MACHINE LEARNING DRIVEN AI INSIGHTS: TRANSFORMING STRATEGIC DECISION MAKING FOR US BUSINESSES

Mahmuda[1], Habibor Rahman Rabby[2,*], Amena Hoque[3], Daudul Islam[4], Samia Ara Chowdhury[5]

[1]Department of Information Technology, Alfa University College, 13, Persiaran Kewajipan, USJ 1, 47600 Subang Jaya, Selangor, Malaysia
[2]Department of Computer Science, Campbellsville University, 2300 Greene Way #100, Louisville, KY 40220, USA
[3]Department of Accounting (MAC), Touro University, 3 Times Square, New York 10036, USA
[4]Department of Computer Science and Engineering, International Islamic University Chittagong, Kumira, Chattogram-4318, Bangladesh
[5]Department of Information Technology, ST FRANCIS COLLEGE, Brooklyn, New York, USA

Corresponding Author: Habibor Rahman Rabby, **Email ID**: Habib.R.Rabby@gmail.com

Abstract

The boom of artificial intelligence (AI) coupled with machine-learning meta-analyses, including Latent Dirichlet Allocation (LDA) topic modeling, keyword co-occurrence, TF-IDF clustering, sentiment polarity, and tool-similarity indices do change decision making in enterprises in the United States. The current paper investigates the implementation of an artificial intelligence into the work of American companies, applying machine-learning methods to explain thematic patterns (e.g., 28.34% prevalence of AI-decision-business intelligence), conceptual connections to one another (e.g., there are strong relationships between the data, strategy, and ethics), the classification of possible content into four categories, a moderate number of positive, negative, and neutral sentences (25 positive, 6 negative, 108 neutral paragraphs), and similar functional features of tools like ClickUp AI, Bricabrac Such machine-learned findings support the idea of AI in efficiency, accuracy, innovation, and ethical governance, therefore, providing competitive benefits and reducing threat impacts, including bias and privacy issues in the context of the United States.

Keywords: Artificial Intelligence; LDA topic Modeling; NPL analysis; Sentiment Polarity; ML-impacted Business Decision making.

INTRODUCTION

Integrating Artificial Intelligence (AI) into corporate strategy has revolutionized decision-making processes, reshaping traditional models and enhancing business agility [1, 2]. This convergence is driven by the role of AI and machine learning in digital transformation initiatives within organizations [3, 4]. However, challenges persist in implementing and strategically using AI tools, necessitating a deeper understanding and expertise. The evolution of strategic management processes also underscores the importance of AI in corporate decision-making. A methodological approach to strategic planning incorporating AI can significantly influence corporate profitability and success [5, 6]. This integration is crucial for companies to navigate complex business environments effectively and make quality decisions that drive successful outcomes [7, 8].

The emergence of AI in strategic business decisions is a pivotal development in the corporate world, offering immense potential for value creation, necessitating rethinking traditional strategic planning processes, and driving the evolution of new business models [9]. As companies navigate this AI-driven landscape, the focus shifts towards harnessing AI's potential to enhance decision-making processes,

improve corporate performance, and ensure sustainable business growth in an increasingly digitalized world [9-12].

AI decision-making is the future of intelligence in businesses, as it allows for faster, more accurate, and more consistent decisions by capitalizing on datasets [13, 14]. AI can analyze large datasets without error, allowing business teams to focus better on work relevant to their field. Decision makers in companies believe in AI available in terms of machine learning, natural language processing, and computer vision. They are the most trusted aspects of any business ground today to increase profits and reach set goals [15, 16]. AI can be experienced in three recognized levels of the AI spectrum: assisted intelligence, augmented intelligence, and automation intelligence [17-19]. Assisted intelligence focuses on automating basic tasks, such as machines in assembly lines, while augmented intelligence aims to learn from human input, allowing machines to base their decision accuracy on intelligent information [20, 21]. Automation intelligence includes machines automating the complete process, with humans out of the loop, such as autonomous robots and self-driving cars [15, 22-24].

Decision-making in AI is of utmost importance when data processing is carried out completely or in part by an AI platform [25-27]. With no human in the picture, this process helps quantify data, make accurate predictions, and make precise decisions. AI can handle anomaly detection, data crunching, complex analysis, optimized decision-making, and spotting trends [28]. The final decisions are either completely automated or taken over by the human end. Degrees of decision-making in AI include decision support, decision augmentation, and decision automation [29]. Decision support involves using predictive, diagnostic, or descriptive analytics to help humans make decisions with accuracy, while decision augmentation uses predictive or prescriptive analytics to recommend multiple decision alternatives. Decision automation relies on prescriptive or predictive analytics, benefiting humans from its scalability, speed, and consistency in decision-making [11, 30-33].

Whether a decision has to be AI automated, augmented, or supported depends on two factors: the time limit within which the organization will need to decide and its complexity [34, 35]. The Cynefin framework suggests that complexity may vary on a continuum, with simple situations being predictable and simple, complicated situations requiring more expertise in problem-solving or analysis, and chaotic situations causing unclear causes and effects or dynamic interdependencies [36].AI is the epitome of businesses because of its learning capability, as it can train itself to build large language models of data collections, making accurate decisions and categorizations over provided data [4]. This helps make better commercial decisions. Companies like Amazon use customer transaction data to learn about customer segments, recommend complementary products, and increase purchases [37-39].

The primary aim of this review is to explore the transformative role of AI in strategic business decision-making, highlighting its impact on various sectors. Also, the review aims to assess the effectiveness of AI in enhancing competitive advantage and operational efficiency, identify challenges and risks associated with AI implementation, investigate ethical considerations, and forecast future trends in AI applications within business strategy and management [40, 41].

LITERATURE REVIEW

AI, a technology-driven technology, has revolutionized various fields, with researchers exploring human-centered artificial intelligence (HCAI) to address societal implications [42]. Despite the potential benefits, there is a lack of clarity on what it means to frame, design, and evaluate HCAI [43]. This paper reviews the growing body of literature on HCAI, providing an overview of the community's definition and suggesting future challenges. The review highlights the breadth of research in HCAI,

established clusters, and emerging areas like interaction with AI and ethical AI [44] . The paper also proposes a new definition of HCAI and calls for greater collaboration between AI and HCI research, as well as the development of new HCAI constructs [45, 46]. AI-enabled recruiting has become a necessity due to the shift from tangible to intangible assets in competitive advantages. As digitalization reshapes business and social landscapes, AI-enabled recruiting has become central to the process [7, 47]. Recent advances in AI-enabled recruiting have improved recruiting efficiency, making it crucial for managers to utilize it effectively [48, 49]. To capture the main benefits of AI-enabled recruiting, managers need to take strategic steps, such as leveraging AI to enhance their workforce and improve their overall efficiency [50-53].

Artificial intelligence (AI) is of great interest in the pharmaceutical industry, as it can significantly transform business processes. A qualitative interview study of five large, five medium, and five small pharmaceutical companies was conducted to understand the impact of AI on these processes. Small pharma companies significantly change research and development, master data management, analysis and reporting, and human resource business processes [54, 55]. Large pharma companies use AI to transform production, sales, marketing, and analysis processes. Medium-sized companies, on the other hand, individually transform their business processes depending on their specialization [56]. The study highlights that business processes vary depending on the company size and that some processes cannot be changed due to strict industry regulations. AI will impact areas where human skills are suited to their maximum capabilities, highlighting the importance of understanding the role of AI in the pharmaceutical industry [57-59].

This paper explores the role of Artificial Intelligence (AI) in sustainable business models (SBMs) and its relationship with machine learning and sustainable development. The study aims to understand if AI can influence production and consumption patterns to achieve sustainable resource management according to the UN 2030 Agenda's Sustainable Development Goals (SDGs) [60]. The paper also highlights the role of Knowledge Management Systems (KMS) in the cultural drift towards AI adoption in SBMs. Despite the importance of AI in sustainable development, there is no comprehensive review of AI and SBM literature in light of SDGs. A bibliometric analysis of 73 English publications from 1990 to 2019 reveals that the innovation challenge involves ethical, social, economic, and legal aspects [61]. The development potential of AI is linked to the UN 2030 Agenda for SD, especially SDG#12. The paper highlights key contributions, including a comprehensive review of the relationship between AI and SBMs, identifying a research gap regarding KMS through AI, and discussing the implications of AI concerning SDG12 [62]. Academic and managerial implications are also discussed, suggesting that AI can represent the vehicle to meet SDGs by identifying cultural change required by enterprises to achieve sustainable goals. Business companies, academic research practitioners, and state policymakers should focus on the further development of AI in SBMs [63-65].

Another study explores the transformative impact of Artificial Intelligence (AI) on strategic business decision-making, examining its role in disrupting traditional decision models and enhancing business agility [66, 67]. Through a systematic literature review, the study provides a comprehensive understanding of AI's multifaceted role in business. Key findings reveal that AI is not just a technological tool but a strategic asset that significantly redefines business decision-making [68]. The integration of AI into business strategies demonstrates substantial potential in enhancing corporate performance and promoting sustainable practices. The study concludes that AI is a cornerstone in business evolution, offering unparalleled opportunities for innovation and efficiency [69]. Recommendations advocate for a balanced approach to AI integration, emphasizing the need for

businesses to align AI with their core values and strategic objectives. As AI continues to evolve, its role in business decision-making is expected to shape the corporate landscape significantly [70].

A recent study aims to address the low adoption rate of artificial intelligence (AI) in business communication, despite its potential to replace humans in communication processes. The lack of in-depth literature and limited sharing of experiences limit the creation, dissemination, and consolidation of understanding in this area. The study adopts the principles of knowledge management (KM) to provide guidelines for the definition of standards and facilitate the introduction of AI in business communication. The study is the first to relate the perspectives of business communication, AI, and KM, activating a virtuous circle between KM and AI. The proposed model focuses on people, processes, and technologies, with KM representing the ideal perspective for defining AI implementation [71]. The study finds that KM can be a possible strategy to solve the problems faced in applying AI in business communication processes, providing a model capable of transforming and adapting to the context. The study contributes to the literature by linking the introduction of emerging technology (AI) in a specific process, such as business communication [72, 73].

Artificial intelligence (AI) is poised to revolutionize the way organizations make decisions, deliver services, and evaluate opportunities. With its potential reach across various industries, AI applications are primarily based on machine learning algorithms, with supervised learning being particularly prevalent. Leaders predict widespread use of AI technologies, with Forbes estimating that 95% of executives believe AI will play a crucial role in their companies in the future. The McKinsey Global Institute predicts that AI's application in companies will result in a global value-added contribution of USD 13 trillion by 2030. AI is already being integrated into common applications, such as financial credit analysis, production machine status determination, law enforcement support, and cybersecurity protection. In healthcare research, AI's application has become even more significant during the COVID-19 pandemic. AI has the potential to lower service delivery costs and speed up decision-making time, making faster, more systematic, and evidence-based decisions than humans. However, ethical concerns about fairness, non-discrimination, transparency, and privacy need to be addressed. While it is uncertain whether these optimistic and pessimistic forecasts will come true, they command attention, suggesting that AI will continue to be integrated into organizations and society in the years to come [58, 74].

AI is a gateway to online help for small and medium-sized businesses in the USA. The literature review describes what artificial intelligence is, the role of AI in business, and the impact of AI implementation in business in the USA. The research combines some of the previous pieces of information along with some popular and useful AI software and implementation of AI in the USA for the welfare of businesses.

METHODOLOGY

AI is revolutionizing businesses by leveraging data to achieve desired results and achieve their goals. By analyzing and predicting future outcomes, AI can provide real-time processing, enabling businesses to solve unresolved problems and innovate. In the commercial sector, AI and decision-making are becoming increasingly important, giving companies a competitive edge. The advent of AI can enhance customer perceptions and interaction with digital strategy-based applications. The conceptual framework used in this investigation is shown in Figure 1.

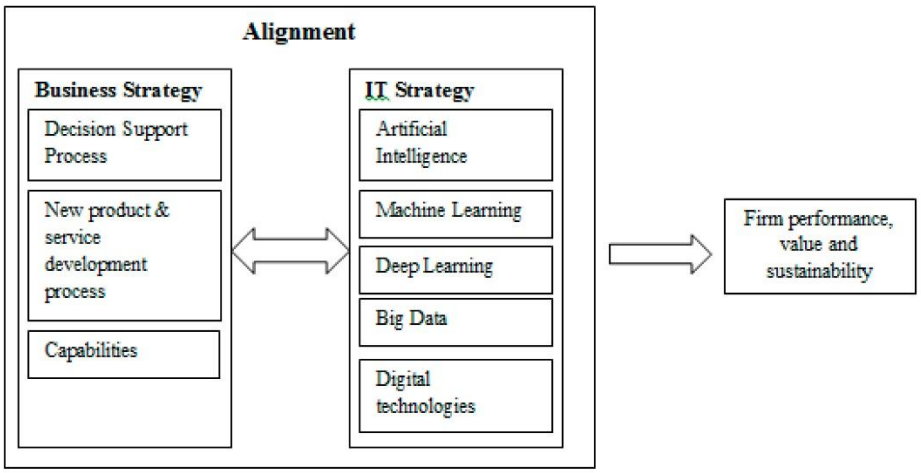

Figure 1: Conceptual framework.

To benefit from integrating next-generation AI technology, businesses must have a clear electronic Internet business plan that includes their goals, efficiency, and legal framework. Organizational and technological competence are crucial in identifying potential applications of AI shown in Figure 2.

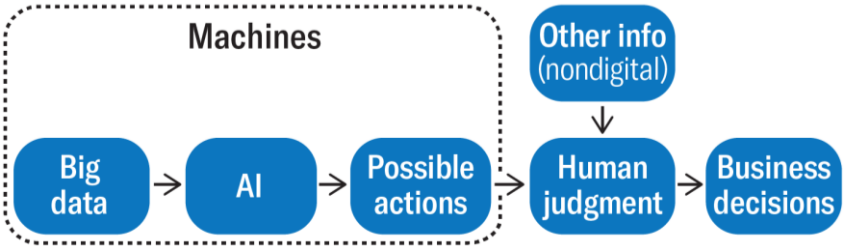

Figure 2: AI and human intelligence for business decision-making.

Digital transformation is the goal of transforming the business model and moving a company online, enhancing process efficiency and effectiveness. Prioritizing AI and digital transformation is essential for businesses to succeed in the digital age.

ANALYSIS AND RESULTS

The NPL analysis was applied to the manuscript to and shortlisting the tools and redirecting the thematic structure.

Thematic Structure of AI- Driven Business Decision Research

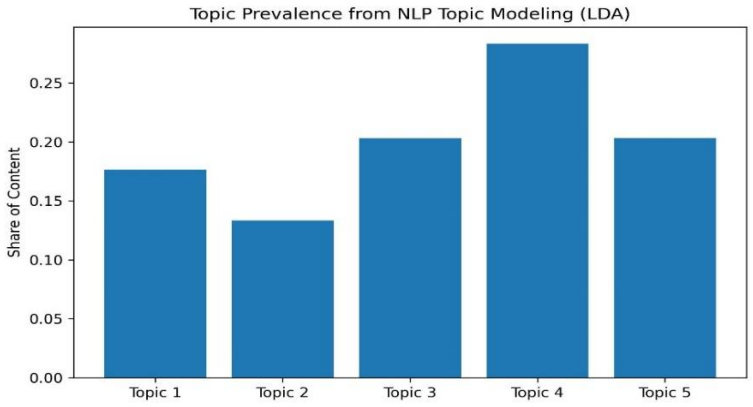

Figure 3: LDA of the Paper Content.

The graph below (Figure 3) shows the thematic decomposition of the manuscript using Latent Dirichlet Allocation with five latent topics. The most salient theme is the part of the document that occupies 28.34% of it and is related to artificial intelligence, decision-making, business, and intelligence, which also defines what the major analytical prism of the research is. The other two issues occupy about 20.34 per cent and 20.33 per cent of the content each, comprising (i) articles about AI technology and industry trends, and (ii) larger discourses about research and uptake of tools. The left-over topics make 17.66% and 13.33%, which constitute additional discussions and considerations of the implementation. In sum, the general trend of the topic division proves that the manuscript is conclusively decision-oriented and at the same time, covers tools, ethics, and the deployment contexts.

Conceptual Linkages in AI-Enabled Business Decision Making

An overview of key word co-occurrences, as in Figure 4 below, represented at the paragraph level reveals the relationship between key conceptual entities. Words connected to artificial intelligence, decision, business, data, strategy, automation, risk, marketing, ethics, and customers are repeated together, showing how AI is framed in the manuscript as the driver of decisions and a facilitator of business. Strong inter-occurrence between decision oriented and data oriented terms, indicates the long standing focus on analytics oriented decision making, and the prevalence of co-occurrences of risk and ethics indicates governance issues that are relevant to deployment. This structural reflection is useful to support the claim that effective AI implementation requires striking a balance between the performance and responsibility in a responsible implementation model.

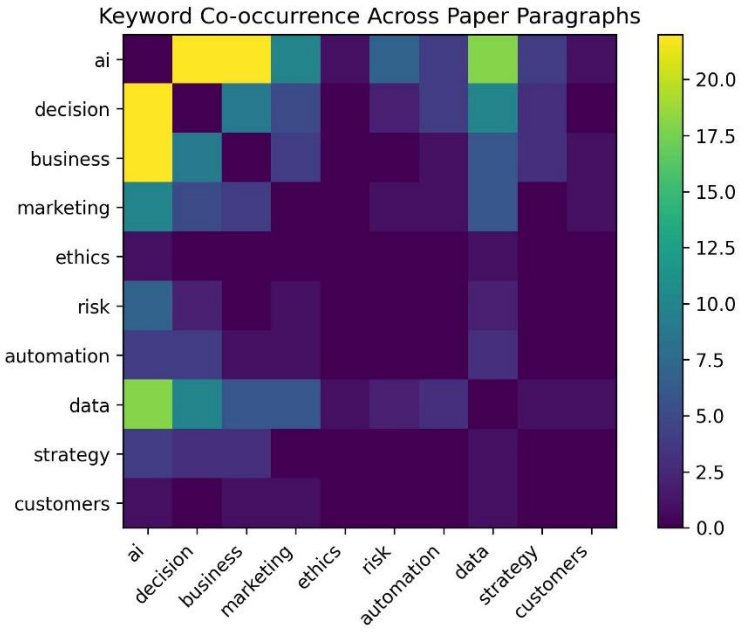

Figure 4: Co-occurrence Structure of keywords.

Structural Segmentation of AI Business Content

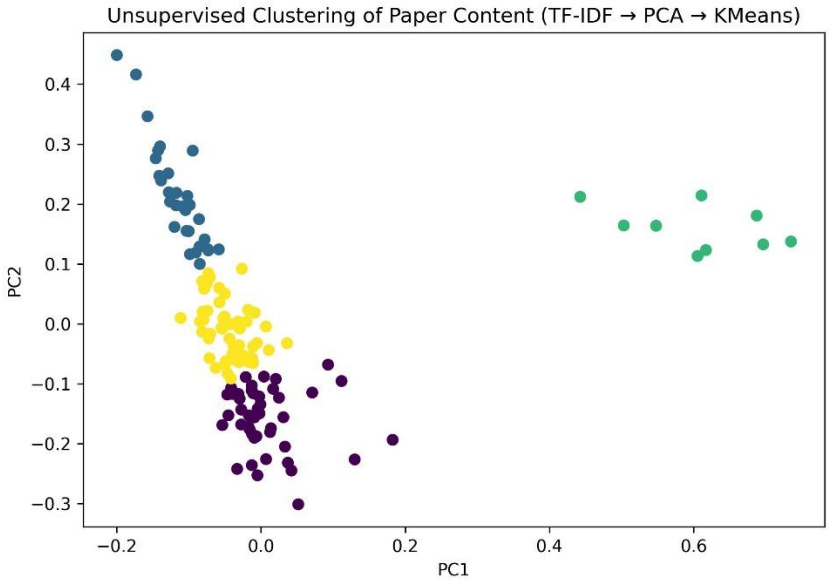

Figure 5: Unsupervised Clustering.

the portability of the data in Figure 5 shows the outcomes of unsupervised segmentation of paragraphs in the manuscript on the basis of TFIDF characteristics, the principle component analysis (2-dimensional projection), and K-Means clustering with the value of k=4. These four clusters result in 56, 44, 30 and 9 paragraphs respectively, thus suggesting that material is concentrated under a small number of dominant thematic blocks as opposed to being evenly distributed. The bigger clusters can be attributed to the main narrative areas, namely the basis of AI decision-making, the series effects on sectors, and implementation of tools, whereas the smaller cluster represents the content of the high level of specialization or limited scope of topics. This grouping offers empirical validation of the apparent thematic structure of the manuscript and explains the division and highlighting induced in the discussion.

Balance Between Opportunities and Risks in AI Adoption

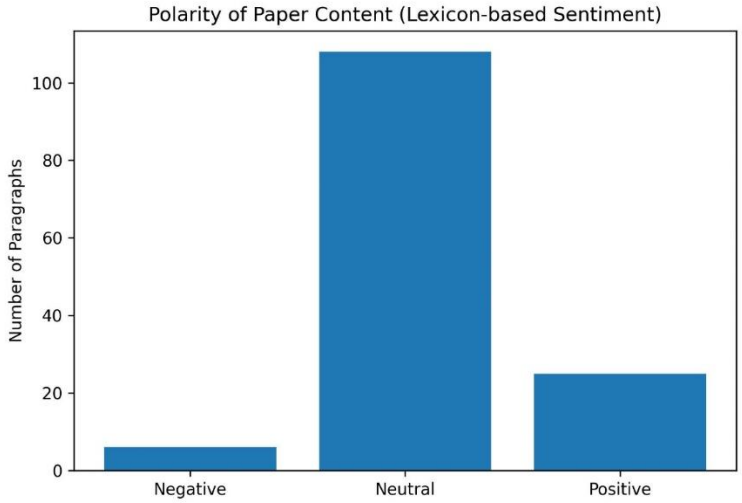

Figure 6: Discussion Polarity (Benefits vs Risks).

Figure 6 measures the tonal polarity of the manuscript through an academic, lexicon-based, and neuter method. Out of 139 equivalent paragraphs that can be analyzed, 25 are mainly positive in tone when they focus on advantages, efficiency and innovation; 6 paragraphs are mainly negating, they foreshadow the risks and bias and privacy, and security and 108 paragraphs are neutral and present an appellate or neutral presentation. This dispensation is indicative of the manuscript being explanatory in most parts although sensitive issues of bias, privacy and responsible governance were given appropriate considerations. The results justify the suggestion to enhance the section of the recommendations with the titling Implementation in the USA and the ethical protection as the counter measure to benefit-driven narratives.

Functional Similarity of AI tools Supporting business decisions

In Figure 7, data on ClickUp AI, Bricabrac AI, Tome AI, and Plus AI are compared in terms of feature-vector encoding and cosine similarity. The highest similarity is found between Tome AI and Plus AI (0.67), which is due to both the same capabilities in the content generation and presentation. The AI resembles ClickUp with average similarity (0.45) with Tome AI (0.45) and Plus AI (0.4). The difference between Bricabrac and the other tools lies in the fact that the former has a similarity of 0.00 in this graph, which is fitting its status as a no-code app-writing, as opposed to a presentation or productivity platform. This analogy makes the readers to infer the real-world ecosystem of AI decision-support applications.

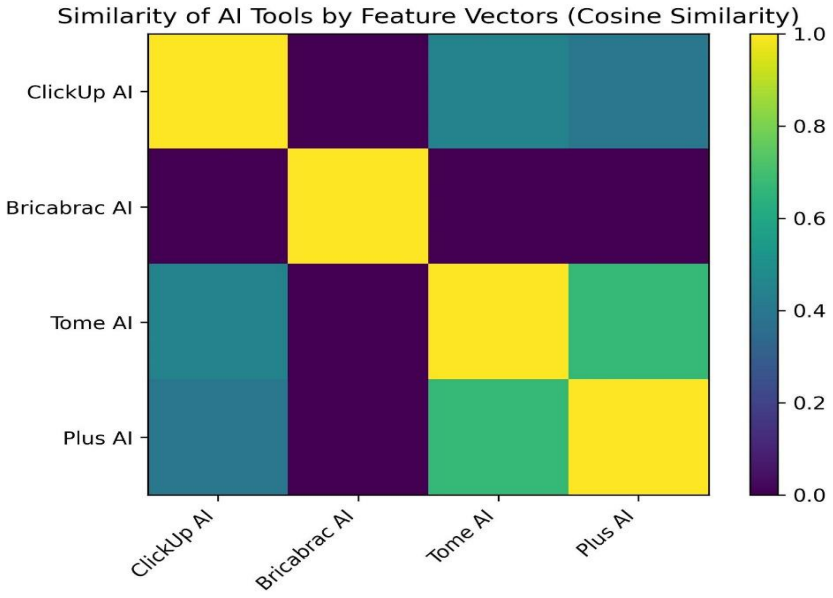

Figure 7: Feature Vectors of AI Tools similarity.

The machine learning-based analyses outlined in the above-one subsections provide a quantitative viewpoint of thematic structurings, conceptual relationships and analytical balance of this research. The identified dominant topics, explanation of the connections between the important concepts, breaking down the content into logical themes with clear links, and the comparison of the AI tools based on the core functions allow the analyses to be used to complement the description and the comparative results mentioned above. More importantly, the machine learning insights do not replace the substantive findings of the work, but they put them into perspective and support them by showing how the discussions about AI-enabled business decision-making, governance, and implementation are situated and inter-connected throughout the entire manuscript. Hot on the heels of this analytical

framework, the below discussion goes back to the implications of AI in terms of specific sectors, practical obstacles, and strategies relevant to AI implementation in the context of U.S. business settings.

AI And Decision Making

Artificial intelligence (AI) is a crucial tool in the future, as it forms the foundation of computer learning and allows computers to harness massive amounts of data. AI has revolutionized various fields, including business, marketing, and customer assistance. It allows businesses to make immediate decisions by analyzing large datasets, boost sales and marketing campaigns, and better understand target customers. AI tools like algorithms with machine learning and chatbots offer a better understanding of customer satisfaction and expectations.

AI has also improved decision-making capabilities in various industries, such as marketing, distribution automation, social computing, opinion mining, and media. By automating cognitive and physical tasks, AI allows humans to make faster and more accurate decisions, reducing human-intensive labor and tedious tasks. For example, smart weather forecasting is one example of AI-powered tasks that bridge the gap between climate and data scientists.

Figure 8: Role of AI in decision making.

The McKinsey Global Institute has suggested that AI will deliver 13 trillion dollars of additional output by 2030, which is estimated to boost the global GDP by 1.2% per year. AI has also made significant contributions to the economy and human decision-making processes, with research suggesting that AI will deliver 13 trillion dollars of additional output by 2030.

In marketing, AI has helped companies understand customer needs and desires, align products with relevant needs and desires, and gain better insights into buyers' viewpoints. AI techniques for rational decision-making, such as decision support systems, can help predict customer behavior better, supporting real-time decisions and updated gathering, forecasting, and analysis of market trends.

Social computing allows marketing professionals to simulate, predict, and analyze human behavior, enabling them to understand the social behavior and dynamics of the target market. Opinion mining is another AI-assisted data mining method that focuses on finding and understanding opinions and feelings through web searches.

In the realm of healthcare, AI has revolutionized learning with digitized textbooks and teachings, with virtual tutors taking over round-the-clock patient monitoring. Big data development and consulting have given rise to more personalized patient assistance.

In the media, AI is being harnessed by journalism, using decision-making applications like the natural learning process to make quick sense of automated insights and financial reports. AI assistants and chatbots are better at understanding nuance and context, making human-like call appointments easier. Overall, AI continues to play a significant role in various sectors, including transportation, manufacturing, and education, media, and customer assistance.

AI tools for Business decision-making

Artificial intelligence is revolutionizing businesses by providing cutting-edge technology tools. These tools are transforming the way businesses operate, enhancing productivity and streamlining operations. As businesses enter 2024, they must harness the power of AI to stay competitive and thrive in a dynamic marketplace.

ClickUp AI

ClickUp AI is an AI-driven tool that enhances productivity and efficiency by assisting with various tasks such as text generation, idea generation, and translation. It is capable of crafting diverse content, such as blog posts, marketing content, and document condensing. ClickUp AI can also translate text across multiple languages, addressing queries related to project management, productivity, and business intricacies. It is also adept at brainstorming innovative concepts for projects, product development, or strategic marketing campaigns. Additionally, it streamlines lengthy documents into concise formats, demonstrating its potential as a robust tool.

Figure 9: ClickUp AI Logo.

ClickUp AI is crucial for several features:

Multiple views: ClickUp offers a flexible view system for managing work life, catering to different work and learning styles. Users can choose from various views, such as List view, Board view, Box view, Calendar view, Gantt view, Mind Map view, Timeline view, Workload view, Table view, Activity view, Map view, Doc view, Chat view, embedded view, and Form view. Each view provides a unique perspective on work, allowing users to manage tasks, schedule tasks, manage deadlines, and handle bottlenecks. The Calendar view helps visualize teamwork, while the Box view and Workload view help manage resources more effectively. This level of flexibility allows users to manage their work according to their preferences and maintain a healthy work life.

Customization Capabilities: ClickUp is a highly customizable online software solution that allows users to tailor the platform to their specific workflow, personal preferences, and business model. It offers tools like custom fields, task statuses, and dashboards, allowing users to create high-level reports and overviews for their work. These features allow ClickUp to work the way they need it to work for any type of team, ensuring that the platform remains adaptable and flexible for any business.

Team Collaboration & Communication: ClickUp is a platform that streamlines team communication and collaboration, allowing small to large teams to work together in real time. It offers features such as single and multiple assignees, watchers, chat view, email in ClickUp, assigned comments and mentions, proofing, and documents for various use cases. These features promote teamwork, transparency, and collaboration, allowing for efficient work and collaboration. ClickUp also provides complete control over who sees what and what permissions, ensuring that everyone is on the same page.

Bricabrac AI

Bricabrac AI is an AI-powered app generator that enables users to create apps with just a description, without coding. This AI-powered generator can create fully responsive interfaces in less than 10 minutes, with users able to make tweaks and add functions based on their desired features. Bricabrac AI offers unlimited code export and hosting for free, powered by the most powerful GPT4 with no lock-in. It is perfect for rapidly creating web-based tools, games, and more. However, the app generator is currently in beta, with some features not yet supported.

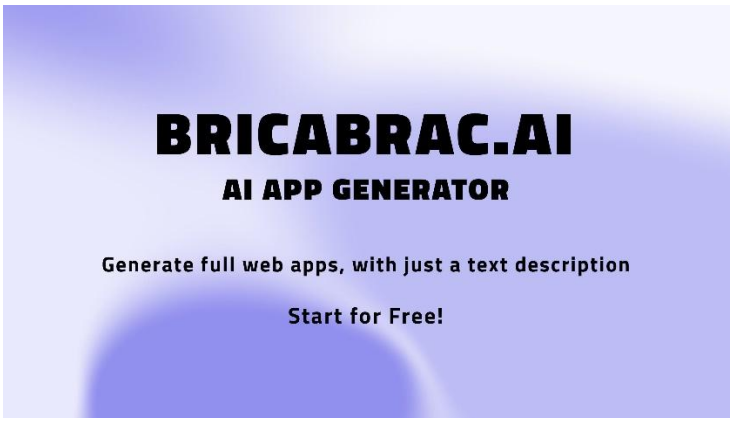

Figure 10: Bricabrac AI logo.

With the AI App Generator, all you have to do is describe what you want an app to include. This is how it operates:

1. Explain Your Idea: Give a brief description of the program you intend to develop.
2. Design It: Your description will be used to create an entirely responsive interface.
3. Add Features: Make a list of the features you would want to see in the app, and the generator will add each one individually.
4. Share It: You can share your app with others or export the code to do more customizations. It will be hosted for free.

Advantages of Bricabrac AI:

1. No Coding Needed: To create an app using this tool, you don't need to know how to code.
2. Rapid Development: Produce fully working apps rapidly, saving both time and money.
3. AI-Powered: Based on your descriptions, the app is generated accurately using the most recent GPT-4 technology.
4. Free Hosting: You can share or export the code of your app with ease, and it will be hosted for free.
5. Customization: Use the no-code editor to make minor adjustments or specify the modifications you wish to make for more customization.

Disadvantages of Bricabrac AI:

1. Limited Customization: Although the tool is customizable, its functionality may be restricted compared to apps with unique coding.
2. Learning Curve: Users may require some time to figure out how to effectively describe their app to achieve the intended results.

Pricing of Bricabrac AI:

1. Power Plan: Users can access 102 AI generations, limitless free hosting, and limitless code exports for a monthly cost.
2. Free Trial: You can test the tool's capabilities for free for two days before committing to a membership.

The AI App Generator makes it easier than ever to create an app. Regardless of your background small business owner, startup founder, or creative app developer—this tool can assist you in realizing your idea without requiring you to know a lot of code.

Tome AI

Tome AI is a powerful tool that combines machine learning and natural language processing to generate presentations, outlines, and stories with text, images, and other media. It is easy to use, allowing users to type a description of their desired presentation or story into a text box. The tool can be used for various purposes, including creating presentations for work or school, writing blog posts or articles, developing marketing materials, pitching ideas to investors, and sharing personal stories. Despite being under development, Tome AI is a valuable tool for anyone seeking engaging and engaging presentations.

Figure 11: Tome AI logo.

Using a range of AI-powered technologies, Tome AI is an AI app that automates the preparation of presentations. A cooperative AI assistant assists users in creating captivating presentations from the ground up.

Advantages of Tome AI:

1. Pre-made themes and templates.
2. AI-generated graphics, animations, and text (titles, headers, and descriptions) are areas where coworkers can collaborate in real-time using auxiliary mobile applications.
3. Easy to use and uncomplicated

Disadvantages of Tome AI:

1. Minimal personalization
2. The less feature-rich free version only supports English

Pricing of Tome AI:

1. Free 5,000 AI credits for .edu email addresses, free with restricted features
2. Pro has infinite AI credits and is invoiced annually at $16 per month.
3. Custom subscriptions for enterprises

Plus AI

Plus.AI is an AI-powered tool that streamlines and automates reporting and analytics tasks for businesses. It extracts valuable insights from data, generates comprehensive reports, and constructs informative dashboards. This versatile tool is used across various applications, including automation of reporting and analytics tasks, data extraction, report and dashboard generation, decision-making enhancement, and cost reduction. Despite being in the developmental phase, businesses of all sizes have already implemented Plus.AI to enhance their reporting and analytics capabilities. Additionally, Plus.AI is a cutting-edge AI presentation generator that streamlines the creation of presentations within Google Slides. Users can install the Plus AI extension from the Google Workspace Marketplace and integrate it directly into Google Slides, generating a complete, customized presentation in minutes. With over 100 templates and the ability to create custom themes, Plus.AI is an invaluable resource for professionals and educators alike.

Figure 12: Plus AI logo.

Advantages of Plus AI:

1. Efficiency: Quickly creates polished Google Slides presentations.
2. AI-driven customization: Provides AI-powered tools for text rewriting, layout modifications, and design updates.
3. Templates: Offers more than one hundred high-quality templates.
4. Integration: Easily connects to Google Slides and several other programs.
5. Ease of Use: An intuitive design and user-friendly interface.
6. Language Support: Writes and translates between several languages.
7. Free Trial: Provides new users with a seven-day free trial.

Disadvantages of Plus AI:

1. Platform Restrictions: Not available to PowerPoint users; only compatible with Google Slides.
2. Dependency on Google Workspace: Access is limited and requires a Google account.

Plus AI Pricing Structure:

1. Offers tiered pricing with subscription plans.
2. Provides a 7-day free trial for new users.
3. Offers secure transactions through encrypted gateways.
4. Payment methods include major credit cards and PayPal.

Implementation of AI in the USA

AI principles in corporate practice are a topic of great interest, with little literature available on the subject. Darrell West, Ronald Sandler, and John Basl have provided a broader picture of how to implement AI principles within organizations. They suggest that an ethics advisory group should be installed at the top of an organization to import outside viewpoints and expertise, and an ethical committee should be created, led by a chief data/AI officer, to provide guidance on AI policy and evaluate AI projects in progress. Ethicists, social scientists, and lawyers should be represented in both groups[75].

Auditing and risk and liability assessments should become standard procedures for AI product lines and products, with tracking audit trails to support auditing. Training programs for ethical AI should be implemented, and remediation measures should be provided in case AI causes damage or harm to consumers. In a US public survey, many of these 'ethical safeguards' received support from 60-70% of respondents[76]. A report from several governmental organizations in Singapore presents a state-of-the-art manual for implementing responsible AI within existing governance structures. It proposes adequate governance structures, clear roles, and responsibilities concerning ethical AI and staff training. The report also suggests ways to put operations management on a more ethical trajectory, including accountability for data practices, explainability, repeatability, robustness, traceability, reproducibility, and auditability[76].

However, requirements like the absence of bias, explainability, and robustness cannot be adequately met by citing measures from management handbooks alone, especially as new techniques of ML will need to be invented and associated software tools coded from scratch. A web search was conducted to discover associated mechanisms of implementation of AI principles, but seven companies did not publish anything about these issues or their attitudes towards the self-regulation of AI.

The US-based companies have all issued statements about governmental regulation of AI, with six emphasizing the need for particular AI technologies or applications to be regulated. Microsoft was the first large company to publicly embrace governmental regulation concerning AI, and other large companies reluctantly followed suit.

Microsoft has been the first large company (involved in AI) to argue for new AI legislation. In January 2018, they held a cautious position, arguing that current laws already protect the privacy and security of personal information, govern credit or employment decisions, and the like. However, half a year later, the company drastically changed course: the time for deliberation was over. Amazon Web Services (AWS) has long tried to remain aloof from discussions about ethical AI and take no position. However, several controversial AI-related issues forced the platform to change tack. First, their AI recruiting tool had to be halted (2017) due to its bias towards non-whites and women. Second, their

facial recognition tool (Rekognition) came under attack, and leading AI researchers from industry and academia condemned the tool for gender and racial bias. Ultimately, after two years of haggling, Amazon reluctantly suspended the sale to police departments for a year (June 2020)[77]. In the process, AWS proposed guidelines for future legislative regulation of facial recognition software in law enforcement (human review of results, a confidence level of 99%, transparency reports, public notification whenever video surveillance and facial recognition are in combined use) (February 2019) [63, 77, 78].

IBM has also been drawn into the regulation debate because of facial recognition issues. In 2019, they instituted their IBM Policy Lab, which is tasked with developing proposals for policies for the digital age. Their approach towards governmental regulation of AI is designated as 'Precision Regulation'. Such regulation targets specific applications of AI and analyzes in detail where along the chain of application risks to society may occur. Subsequently, regulatory rules have to be formulated in proportion to the risks to be contained: more stringent rules for high-risk situations, and more relaxed rules for low-risk situations. In particular, they propose that governments designate standard-developing organizations of choice (like NIST and CENELEC) and ask them to develop international standards. Adherence to these standards would be evidence of compliance with the law ('safe harbour protection')[78].

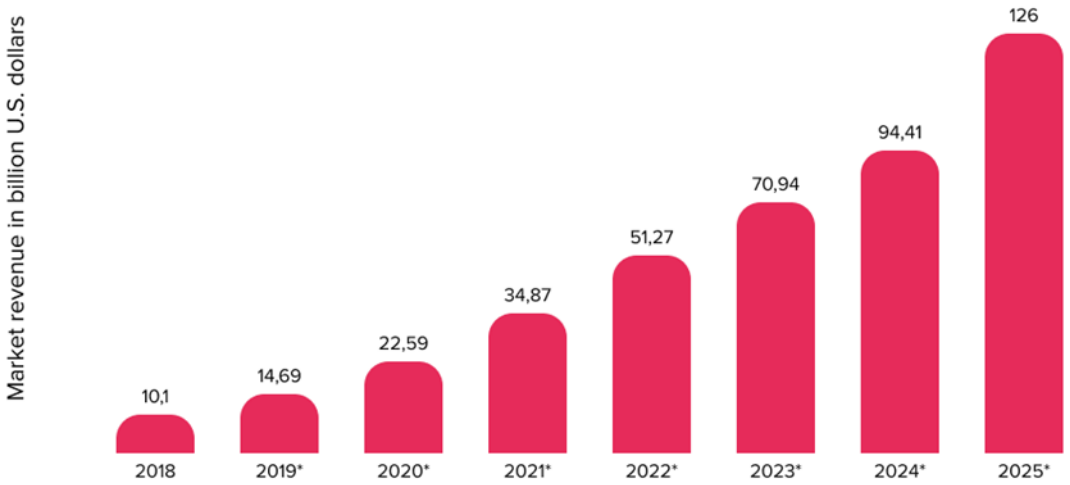

Figure 13: Revenue of the AI software market in the USA from 2018 to 2025[77].

In conclusion, the US-based companies have all issued statements about governmental regulation of AI, with six emphasizing the need for particular AI technologies or applications to be regulated. As pressures on both sides of the Atlantic mounted on account of data leaks and apparent privacy violations, the companies realized that this attitude would harm their interests in the long run.

CONCLUSION

The potential of artificial intelligence to revolutionize business decision-making has been significant, as it has been shown to be able to improve efficiency, accuracy, and strategic wisdom of various organizational functions. The paper explains how the use of AI can facilitate, complement, or replace decisions in the marketing, customer relationship management, risk assessment, and quality management domains to support the relevance of human-AI partnerships as opposed to human displacement. The AI-based systems can substantially enhance organizational responsiveness and customer satisfaction by allowing analyzing large amounts of data in the fastest time possible and

providing quick responses to the needs of customers. On top of narrative review, the analytical rigor of this analysis was strengthened by the use of machine learning and natural language processing analyses. Thematic Analysis of decision-making using AI was identified as the largest theme of the manuscript by the topic modelling but was supported by clustering and co-occurrence of keywords in supporting coherent structural relationships between strategy, data analytics, ethics and governance. Sentiment analysis also showed that it had a predominantly neutral and explanatory tone that was balanced by a focused discussion of the advantages and disadvantages and similarity analysis of the AI tools offered a systematic comparison of their functional roles in aiding business decisions. All these ML-based findings together are a quantitative measure that the study results are thematically consistent and balanced.

The findings imply that AI is not just another technological addition but a business tool that can transform business models and decision-making structures in all sectors in the United States. However, the ethical and accountable use of AI is still necessary. The challenges related to data privacy, algorithm bias, transparency, workforce effects, and regulatory compliance issues have to be dealt with thoroughly to maintain trust and value creation in the long-term. To summarize, AI with a solid machine learning algorithm can be utilized to provide powerful services of informed and timely business decision-making. In combination with the right governance frameworks and ethical protection, AI can lead to innovation, operational brilliance and competitive benefits. This paper has highlighted the relevance of the alignment of AI implementation with strategic goals along with the use of ML-based analytical solutions to make AI-enabled business decision-making to be oriented and assessed in a more precise manner.

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