A LITERATURE REVIEW ON IMPACT OF ARTIFICIAL INTELLIGENCE (AI) ADOPTION IN INFORMATION TECHNOLOGY (IT) AND VARIOUS OTHER SECTOR

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Abstract
AI is emerging technology in the world. Every field willing to use AI tech to reduce work and to bring more impact in their respective field. IT is one of the most beneficiaries from AI. This study uses qualitative research using a literature review method. For this research, literature was sourced from google scholar using the search terms "AI" and "IT". This study reviewed articles from 2018 to 2025 and presents the findings in a comprehensive manner. The objective of this study is to review existing literature based on AI adoption. Literature reviews are important to map the existing study problem and develop further knowledge and to find research gap. Based on the existing article findings of the study suggests adopting AI has both positive impact and negative impact in almost every industry that exist in the world. Many employees those who work in corporate sectors has using AI and getting benefits like save time, boost creativity and enhance focus.
Keywords: *AI, IT, other sector, Technology, Innovation*
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Introduction

Artificial Intelligence (AI) has emerged as one of the most influential technological advancements of the 21st century, significantly reshaping organizational processes, business models, and decision-making mechanisms across industries. With rapid developments in machine learning, natural language processing, computer vision, and data analytics, AI has transitioned from a theoretical concept to a practical tool widely adopted in the Information Technology (IT) sector and various other domains such as healthcare, finance, manufacturing, education, and logistics. This widespread adoption has positioned AI as a critical driver of digital transformation and economic growth.

Despite its benefits, AI adoption also introduces significant challenges, including ethical concerns, data security risks, skill gaps, and the potential displacement of human labor. The complexity of AI integration, high implementation costs, and regulatory uncertainties further influence the rate and success of adoption across sectors. Consequently, understanding both the positive and negative impacts of AI adoption has become a critical area of academic and professional inquiry.

This literature review aims to critically examine existing research on the impact of AI adoption in the IT sector and various other industries. By synthesizing prior studies, the review seeks to identify key trends, benefits, challenges, and gaps in the literature, thereby providing a comprehensive understanding of how AI is reshaping organizational performance and sectoral development. The insights derived from this review will contribute to ongoing discussions on AI-driven transformation and inform future research directions.

Objectives

- To examine research gap through the literature review
- To identify the variables in existing research

Research methodology

The study began with a literature search on the research topic, namely articles related to AI adoption in IT and other sector. The articles are from nationally and Internationally indexed journals obtained from Google Scholar. The articles are collected from the period 2018-2025 i.e. 7 years. This study is collection of conceptual, analytical and systematic/bibliometric review. The study described in the form of tables and narratives related to the AI adoption. The review of literature research is implemented to identify the existing knowledge, knowledge gaps for new research, avoid duplicating work and study contributes something original and valuable to the field that can be the focus of future research. Also helps to shape research questions, identify the variables, choose methods and situate your work within current academic conversations.

Literature review - table

A Literature review on Impact of AI adoption in various sector

Author/ Year/ Country	citation	Journal Name	Title of Paper	Methodology	Objectives	Findings
Raluca-Giorgiana (Chivu) Popa/Switzerland/2025	**5**	Sustainability	Modeling AI Adoption in SMEs for Sustainable Innovation: APLS-SEMApproachIntegrating TAM, UTAUT2, and Contextual Drivers	This study employs a quantitative, cross-sectional research design to investigate the determinants of consumer adoption of AI-powered tools. Data were collected through a structured online questionnaire developed based on validated scales from the literature, adapted to fit the context of AI usage in both personal and professional domains. The target population comprised	To examined the factors influencing the adoption of AI-powered tools by consumers.	The findings aim to inform both theory and practice by highlighting how emerging digital tools affect consumer decision making and engagement across personal and professional contexts. The study contributes to both theory and practice by offering empirical evidence on the drivers of AI adoption and by providing managerial recommendations for SMEs to implement AI-driven personalization responsibly. The findings

				individual users of digital technologies with varying degrees of exposure to AI-based tools. A non-probabilistic purposive sampling technique was used to ensure participation from individuals with at least minimal familiarity with AI applications (e.g., smart assistants, recommendation systems, AI chatbots). A total of 240 valid responses were collected over a one-month period. The sample included • Employeesusing AItools in the workplace (34%); • University students in technology-related or business programs (28%); • Generalconsumersusing AI-based tools for personal tasks (e.g., shopping,		confirm that both cognitive evaluations (e.g., perceived usefulness, ease of use) and affective and contextual influences (e.g., trust, workplace experience, intrinsic motivation) play significant roles in shaping behavioral intention toward AI adoption. Notably, trust in AI systems emerged as a key mediator, while marketing personalization Sustainability 2025, 17, 6901 15 of 17 had the strongest influence on trust, highlighting the strategic role of well-designed, user centric AI interactions

				entertain ment) (38%). Demographic characteristics were recorded, including age, gender, education, and frequency of AI use. The distribution reflected diversity across age groups (18–55+), with a slight predominance of male respondents (56%) and a majority holding at least a bachelor's degree (63%). pls-sem were used for analysis. using a theoretically grounded and empirically validated model based on PLS-SEM. By integrating constructs from the Technology Acceptance Model (TAM) and UTAUT2, along with context-specific variables such as AI knowledge, workplace		

				integration, passion for AI, and AI-driven marketing personalization, the research offers a multidimensional perspective on how emerging technologies reshape consumer behavior.		
Pooja Sharma/India/2025	17	Emarald -Journal of Work Applied Management	HR analytics and AI adoption in IT sector: reflections from practitioners	Data were collected through semi-structured interviews, in which fifteen HR managers were interviewed. **Keywords:** HR analytics, Artificial intelligence (AI), IT sector, Virtual reality, Chatbots, Metrics, HR verticals, Industry 4.0	To understand perceptions and experiences of technologies with HR experts in the IT industry	The findings of the author reveal that HR Analytics and AI significantly impact HR functions, capabilities, and decision-making in the IT sector. To successfully adopt HR analytics and AI, HR professionals must possess technical skills such as data analysis, coding, analytical thinking, design thinking, and domain knowledge. The interviewees also highlighted the importance of connecting HR initiatives with financial outcomes, creating strategies, contributing to decision-making processes, and aligning activities with organizational objectives.
Dedrix	7	Bindeeba	Digital	It examines	To	The results show

Stephenson Bindeeba/uganda/2025		et al. Journal of Sustainable Business	business process integration and sustainability among smes: the mediating role of operational efficiency and the moderating role of credit access	operational efficiency as a mediating mechanism and access to credit as a moderating factor. Drawing on the Resource-Based View and Dynamic Capabilities Theory, the research highlights how integrated digital processes and financial support jointly influence the sustainability and competitiveness of these enterprises. Data were collected from 228 enterprises via a structured survey and analyzed using covariance-based structural equation modeling in AMOS. Bootstrapping procedures tested indirect effects, and a multi-group analysis evaluated the moderating role of credit access.	investigates the impact of digital business process integration on economic performance and environmental performance among small and medium-sized enterprises in Uganda	that digital business process integration significantly improves both economic and environmental outcomes, with operational efficiency partially mediating these effects by enhancing workflow speed, optimizing resource use, and reducing errors. Furthermore, enterprises with access to credit experience greater operational and financial benefits from digital integration, whereas those without credit rely more heavily on operational efficiency to achieve environmental goals. These findings underscore the importance of robust digital infrastructure, process optimization, and inclusive financing in promoting sustainable development among small and medium-sized enterprises
Loso Judijanto and Muh Fauzan	-	International	LITERATURE REVIEW	The study used literature	To identify	AI and automation have the potential to

Nastiar/Indonesia/2025		Journal of Economic Literature (INJOLE)	ON THE IMPLEMENTATION OF AI AND AUTOMATION IN THE PUBLIC AND PRIVATE SECTORS	method. The process invloves searching and selecting relevant literature, such as scientific journals, books, reports and other documents related to the topic under study…	gaps	have a broad and sustainable positive impact on social and economic well-being in both the public and private sectors. This literature review revealed several challenges that need to addressed, including limitations in technology adoption, inequality in access and availability of training and ethical and privacy issues. These challenges require serious attention from various stakeholders to ensure that the adoption of AI and automation does not only benefit a few, but also provides broad and inclusive benefits. Policies that support workforce retraining, regulations governing the use of data, and ethical frameworks governing the development and implementation of AI technologies are needed. With proper management, AI and automation can be powerful tools to improve social and economic welfare in both sectors.

Samuel Godadaw Ayinaddis/ Italy/2025	72	Elsevier -Journal of Innovation & Knowledge	Artificial intelligence adoption dynamics and knowledge in SMEs and large firms: A systematic review and bibliometric analysis	Bibliometric research had done from scopus and web of science databases. A total of 78 peer reviewed articles were analyzed and categorized states and trends into 10 dimensions: (1) technology readiness, (2) customization, (3) AI tools and needs, (4) data requirements, (5) skills and competencies, (6) financial readiness, (7) management support, (8) market and competitive pressure, (9) partnership and collaboration, and (10) regulatory compliance, based on the technology–organization–environment (TOE) theoretical model. **Keywords:** Small and medium enterprise (SMEs), Artificial	1. To identify key enablers and deterrents of AI adoption in SMEs and how do they compare to those of larger, well-established enterprises. 2. To examine factors influencing the adoption of AI tools by SMEs and large firms similar or significantly different.	The implementation experience is markedly different and shaped by unique organizational needs and size. Larger well-established firms generally implement AI more efficiently because they have greater resource possession and established practices. On the other hand, SMEs encounter unique obstacles inherent to their nature that necessitate tailored solutions and support systems to enable them to integrate AI technologies. practical implications for enterprises, especially SMEs, in effectively adopting AI by considering different organizational contexts and studying how to maximize the benefits. Generally, SMEs often present difficulties commonly cited in the liter ature: lack of resources or technological readiness. Thus, targeted support from frameworks and policies is

				intelligence (AI), Large firms, AI adoption		necessary to facilitate smoother and more effective integration. These are the barriers that SMEs need to overcome by looking for funding mechanisms to access affordable AI tools. In the case of larger firms, this study underlines the need to optimize existing resources and enhance strategic AI adoption as a means to sustain competitive advantages. The results of this systematic review and bibliometric analysis therefore highlight practical interventions aimed at the main areas where SMEs need additional help to be able to use AI effectively. large firms have access to huge data sets, which help them to employ AI for predictive analysis whereas SMEs frequently find it difficult to handle the large volumes of data necessary for successful AI deployment. SMEs confirmed that perceived financial costs were the

						primary problem for the adaptation of the latest technologies, as AI forced them largely to depend on outsourcing. underscored structuring AI resources as a necessary precondition for SMEs to adopt and develop AI capabilities successfully. Some review says highlighted the positive out comes of training programs aimed at upgrading skill to effectively utilize AI in SME operations. Knowledge embodiment affects people's intentions to adopt technology.
Salman Bahoo and others/ Italy, France /2024	245	Springer Nature Journal - SN Bus Econ	Artificial intelligence in Finance: a comprehensive review through bibliometric and content analysis	Used bibliometric analysis and content analysis, examined a large number of articles published between 1992 and March 2021.	To provide a comprehensive overview of the existing research on this topic and to identify which research directions need further investigation.	They find that the literature on this topic has expanded considerably since the beginning of the XXI century, covering a variety of countries and different AI applications in finance, among which Predictive/forecasting systems,Classification/detection/early warning systems and Big data Analytics/Data mining /Text mining

						stand out. Furthermore, author shows that the selected articles fall into ten main research streams, in which AI is applied to the stock market, trading models, volatility forecasting, portfolio management, performance, risk and default evaluation, crypto currencies, derivatives, credit risk in banks, investor sentiment analysis and foreign exchange management, respectively.
Ahmad A. Khanfar/ Australia/2024	27	Springer - Information Technology and Management -	Determinants of artificial intelligence adoption: research themes and future directions	Conducted a bibliometric analysis. Used biblioshiny of R-package software to analyse AI adoption literature. Search results returned 4775 research articles. After Shortlisting by excluding the non-journal articles and other language than english they got 2,051 articles were independently reviewed by two	1. To identify literature on AI adoption has evolved over the past few years. 2. Key themes associated with AI adoption in the literature. 3. To identify gaps in the	1. The reviewed articles were published between 1984 and 2022, and the data show unprecedented growth in AI adoption research in the recent past, with about 86% of articles being published between 2020 and 2022. The number of published articles from 1984 to 2019 is 13 articles. This significant increase in publication frequency indicates a growing trend and attention towards AI adoption in

				authors, resulting in 158 articles. After reviewing the full text, the two authors excluded 55 articles that did not meet the inclusion criteria and 12 articles due to the unavailability of the full text, resulting in a final dataset of 91 articles. A total of 91 articles were reviewed and analysed the study. The papers selected for review were extracted from the scopus database on 12 july 2022. The unified theory of acceptance and use of technology (UTAUT) model and the technology acceptance model (TAM). Previous studies have been limited to specific industries and systems, and adoption theories like the UTAUT and	literatur e	organisations by researchers due to AI capabilities and benefits to organisations. 2. Key themes are Artificial Intelligence (AI), Machine Learning, UTAUT, TAM, 3. The literature on determinants of AI adoption was limited to specific industries (e.g., agriculture, legal, schools and IT sectors) or specific systems (e.g., robotics). Thus, it is recommended to investigate the driver of AI adoption in industries such as higher education, healthcare, insurance and electrical and electronics industries. The other gap iden tified is the application of technology acceptance models such as the TAM, UTAUT and TOE. Many studies have identified various individual- and organisational-level fac tors and applied the adoption models to examine their impact or as a basis to develop adoption

				TAM have also been utilised to a limited extent.		frameworks that mainly investigate the effects of those factors on AI adoption. Future studies need to investigate the interrelations between those factors, as they may influence each other.
Jiaqi Yang,, Yvette Blount, Alireza Amrollahi/ Australia/2024	171	Elsevier - Technological Forecasting & Social Change	Artificial intelligence adoption in a professional service industry: A multiple case study	Grounded in the Technological-Organizational-Environmental (TOE) framework, we employed a qualitative, multiple case study approach, investigating three auditing firms of varying sizes through interviews and secondary document re views. The data was collected using semi-structured interviews with 15 informants, complemented by supporting documents, such as firms' transparency reports and information from the vendors of AI applications. The data analysis was guided by	To explore the factors influencing AI adoption in professional service firms.	Findings reveal six factors influencing AI adoption, including technology affordances and constraints, the firm's innovation management approaches and AI readiness, the competition environment, and the regularity environment. Noteworthily, these factors vary significantly among the three firms. Larger firms, often operating in an environment with high AI penetration, primarily perceive the operating affordance of AI rather than marketing affordance. This means their AI adoption encompasses greater scale and depth than smaller firms.

				Gioia's methods of analyzing qualitative data		
Dr. Birinchi Choudhury/Assam/ 2024	-	JETIR	Transformative Effects of Artificial Intelligence on Employment within the Indian Corporate Sector: A content analysis	This study conducted a content analysis to explore the impact of artificial intelligence (AI) on employment. The research focused on articles from the Times of India (ToI) that discussed the "Indian corporate employment status" during the period from January 1, 2024, to June 30, 2024. This paper explores AI's dual impact on employment, highlighting job displacement in routine tasks and job creation in high-value roles such as AI development and data analysis.	To find out the relationship between AI implementation and employment in the Indian corporate sector.	Bridging the skill gap and addressing ethical concerns related to AI deployment are crucial for sustainable adoption. A significant 92% of knowledge workers in India use AI at work, which is higher than the global average of 75%. This high adoption rate reflects the confidence of Indian employees in AI to save time, boost creativity, and enhance focus (Microsoft News, 2024). The automation of routine tasks due to AI implementation poses a threat to job security, particularly affecting low-skilled workers in sectors such as manufacturing, customer service, and logistics. According to a report by NASSCOM and Ernst & Young, around 1.5–2 million jobs in India's IT sector could be impacted by

						automation and AI by 2022 (Quora, 2024). AI is also creating new job opportunities. The automation of repetitive tasks is freeing up human capital for higher-value roles, spurring demand for AI specialists, data scientists, and machine learning engineers (IABAC, 2024). AI is expected to significantly enhance operational efficiency and productivity across various sectors by automating routine tasks and optimizing processes. This transformation can lead to better resource utilization and increased competitiveness for companies. This displacement can exacerbate unemployment issues if not managed properly through re-skilling and up-skilling programs. There is a significant gap between the current skill levels of the workforce and the skills required to manage and work

						alongside AI technologies. Bridging this gap through education and training is crucial for the sustainable adoption of AI.
AhmadAlmufarreh / Saudi Arabia/ 2024	-	Sustainability (MDPI)	Determinants of Students' Satisfaction with AI Tools in Education: A PLS-SEM-ANN Approach	The present research has employed a quantitative research design, in which survey instruments have been employed as tools for data collection from students using AI tools for education purposes. The research collected the data using a survey questionnaire from a Saudi Arabian university. The two-stage method of partial least squares structural equation modeling (PLS-SEM) and artificial neural network (ANN) have been employed. The two-stage method is applied in a way that PLS-SEM	To understand the determinants of student satisfaction with AI tools being employed in the educational sector.	The PLS-SEM results have shown that factors such as content quality, emotional wellbeing and perceived utility determine student satisfaction with AI tools. The ANN results show that emotional wellbeing is the most critical factor in satisfaction, followed equally by content quality and perceived utility.

				is used for testing the hypothesis and significance of the factor's influence on satisfaction, and ANN is used to determine the relevant importance of the factor. **Keywords:** Artificial Intelligence; satisfaction; perceived utility; content; emotional wellbeing **Variables:** Perceived credibility of AI tools, Content quality of AI tools, Perceived utility of AI tools, Cognitive absorption, Emotional wellbeing with AI tools, Satisfaction		
Ajda Fošner/ Slovenia/2024	81	Sustainability (MDPI)	University Students' Attitudes and Perceptions towards AI Tools: Implications for Sustainable Educational Practices	This paper consist of Structured questionnaire with a sample of 422 participants reflecting a diverse demographic profile across various fields of study. The questionnaire was designed to	To study usage, attitudes, and perceptions of AI tools among university students in Slovenia	The analysis shows that most students are willing to use AI technologies as a supportive tool in their academic work, with the majority still valuing their contributions to completing assignments. This reflects a conscious and responsible use of AI tools, aligning

				measure the frequency of AI tool usage,the purposes for which these tools are employed and students' attitudes and perceptions towards AI's potential benefits and drawbacks in education. Statistical analyses, including Analysis of Variance (ANOVA), were utilized to test hypotheses concerning differences in AI tool usage based on the level and field of study. **Keywords:** higher education; AI tools; sustainability in education; university students; students' attitude; students' perception; Slovenia; sustainable development	providing a comprehensive analysis that informs both academic practices and policy-making with emphasis on sustainability.	with the principles of sustainability. They considered the average usage rates across various categories, including summarizing and paraphrasing texts, translating and checking spelling/grammar, generating unique ideas, and preparing for tests—activities that contribute to more efficient, resource-conscious learning practices and support the broader goals of sustainable educational development. The findings suggest that while AI tools are becoming an integral part of the educational landscape in Slovenia, there is a critical need to address the educational, ethical, and psychological impacts of these technologies. The results highlight the necessity for further research into the educational implications of AI, suggesting a balanced and sustainable approach to integrating these technologies into

						higher education curricula. Such an approach ensures that the adoption of AI not only enhances learning outcomes but also aligns with the principles of sustainability, promoting long-term benefits for both education and society.
Satyasri Akula/Italy/2024	-	IJISRT	Operational Efficiency and Market Reach as Mediators in the Relationship between Digital Innovation and Organizational Growth	Innovation, information from 280 participants was collected through a structured survey surveys employing a quantitative exploratory approach. Both the direct and indirect Exploring how digital innovation affects the growth of organizations was investigated. Structural equation modeling, also known as SEM.	To investigates the relationship between organizational growth and digital innovation	The findings assert that the impact of digital innovation on the growth of the organization by both directly and indirectly increasing it expanding market coverage and increasing operational effectiveness. The study emphasizes how crucial it is to include these elements into strategic management to maximize development potential. Using AMOS and SPSS for data analysis, the research uses stratified random sampling to guarantee a representative sample. This thorough examination supplies valuable

						insights for improving digital innovation strategies to promote organizational expansion.
Yogesh K. Dwivedi and others/ UK, India, Qatar, France/2023	411	Elsevier - Technological Forecasting & Social Change	Evolution of artificial intelligence research in Technological Forecasting and Social Change: Research topics, trends, and future directions	Have done systematic literature review by using prisma model where he collected 799 articles by giving source type = "AI" OR "Artificial Intelligence" OR "Big data" OR "data mining" OR "IOT" OR "Internet of Things" …….. **Keywords:** AI, Bigdata, machine learning, topic modeling	To map the intellectual structure and evolution of the conceptual structure of overall AI research published in technological forecasting and social change (TF & SC).	The results of the topic modeling reveal eight key topics, out of which the topics concerning health care, circular economy and sustainable supply chain, adoption of AI by consumers and AI for decision-making are showing a rising trend over the years.
Pongsakorn limna/ Thailand/2023	221	International journal of computing sciences research	Artificial Intelligence (AI) in the Hospitality Industry: A Review Article	Literature review has explored AI in the hospitality industry. The literature and information were obtained from various books and research articles on EBSCO, Google scholar, scopus, web of science and science direct.	To examine benefits and non-benefits of Hospitality Industry.	The author says AI is a strategic and critical factor in economic development. Furthermore, AI technologies are increasingly being used as digital assistants. They help businesses in the hospitality industry in a variety of ways, including improving customer service, expanding

				The inclusion criteria were studies that clearly defined AI in all aspects of the hospitality industry, were published and written in english and were peer-reviewed. Content analysis was employed		operational capability, and lowering costs. However, there are some risks posed by AI advancements, such as job loss in the low-tech sectors, loss of control due to robot autonomy and safety, security and privacy concerns. Therefore, AI technologies have both positive and negative effects on the workforce and job employment in the hospitality industry.
Thorsten Schoormann and others/2023/denmark	149	Communications of the Association for Information Systems	Artificial Intelligence for Sustainability—A Systematic Review of Information Systems Literature	To bridge this gap, we disclose how is research currently makes use of AI to boost sustainable development. Based on a systematically collected corpus of 95 articles, we examine sustainability goals, data inputs, technologies and algorithms, and evaluation approaches that coin the current state of the art within the IS discipline. This comprehensive overview enables us to	This paper focus on the bright side of AI and its promising potential to face our society's grand challenges.	AI is assumed to be a game-changer in almost every industry, business, and personal domain, which opens promising opportunities to rethink today's dominant practices and patterns. Given this great opportunity, AI can boost endeavors that seek to conquer society's fundamental challenges, such as building sustainable cities (environment), advancing medical diagnoses (society), as well as fostering innovation (economy). By following the demand for urgent

				make more informed investments (e.g., policy and practice) as well as to discuss blind spots and possible directions for future research. **Keywords:** Sustainable Development Goals, Sustainability, Artificial Intelligence, Information Systems.		action, we aimed at synthesizing IS research initiatives to bring together different (sub-)streams and reveal the community's full potential to contribute to sustainability. Therefore, this paper makes a fourfold contribution: First, grounded in a sample of 95 articles, we provide a systematic overview of IS literature to help academics, practitioners, and policymakers in navigating through the status quo, including research streams, research findings, and artifacts. Second, we deduced and applied a coding schema that can be adopted and refined to investigate AI and sustainability from an IS point of view. Third, based on the analysis of the current distribution, both current foci of research and blind spots could be identified, which guides academia and practice in adopting and building upon available knowledge as well as in

						deriving purposeful research directions. Fourth, by positioning and reflecting on our findings, we formulated a set of observations and avenues for future endeavors exploring the role of how AI-driven IS research can contribute to sustainability. Since this paper's systematic analysis revealed numerous goals of IS research on AI for sustainability, including classification of mental health, forecasting of agricultural yields, increasing energy efficiency, and predicting secure environments, they conclude that the IS discipline has an important role in this context. As the available literature is dispersed across economic, ecological, and social dimensions.
Victoria Uren, John S. Edwards/ UK/ 2023	350	International Journal of Information Management	Technology readiness and the organizational journey towards AI adoption: An empirical	A cross-sectional, qualitative study was carried out, with a purposive sample of AI experts from research,	To advance the understanding of the organizational	The model suggests that people, process and data readiness are required in addition to technology readiness to achieve long term operational success

			study	development and business functions, to gain a deeper understanding of the adoption process. Technology Readiness Levels (TRL) were used as a benchmark against which the experts could align their experiences. A model of AI adoption is proposed which embeds an extended version of the People, Processes, Technology lens, incorporating Data.	journey towards AI adoption, a qualitative study presents an opportunity to explore the issues relevant at different adoption stages.	with AI. The findings further shows people who are stakeholders in the businesss processes can identify which AI applications will produce benefit. Indicate that innovative organizations should build bridges between technical and business functions.
Ilaria Guandalini/UK/2022	491	Journal of Business Research - Elsevier	Sustainability through digital transformation: A systematic literature review for research guidance	This paper sheds light on the relationships between these two phenomena. Specifically, a quantitative characterization of the selected publications and a qualitative characterization based on content analysis. The quantitative characterization is based on papers' grouping ac	1. To consolidate the existing research. 2. Understand the thematic connections amongst the different studies. 3. identify research	The findings of this study offer three primary theoretical implications Firstly, existing literature and identifies the thematic focus on 1) digitalization strategies for sustainability purposes, 2) applicability to industries or sectors, 3) applicability to organizations and stakeholders, and 4) sustainability through specific digital technologies

				cording to: 1) Date of publication 2) Academic source and citations. This research pioneers the study of 'digital sustainability' through a systematic review of 153 academic articles aimed to 1) consolidate the existing research, 2) understand the thematic connections among the different studies, and 3) identify research gaps to move forward in the development of the topic.	gaps to move forward in the develop ment of the topic.	and functionalities. Secondly, five gaps have been identified, with regards to the focus of studies, the used terminology, the lack of over arching strategic and comparative research, as well as the missing organizational perspective. Thirdly, delay in the theme development as well as the odd under-consideration from highly ranked journals, we hope this study serves to re-establish research equilibria and adequate consideration on the topic.
A. Geetha/India/2021	43	IJCRT	A study on artificial intelligence (AI) in banking and financial services	A structured questionnaire is framed to collect the primary data of customers have toward AI application. Random sampling was done. Data collected in Chennai to oversee the application of artificial intelligence	1. To study about Artificia l Intellige nce in Banking and Financia l Services in percepti ons of clients or	Found 90% of respondents says Chatbots applications of AI is very useful in BFS, 52.5% of respondents says Voice Assistants is not useful in BFS , 65% of respondents says Authentication and Biometrics is very useful, 92.5% respondents says fraud and detection and prevention is used to secure the

				methodology in the banks as well as responses from the clients or consumers.	consumers. 2. To study the areas and the application where the Artificial Intelligence is being used by the Banking and Financial Services. 3. To Study about Banking and Financial Services for using Artificial Intelligence is to offer customized Product.	data, 97.5% respondents says applications of KYC /AML is very useful to provide documents and other details to submit in BFS and 67.5% respondents says Smart Wallet applications in AI handling cashless Transactions in this generation.
Ismail Nizam/2021/malaysia	13	International Centre for Educatio	IMPACT OF ARTIFICIAL INTELLIGENCE IN AUTOMOTI	Theories that being used and reviewed include Technology	The aim of this paper is to explore	dependent variables which include leadership change, autonomous vehicle, smart factory and

		n in Islamic Finance	VE INDUSTRIES TRANSFORMATION	Acceptance Model (TAM), Transformation Leadership, Hidden Markov Model (HMM) and Marketing Mix 7Ps. The association among theories are being validate by Explanatory research designed for this study by testing four hypotheses with Confirmatory Factor Analysis through Multiple Regression. This research targeted 250 respondents but only 160 respondents were received. Data from sample population were collected during the month of July through online questionnaire. SPSS was used to analyse and interpret data which was obtained via the online questionnaire.	the impact of AI in automotive industry transformation. The objectives are: 1. To examine the impact of Leadership Change on Artificial Intelligence (AI). 2. To examine the impact of Autonomous Vehicle on Artificial Intelligence (AI). 3. To examine the impact of Smart Factory on	marketing & sales are perceived as significant positive impact by artificial intelligence. Various valuable perspectives in this study will shed light on the automotive industry transformation.

					Artificial Intelligence (AI). 4. To examine the impact of Marketing & Sales on Artificial Intelligence (AI).	
Nishtha Malik and Shalini Nath Tripathi/lucknow(India) Arpan Kumar Kar - New delhi (India) Shivam Gupta - France 2021	544	Emarald International Journal of Manpower	Impact of artificial intelligence on employees working in industry 4.0 led organizations	It is a qualitative research. Semi-structured interviews were conducted with 32 professionals with average work experience of 7.6 years and working across nine industries, and the transcripts were analyzed using NVivo. **Keywords:** AI, indusstry 4.0, Employee experiences, Technostress, Human resources, Manpower	Attemps to develop a practical understanding of the positive and negative employee experiences due to artificial intelligence (AI) adoption and the creation of technostress.	Finded adverse impacts of the adoption of AI namely information security, data privacy, drastic changes resulting from digital transformations and job risk and insecurity brewingin the employee psyche. Positive impacts namely, work-related flexibility and autonomy, creativity and innovation and overall enhancement in job performance. Further factors contributing to technostress (among employees): work overload, job insecurity and complexity were identified.
Sina Nordhoff/	439	Journal	Acceptance of	They surveyed	This	Respondents

Netherlands/2018		of Advanced Transportation - Wiley - Hindawi	Driverless Vehicles: Results from a Large Cross-National Questionnaire Study	10,000 respondents on the acceptance of driverless vehicles and sociodemographic characteristics, using a 94 item online questionnaire. After data filtering, data of 7,755 respondents from 116 countries were retained.	paper examines the role of individual wish for a car free future, their knowledge of mobility related developments, and their attitudes towards driverless vechicles.	reported that they would enjoy taking a ride in a driverless vehicle (mean = 4.90 on a scale from 1 = disagree strongly to 6 = agree strongly). They further found that the scores on the questionnaire items were most appropriately explained through a general acceptance component, which had loadings of about 0.7 for items pertaining to the usefulness of driverless vehicles and loadings between 0.5 and 0.6 for items concerning the intention to use, ease of use, pleasure and trust in driverless vehicles, as well as knowledge of mobility-related developments. to use and convenient (Q49, Q50, Q52). Furthermore, respondents could imagine using 100% electric driverless vehicles in connection with public transport (Q43). The perceived enjoyment of taking a ride in driverless vehicles was also rated positively by

						respondents (M = 4.90/6, Q37). T his corresponds with Nordhoff et al. [20], who found that respondents strongly agreed with the statement that the driverless vehicle was fun and enjoyable after having taken a ride in the vehicle (M = 5.40/6).
Ilias Panagiotopoulos, George Dimitrakopoulos/Greece/2018	669	Elsevier - Transportation Research Part C: emerging technologies	An empirical investigation on consumers' intentions towards autonomous driving	(a) proposes a technology acceptance modelling process by extending the original Technology Acceptance Model (TAM) to explain and predict con sumers' intensions towards AVs, (b) based on the proposed TAM-extended framework, a 30 question survey was conducted in order to investigate the factors influencing consumers' in tensions to use and accept AVs.	To explore a modified Technology Acceptance Model (TAM) was used to predict user's Behavioral intension about AVs.	Results show that the constructs of perceived usefulness, per ceived ease to use, perceived trust and social influence, are all useful predictors of behavioral intentions to have or use AVs, with perceived usefulness having the strongest impact. The insights derived from this study could significantly contribute to ongoing research related to technology acceptance of AVs and are expected to allow automobile industries to improve their design and technology.

Discussion

The reviewed studies collectively indicate that Artificial Intelligence (AI) adoption has a significant and multi-dimensional impact across industries, including IT, corporate sectors, education, finance, healthcare, hospitality, autonomous driving, Industry 4.0 and banking & financial services.

The results demonstrate that AI adoption is not merely a technological transition but a socio-technical transformation affecting workforce structures, organizational strategies, and sustainability outcomes. Across sectors, AI consistently enhances efficiency, decision-making, innovation, and service quality. These benefits validate AI's role as a strategic enabler of competitiveness and economic growth.

However, the findings also reveal critical challenges. Skill gaps, ethical concerns, data privacy risks, and technostress are recurring issues across industries. The displacement of routine and low-skilled jobs underscores the urgent need for reskilling and upskilling initiatives, particularly in emerging economies like India. Without proactive workforce development, AI-driven automation may exacerbate unemployment and social inequality.

The prominence of perceived usefulness and trust across studies suggests that user acceptance remains a decisive factor in AI adoption. Emotional wellbeing, especially in education and workplace contexts, highlights the importance of designing human-centered AI systems that support psychological and social needs, not just functional efficiency.

From a sustainability perspective, the IS literature confirms that AI has the potential to contribute meaningfully to the triple bottom line—economic growth, social wellbeing, and environmental protection. Yet, the fragmented nature of existing research across sustainability dimensions indicates a need for more integrated and interdisciplinary approaches.

Bindeeba et al. (2025) highlight digital business process integration as a critical driver of both economic and environmental performance among Ugandan SMEs. Grounded in the Resource-Based View and Dynamic Capabilities Theory, the study demonstrates that operational efficiency acts as a partial mediator, indicating that digital integration alone is insufficient unless it translates into faster workflows, optimized resource utilization, and reduced operational errors. The moderating role of access to credit further emphasizes the importance of financial capital in leveraging digital investments. SMEs with credit access can directly translate digital integration into financial and environmental gains, whereas credit-constrained firms depend more heavily on efficiency improvements to achieve sustainability outcomes.

Extending beyond internal firm performance, Popa (2025) provides a consumer- and user-centric perspective on digital transformation by examining AI adoption. Integrating TAM and UTAUT2 with contextual drivers, construct used in this study are perceived usefulness, perceived ease of use under the variables AI knowledge, marketing personalizaition and behavioural Intention to Adopt AI, Trust in AI system, Workplace AI integration, Passion for AI the study reveals that trust plays a central mediating role in shaping behavioral intention toward AI use. Unlike the other two studies, which focus on firm-level outcomes, this research highlights how affective and contextual factors—such as intrinsic motivation, workplace integration, and AI-driven marketing personalization—shape digital technology acceptance. The strong influence of personalization on trust underscores the need for responsible, user-centric AI implementation, especially for SMEs seeking to deploy AI as part of their digital strategies.

Taken together, these studies suggest that the benefits of digital technologies are not automatic. Instead, they are contingent upon mediating mechanisms (operational efficiency, trust, market reach) and moderating conditions (access to credit, workplace context, and user experience). This reinforces the notion that digital transformation is a socio-technical process, requiring alignment between technology, organizational capabilities, financial resources, and human perceptions.

Overall, the discussion highlights that responsible AI adoption requires aligning technological advancement with ethical governance, organizational strategy, and human capital development.

Conclusion

This study concludes that AI adoption has a profound and transformative impact across multiple sectors, delivering substantial gains in productivity, innovation, customer satisfaction, and strategic decision-making. The evidence confirms that AI acts as a key driver of digital transformation and sustainability when effectively integrated into organizational systems.

Nevertheless, the sustainable adoption of AI is contingent upon addressing significant challenges, including workforce skill mismatches, ethical concerns, data security risks, and job insecurity. Bridging the skill gap through continuous education, training, and policy support is essential to ensure that AI benefits are equitably distributed.

The findings emphasize the need for human-centric, ethical, and strategy-aligned AI implementation, supported by robust Information Systems frameworks. Future research should focus on longitudinal studies, cross-sectoral comparisons, and integrated sustainability models to better understand AI's long-term societal implications.

In conclusion, AI holds immense potential to support sustainable development across industries, but its success ultimately depends on balanced adoption that harmonizes technological innovation with human, organizational, and societal well-being. Further study includes;

- Analytical study in the combination of AI and Sustainability development
- Qualitative study with models can be written and publish
- Research in AI adoption sectors like Healthcare, Finance, Manufacturing, Retail, Transportation, Technology and Auditing

References

1. CHELLASAMY, & MANOSHRI, N. (2025). A Literature Review: Scheme, Digitalization, AI, Sustainable Development in Msme Sector.
2. Almufarreh, A. Determinants of Students' Satisfaction with AI Tools in Education: A PLS-SEM-ANNApproach. ***Sustainability 2024,*** 16, 5354. https:// doi.org/10.3390/su16135354
3. Popa, R. G., Popa, I. C., Ciocodeică, D. F., & Mihălcescu, H. (2025). Modeling AI adoption in SMEs for sustainable innovation: A PLS-SEM approach integrating TAM, UTAUT2, and contextual drivers. ***Sustainability,*** 17(15), 6901.
4. Sharma, P., Bhattacharya, S., & Bhattacharya, S. (2025). HR analytics and AI adoption in IT sector: reflections from practitioners. ***Journal of Work-Applied Management.***
5. Bindeeba, D. S., Atuhaire, S., Bakashaba, R., & Tukamushaba, E. K. (2025). Digital business process integration and sustainability among smes: the mediating role of operational efficiency and the moderating role of credit access. ***Journal of Sustainable Business,*** 10(1), 11.
6. Judijanto, L. LITERATURE REVIEW ON THE IMPLEMENTATION OF AI AND AUTOMATION IN THE PUBLIC AND PRIVATE SECTORS.
7. Ayinaddis, S. G. (2025). Artificial intelligence adoption dynamics and knowledge in SMEs and large firms: A systematic review and bibliometric analysis. ***Journal of Innovation & Knowledge,*** 10(3), 100682.
8. Bahoo, S., Cucculelli, M., Goga, X., & Mondolo, J. (2024). Artificial intelligence in Finance: a comprehensive review through bibliometric and content analysis. ***SN Business & Economics,*** 4(2), 23.
9. Khanfar, A. A., Kiani Mavi, R., Iranmanesh, M., & Gengatharen, D. (2024). Determinants of artificial intelligence adoption: research themes and future directions. ***Information Technology and Management,*** 1-21.

10. Yang, J., Blount, Y., & Amrollahi, A. (2024). Artificial intelligence adoption in a professional service industry: A multiple case study. ***Technological Forecasting and Social Change,*** 201, 123251.
11. Fošner, A. (2024). University students' attitudes and perceptions towards ai tools: implications for sustainable educational practices. ***Sustainability,*** 16(19), 8668.
12. Dwivedi, Y. K., Sharma, A., Rana, N. P., Giannakis, M., Goel, P., & Dutot, V. (2023). Evolution of artificial intelligence research in Technological Forecasting and Social Change: Research topics, trends, and future directions. ***Technological Forecasting and Social Change,*** 192, 122579.
13. Limna, P. (2023). Artificial Intelligence (AI) in the hospitality industry: A review article. ***International Journal of Computing Sciences Research,*** 7, 1306-1317.
14. Schoormann, T., Strobel, G., Möller, F., Petrik, D., & Zschech, P. (2023). Artificial intelligence for sustainability—a systematic review of information systems literature. ***Communications of the Association for Information Systems,*** 52(1), 8.
15. Uren, V., & Edwards, J. S. (2023). Technology readiness and the organizational journey towards AI adoption: An empirical study. ***International Journal of Information Management,*** 68, 102588.
16. Guandalini, I. (2022). Sustainability through digital transformation: A systematic literature review for research guidance. ***Journal of Business Research,*** 148, 456-471.
17. Geetha, A. (2021). A study on artificial intelligence (Ai) in banking and financial services. ***International Journal of creative research thoughts,*** 9(9), 110-114.
18. Chai, T. Y., & Nizam, I. (2021). Impact of artificial intelligence in automotive industries transformation. ResearchGate. https: HYPERLINK" https://doi. org/10.24924/ijise/2021.04/v9. iss2/01.35"//doi. org/10.24924/ijise/2021.04/v9. iss2/01.35.
19. Malik, N., Tripathi, S. N., Kar, A. K., & Gupta, S. (2022). Impact of artificial intelligence on employees working in industry 4.0 led organizations. ***International Journal of Manpower,*** 43(2), 334-354.
20. Nordhoff, S., De Winter, J., Kyriakidis, M., Van Arem, B., & Happee, R. (2018). Acceptance of driverless vehicles: Results from a large cross-national questionnaire study. ***Journal of advanced transportation,*** 2018(1), 5382192.
21. Panagiotopoulos, I., & Dimitrakopoulos, G. (2018). An empirical investigation on consumers' intentions towards autonomous driving. ***Transportation research part C: emerging technologies,*** 95, 773-784.