of AI's ontological dimensions. Nevertheless, the inclusion of ethical discourse in films such as Avengers: Age of Ultron (2015) and Superintelligence (2020), highlights a growing cultural awareness of AI's moral implications. The gradual increase in depictions of AI as manipulative or threatening mirrors global debates on automation, unemployment and algorithmic bias, illustrating cinema's role in reflecting and shaping public opinion. By analysing the evolution of AI representations in cinema, this study demonstrates the interplay between technological progress and cultural production. In particular, science fiction cinema serves as both a source of entertainment and a cultural mechanism that mediates public engagement with emerging technologies. The findings highlight the close link between representations of AI and sociopolitical climates: optimism in the early decades coincides with enthusiasm over AI's potential, while caution in the late decades aligns with increasing scrutiny over AI ethics and governance. This thematic shift parallels the rise of deep learning and generative AI, which have fuelled conversations about creativity, authenticity and labour dynamics in the digital age. The implications of this study extend beyond film studies, offering valuable insights into how popular culture frames technological narratives. As AI continues to permeate everyday life, cinematic depictions will likely serve as cultural texts that respond to and influence societal attitudes. Future research could expand this analysis by examining AI representations in other media, such as television, video games and interactive storytelling platforms. This would provide a more comprehensive understanding of AI's role in shaping contemporary cultural imagination. In conclusion, this study positions science fiction cinema as a critical lens through which to examine evolving perceptions of AI. By tracking narrative trends over a transformative decade, the study highlights cinema's dual function as a mirror of societal anxieties and an ideological force capable of shaping future discourse on technology. As AI continues to develop, cinematic representations will remain a valuable tool for tracing cultural responses, ethical debates and visions of human–machine coexistence.

Keywords: Artificial Intelligence, Representation, Science Fiction, IMDb.

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This study/methods section (or specify parts) was **assisted** by the use of generative artificial intelligence tools. Specifically, DeepL and OpenAI ChatGPT was **used** for language editing and translation.

Bu çalışma/yöntemler bölümü (veya belirtilen bölümler), üretken yapay zeka araçlarının kullanımıyla **desteklenmiştir.** Özellikle, dil düzenleme ve çeviri için DeepL ve OpenAI ChatGPT **kullanılmıştır.**

The research was conducted by a **single author.**

Araştırma t**ek bir yazar** tarafından yürütülmüştür.

There is no **conflict of interest** with any institution or person within the scope of the study.

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