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Artificial Intelligence in the Service Sector: A Mixed-Methods Analysis in the Tunisian Context

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Abstract: **This article examines the use of artificial intelligence (AI) in Tunisia's service sector through a mixed-methods approach. The study integrates a quantitative survey of 58 companies with qualitative insights derived from multiple case studies. The findings highlight AI's potential to optimize processes, reduce costs, and enhance productivity. However, the adoption of AI is hindered by several key challenges: the limited reliability of AI-generated information, employee resistance to the technology, concerns over data privacy, and financial constraints that limit access to advanced solutions. These obstacles underscore the need for targeted strategies to foster more effective AI adoption in Tunisia's service industry.**

Keywords: **Artificial Intelligence, Service Sector, Mixed-Methods, Tunisian Context.**

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I. INTRODUCTION

Many service companies are adopting new technologies to enhance their performance and gain a competitive edge [31]. Among these technologies, artificial intelligence (AI) is playing an increasingly significant role [22], fundamentally reshaping business operations and executive decision-making. This technology offers significant potential for the service sector by enhancing efficiency, reducing costs, and providing improved decision-making capabilities [44].

As AI continues to evolve across various sectors, its implications extend far beyond mere technical improvements. It fosters innovative ways of conducting business, catalyzes the development of new service propositions, and drives organizational transformation [38]. However, these promising opportunities are accompanied by a series of complex challenges that require careful management, such as issues related to the black box and questions of accountability [1]. In the service sector, the strategic importance of harnessing AI opportunities while mitigating the associated challenges cannot be overstated.

The literature has extensively explored the adoption of AI across various domains, including the public sector [16], manufacturing industries [36], SMEs [6], AgriTech companies [18] and service businesses [21]. However, studies on the integration of AI in the service sector in emerging economies like Tunisia, remain limited, highlighting the importance of developing original contributions to bridge this gap.

In Tunisia, as in many emerging economies, the adoption of AI in the service sector is still in its early stages, despite its clear potential to enhance business efficiency and drive economic growth. Understanding the specific challenges and opportunities in this context is crucial to enabling Tunisian companies to leverage this technology. This study aims to fill this gap by shedding light on how Tunisian service companies are using AI and the factors that hinder its adoption. By identifying these obstacles and highlighting optimization levers, this research seeks to provide practical recommendations that will help decision-makers better integrate AI into their strategies.

By using a mixed-methods approach, combining a quantitative study through questionnaires with business executives and a qualitative study based on in-depth case studies, this research aims to provide valuable insights for managers and decision-makers.The goal is to help them better understand the challenges associated with AI adoption and support them in implementing technological solutions tailored to their specific needs.

The article is structured as follows: the first section presents the literature review, followed by a second section detailing the mixed-methods approach of the study. The third section presents the survey results, and the article concludes with a fourth section dedicated to discussions and conclusions.

II. LITERATURE REVIEW

A. USE OF AI IN SERVICES

AI applications span various fields, such as marketing, production management, business management, and customer service [34], [11]. Depending on their use, AI applications can be divided into two categories: AI for automation and AI for augmentation. Automation refers to AI systems designed to replace human labor, while augmentation enhances human intelligence by providing insights that can assist in decision-making.

1) TASK AUTOMATION: The concept of automation is not new; it refers to machines that replace humans, such as robots performing tasks on an assembly line. Recent advancements in AI have enabled machines to learn, improve, and adapt, thus enhancing their performance over time [7]. As a result, AI technologies are now capable of automating more complex tasks involving cognition, such as learning and problem-solving [20]. This form of automation is often referred to as intelligent automation [27]. Intelligent automation enables the automation of tasks that were previously considered too difficult to automate, such as knowledge and service work [7]. In the service context, AI can provide clients with digital and robotic services to influence their customer experience [9]. Conversational intelligent agents, such as Apple's Siri and Amazon's Alexa [10] , [9], are examples that can automate tasks such as text writing, making calls, and launching playlists through voice commands.

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2) HUMAN AUGMENTATION: In recent years, AI has surpassed humans in performing certain complex tasks [24]. AI can process large amounts of information at high speeds, beyond human cognitive capabilities [24]. AI thus serves to overcome the cognitive constraints of humans. Augmentation refers to the integration of AI with human expertise to enhance decisions and optimize actions [33]. The focus is on AI's assistive role, emphasizing that it supports humans rather than replacing them. Organizations frequently generate large volumes of data or have access to them. By leveraging this information, decision-makers can make more informed choices. However, this data is often too complex to be analyzed by humans. Therefore, managers can use AI to extract insights from the data to make better decisions [4]. AI can be used to interpret previously unknown management control indicators and suggest corrective actions when sales decline and competitors introduce new products [2]. It can also be employed in analyzing opinions, attitudes, and emotions related to a specific product or service [11].

B. THE BENEFITS OF USING AI IN SERVICES

1) PROCESS EFFICIENCY: The use of AI can improve the performance of service business processes by enhancing efficiency indicators [7], [25]. By automating tasks, these companies can relieve employees of repetitive, routine duties, allowing them to focus on other knowledge-intensive activities that add more value to the business [12], thereby increasing their productivity [35], [41], [2],[15]. Furthermore, machines can perform tasks more quickly and accurately than humans, which enhances the productivity of service businesses [35], [15]. Furthermore, the use of AI can reduce the time required to execute certain processes [7] and improve error rates and turnaround times [37].

2) INFORMATION GENERATION: AI can uncover insights and hidden patterns within large volumes of data [30]. It can present previously unknown information and assist in making informed decisions [11]. When decision-makers have access to more detailed knowledge, the quality and speed of decision-making improve [8]. AI thus enables faster and higher-quality decision-making [19]. Organizations that can leverage the informational effects of AI are better positioned to quickly perceive market dynamics and respond to them [37].This ability to respond is also known as organizational agility, which involves detecting, making informed decisions, and reacting [19].

3) OPERTAIONAL INNOVATION: As an innovative technology, AI enables service businesses to innovate and transform operational processes [37]. AI is no exception, as it can facilitate the redesign of business processes with the aim of radically changing the way current operations are executed [5]. The implementation of AI introduces a new set of skills and capabilities for managers, employees, and AI, who must collaborate together [12]. As a result, jobs may be redefined, and new roles may emerge. By utilizing AI, organizations can reallocate resources, which, in the long term, could reshape organizational structures [39].

4) MARKETING EFFECTIVENESS: Companies that integrate AI into their marketing strategies can reap numerous benefits. AI enhances customer segmentation by analyzing and learning from existing data, allowing service businesses to better understand their customers' preferences and lifestyles. This capability enables more precise segmentation, as companies can categorize customers at a finer level [5]. As a result, service businesses can more effectively target their marketing efforts [32], opening up the opportunity to deliver personalized marketing by tailoring the customer experience [5]. Thus, AI improves the efficiency and accuracy of marketing by targeting the right customers with the right strategies. Additionally, when customer behavior evolves, the AI system updates its segmentation recommendations, allowing businesses to adjust their marketing strategies effectively [32].
By using AI, service businesses can gain deeper insights into customer behaviors and, in turn, leverage this understanding to proactively prevent any negative experiences [26]. Furthermore, the use of AI can enhance customer satisfaction, as customers are better informed and find more personalized solutions guided by AI [33]. Table 1 summarizes the various benefits associated with the use of artificial intelligence by service

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businesses. However, it is important to note that these benefits may evolve based on future technological advancements in AI.

TABLE I. *BENEFITS OF USING AI IN SERVICES*

Advantages	Description
Process Efficiency	The use of artificial intelligence (AI) in service companies enhances process performance by increasing efficiency, productivity, and accuracy while reducing errors and delays.
Information Generation	Artificial intelligence (AI) enhances decision-making by uncovering hidden insights within data, enabling faster, more informed, and higher-quality decisions. This strengthens organizational agility and improves service companies' ability to adapt quickly to market dynamics.
Operations Innovation	Artificial intelligence (AI) drives innovation and transformation in operational processes, enabling a radical overhaul of operations, redefining jobs, creating new skills, and reorganizing resources and organizational structures.
Marketing Effectiveness	Integrating artificial intelligence (AI) into marketing strategies enhances segmentation and personalization, optimizes targeting strategies, and boosts customer satisfaction by better understanding their behaviors and delivering tailored, proactive experiences.

C. *RISKS ASSOCIATED WITH THE USE OF AI IN SERVICES*

1) MISUSE OF TECHNOLOGY : One of the most significant examples is the difficulty companies face in detecting and correcting biases present in AI data or algorithms, which can lead to discrimination or unfavorable outcomes for certain ethnic groups, genders, or populations. The use of AI tools, such as ChatGPT, carries risks related to the inappropriate or unethical application of these technologies [43], [3], [29] , [17]. For example, ChatGPT can generate a variety of content. However, if not properly managed, AI-generated content may rely on outdated or unreliable data, which does not accurately reflect customers' interests and preferences. Moreover, content generated by AI may not align with a company's brand image or positioning, potentially damaging its reputation [44].

2) TRANSPARENCY CONCERNS: The negative effects of using AI are not limited to biased outcomes; they also encompass other aspects, such as black-box algorithms, lack of transparency and accountability, security issues, as well as potential harm to society and the environment [14]. This evolution has triggered a general need for greater transparency throughout the entire process, from data collection to result generation [28]. The lack of explanatory practices and transparency undermines individuals' trust in AI systems, which can lead to their non-use [42].

3) CYBERSECURITY : The integration of AI into service companies also introduces cybersecurity risks. Service companies using chatbots or virtual assistants are vulnerable to cyberattacks [3], [44], [13]. Cybercriminals can impersonate company representatives, provide misleading responses, and solicit confidential information such as banking details. If a chatbot or virtual assistant is compromised, attackers could gain access to sensitive data stored on the company’s servers, including customer information (e.g., names, addresses, phone numbers) and financial records. Table 2 summarizes the risks associated with the use of artificial intelligence in the service sector.

Table II. RISKS ASSOCIATED WITH THE USE OF AI IN SERVICES

Risks	Description
Misuse of Technology	The use of AI by service companies can lead to biased outcomes in terms of sexual and racial discrimination.

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Transparency Concerns	The use of AI can lead to negative effects beyond biases, including a lack of transparency, black-box algorithms, security issues, and societal and environmental impacts.
Cybersecurity	The integration of AI into service companies exposes them to cybersecurity risks, which could lead to unauthorized access to sensitive data and compromise the security of customer information.

III. METHODOLOGY

In this study, we adopted a mixed-methods approach, combining both qualitative and quantitative methods to address the research objectives. The quantitative component is based on a questionnaire administered to 58 Tunisian service companies that have adopted artificial intelligence (AI) or expressed interest in this technology. The questionnaire measures key variables such as current AI usage, intention to adopt AI, perceived applications, as well as perceived benefits and risks. The data were analyzed using SPSS 23 with a descriptive approach. The qualitative component is based on the analysis of four case studies of companies operating in the service sector in Tunisia. These cases were selected based on their use of AI or their clear interest in the technology. We analyzed the practices and perceptions of leaders through in-depth case studies, using a deductive thematic analysis guided by our literature review. Table 3 provides a summary of the two research methods used.

Table III. SUMMARY OF RESEARCH METHODS USED

Research Methods	StudiedCompanies		Data Collection Techniques
Survey Questionnaire	58 companies using or expressing interest in the use of AI.		- A purposive sample of 58 companies operating in the service sector based in Tunisia. - A self-administered questionnaire. - The respondents are members of the executive management (executives, sales managers, administrative and financial managers, IT managers).
Case Studies	Company (A)	Owner-Manager	- A 90-minute semi-structured, face-to-face interview. - Consultation of the company's website. - Consultation of the company's Facebook page.
	Company (B)	-Owner-Manager -Account manager	- A 70-minute semi-structured, face-to-face interview. - Consultation of the company's website. - Consultation of the company's Facebook page.
	Company (C)	Owner-Manager	- A 72-minute telephone interview. - Consultation of the company's website. - Consultation of the company's Facebook page..
	Entreprise (D)	Owner-Manager	- A 35-minute telephone interview. - Consultation of the company's website. - Consultation of the company's Facebook page.
General Themes of the Semi-Structured Interview Guide: - The Use of AI in Services - Benefits of Using AI in Services - Risks Associated with the Use of AI in Services - AI Usage Strategies in Services - Future Vision of AI in the Service Sector			

IV. RESULTS OF THE QUANTITATIVE STUDY

A. THE USE AND INTEREST IN AI

The results show that among the 58 respondents, half use artificial intelligence in their activities, and the majority (91%) express interest in these technologies for their development strategies. When comparing AI usage to company size, we find that among the companies not using AI, small businesses represent the majority, accounting for 57%. This maybeexplained by theirlimited innovation potential.

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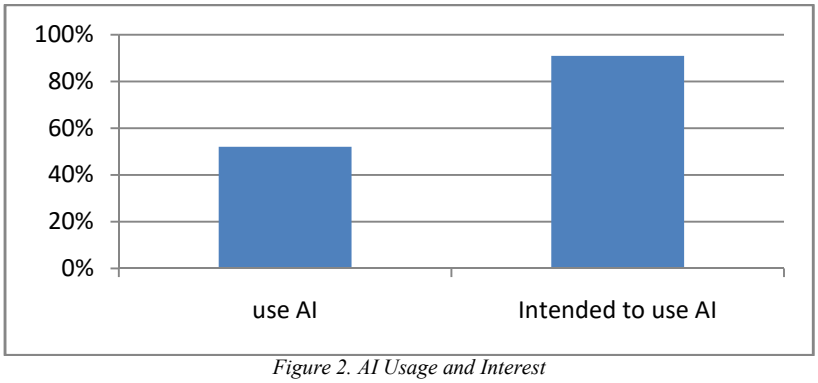

Figure 2. AI Usage and Interest

The application varies from one company to another, as shown in Figure 3. The results of our study reveal that leaders are most interested in adopting artificial intelligence (AI) in the following areas: customer and supplier relationship management, accounting and financial management, product or service management, and internal information systems. In fact, a significant percentage of leaders (34.48%) are opting to integrate AI into their internal information systems. Nearly 28% of leaders are interested in using AI to optimize interactions with customers and suppliers.

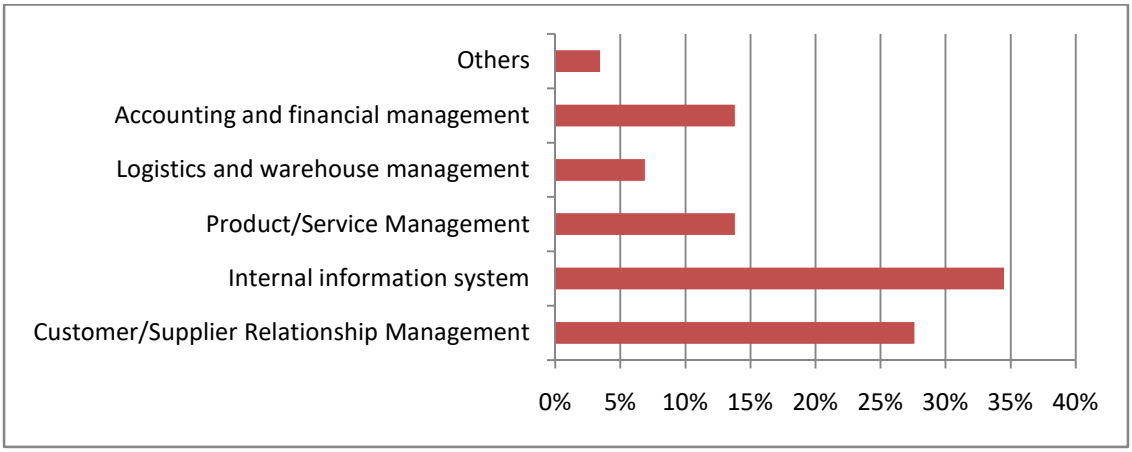

Figure 3. Different Uses of AI

B. THE PERCEIVED BENEFITS OF AI USAGE

As shown in the table below, several benefits are perceived by business leaders as a result of AI adoption. Our study suggests that task automation (32.8%), improved operational efficiency (27.6%), and enhanced customer experience (24.1%) are among the most frequently cited advantages.

TableIV. PERCEIVED BENEFITS OF AI

Perceived Benefits of AI Usage	Frequency (N=58)	Percentage
Improvement in OperationalEfficiency	16	27,6%
Cost Reduction	2	3,5%
ImprovedDecision-Making	6	10,3%
Automation of RepetitiveTasks	19	32,8%
Better Customer Experience	14	24,1%
Others (Performance)	1	1,7%

Although interest in AI in the service sector in Tunisia is growing, its actual adoption is still in its early stages, hindered by several challenges, as shown in Figure 4. The main concern expressed by respondents is data security and privacy, cited by 37.9% of them. This finding highlights the importance placed on protecting sensitive information in the decision-making process. Moreover, nearly one-third of respondents view

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employee resistance as a major barrier to AI adoption. This reluctance may stem from fear of change or uncertainty about the impact of AI on jobs and existing work methods. Additionally, the high cost of AI technologies also represents a significant obstacle. In fact, 25.9% of respondents perceive the financial investment required as a major barrier to adoption.

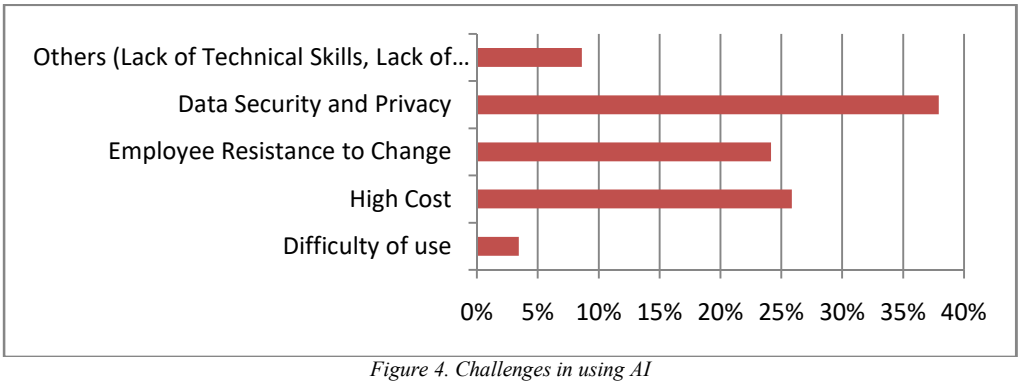

Figure 4. Challenges in using AI

V. CASE STUDY RESULTS

A. OPPORTUNITIES OF AI IN THE SERVICE SECTOR

The analysis of interviews with executives revealed that generative AI tools offer several opportunities. All the surveyed leaders emphasized that AI helps them save time and streamline task execution. Additionally, they revealed that AI can be a source of creativity for their staff. The manager of Company B stated: "Staff become more creative, especially during the idea generation phase. Sometimes, employees come up with multiple ideas at once and struggle to identify or organize a well-structured idea. This technology can address that issue by organizing the staff's ideas to help find a creative and original concept." Another manager stated: "By using AI to handle certain repetitive tasks, our team is able to dedicate more time to strategic and creative activities." However, the manager of Company A pointed out: "Excessive use of AI can, in the long run, negatively affect employee creativity. Humans must still engage their intellectual effort. They need to know how to use AI as a source of creativity." We can conclude that AI can indeed be a source of creativity, provided it is used appropriately by employees.

In general, the analysis showed that by automating certain tasks, companies can increase their productivity and performance, ultimately generating significant profits. One manager said: "AI is a catalyst in executing work. By automating repetitive tasks, AI helps save time and frees up employees for strategic activities, which can increase productivity and performance." Another manager added: "AI can reduce human errors, which in turn saves us time and money."

B. CHALLENGES OF AI IN THE SERVICE SECTOR

We found that companies in the service sector face some challenges when using AI. Our study revealed that the use of AI tools, such as ChatGPT, may pose risks related to inappropriate application or ethical concerns. Indeed, the four companies examined reported a lack of reliability in AI technologies. One manager noted: "AI has not yet reached a certain level of reliability. It can make mistakes and requires human intervention." Another manager confirmed this statement, saying: "In reality, AI is not always intelligent. It is not reliable." Therefore, we can observe that the content generated by AI may rely on outdated or unreliable data, leading to content that does not accurately reflect customer expectations and preferences. The majority of companies mentioned the issue of data security, stating that AI could request confidential information. However, all the managers confirmed their caution regarding the confidentiality and security of their clients' data. The response to the question about data security and confidentiality was always the same: "We consider the security and confidentiality of our clients' data." Another challenge was identified in studying these companies. Indeed, two managers highlighted the issue of the high cost of certain AI tools. One manager said: "There are paid tools that don't even have a free trial version. Sometimes, it'sexpensive."

VI. DISCUSSION OF RESULTS

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Although interest in AI in the service sector in Tunisia is growing, its adoption remains limited. The various research methods employed (case studies, surveys) have shown that leaders primarily perceive four benefits related to AI usage: automation of repetitive tasks, improvement in operational efficiency, productivity gains, and optimization of customer experience. Automation, cited by 32.8% of respondents, is particularly valued for its ability to streamline internal processes and reduce human errors. This dominant perception highlights the importance placed on operational optimization, which is a priority for many businesses. These results align with the work of [40], who identify automation as one of the key applications of AI in modern businesses. This finding highlights a strong interest in reducing the burden of manual tasks, thereby freeing up resources and time for higher-value and more strategic activities.This idea aligns with the work of [12], who emphasize that task automation allows organizations to relieve certain employees from repetitive, routine tasks, enabling them to focus on other knowledge-intensive activities that add more value to the organization, thus increasing productivity [35], [41], [2], [15]. In the same vein, the results of the case studies indicate that managers highlighted the productivity gains offered by AI. These findings align with the work of [44], who reported that the growing adoption of generative AI is crucial for improving business productivity, alongside the automation of decisions, services, and processes.

Despite the benefits, the delay observed in AI adoption by some companies can be attributed to several challenges. Indeed, the case studies reveal the lack of reliability in AI-generated content. This aligns with the work of [44], who suggest that AI-generated content may be influenced by biases or inconsistencies present in the training data, which can affect its quality and reliability.

In the literature, Reference [23] highlight the need for a dedicated budget for AI implementation. However, the results of the questionnaire survey and case studies showed that certain AI tools remain inaccessible due to their cost. This finding is particularly relevant in the Tunisian context, where budgets allocated to technological innovation can be limited. This budgetary constraint may explain the delay in AI integration and underscores the need to develop localized and accessible AI solutions. The case studies and questionnaire survey highlighted concerns related to the protection of customer data, reflecting a global challenge in AI adoption. This issue resonates with the work of Deslée (2021). According to this author, data privacy issues are seen as a major risk influencing the intention to adopt new technologies. On the other hand, the questionnaire survey revealed that one-third of respondents also identify employee resistance as a significant barrier, highlighting the importance of change management and training to facilitate AI acceptance within organizations.

VII. CONCLUSION

This article examines the current state of artificial intelligence adoption in Tunisia's service sector, identifying the most common application areas. It also highlights the opportunities AI offers, such as process optimization, cost reduction, and productivity enhancement, as well as the challenges associated with its integration, including limited reliability, employee resistance, data privacy concerns, and budget constraints. This study could provide an analytical framework for assessing AI's impact on organizational structures and service processes, contributing to the literature on digital transformation in developing countries. The results of this research will provide practical recommendations for Tunisian businesses, particularly in the service sector, on how to integrate AI into their processes, overcome obstacles, and maximize the benefits of this technology. This study could also influence Tunisian public policies regarding AI adoption, emphasizing the importance of training, subsidies for SMEs, and the development of digital infrastructures to promote widespread adoption.

Although this study focuses on the service sector in Tunisia, its findings cannot be generalized to other low- or middle-income countries without considering local specificities. Each country has its own economic, cultural, and technological challenges that may influence AI adoption in different ways. A comparative study between Tunisia and other low- or middle-income countries could offer valuable insights into the country-specific factors influencing AI adoption in the service sector. This would help better understand the obstacles and opportunities in various socio-economic contexts. It would also be valuable to conduct more targeted research on the impact of AI in specific subsectors of the service industry, such as healthcare, education, or tourism. These subsectors may present unique challenges and opportunities, and a more in-depth study could provide tailored recommendations for each field.

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REFERENCES

[1] A. Barredo Arrieta, N. Díaz-Rodríguez, J. Del Ser, A. Bennetot, S.Tabik, A. Barbado, S. Garcia, S. Gil-Lopez, D. Molina, R. Benjamins,R. Chatila, & F. Herrera, « Explainable Artificial Intelligence (XAI): Concepts, Taxonomies, Opportunities and Challenges toward Responsible AI», *Information Fusion*, vol. 58, p. 82-115, Jun. 2020.
[2] A. Bytniewski, K. Matouk, A. Chojnacka-Komorowska, M. Hernes, A. Zawadzki, & A. Kozina, « The functionalities of cognitive technology in management control system », *Asian Conference on Intelligent Information and Database Systems*, pp 230–240, Mar. 2020.
[3] A. De Bruyn, V. Viswanathan, Y. S. Beh, J. K-U Brock, & F. von Wangenheim, «Artificial Intelligence and Marketing: Pitfalls and Opportunities», *Journal of Interactive Marketing*, vol. 51, pp. 91–105, 2020.
[4] A.F.S. Borges, F.J.B. Laurindo, M.M. Spinola, R.F. Gonçalves. & C.A. Mattos, « The strategic use of artificial intelligence in the digital era: Systematic literature review and future research directions », *International Journal of Information Management*, vol.57, p. 102225-102241, Apr. 2021.
[5] A. N. Mishra, & A. K. Pani, « Business value appropriation roadmap for artificial intelligence », *VINE Journal of Information and Knowledge Management Systems,* vol. 51, n°3, pp. 353–368, Apr. 2020.
[6] A. Polisetty, D. G. S. Chakraborty, A. K. Kar, & S. Pahari, « What determines AI adoption in companies? Mixed-method evidence», *Journal of Computer Information Systems*, vol. 64, n°3, pp. 370-387, Jun. 2023.
[7] C. Coombs, D. Hislop, S. K. Taneva, & S. Barnard, « The strategic impacts of Intelligent Automation for knowledge and service work: An interdisciplinary review », *The Journal of Strategic Information Systems*, vol. 29, n°4, p.101-600, Dec. 2020.
[8] C. Keding, C. « Understanding the interplay of artificial intelligence and strategic management: four decades of research in review », *Management Review Quarterly*, vol. 71, n°1, pp. 91–134, Feb. 2020.
[9] C. Prentice, D. Lopes, & X. S. Wang, « The impact of artificial intelligence and employee service quality on customer satisfaction and loyalty », *Journal of Hospitality Marketing & Management*, vol. 29, n°7, pp. 739–756, Feb. 2020.
[10] D. Castillo, A.I. Canhoto, E. & Said, « The dark side of AIpowered service interactions: exploring the process of codestruction from the customer perspective », *The Service Industries Journal*, vol. 41, n° 3, pp.1–26, Jun. 2020.
[11] D. Jelonek, A. Mesjasz-Lech, C. Stępniak, T. Turek, & L. Ziora, « The artificial intelligence application in the management of contemporary organization: Theoretical assumptions, current practices and research review », Future of Information and Communication Conference, pp. 319–327, Feb.2019.
[12] E. E. Makarius, D. Mukherjee, J. D Fox, & A. K. Fox, « Rising with the machines: A sociotechnical framework for bringing artificial intelligence into the organization », *Journal of Business Research*, vol. 120, pp. 262–273, Nov. 2020.
[13] E. Hermann, «Leveraging Artificial Intelligence in Marketing for Social Good—An Ethical Perspective», *Journal of Business Ethics*, vol. 179, n°1, pp. 43–61, Aug. 2022.
[14] E. Yudkowsky, «Artificial intelligence as a positive and negative factor in global risk », *Global Catastrophic Risks*, vol. 1, n° 303, p. 184, Jul. 2008.
[15] G. Finch, B. Goehring, A. & Marshall, «The enticing promise of cognitive computing: high-value functional efficiencies and innovative enterprise capabilities », *Strategy & Leadership*, vol. 45, n°6, pp. 26–33, Nov. 2017.
[16] G. Maragno, L. Tangi, L. Gastaldi, M. Benedetti, « Exploring the factors, affordances and constraints outlining the implementation of artificial intelligence in public sector organizations», *International Journal of Information,* vol.73, pp. 102686, Dec. 2023.
[17] G. Volkmar, P. M. Fischer, & S. Reinecke, « Artificial Intelligence and Machine Learning: Exploring drivers, barriers, and future developments in marketing management», *Journal of Business Research,* vol. 149, pp. 599–614, Oct. 2022.
[18] H. Issa, R. Jabbouri, M. Palmer, « An artificial intelligence (AI)-readiness and adoption framework for AgriTech firms», *Technological Forecasting and Social Change*, vol. 182, 121874, Sep. 2022.
[19] H. Wang, J. Huang, & Z. Zhang, « The impact of deep learning on organizational agility », », in *Proc*. ICIS, 2019.
[20] J. Lee, T. Suh, D. Roy, & M. Baucus, « Emerging technology and business model innovation: the case of artificial intelligence », *Journal of Open Innovation: Technology, Market, and Complexity*, vol. 5, n°3, p. 44, Jul. 2019.
[21] J. Yang, Y. Blount, & A. Amrollahi, «Artificial intelligence adoption in a professional service industry: A multiple case study », *Technological Forecasting & Social Change*, vol. 201, 123251, Apr. 2024.
[22] k. Panetta, « 5 trends emerge in the Gartner hype cycle for emerging technologies», 2018, Gartner.
[23] L. Pumplun, C. Tauchert, & M. Heidt, «A new organizational chassis for artificial intelligence-exploring organizational readiness factors », *in Proc. ECIS*, 2019.
[24] M. H. Jarrahi, « Artificial intelligence and the future of work: human-AI symbiosis in organizational decision making », *Business Horizons*, vol. 61, n°4, pp. 577–586, Aug. 2018.

ISSN: 2961-6611

[25] M. Kirchmer, P. & Franz, « Value-Driven Robotic Process Automation (RPA) », *International Symposium on Business Modeling and Software Design*, pp 31–46, Jul. 2019.
[26] M. Riikkinen, H. Saarijärvi, P. Sarlin, & I. Lähteenmäki, «Using artificial intelligence to create value in insurance », *International Journal of Bank Marketing*, vol. 36, n° 6, pp. 1145–1168, Sep. 2018.
[27] M. Welling, « Artificial intelligence versus intelligence engineering », *Harvard Data Science Review*, vol. 1, n°1, Jun. 2019.
[28] O. Loyola-Gonzalez, « Black-box vs. white-box: Understanding their advantages and weaknesses from a practical point of view », *IEEE Access*, Vol. 7, pp. 154096–154113, Oct. 2019.
[29] P. K. Kopalle, M. Gangwar, A. Kaplan, D. Ramachandran, W. Reinartz, & A. Rindfleisch, « Examining artificial intelligence (AI) technologies in marketing via a global lens: Current trends and future research opportunities», *International Journal of Research in Marketing*, vol. 39, n°2, p. 522–540, Jun. 2022.
[30] P. Mikalef, & M. Gupta, « Artificial Intelligence Capability: Conceptualization, measurement calibration, and empirical study on its impact on organizational creativity and firm performance », *Information & Management*, vol. 58, 103434, Apr. 2021.
[31] P. Weill, & S. Woerner, «Surviving in an increasingly digital ecosystem», *MIT Sloan Management Review,* vol. 59, n°2, P. 26-28, Nov. 2017.
[32] R. Afiouni, « Organizational learning in the rise of machine learning», *International Conference on Information Systems*, Munich, Germany, 2019.
[33] R. Schmidt, A. Zimmermann, M. Moehring, & B. Keller, « Value creation in connectionist artificial intelligence–A research agenda», in *Proc. AMCIS,* 2020, 978-1-7336325-4-6.
[34] S. Alsheibani, Y. Cheung, & C. Messom, « Artificial intelligence adoption: AI-readiness at firm-level », *Artificial Intelligence*, vol.6, p. 26, Sep. 2018.
[35] S. Balasundaram, & S. Venkatagiri, « A structured approach to implementing Robotic Process Automation in HR », *Journal of Physics: Conference Series,* vol. 1427, n°1 012008. IOP Publishing. Jan. 2020.
[36] S. Chatterjee, R. Chaudhuri, D.Vrontis, G. Basile, « Digital transformation and entrepreneurship process in SMEs of India: a moderating role of adoption of AI-CRM, capability and strategic planning », *Journal of Strategy and Management,* vol.15, n° 3, pp. 416–433, May. 2022.
[37] S. L. Wamba-Taguimdje, S. F. Wamba, J. R. K. Kamdjoug, & C. E. T. Wanko, « Influence of artificial intelligence (AI) on firm performance: the business value of AI-based transformation projects », *Business Process Management Journal*, vol. 26, n°7, p 1893–1924, Mar. 2020.
[38] S. Raisch, & S. Krakowski, « Artificial intelligence and management: The automation-augmentation paradox », *Academy of Management Review*, vol. 46, n°1, pp. 192-210, Jan. 2020.
[39] T. Eriksson, A. Bigi, & M. Bonera, « Think with me, or think for me? On the future role of artificial intelligence in marketing strategy formulation », *The TQM Journal*, vol. 32, n°4, pp. 795–814, Apr.2020.
[40] T. H. Davenport, & R. Ronanki, «Artificial intelligence for the real world », *Harvard Business Review*, vol. 96, n°1, p. 108–116, Jan. 2018.
[41] W. Bauer, & C. Vocke, «Work in the age of artificial intelligence–challenges and potentials for the design of new forms of human machine interaction », *International Conference on Applied Human Factors and Ergonomics*, pp 493–501, Jun. 2019.
[42] W. Samek, & K. R. Müller, « Towards explainable artificial intelligence *», In: Explainable AI: interpreting, explaining and visualizing deep learning*, Springer, 2019, pp. 5-22.
[43] Y. Cheng, & H. Jiang, «Customer–brand relationship in the era of artificial intelligence: Understanding the role of chatbot marketing efforts», *Journal of Product & Brand Management*, vol. 31, n°2, pp.252–264, Jun. 2021.
[44] Y. K. Dwivedi, N. Kshetri, L. Hughes, E. L. Slade, A. Jeyaraj, A. K. Kar, A. M. Baabdullah, A. Koohang, V. Raghavan, M. Ahuja, H. Albanna, M. A. Albashrawi, A. S. Al-Busaidi, J. Balakrishnan, Y. Barlette, S. Basu, I. Bose, L. Brooks, D. Buhalis, … R. Wright, « "So what if ChatGPT wrote it?" Multidisciplinary perspectives on opportunities, challenges and implications of generative conversational AI for research », *practice and policy*, Aug. 2023.

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