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Adoption Intention of Employees Towards AI in Technology

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Abstract

The rapid advancement of artificial intelligence (AI) technology has led to its increasing adoption by businesses, promising transformative changes across various industries. However, despite its potential benefits, many organizations are still in the early stages of AI adoption, grappling with complexities and uncertainties surrounding its integration into operations. Concerns about the future of work, including issues related to data privacy, human value, biases, and transparency, have accompanied the rise of enterprise AI. Nevertheless, there is also optimism regarding AI's potential to enhance decision-making, stakeholder relationships, and innovation. Top management support plays a crucial role in facilitating AI adoption within organizations, with strong leadership seen as essential to overcoming adoption-related challenges. The technology-organizational-environment (TOE) framework provides a useful lens for understanding the adoption of AI within socioenvironmental and technological contexts. Despite significant progress in understanding AI adoption from an organizational perspective, the perspectives of employees remain relatively understudied. This research aims to address this gap by exploring how employees' cognitive and affective attitudes toward AI influence their behavioral responses during the pre-adoption phase. By utilizing the cognitive appraisal theory, this study seeks to uncover the factors shaping employees' attitudes toward AI and their intentions to use or leave organizations. Understanding these dynamics is essential for promoting a conducive environment for AI adoption and fostering creativity and innovation in the workplace. Additionally, this study utilized a Google Form questionnaire to collect data from employees.

Introduction

The adoption of artificial intelligence (AI) technology by businesses has surged in recent years, with many heralding it as the most significant technological advancement of the century (Brynjolfsson & McAfee, 2017). AI, defined as the ability of machines to learn from experience and adapt to new inputs to perform tasks traditionally done by humans (Duan, Edwards, & Dwivedi, 2019), holds immense potential to enhance and complement human capabilities (Teradata, 2017).

Despite this recognition, the adoption of AI applications within enterprises is still in its early stages. Statistics indicate that while 47% of organizations have integrated at least one AI application into their business processes, a considerable portion, including many major firms, have yet to commit to specific AI implementations (Chui & Malhotra, 2018). This suggests that many large and small businesses are still in the pre-adoption phase of the AI technology life cycle, navigating the complexities and uncertainties associated with incorporating AI into their operations.

Enterprise AI has generated concerns about the future of work due to issues around data privacy, the reduction of human value, ingrained biases, lack of transparency, and the replacement of human relationships with human-machine relationships (Levy, 2018; Müller & Bostrom, 2016), even though it has also sparked interest and optimism in terms of improving future conditions such as enhanced decision support, stakeholder relationships, and innovations (Borges, Laurindo, Spínola, Gonçalves, & Mattos, 2021). Organizations must assist their employees in adjusting to a digital future powered by AI, as AI's transformative effects impact workers' intentions to remain with or leave the company (Brougham & Haar, 2018; Li, Bonn, & Ye, 2019; Mahlasela & Chinyamurindi, 2020). (Wang et al., 2017).

The field of information systems (IS) research has made significant strides in our comprehension of how businesses respond to transformational technologies such as artificial intelligence (Duan et al., 2019; Dwivedi et al., 2021). Existing research has examined risk and success factors (e.g., Pan, Froese, Liu, Hu, & Ye, 2021; Sun & Medaglia, 2019), strategies driven by AI (e.g., Borges et al., 2021), creating value with AI (e.g., Papadopoulos, Baltas, & Balta, 2020), and customers' perspectives on AI (Balakrishnan & Dwivedi, 2021a,[Balakrishnan & Dwivedi, 2021b]2021b; Gursoy, Chi, Lu, & Nunkoo, 2019).

According to a 2017 Gartner survey, 6% of firms had used AI by then, and 59% of industries were still debating whether to do the same. However, this Gartner (2017) research does not explain how an industry's adoption of AI might enhance its business strategy. However, research suggests that the use of big data analytics and machine learning could guarantee certain business and social values in organizations (Dubey et al., 2021; Dwivedi et al., 2021; 2020; Pappas et al., 2018; Mikalef et al., 2020; Shareef et al., 2021). It is

also unclear how AI technology could improve the practices of organizations (Margherita and Braccini, 2020).

One of the biggest obstacles to any novel technology being adopted in a company is getting top management support (Pu et al., 2019). The adoption of AI can be facilitated by top management realizing its business-oriented benefits and mobilizing financial and technical resources (Alshamaila et al., 2013). Strong leadership support is therefore thought to mitigate these adoption-related problems. The technology-organizational-environment (TOE) framework (Hossain & Kuaddus, 2011) has been successful in explaining the adoption of cloud computing and e-commerce, indicating that any technology adoption in the context of socioenvironmental and technological aspects can be easily interpreted in terms of this framework (Idris, 2015; Yang et al., 2015). Artificial intelligence (AI) solutions are now a reality in business. The benefit of using AI systems and the real impact they have on many organizations' operations are driving businesses' increasing interest in the newest technologies that support their growth. For most of these businesses, however, this is just the start of a journey that will soon revolutionize business. Employers must embrace AI solutions before they can be implemented.

Artificial intelligence is an extremely capacious concept encompassing various technologies and modern solutions, operating based on diverse and often very complicated algorithms, it is difficult to indicate one commonly accepted definition of AI. The ability of systems to make decisions or carry out specific tasks with at least a partial representation of human intelligence, as well as the capacity to learn and improve based on information collected, is a crucial component of advanced technology that determines its categorization into the functional area of artificial intelligence, regardless of the differences in the definition that currently exist.

This research is primarily conducted from an organizational perspective. The perspectives of employees have not gotten much consideration. Few studies have looked into how concerns and benefits are seen and how that affects the intention to switch jobs (e.g., Abdullah & Fakieh, 2020; Ardon & Schmidt, 2020; Brougham & Haar, 2018)

Artificial intelligence (AI) has advanced very quickly in recent years, which has resulted in the rise of AI-facilitated artistic expression, which has become quite well-liked and accepted in society at large. Using generative artificial intelligence (GenAI) platforms to generate visual art is one prominent use of AI in the graphic design industry. Disco Diffusion, Midjourney Diffusion, and Stable Diffusion are a few examples of platforms that help designers quickly create eye-catching posters.

As far as we know, no research has looked at the nature of AI and how affective attitudes affect how workers react to it. Artificial intelligence (AI) can elicit powerful emotions. It is distinguished from traditional enterprise IT, such as cloud computing and ERP, by its unique learning, cognitive, and intelligent characteristics (Brock & von Wangenheim, 2019; Huang & Rust, 2021). Unanswered questions in the existing literature include how employees' views regarding AI change over time, how AI's distinctive features affect attitudes, and how employees' behavioral intentions are influenced by their cognitive and affective processes.

We hope to answer some of these unresolved questions with this research. To achieve this, we utilize the cognitive appraisal theory (Lazarus & Folkman, 1984) to shed light on the method by which individuals assess and react to difficult circumstances. According to the theory, people's perceptions of opportunities, harm/loss, threats, and challenges vary based on their objectives, their ability to cope, and their expectations for the future. This appraisal evokes feelings, both good and bad. In this study, the context of interest is employees' cognitive evaluation of AI during the pre-adoption phase, which occurs before a specific IT solution is adopted (Herold, Farmer, & Mobley, 1995), but before businesses consider the necessity for a technology (Lai & Mahapatra, 1997).

Pre-adoptive evaluation is future-focused and relies on a small number of clues. The present study finds that some factors mentioned in the literature on IT adoption, like performance expectancy, effort expectancy, and social impact, are not very relevant when considering the use of a certain kind of AI (Venkatesh, 2021; Vimalkumar, Sharma, Singh, & Dwivedi, 2021). Instead, workers have preconceived notions about what AI is or can do, as well as how it can impact their working environment. Their assessments shape their cognitive and affective attitudes, which in turn shape their intentions for how they will behave with the technology and inside their company.

Our investigations in this setting are guided by two study questions: what influences employees' affective and cognitive attitudes regarding AI during pre-adoptive appraisal, and how do these attitudes affect employees' behavioral responses? This study examines how employees' subjective knowledge, their perceptions of AI's operational and cognitive skills, and their expectations of AI's results affect their affective and cognitive attitudes toward the technology. We also examine the association between behavioral intentions and opinions about AI (intention to use) and organizations (intention to leave). The intention to use signifies the success of AI implementation.

The adoption of AI technologies by employees represents a significant shift in the traditional dynamics of work. While AI promises to automate repetitive tasks, augment decision-making processes, and streamline operations, its introduction into the workplace often elicits mixed reactions. Employees may perceive AI as

a threat to job security, fear loss of control, or harbor skepticism about its reliability and ethical implications. Conversely, others may welcome AI as a tool for empowerment, enabling them to focus on higher-value tasks and fostering creativity and innovation.

In the tech industry, where innovation is equated with survival, employee attitudes and intentions regarding AI adoption are crucial. Therefore, the purpose of this study is to explore the varied viewpoints of tech industry workers about the use of AI. By using in-depth questionnaires, in-person interviews, and data analysis, we want to identify the fundamental elements affecting workers' intentions to adopt AI. Through illuminating these dynamics, this study aims to offer significant perspectives to enterprises attempting to manage the intricacies of incorporating AI into the workplace, promoting an atmosphere that is favorable for creativity and development.

Literature review

In this research, the author explores how frontline service employees perceive and interact with AI-based technologies, an area that has not been thoroughly examined before. Despite the growing interest in this field, there is a noticeable lack of comprehensive research on the personal factors that influence employees' willingness to embrace AI. This study seeks to fill this gap by concentrating on individual determinants and constructing a holistic framework to understand their importance in shaping employees' intentions to adopt AI. The study demonstrates that individual factors like one's role, motivation, and proficiency in using AI can coexist and have a positive impact on adoption, despite potential conflicts. Additionally, the research leads the way in investigating AI-specific moderators such as privacy concerns and trust, revealing their influence on the adoption process. Practically, the results suggest that AI developers should prioritize improving employees' perceptions of their roles, motivations, and capabilities when developing AI technologies. For example, creating user-friendly interfaces could boost employees' comfort with AI technology. Furthermore, organizations should tackle privacy concerns and build trust by establishing transparent communication channels between employees and AI systems.

Nevertheless, it is crucial to recognize certain limitations of the study. Firstly, the data was collected solely from employees in South Korea, which may limit the applicability of the findings to other cultural settings. Future research should seek to replicate these results in diverse countries. Secondly, due to the study's cross-sectional design, causal relationships between variables could not be determined. Longitudinal studies could offer deeper insights into the evolution of AI adoption over time. Lastly, while the focus was on

specific individual factors and AI-specific moderators, future studies could uncover additional factors relevant to intentions to adopt AI (Choi, 2021).

This investigation provides novel insights into the perceptions and acceptance of artificial intelligence (AI) among customers in frontline service environments. Despite the growing significance of AI, there exists a paucity of comprehensive studies on the factors influencing customers' inclination to utilize AI technologies. This research addresses this gap by examining individual determinants such as one's role, motivation, and capability, and their interconnectedness in the context of AI utilization. It is observed that despite potential conflicts, these individual factors can coexist and impact the acceptance of AI.

Moreover, the study delves into specific aspects concerning AI, notably focusing on privacy apprehensions and trust. Privacy concerns appear to influence the actual usage of AI devices by customers, while trust plays a crucial role in their cognitive evaluation of employing such technologies, particularly regarding their perceived competence in adopting them. In conclusion, this study illuminates the personal and situational factors that mold customers' acceptance of AI in frontline services. It underscores the significance of comprehending factors like role, motivation, and capability in enhancing the acceptability of AI among customers. This indicates the necessity for AI developers to concentrate on designing user interfaces that elucidate customers' roles, enhance motivation, and boost capability during AI utilization. Additionally, the prominence of privacy concerns cannot be overlooked, as they impact how customers engage with AI devices, necessitating operators to prioritize privacy safeguards. Lastly, cultivating trust is imperative for customers to feel at ease while utilizing AI technology, and promoting diverse forms of communication between customers and AI systems can aid in achieving this goal. (Choi, 2023)

The presence of ANI and the emergence of more sophisticated AI agents have sparked a surge in research studies in recent years dedicated to assessing user acceptance of AI. While numerous studies have been examined, the theoretical foundations were not always firmly established. The TAM and UTAUT models were frequently utilized from a theoretical standpoint to gauge behavioral intentions. Factors like perceived usefulness, performance expectancy, attitudes, trust, and effort expectancy were found to significantly and positively influence behavioral intention, willingness, and use behavior of AI across various industries. Cultural aspects also play a crucial role in comparing acceptance research among diverse demographics. Although the TAM was commonly used to measure acceptance and demonstrated high predictive success in assessing behavioral intentions, new theoretical advancements in the AI field have emerged. The AIDUA model is an emerging framework that provides a more thorough analysis of use behavior by incorporating two outcome stages (willingness and rejection) and considering advanced technology like AI. Future studies should acknowledge the possibility of co-existing willingness and rejection, rather than solely relying on

traditional models like TPB and TAM, which perceive willingness as the absence of rejection. A key limitation is that actual behavior has primarily been assessed using the TAM, leaving the external validity of other theories largely unexplored. This is not unexpected as actual behavior is an outcome variable in the TAM but not in other models such as the AIDUA. Researchers need to account for the varying outcome variables when examining user acceptance or rejection of AI. The lack of naturalistic studies represents a constraint in current literature, highlighting the need for further research to evaluate the real-world adoption of AI. AI research is a diverse field with numerous applications, spanning from religious services to automated retail stores. By systematically outlining the predictive factors of AI acceptance, this study can serve as a valuable tool to direct future AI research and development. (Kelly et al., 2022)

Generative Artificial Intelligence (AI) systems can independently generate novel content, encompassing visuals, audio, and videos, in reaction to user inquiries. These systems, such as ChatGPT (Generative Pre-Trained Transformer), exhibit the ability to engage in dialogues resembling human conversations to furnish users with pertinent information. ChatGPT, for instance, can aid entrepreneurs by supplying insights on global markets or supporting in tasks related to coding such as code generation and debugging. The practical implications of Generative AI, notably in entrepreneurship education and business activities, have been extensively documented. Within libraries, for instance, ChatGPT can be harnessed for diverse purposes like organizing catalogs, providing reference services, and facilitating language translation. Nevertheless, further investigation is imperative to conceptualize the theoretical framework surrounding the influence of Generative AI on business. Despite offering sophisticated functionalities, these technologies also manifest limitations like producing inaccurate results and exhibiting biases. This instigates inquiries into entrepreneurs' dependency on Generative AI and its perceived utility and user-friendliness. To mitigate apprehensions regarding reliance on Generative AI, a recommendation is made to perceive it as a collaborator in knowledge rather than a sole arbiter of decisions. Entrepreneurs are advised to treat outputs from Generative AI as hypotheses and corroborate them with human expertise. This methodology ensures well-informed decision-making and ethical integration of Generative AI into business operations. A technology adoption model for Generative AI, postulated by the researchers, posits that entrepreneurs should embrace the technology incrementally under the influence of diverse determinants. These stages encompass pre-conception, conception, evaluation, and consequence stages, each shaped by distinct factors like societal impact, perceived utility, and emotional aspects. The empirical validation of this adoption model aims to furnish substantial proof of the associations among adoption determinants. This will facilitate entrepreneurs in making strategic choices aligned with their business requisites and limitations. In essence, comprehending the adoption determinants and their interrelations will steer entrepreneurs in formulating

judicious adoption decisions and seamlessly incorporating Generative AI into their business methodologies. (Gupta, 2024)

AI enables machines to learn from past experiences and errors, performing tasks requiring human intelligence. It involves analyzing data to aid decision-making processes and transforming businesses and user experiences. AI mimics human intelligence in machines, revolutionizing data collection and analysis in businesses.

Despite the potential benefits, only half of organizations have implemented AI in at least one business function. Managers face challenges in AI adoption despite recognizing its opportunities across industries. AI reshapes human resource management, predicting employee behaviors and improving decision-making processes. AI technology drives innovations like self-driving cars and real-time translation services. Businesses rely on AI for reliable outcomes, emphasizing the need to incentivize staff for adoption. Aligning managers' attitudes and intentions with AI goals is crucial for effective implementation, empowering businesses to analyze consumer preferences accurately. (Jameel & Harjan, 2023)

In the initial phases of integrating Artificial Intelligence (AI) systems into workplaces in countries such as Germany, the USA, England, China, and Japan, researchers primarily focused on the potential impact on the employment market. Concerns arose regarding the possibility of AI technologies, like robotics, displacing human workers and resulting in economic disparity. This apprehension was rooted in the notion that the introduction of new technology could disrupt production processes and employment by rendering certain human skills outdated while necessitating the acquisition of new skills, a phenomenon known as creative destruction. As time has progressed, studies have shown that technological progress could lead to both an increase and a decrease in employment across various sectors and job types. While the initial intention of AI was to substitute human labor for the sake of efficiency and cost reduction, the emphasis has now shifted towards fostering collaboration between humans and machines. Nevertheless, the concerns of job displacement and the substitution of human labor by machines persist, as organizations seek to leverage AI adoption for cost savings, improved profitability, enhanced efficiency, and meeting customer needs.

Despite the potential advantages, numerous workers globally have voiced apprehension toward AI due to the fear of job displacement. Only a minor fraction of employees view AI as a supplement to their work processes. Employers often perceive machines as cost-effective alternatives capable of working longer hours and performing multiple tasks with efficiency.

The adoption of AI has presented challenges, with less than 39% of companies worldwide having a formulated AI strategy. As automation advances, there is mounting pressure on existing job roles, with a considerable portion of employment at risk of being automated. In regions like Africa, including Nigeria, where the adoption of AI may still be at an early stage, obstacles include inadequate infrastructure, a lack of technological ecosystem, limited training opportunities, and outdated educational curricula to support the integration of AI. Overcoming these challenges necessitates collaborative endeavors from stakeholders to provide the essential infrastructure, training, and educational support required for the successful adoption of AI across various sectors of the economy. This research endeavor seeks to delve into the factors contributing to the sluggish adoption of AI in Nigeria and to propose strategies for surmounting obstacles to its implementation. (ELEGUNDE & OSAGIE, 2020)

The onset of the Fourth Industrial Revolution, marked by the emergence of artificial intelligence (AI), is currently in progress and is set to redefine human history. Its official declaration took place at the 46th World Economic Forum in Davos, Switzerland, in January 2016. This revolution is projected to revolutionize employment trends, as evidenced in publications such as "The Future of Jobs." The progression of AI, supported by factors like the accessibility of extensive datasets, cloud computing, and machine learning, has facilitated its extensive integration into various facets of everyday life, encompassing language acquisition, robotics, computer vision, and self-driving vehicles. In preparation for this revolution, organizations are advised to designate Chief Artificial Intelligence Officers (CAIOs) alongside Chief Innovation Officers (CIOs) to effectively leverage AI technologies throughout their operations. Unlike past revolutions, where machines supplemented or substituted physical or mental labor, the AI revolution aims to influence almost every task currently carried out by humans, potentially rendering humans superfluous for the first time. AI-driven systems are denoted by various titles such as intelligent software agent systems, expert systems, or knowledge-based systems. The fusion of AI with big data and sophisticated algorithms has established it as a fundamental element of digital systems in the contemporary era. Scholars have concentrated on comprehending how AI impacts human decision-making and have pinpointed ethical, legal, and philosophical dilemmas that require resolution, particularly in scenarios like autonomous driving.

Given these advancements, there is a growing consensus on the necessity for regulating the usage of AI. Consequently, AI is anticipated to influence employee conduct, emphasizing the significance for organizations to cultivate organizational climates that promote the adoption and utilization of AI.Organizational climate, molded by shared norms and values, holds a pivotal role in shaping employees' perspectives on AI. Favorable or unfavorable stances towards AI within the organizational climate substantially affect the rate at which organizations embrace and deploy AI technologies. Hence, there is an

urgent call in the literature to investigate the correlation between organizational culture and attitudes towards AI within organizational settings. This research endeavour aims to explore this correlation, scrutinizing how organizational culture influences employees' attitudes towards AI. The manuscript encompasses segments encompassing theoretical framework, methodology, results, discourse, and conclusion. (Akyazı, T. E. (2023).

the adoption intention of employees towards AI-based technology in the hotel industry. It highlights the importance of technology adoption for operational efficiency and guest satisfaction. Barriers to adoption, including human factors and managerial support, are identified. Theoretical frameworks such as the Theory of Planned Behavior are applied to understand attitudes, self-efficacy, and behavioral intention. Task-technology fit is found to interact with employees' perceptions, shaping their attitudes towards technology adoption. 9. (Lee, Kim, & Kim, 2006)

The use of artificial intelligence (AI) in higher education in India has opened up new possibilities and challenges, with potential to greatly enhance governance effectiveness and efficiency. AI systems are capable of performing tasks like learning, adapting, and synthesizing data, which can benefit students, teachers, administrative staff, and researchers. Governments worldwide are investing in modern technologies like AI to improve the quality of education and assessment processes. Studies have shown that learning with AI can be more effective than traditional methods. In India, there's increasing momentum towards adopting AI in higher education, but aligning users' acceptance and attitudes towards this technology remains a challenge. The Unified Theory of Acceptance and Use of Technology (UTAUT) model is commonly used to understand users' intention to adopt new technology like AI, as it has shown significant explanatory power in previous studies. Many researchers have adapted the UTAUT model to fit their specific contexts and achieved positive results. (Gurjar, Singh, & Sharma, 2020)

Prominent figures like Stephen Hawking and Bill Gates have warned of potential mass unemployment due to advancements in Smart Technology, Artificial Intelligence, Robotics, and Algorithms (STARA). Studies predict up to one-third of jobs could be replaced by STARA by 2025 due to significant improvements in robotic capabilities and affordability of autonomous systems. These technologies are increasingly prevalent across sectors, posing challenges even to high-skilled professions. Unlike previous industrial revolutions, STARA's rapid evolution may not offer immediate replacements for displaced workers, particularly in the service sector. Career planning must adapt to consider the impact of STARA on future job prospects, as traditional factors like personal interests may become less relevant. This study explores STARA awareness and its implications for employees' job and well-being outcomes, drawing on insights from career planning (Hill, Wilkins, & McLeod, 2021)

Recent advancements in computing have led to significant growth in artificial intelligence (AI) technologies like natural language processing, voice recognition, and machine learning. As a result, there's increasing interest in intelligent products that utilize AI for autonomous decision-making. These intelligent products, categorized as innovative IT products, prompt researchers to explore factors influencing user adoption. Studies often rely on models like the Technology Acceptance Model (TAM), Theory of Planned Behavior (TPB), and Unified Theory of Acceptance and Use of Technology (UTAUT). While these models have been applied in various fields, there's no consensus on which performs best across different contexts. This study aims to compare these models in the context of AI-based intelligent products to understand factors influencing acceptance and purchase intention. By examining these factors, developers and investors can better predict consumer behavior and facilitate the successful adoption of AI-based intelligent products. (Groß, 2020)

Knowledge sharing has become crucial for organizational competitiveness, fostering the development of organizational capital, enhancing performance, and driving innovation. Traditionally, knowledge transfer involved a one-way flow from a sharer to a recipient, but it has evolved into multidimensional interpersonal interactions among employees and now involves interactions with AI applications. AI-enabled applications offer a new mechanism for knowledge sharing and transfer, known as AI-mediated knowledge sharing (AI-MKS) social exchange. This article addresses the increasing interactions between humans and AI applications, highlighting the limited understanding of the resulting issues and the sparse research on the considerations for adopting such applications. AI-MKS social exchange offers advantages over human-to-human exchange, including flexibility in sharing knowledge regardless of time and space constraints, particularly beneficial for multinational or large organizations with geographically dispersed employees. However, there is a gap in the literature regarding motivation in employees' AI-MKS social exchange, especially in the context of HRM-focused AI applications. Drawing upon theories of HRM such as high-commitment HRM and best-fit theory, the article aims to achieve a balance between strategic, organizational, employee, and job fit with HRM practices through AI-mediated social exchange. Additionally, research on AI and HRM has only recently begun to emerge, with a noticeable increase in publications post-2010, indicating the growing focus on AI-human collaboration in organizational settings. (Gursoy, Chi, Lu, & Nunkoo, 2019)

Technology plays a significant role in both individual and organizational outcomes in the workplace, with various IT-based innovations such as sensors, big data, analytics, artificial intelligence, robots, and automation becoming increasingly prevalent. This trend is not limited to developed countries but also applies to developing nations. In this context, there is a growing emphasis on understanding how technology

influences Human Resources Management (HRM) practices, both locally and internationally. It is widely acknowledged that the future of work is closely intertwined with technological advancements. This article examines the impact of technology-related factors, such as technology-based job autonomy, overload, and monitoring, on turnover intention among government employees in South Africa. By focusing on these factors, the study aims to shed light on their influence within the digital economy. The research question guiding the study is to understand how technology-related factors affect turnover intentions in South African public service. The article proceeds to provide background information, review relevant literature, describe the research design and methodology, present the analysis of results, and conclude with recommendations for future research and the study's contributions. (Mahlasela & Chinyamurindi, 2020)

Artificial intelligence (AI) is a powerful tool designed to mimic human cognitive functions, observing and reacting to environments to achieve objectives. It processes vast amounts of data and has applications across industries, not limited to marketing. AI aims to simplify tasks and enhance efficiency, evident in everyday devices like smartphones with virtual assistants. In marketing, AI automates processes, analyzes data, and aids in strategic planning, yet research on its direct impact remains limited. This study fills a gap by conducting a systematic review to explore AI's applications, benefits, and future directions in marketing. It aims to uncover how AI can maximize customer satisfaction, market share, and profitability in the evolving digital landscape, (Papadopoulos, Baltas, & Balta, 2020).

Industry 4.0, akin to the fourth industrial revolution, emerged in Germany in 2011 as a cyber-physical system, akin to GE's industrial Internet. Facing numerous challenges, organizations sought advanced digital strategies, leading to a shift towards Industry 4.0. This paradigm encompasses nanotechnology, cyber-physical systems, AI, robotics, and IoT, aiming for smart organizations through digitalization. Global investments in digitalizing industries were estimated at $900 billion annually by 2020. AI's use is seen to enhance productivity and decision-making, with potential for economic growth, yet many industries remain hesitant to adopt it. Top management support is crucial for AI adoption, with the TOE framework often employed to understand adoption factors. Despite Industry 4.0's potential to enhance business strategy, the impact of AI adoption on manufacturing and production firms' strategies remains unclear. This study aims to identify AI adoption antecedents, assess organizational readiness, and explore how leadership support moderates adoption. (Papadopoulos, Baltas, & Balta, 2020).

Electronic Customer Relationship Management (eCRM) combines traditional CRM practices with e-business applications, sparking interest among companies. It offers both opportunities and challenges. On one hand, it enhances customer interactions, fosters better relationships, and allows for personalized services, giving companies a competitive edge. On the other hand, challenges include managing online

channels, integrating data, and overcoming IT architecture issues. This paper explores these opportunities and challenges and suggests areas for future research in eCRM implementation (Chatterjee, Chakraborty, Chatterjee, & Mukherjee, 2021)

The paper discusses how artificial intelligence (AI) is playing a significant role in transforming various industries by enhancing efficiency, productivity, and decision-making. Despite its benefits, the adoption of AI can also lead to technostress among employees, posing challenges for organizations. The study aims to explore the factors influencing employees' intention to adopt AI and how technostress affects this intention. It categorizes technostress into challenge and hindrance stressors and examines their impact on employees' attitudes and behaviors using psychological frameworks. Additionally, the study investigates how individual characteristics, such as technical self-efficacy, moderate the relationship between technostress and AI adoption intention. Overall, the research contributes to understanding the complexities surrounding AI adoption in the workplace and offers insights into both theory and practice. (Chang et al., 2024)

Research objectives

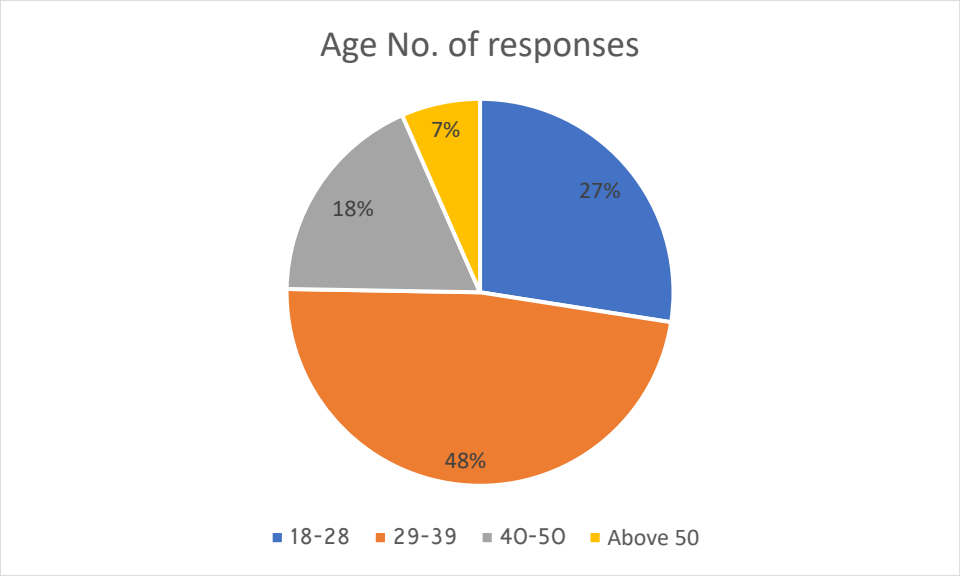
1. To identify contributing factors affecting the adoption intention of employees toward AI technology
2. To examine the impact of contributing factors on the adoption intention of AI technology

Research Methodology

For our research methodology, we opted to utilize Google Forms to create a questionnaire aimed at understanding employees' perspectives on AI adoption within their workplace. Through this approach, we sought to gather insights into various aspects of AI integration, including attitudes, concerns, and experiences. This method allowed for convenient data collection, enabling us to reach a broad spectrum of employees across different departments and roles within the organization. It's important to note that our sampling method was convenience sampling, chosen for its practicality and accessibility in obtaining responses from a diverse pool of participants.

- **Age**

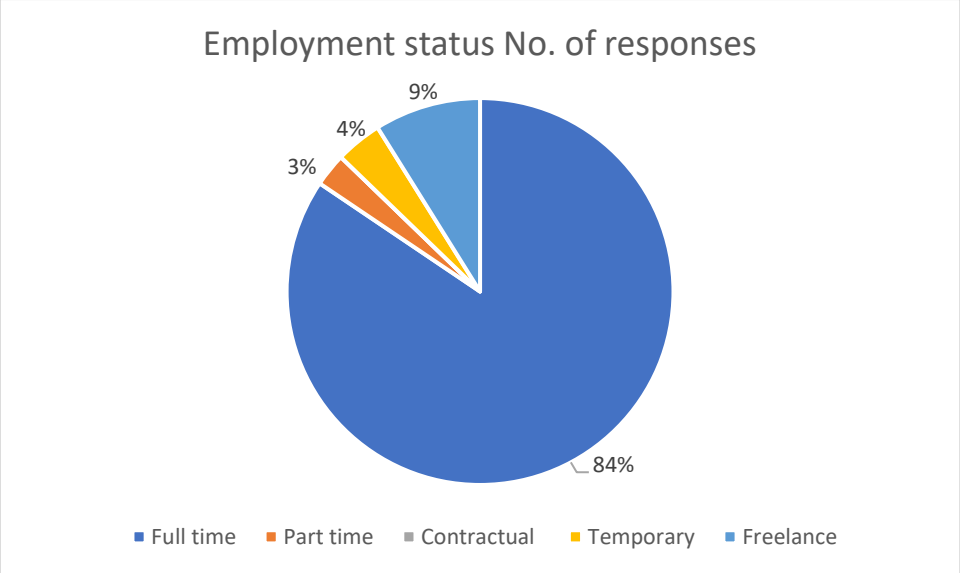
Response	No. of responses	% of responses
18-28	50	27.5%
29-39	87	47.8%
40-50	33	18.1%
Above 50	12	6.6%
Total	182	100%



The data presents the age distribution of the responses, indicating that the majority of the respondents (47.8% of the total) are between the ages of 29 and 39, with the next largest group being 18 to 28 (27.5%). The age group between 40 and 50 makes up 18.1% of all responses, with respondents above 50 making up the smallest portion (6.6%). This implies that a sizable percentage of participants in the survey or study were in their late 20s to late 30s, with proportionally fewer respondents belonging to the younger, older, or middle-aged groups.

- **Employment status**

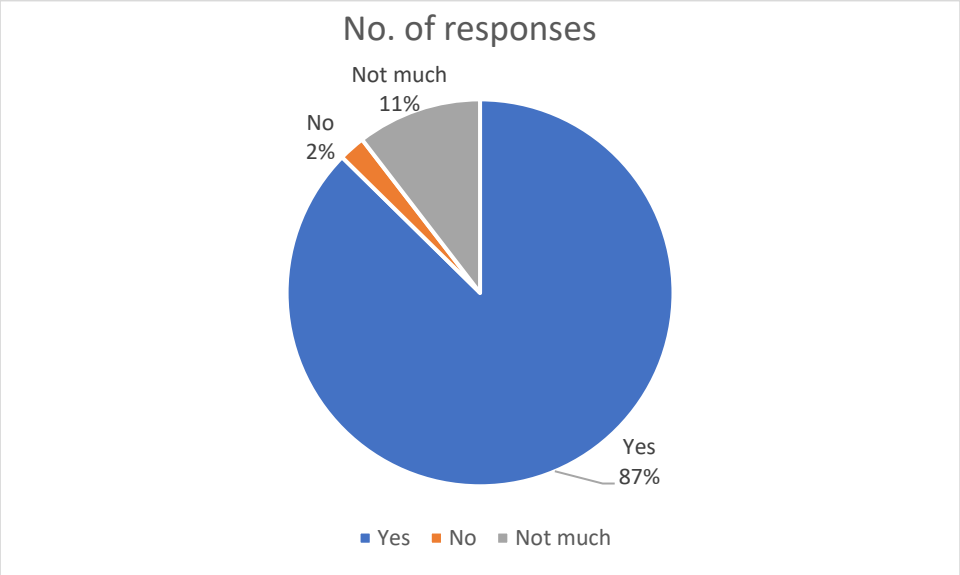
Response	No. of responses	% of responses
Full time	152	84.4%
Part-time	5	2.8%
Contractual	0	0%
Temporary	7	3.9%
Freelance	16	8.9%
Total	182	100%



The majority (84.4%) of respondents are employed full-time, with a small portion (2.8%) working part-time. There were no respondents in contractual positions, while temporary workers accounted for 3.9% and freelance workers for 8.9% of the total.

- **Are you aware about AI technologies being integrated into workplace?**

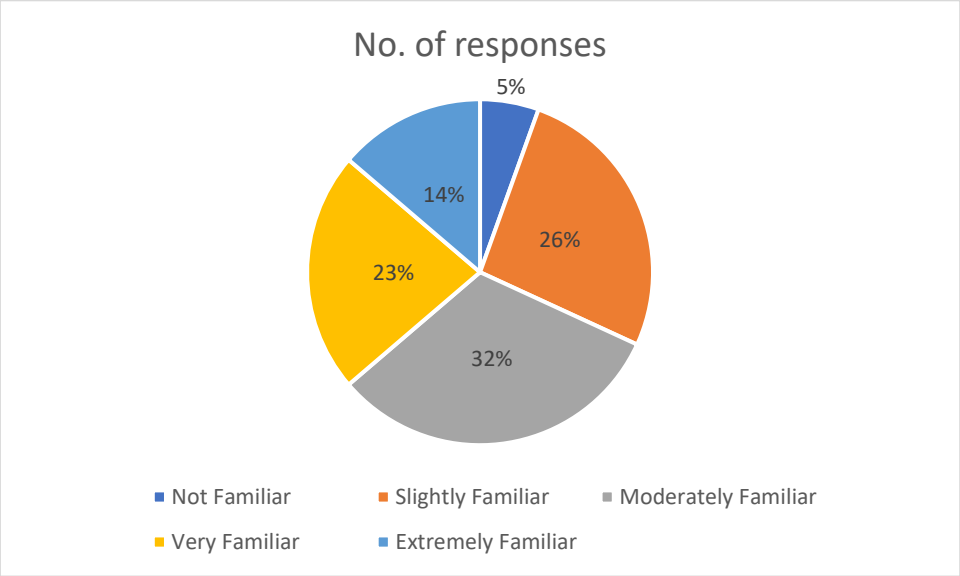
Response	No. of responses	% of responses
Yes	159	87.4%
No	4	2.2%
Not much	19	10.4%
Total	182	100%



The research shows that respondents have a high level of awareness (87.4%) about the use of AI technologies in the workplace. 10.4% said they had limited awareness, while a tiny minority (2.2%) said none. This implies that the vast majority of respondents are aware of the existence and significance of AI technologies in their work settings, with a small percentage needing to be more familiar with them.

- **How familiar are you with the use of AI technologies in our workplace?**

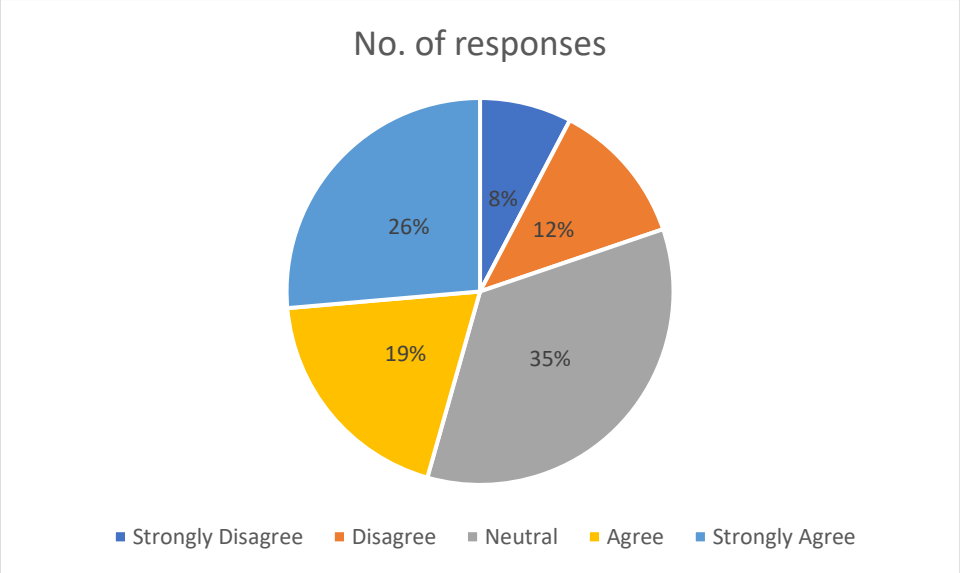
Response	No. of responses	% of responses
Not Familiar	10	5.5
Slightly Familiar	48	26.4
Moderately Familiar	58	31.9
Very Familiar	41	22.5
Extremely Familiar	25	13.7
Total	182	100%



The information indicates that respondents' experience with AI applications in the workplace varied. A considerable percentage of respondents—26.4% fairly familiar, 31.9% very familiar, 22.5% very familiar, and 13.7% highly familiar—expressed some level of familiarity, compared to 5.5% who said they were not familiar. This distribution indicates a wide range of knowledge, with a significant percentage having at least a passing familiarity with AI technologies.

- **Do you think AI will create new opportunities for your job or industry?**

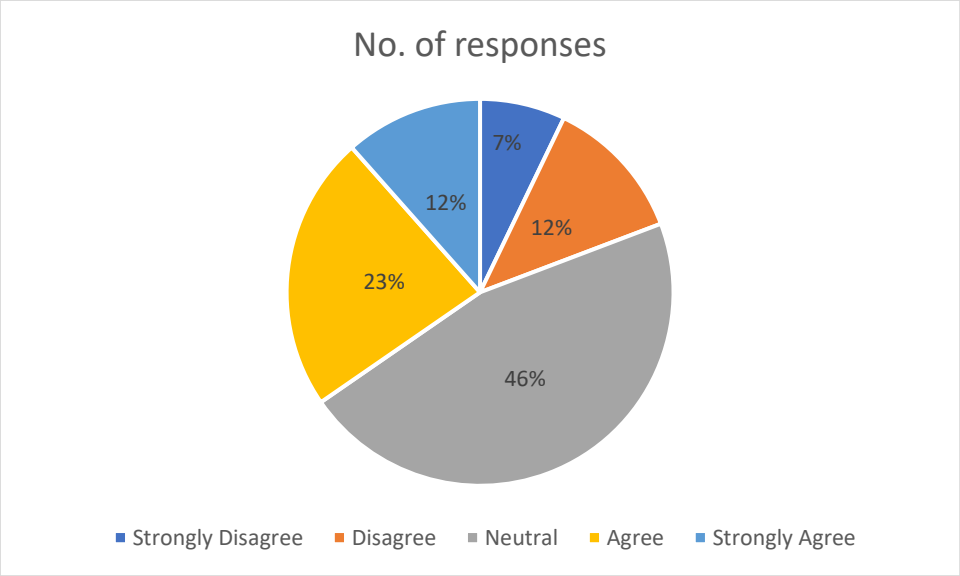
Response	No. of responses	% of responses
Strongly Disagree	14	7.7%
Disagree	22	12.1%
Neutral	63	34.6%
Agree	35	19.2%
Strongly Agree	48	26.4%
Total	182	100%



The data showcases a diverse range of opinions regarding the potential impact of AI on job opportunities within the respondents' industries. While 7.7% strongly disagree and 12.1% disagree that AI will create new opportunities, a significant portion are neutral (34.6%). On the other hand, 19.2% agree and 26.4% strongly agree that AI will indeed generate new prospects, suggesting a considerable level of optimism among respondents regarding the transformative potential of AI technologies in their respective fields.

- **Do you think AI technologies have improved efficiency in your daily task?**

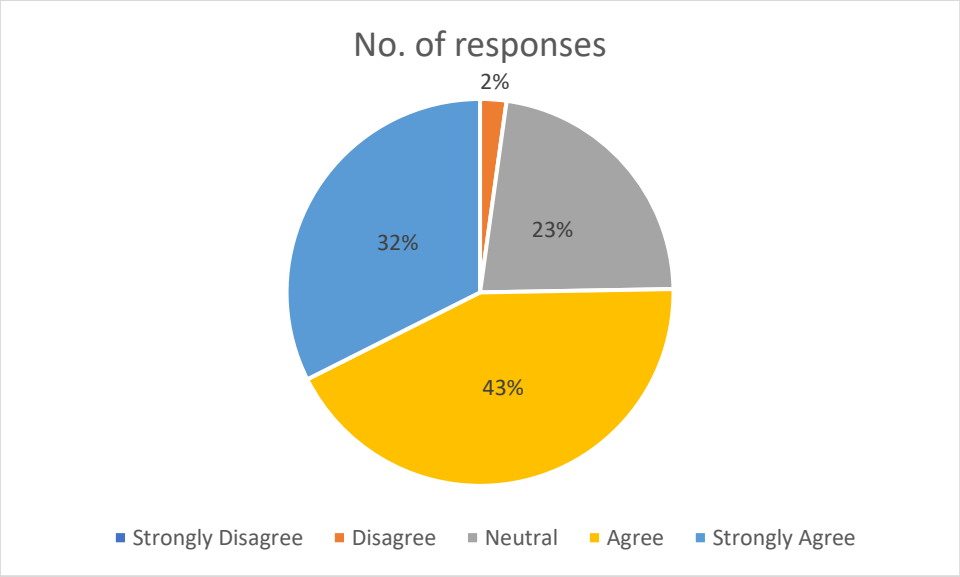
Response	No. of responses	% of responses
Strongly Disagree	13	7.1%
Disagree	22	12.1%
Neutral	84	46.2%
Agree	42	23.1%
Strongly Agree	21	11.5%
Total	182	100%



The research shows that respondents' perceptions of how AI technologies affect the efficiency of their daily tasks are not all that consistent. Although 12.1% and 7.1% disagree and strongly disagree that AI has increased efficiency, a sizable portion (46.2%) have no opinion. On the other hand, 11.5% strongly agree and 23.1% believe that AI has increased efficiency. This indicates that different people have different perceptions of and experiences with AI's ability to simplify daily chores, and a sizable percentage of them seem skeptical or withhold judgment.

- **Do you think AI will make your job riskier in the future?**

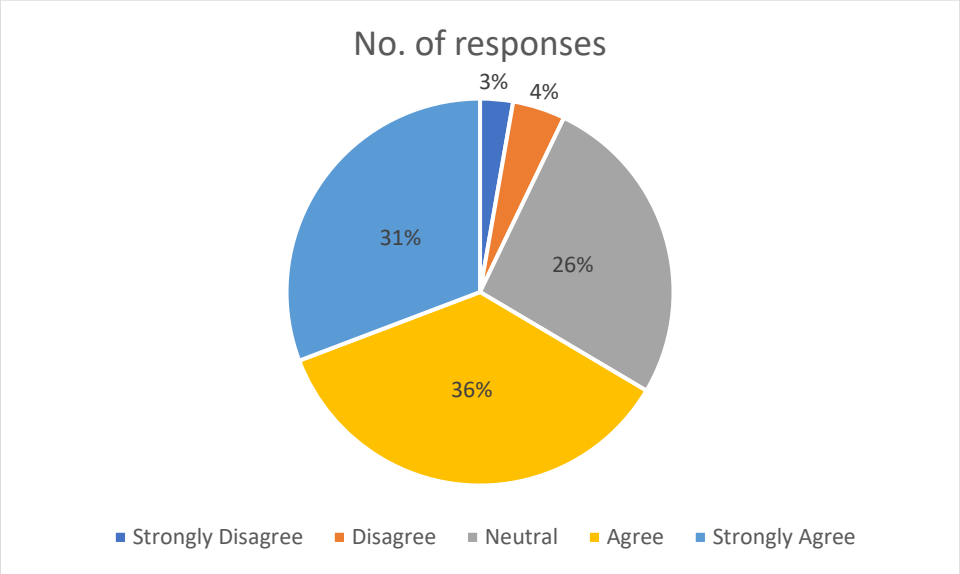
Response	No. of responses	% of responses
Strongly Disagree	0	0%
Disagree	4	2.2%
Neutral	41	22.5%
Agree	78	42.9%
Strongly Agree	59	32.4%
Total	182	100%



According to the findings, respondents were noticeably concerned about the risks AI might one day pose to their jobs. Only 2.2% disagree and none strongly disagree, yet a sizable majority of respondents believe (42.9%) or strongly agree (32.4%) that AI will increase the danger in their professions. Furthermore, 22.5% express no opinion, which suggests ambiguity or the need for additional research on the effects of AI on job security. All things considered, the vast majority of participants view AI as a possible risk factor for their future careers.

- **Do you agree that AI technologies will replace certain job roles within our organization in the near future?**

Response	No. of responses	% of responses
Strongly Disagree	5	2.7%
Disagree	8	4.4%
Neutral	48	26.4%
Agree	65	35.7%
Strongly Agree	56	30.8%
Total	182	100%

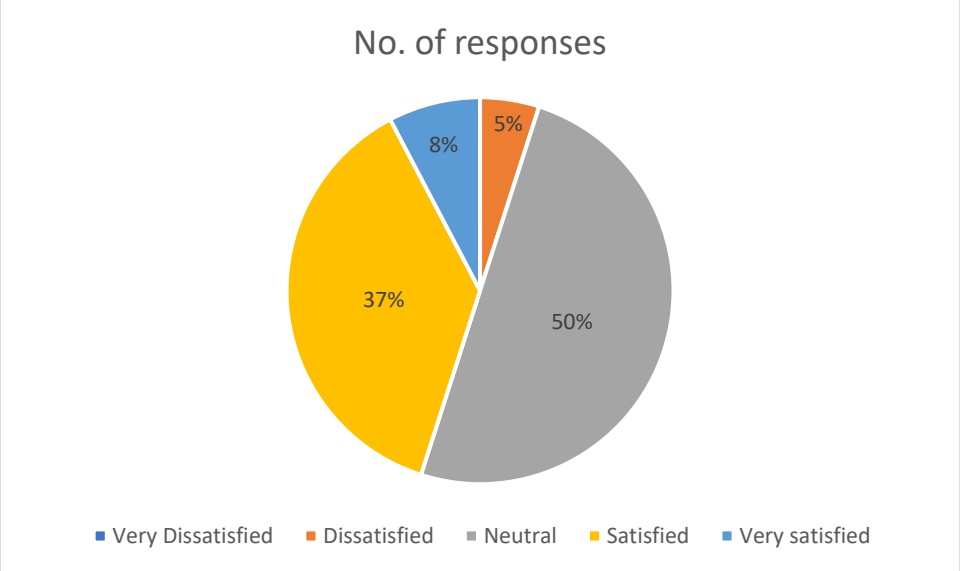


The data suggests a significant apprehension among respondents regarding the potential for AI technologies to replace certain job roles within their organization in the near future. While 2.7% strongly disagree and 4.4% disagree with this notion, a substantial portion expresses agreement (35.7%) or strong agreement (30.8%) that AI will indeed replace certain roles. Additionally, 26.4% remain neutral,

indicating a need for further assessment or uncertainty about the extent of AI's impact on job roles within the organization.

- **How much you are satisfied with the training opportunities that are provided to you in order to adopt the technology?**

Response	No. of responses	% of responses
Very Dissatisfied	0	0%
Dissatisfied	9	4.9%
Neutral	91	50%
Satisfied	68	37.4%
Very satisfied	14	7.7%
Total	182	100%

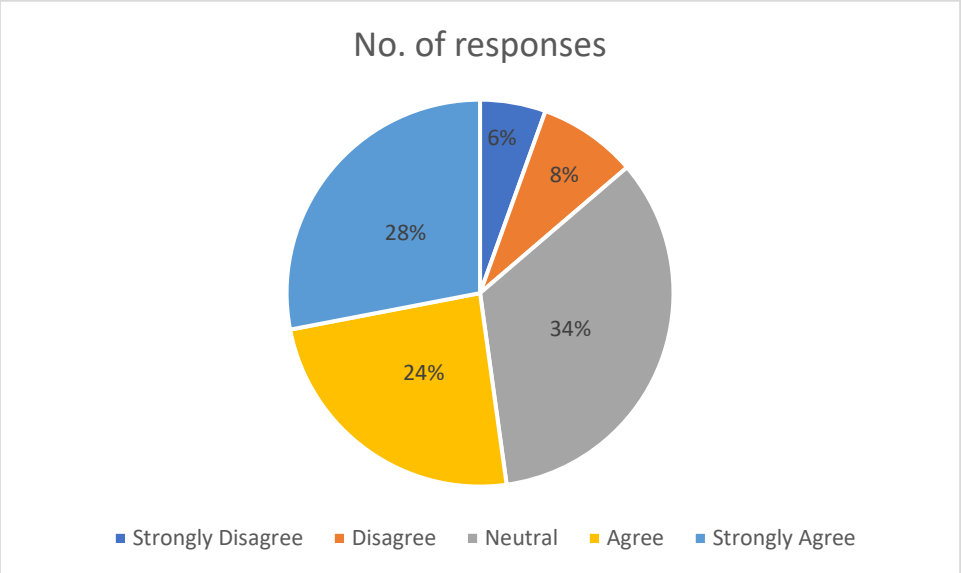


The data indicates a mixed level of satisfaction among respondents regarding the training opportunities provided to adopt technology. While no one reported being very dissatisfied, 4.9% expressed dissatisfaction and a majority (50%) remained neutral. However, a notable portion reported satisfaction,

with 37.4% feeling satisfied and 7.7% very satisfied with the training opportunities. This suggests room for improvement in addressing training needs to enhance satisfaction levels.

- **Do you agree that AI technology have altered the skills or competencies required for your role?**

Response	No. of responses	% of responses
Strongly Disagree	10	5.5%
Disagree	15	8.2%
Neutral	62	34.1%
Agree	44	24.2%
Strongly Agree	51	28%
Total	182	100%

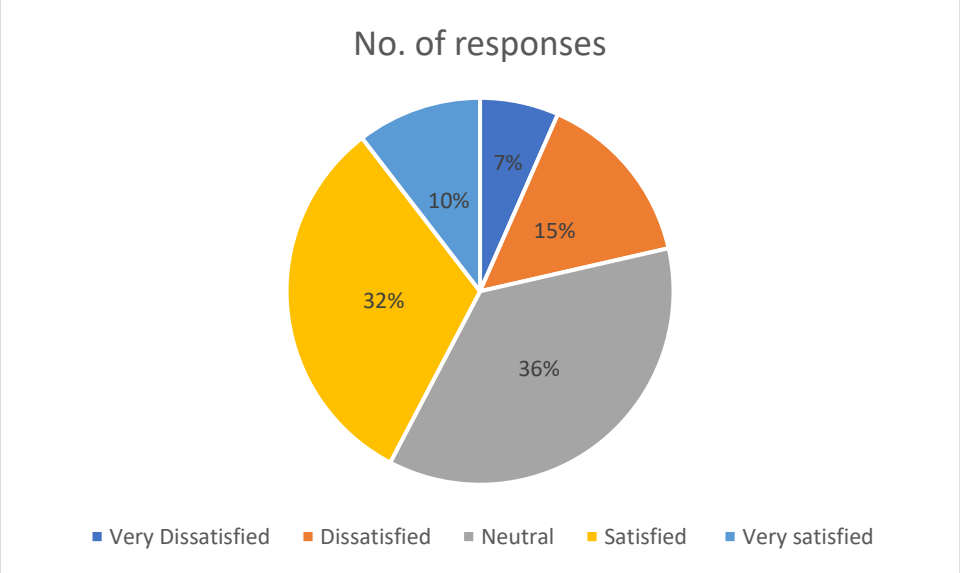


The information shows that respondents' perceptions of how AI technology will affect the competencies or abilities needed for their jobs vary widely. A sizeable portion (34.1%) is neutral, with 5.5% strongly disagreeing and 8.2% disagreeing that AI has changed these criteria. On the other hand, a significant acknowledgment of AI's transformative influence in molding work needs can be seen from the 24.2%

who agree and 28% who strongly agree that AI technology has transformed the necessary abilities or competencies.

- **How much satisfied are you with the AI technologies used in your workplace?**

Response	No. of responses	% of responses
Very Dissatisfied	12	6.6%
Dissatisfied	27	14.8%
Neutral	66	36.3%
Satisfied	58	31.9%
Very satisfied	19	10.4%
Total	182	100%

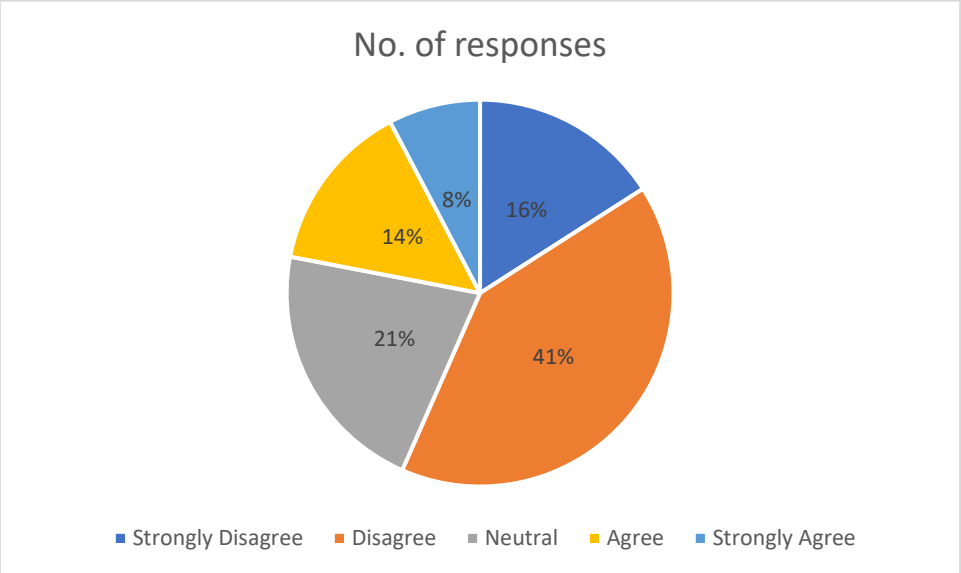


The data indicates a varied level of satisfaction among respondents regarding the AI technologies used in their workplace. While 6.6% reported being very dissatisfied and 14.8% dissatisfied, a substantial portion remained neutral (36.3%). However, a notable percentage expressed satisfaction, with 31.9% feeling

satisfied and 10.4% very satisfied with the AI technologies. This suggests a mixed but generally moderate satisfaction level with the AI tools implemented in their work environment.

- **Do you agree that AI technologies had a significant impact on your performance and efficiency?**

Response	No. of responses	% of responses
Strongly Disagree	29	15.9%
Disagree	74	40.7%
Neutral	39	21.4%
Agree	26	14.3%
Strongly Agree	14	7.7%
Total	182	100%

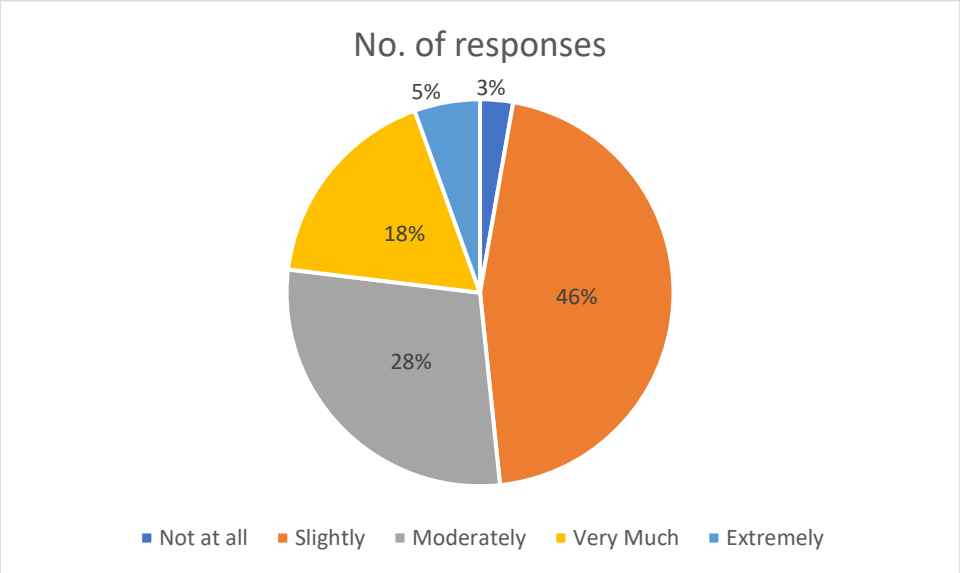


According to the research, respondents' perceptions of how AI technologies affect their productivity and performance are primarily unfavorable. A sizable majority—56.6%, of which 15.9% strongly disagree and 40.7% disagree—do not think AI has had a discernibly good impact. Furthermore, only 21.6% (14.3% agree and 7.7% strongly agree) admit a beneficial impact, demonstrating a widespread skepticism

or lack of observed increase in performance and efficiency attributable to AI technology. Additionally, 21.4% are neutral on the topic.

- **To what extent do you believe AI technologies contribute to our organization's innovation and competitive advantage?**

Response	No. of responses	% of responses
Not at all	5	2.7%
Slightly	83	45.6%
Moderately	52	28.6%
Very Much	32	17.6%
Extremely	10	5.5%
Total	182	100%



The data reflects a mixed perception regarding the contribution of AI technologies to the organization's innovation and competitive advantage. While a small percentage (2.7%) believe AI contributes "not at all," the majority perceive its impact as modest, with 45.6% indicating a slight contribution and 28.6% stating a moderate level. However, there is recognition of significant impact, with 17.6% acknowledging

a very substantial contribution and 5.5% indicating an extremely high contribution, underscoring varying degrees of appreciation for AI's role in enhancing innovation and competitive edge within the organization.

Findings

- The research indicates a widespread awareness among respondents regarding the presence and significance of AI technologies in their workplace.
- Respondents display varying levels of familiarity with AI applications, spanning from slight to highly familiar.
- Opinions diverge on the impact of AI on job opportunities, reflecting a spectrum of perspectives from strongly positive to strongly negative.
- There is a lack of consensus regarding AI's effect on task efficiency, with responses ranging from strongly agree to strongly disagree.
- Concerns about AI's potential risks to job security emerged as a prominent theme among respondents.
- A notable portion of respondents express apprehension about AI's potential to replace job roles within their organization.
- Satisfaction levels with training opportunities for adopting technology vary among respondents.
- Perceptions of how AI influences job competencies exhibit a wide range of viewpoints.
- Satisfaction with AI technologies in the workplace appears to be mixed, indicating varying degrees of contentment.
- Perspectives on AI's impact on performance are divided, with some respondents acknowledging positive effects and others expressing skepticism.
- Opinions on AI's contribution to innovation and competitive advantage vary, reflecting differing degrees of appreciation for its role in organizational advancement.

Conclusion

In conclusion, the rapid advancement of artificial intelligence (AI) technology has ushered in a new era for businesses, promising transformative changes across various industries. However, the journey towards AI adoption is not without its complexities and uncertainties. This research has delved into the perspectives of employees within organizations, shedding light on their attitudes and experiences regarding AI adoption.

One of the key findings of this research is the high level of awareness among employees regarding the use of AI technologies in the workplace. Despite this awareness, there exists a spectrum of familiarity with AI applications, with some employees expressing varying degrees of familiarity while others remain less acquainted. This highlights the importance of providing comprehensive training and educational opportunities to ensure that employees are well-equipped to leverage AI technologies effectively.

The research also unveiled a diverse range of opinions regarding the potential impact of AI on job opportunities. While some employees expressed optimism about AI's ability to create new prospects and enhance efficiency, others harbored concerns about its potential risks to job security. Additionally, there were mixed perceptions regarding the contribution of AI technologies to innovation and competitive advantage, with some employees acknowledging its significant impact while others remained more skeptical.

The findings also underscored the importance of top management support in facilitating AI adoption within organizations. Strong leadership is crucial in navigating the complexities associated with AI integration and in addressing the diverse needs and concerns of employees throughout the adoption process.

Moreover, the research highlighted the need for organizations to foster a supportive environment that promotes effective AI integration while ensuring the well-being of employees. This includes providing adequate training opportunities, addressing concerns about job security, and actively involving employees in the decision-making process surrounding AI adoption.

while AI holds immense promise for innovation and competitive advantage, its successful integration into organizations requires careful navigation of challenges and uncertainties. By understanding and addressing the perspectives and concerns of employees, organizations can create a conducive environment for AI adoption, fostering creativity, innovation, and sustainable growth in the workplace.

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