



'From Data to Decisions- Harnessing Artificial Intelligence for Effective Business and Software Management'

Siddhesh Nasnodkar^{1*}

Submitted: 05/02/2024 Revised: 13/03/2024 Accepted: 19/03/2024

Abstract: In the realm of contemporary corporate and software management, the pivotal role of Artificial Intelligence (AI) in renovating raw data into informed decisions cannot be excessive. This research delves into the intricate process of navigating from data acquisition to strategic decision-making, elucidating the profound impact of AI technologies on enhancing efficacy in both business and software realms. By leveraging advanced algorithms and machine learning capabilities, organizations can harness the power of AI to sift through vast datasets, derive meaningful insights, and facilitate more nuanced decision-making processes. The study examines how AI acts as a catalytic force in distilling complex information, offering decision-makers a comprehensive and timely understanding of intricate business dynamics. Furthermore, it investigates the symbiotic relationship between effective business management and software optimization, exploring how AI-driven insights can streamline software development processes and bolster overall organizational efficiency. In this ever-evolving landscape, understanding and maximizing the potential of AI for data-driven decision-making emerges as a crucial imperative for businesses and software enterprises alike, positioning them to thrive in the dynamic digital era.

Keywords: Contemporary business, Software management, Data transformation, Strategic decision-making, Machine learning capabilities, Symbiotic relationship, Organizational efficiency

1. Introduction:

In today's rapidly evolving technological landscape, the integration of artificial intelligence (AI) into various facets of business and software management has become imperative. This shift towards data-driven decision-making is revolutionizing traditional approaches, offering unparalleled opportunities for efficiency, innovation, and strategic planning. As organizations navigate this transformative journey, understanding the nuanced interplay between data and decisions is paramount. This research paper delves into the multifaceted realm of "From Data to Decisions: Harnessing Artificial Intelligence for Effective Business and Software Management," exploring the symbiotic relationship between AI, data, and decision-making.

The proliferation of data in the digital age is staggering, with businesses accumulating vast datasets at unprecedented rates [6]. This wealth of information, often referred to as big data, serves as the cornerstone for AI applications. As highlighted by [1], the success of AI hinges on the quality and quantity of available data. By harnessing advanced algorithms, AI systems can discern patterns, extract insights, and predict future trends, empowering organizations to make informed decisions. In essence, the journey from raw data to actionable

insights becomes a strategic imperative for businesses seeking a competitive edge in today's dynamic markets.

The role of AI in business and software management extends beyond data analysis, permeating various operational aspects. Machine learning algorithms, a subset of AI, excel in recognizing complex patterns and adapting models based on new information [5]. This adaptability is particularly pertinent in the software development life cycle, where rapid changes and evolving requirements are the norm. AI-driven software management systems, as expounded by [4], can enhance project planning, automate routine tasks, and optimize resource allocation. Consequently, the incorporation of AI not only accelerates software development but also ensures the delivery of high-quality products in an increasingly competitive market.

However, the journey from data to decisions is not without its challenges. As AI systems become more sophisticated, ethical considerations and responsible AI practices are paramount [3]. Issues such as bias in algorithms, privacy concerns, and the potential societal impacts of AI necessitate a comprehensive approach to development and deployment. Striking a balance between innovation and ethical considerations is crucial for building trust in AI systems and ensuring responsible business practices. Therefore, organizations must tread carefully, acknowledging the dual responsibility of harnessing AI for competitive advantage while upholding ethical standards.

¹*Columbia University email: sup2104@columbia.edu

*Corresponding Author Siddhesh Nasnodkar

*Columbia University email: sup2104@columbia.edu

One of the pivotal aspects of effective decision-making through AI lies in the seamless integration of these technologies into existing business frameworks. A study by [2] emphasizes the importance of creating a data-centric culture within organizations. This involves not only investing in advanced technologies but also fostering a mindset that values data-driven insights. Organizations must provide employees with the necessary skills and resources to interpret and act upon AI-generated insights, bridging the gap between technological capabilities and practical application.

In conclusion, "From Data to Decisions: Harnessing Artificial Intelligence for Effective Business and Software Management" is a journey laden with opportunities and challenges. As organizations increasingly rely on AI to distill meaningful insights from vast datasets, the symbiotic relationship between data and

decisions takes center stage. The integration of AI in software management amplifies efficiency and innovation, but ethical considerations and the need for a data-centric culture cannot be overlooked. This research paper aims to unravel the intricacies of this transformative journey, shedding light on the evolving landscape of AI in business and software management.

2. The Ascent of Big Data:

The exponential growth of digital information in recent years has marked the ascent of Big Data as a transformative force across various industries. Organizations are grappling with vast extents of structured and amorphous data generated at unprecedented rates. This surge is attributed to the proliferation of online activities, social media interactions, and the Internet of Things (IoT) devices.

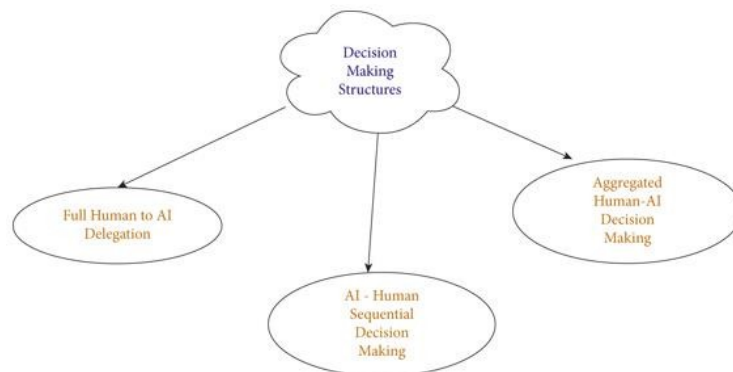


Figure 1: An AI-based model for decision-making

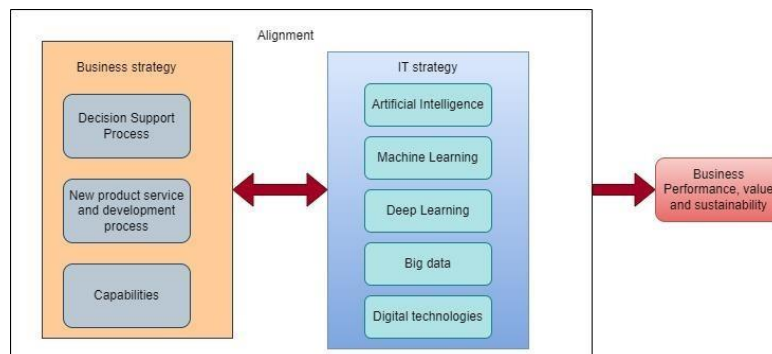


Figure 2: Conceptual framework

As [7] assert, "The era of Big Data has arrived, and it is impacting business and society at large." The scale and complexity of this data necessitate advanced technologies for collection, storage, and analysis. Big Data analytics provides businesses with the ability to derive meaningful insights, enabling informed decision-making and strategic planning [8]. This capability has become a cornerstone for organizations seeking a competitive edge in today's data-driven landscape.

One of the key drivers behind the ascent of Big Data is the evolution of data storage and processing technologies. Traditional databases and data management systems were

ill-equipped to handle the sheer volume and velocity of data generated in the digital age. The advent of distributed computing frameworks, such as Apache Hadoop, has revolutionized the way organizations store and process data [9]. These technologies qualify the counterpart managing of data across gatherings of computers, significantly enhancing scalability and performance. As a result, organizations can now harness the power of massive datasets, unlocking valuable insights that were previously unattainable.

Moreover, the integration of machine learning and artificial intelligence (AI) has further propelled the ascent

of Big Data. These technologies play a pivotal role in extracting meaningful patterns and predictions from vast datasets. Machine learning algorithms can analyze data at unprecedented speeds, identifying correlations and trends that human analysts may overlook. As [1] emphasizes, "The synergy between Big Data and machine learning has the potential to revolutionize decision-making processes

in various domains." The combination of Big Data analytics and AI not only enhances data processing capabilities but also augments the predictive and prescriptive functionalities, paving the way for more intelligent and data-driven decision-making in business and software management.

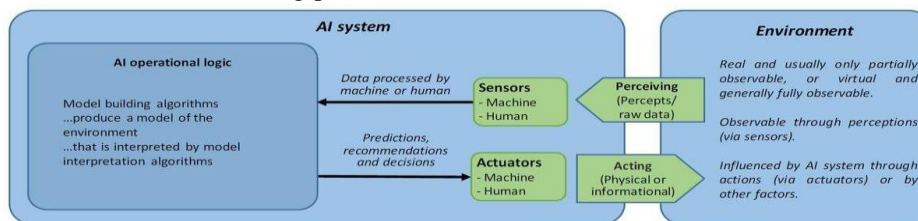


Figure 3: AI systems

3. Artificial Intelligence and Advanced Analytics:

Artificial Intelligence (AI) and Advanced Analytics have emerged as transformative forces in the realm of business and software management, revolutionizing the way organizations extract insights from vast datasets to make informed decisions. Leveraging machine learning algorithms and statistical models, AI enables businesses to analyze and interpret complex data patterns, uncover hidden correlations, and predict future trends. As highlighted by [10], AI plays a pivotal role in enhancing decision-making processes by automating data analysis and providing valuable insights, thereby contributing to improved operational efficiency and strategic planning. The integration of AI in advanced analytics not only accelerates the decision-making cycle but also empowers businesses to capitalize on opportunities and navigate challenges in a dynamic market environment.

One of the key facets of AI in advanced analytics is its ability to streamline software management processes. As noted by [11], AI-driven analytics assists organizations in optimizing software development, deployment, and maintenance. By analyzing historical project data, AI algorithms can identify patterns of success and failure, aiding project managers in making data-driven decisions to enhance software quality and

delivery timelines. This not only contributes to the overall efficiency of software development but also reduces costs associated with debugging and maintenance. The symbiotic relationship between AI and advanced analytics in software management is thus instrumental in ensuring the success and sustainability of software projects in an increasingly competitive landscape.

Moreover, the collaborative integration of AI and advanced analytics fosters a data-driven culture within organizations, fundamentally altering the decision-making paradigm. According to [12], AI facilitates the creation of a dynamic and adaptive analytics environment, where decision-makers are empowered with real-time insights. The continuous learning capabilities of AI algorithms enable organizations to evolve their analytical models, ensuring relevance and accuracy in decision support systems. This iterative process, driven by AI and advanced analytics, not only enhances the overall decision-making capabilities of businesses but also cultivates a culture of continuous improvement, positioning organizations to thrive in an era defined by rapid technological advancements and market uncertainties.

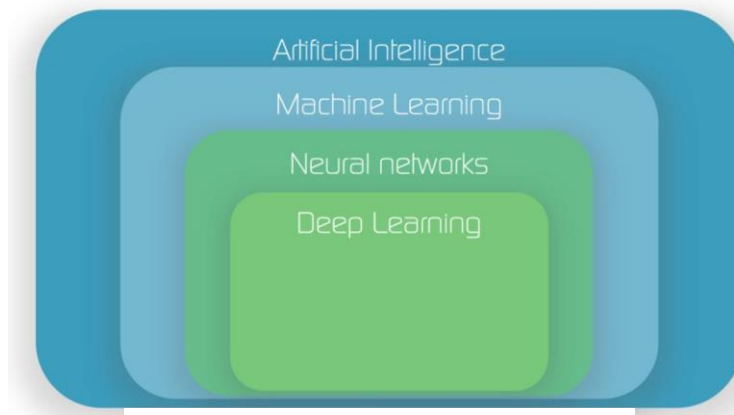


Figure 4: Illustration of AI subsets

4. Predictive and Prescriptive Analytics:

Predictive and prescriptive analytics play pivotal roles in transforming raw data into actionable insights, guiding effective decision-making in the realm of business and software management. Predictive analytics involves harnessing historical data, statistical algorithms, and machine learning techniques to identify the likelihood of future outcomes. By examining patterns and trends within large datasets, predictive analytics empowers organizations to anticipate potential challenges and opportunities. In the context of software management, predictive analytics aids in forecasting

system failures, enabling proactive maintenance and minimizing downtime [13]. This proactive approach not only enhances operational efficiency but also contributes to cost savings and improved user experiences.

Prescriptive analytics takes the process a step further by not only predicting future scenarios but also providing recommendations for optimal actions. This advanced form of analytics leverages a combination of data, algorithms, and business rules to suggest the most effective strategies for achieving desired outcomes [14]. In the business context, prescriptive analytics assists in strategic decision-making by considering various constraints and objectives simultaneously. For instance, it can guide resource allocation, marketing strategies, and

pricing decisions, contributing to enhanced competitiveness and profitability. Moreover, in software management, prescriptive analytics can offer recommendations for optimizing code, enhancing system performance, and ensuring efficient resource utilization, ultimately leading to robust and resilient software systems [15].

The synergy between predictive and prescriptive analytics is particularly powerful, offering a comprehensive approach to data-driven decision-making. Organizations can first leverage predictive analytics to foresee potential outcomes and then apply prescriptive analytics to determine the best course of action based on those predictions. This combination not only facilitates proactive planning but also allows for real-time adjustments in response to changing conditions. In business, this can mean adapting marketing strategies in response to shifting consumer behaviors, while in software management, it can involve dynamically allocating resources based on predicted usage patterns [13; 14; 15]. As organizations increasingly recognize the importance of harnessing AI for effective decision-making, the integration of predictive and prescriptive analytics stands out as a crucial step towards achieving data-driven excellence.



Figure 5: The emerging tech policy cycle

5. Strategic and Operational Benefits:

The incorporation of AI into figures-determined managerial-production yields diverse intentional and

functioning benefits, empowering companies to achieve improved outcomes:

Strategic Benefits:

- **Enhanced Operational Efficiency**

Harnessing AI in business and software management yields a significant boost in operational efficiency. The implementation of intelligent algorithms streamlines processes, reducing manual intervention and minimizing errors. This results in swift decision-making and enhanced productivity, positioning organizations at the forefront of operational excellence.

- **Data-Driven Decision Making**

AI empowers businesses to make informed decisions by analyzing vast datasets. This data-driven approach ensures that choices are grounded in comprehensive insights, minimizing the risks associated with uncertainty. Strategic benefits arise as organizations pivot towards a more proactive decision-making paradigm, aligned with the dynamic business environment.

- **Improved Resource Allocation**

Through the utilization of AI, organizations can optimize resource allocation with precision. Machine learning algorithms can forecast resource demands, enabling efficient allocation of manpower, finances, and other critical resources. This strategic advantage leads to cost savings and a maximization of resources, fostering sustainable growth.

- **Enhanced Customer Experience**

AI-driven technologies, such as chatbots and personalized recommendation systems, contribute to an enriched customer experience. By understanding customer preferences and behavior, businesses can tailor their products and services, fostering customer loyalty. This strategic advantage not only boosts customer satisfaction but also positions the organization competitively in the market.

- **Agile Adaptation to Market Trends**

AI equips businesses with the capability to adapt swiftly to changing market trends. Through real-time analysis of market dynamics, organizations can adjust strategies promptly, gaining a competitive edge. This agility in adaptation is a strategic benefit that ensures businesses stay relevant in the ever-evolving market landscape.

- **Predictive Maintenance in Software Management**

In the realm of software management, AI plays a pivotal role in predictive maintenance. By analyzing usage patterns and performance metrics, AI algorithms can forecast potential software glitches before they escalate. This strategic advantage

minimizes downtime, enhances software reliability, and optimizes overall system performance.

- **Security Enhancement**

AI contributes to robust cybersecurity by identifying and mitigating potential threats in real-time. Machine learning algorithms can detect anomalous patterns, fortifying the organization's digital infrastructure. This strategic benefit ensures data integrity, instills customer trust, and safeguards the organization against evolving cyber threats.

Operational Benefits:

- **Enhanced Operational Efficiency:**

Artificial Intelligence (AI) contributes to heightened operational efficiency by automating routine tasks and processes. This not only accelerates the pace of operations but also minimizes errors, ensuring a smoother workflow.

- **Improved Decision-Making:**

The integration of AI in business and software management facilitates data-driven decision-making. By analyzing vast datasets, AI systems provide valuable insights, enabling more informed and strategic decisions for enhanced organizational performance.

- **Streamlined Workflows:**

AI technologies streamline complex workflows, reducing redundancies and optimizing resource allocation. This streamlining effect leads to a more agile and responsive operational structure, fostering adaptability in dynamic business environments.

- **Predictive Maintenance:**

Incorporating AI into software and business operations allows for predictive maintenance. AI algorithms can analyze historical data to anticipate potential system failures, enabling proactive maintenance efforts that prevent downtime and enhance overall system reliability.

- **Real-time Monitoring and Reporting:**

AI-driven monitoring systems provide real-time insights into various aspects of business and software operations. This allows for immediate detection of anomalies, facilitating prompt corrective actions and ensuring continuous performance optimization.

- **Enhanced Customer Experience:**

- AI plays a pivotal role in enhancing customer experience through personalized interactions, efficient query resolution, and the provision of tailored services. This positively impacts customer

satisfaction and loyalty, crucial for sustained business success.

- **Resource Optimization:**
- Through the optimization of resource allocation, AI contributes to cost reduction and improved utilization of assets. This optimization extends across personnel, infrastructure, and other operational elements, resulting in a more economical and efficient business model.
- **Scalability:**
- AI-powered systems are inherently scalable, adapting seamlessly to varying workloads and demands. This scalability ensures that businesses can expand or contract operations as needed without compromising efficiency, making them more agile in responding to market dynamics.
- **Cybersecurity Enhancement:**
- AI bolsters cybersecurity measures by detecting and responding to potential threats in real time. Advanced algorithms can identify patterns indicative of cyber attacks, fortifying the overall security posture of business and software systems.
- **Continuous Learning and Adaptation:**
- AI systems continuously learn and adapt based on evolving data trends. This ability to self-improve ensures that businesses remain at the forefront of technological advancements, adapting to changes in the industry and staying competitive.

6. Application Domains

- **Application Domains**

Artificial Intelligence (AI) has found compelling applications across diverse domains, revolutionizing the landscape of business and software management. The versatility of AI technologies has paved the way for their integration into various sectors, unlocking new possibilities and enhancing decision-making processes. This section explores six distinct application domains where AI plays a pivotal role.

- **Healthcare Optimization**

Within the healthcare sector, AI is making significant strides in optimizing patient care, diagnosis, and treatment planning. Machine learning algorithms analyze vast datasets to identify patterns, predict disease outcomes, and recommend personalized treatment options. This application domain holds the promise of more efficient and tailored healthcare solutions.

- **Financial Predictive Analytics**

In the realm of finance, AI is instrumental in predictive analytics, risk management, and fraud detection. Advanced algorithms analyze financial data in real-time, providing insights into market trends, optimizing investment strategies, and enhancing overall financial decision-making. This application domain is crucial for maintaining the stability and security of financial systems.

- **Supply Chain Optimization**

AI has proven to be a game-changer in supply chain management by optimizing logistics, demand forecasting, and inventory management. Smart algorithms enhance the efficiency of supply chain processes, reduce costs, and minimize disruptions, ultimately leading to a more streamlined and responsive supply chain.

- **Customer Relationship Management (CRM)**

In the realm of business, AI is reshaping customer relationship management. Chatbots, sentiment analysis, and predictive analytics empower businesses to provide personalized customer experiences, understand customer preferences, and anticipate their needs. This application domain is pivotal for fostering customer loyalty and improving overall satisfaction.

- **Cybersecurity Enhancement**

AI plays a crucial role in fortifying cybersecurity defenses against evolving threats. Machine learning algorithms detect anomalies, identify potential vulnerabilities, and respond swiftly to cyber attacks. This application domain is essential for safeguarding sensitive information and ensuring the integrity of digital assets.

- **Software Development Automation**

In the domain of software management, AI contributes to automation and efficiency improvements in software development processes. From code optimization to automated testing, AI streamlines workflows, accelerates development cycles, and enhances the overall quality of software products. This application domain is at the forefront of transforming traditional software development methodologies.

7. Implementation Considerations;

The implementation of artificial intelligence (AI) in business and software management necessitates careful consideration of various factors to ensure its effectiveness. One crucial aspect is the integration of AI into existing workflows and systems. According to [6], seamlessly embedding AI into the organizational framework requires a comprehensive understanding of

current processes. This involves identifying key touchpoints where AI can enhance decision-making and streamline operations. Moreover, it is imperative to assess the compatibility of AI solutions with existing software and infrastructure. [17] highlight the significance of conducting a thorough system analysis to identify potential conflicts and dependencies. By addressing these compatibility issues during the implementation phase, organizations can mitigate disruptions and maximize the benefits of AI integration.

Another critical consideration in AI implementation is the ethical dimension. As AI systems increasingly influence decision-making, ethical guidelines become paramount. [18] emphasize the importance of developing and adhering to ethical frameworks to govern AI applications. This includes considerations for fairness, transparency, and accountability in AI algorithms and decision processes. Ethical AI implementation is not only a moral imperative but also mitigates risks associated with biases and unintended consequences. To ensure responsible and ethical AI usage, organizations must prioritize the establishment of guidelines and protocols that align with industry standards and legal requirements.

In addition to technical and ethical considerations, the human element plays a pivotal role in the successful implementation of AI. Engaging and upskilling employees is crucial for fostering a culture that embraces AI technologies. As suggested by [19] organizations need to invest in training programs to familiarize employees with AI tools and methodologies. This not only enhances the workforce's capabilities but also addresses concerns related to job displacement and resistance to AI adoption. Effective communication strategies, including transparent discussions about the role of AI in the workplace, are essential for building trust and collaboration between humans and AI systems.

leadership development, and employee engagement [19]. AI implementation necessitates a shift in organizational mindset, encouraging adaptability and continuous learning. A study by [8] emphasizes the importance of fostering a culture that embraces change and encourages collaboration, as organizations with a proactive and innovative culture are more likely to navigate the challenges associated with AI integration successfully.

Moreover, organizational transformation in the AI era involves redefining roles and responsibilities within the workforce. As AI technologies automate routine tasks, employees need to focus on higher-order cognitive and creative functions. A study by Brynjolfsson and [9] highlights that organizations need to invest in upskilling and reskilling programs to train their workers with the essential skills for the AI-driven future. This shift in the nature of work demands strategic planning and proactive

management to ensure a smooth transition and avoid potential disruptions [16].

Furthermore, effective organizational transformation involves leveraging AI to optimize decision-making processes. The integration of AI technologies in decision support systems enhances the quality and speed of decision-making, leading to improved organizational performance. Research by [16] emphasizes the role of AI in augmenting managerial decision-making capabilities, enabling organizations to make data-driven and informed choices. However, successful implementation requires organizations to establish a robust data infrastructure and ensure ethical considerations are addressed to maintain trust and transparency in decision-making processes [9].

8. Conclusion

In conclusion, the integration of artificial intelligence (AI) into business and software management processes represents a transformative paradigm shift, ushering in a new era of efficiency and strategic decision-making. As organizations increasingly leverage AI technologies to harness the power of data, they find themselves equipped with invaluable insights that facilitate informed decision-making. This cooperation relating data and AI not only develops active effectiveness but also fosters a proactive approach to challenges. The real-time analysis capabilities of AI empower businesses to adapt swiftly to dynamic market conditions, optimizing resource allocation and minimizing risks. Furthermore, the seamless integration of AI into software management ensures a more streamlined development lifecycle, reducing errors and enhancing the overall quality of software products. The potential of AI extends beyond mere automation; it becomes a catalyst for innovation and growth. As we navigate this digital landscape, it becomes evident that harnessing AI for effective business and software management is not just a technological imperative but a strategic necessity for staying competitive in today's rapidly evolving landscape.

References

- [1] Chen, M., Mao, S., & Liu, Y. (2012). Big Data: A Survey. *Mobile Networks and Applications*, 19(2), 171–209.
- [2] Davenport, T. H., & Ronanki, R. (2018). Artificial Intelligence for the Real World. *Harvard Business Review*, 96(1), 108–116.
- [3] Floridi, L., Cowls, J., Beltrametti, M., Chatila, R., Chazerand, P., Dignum, V., ... & Wachter, S. (2018). AI4People—An Ethical Framework for a Good AI Society: Opportunities, Risks, Principles, and Recommendations. *Minds and Machines*, 28(4), 689–707.

- [4] Kim, S., Park, H., & Baik, J. (2016). Software Development Process Model for Effective and Efficient Task Allocation of Global Software Development. *Information and Software Technology*, 73, 1–17.
- [5] Russell, S., Norvig, P., & Davis, E. (2016). *Artificial Intelligence: A Modern Approach* (3rd ed.). Pearson.
- [6] Smith, A. N., Fischer, E., & Yongjian, C. (2018). How Does Artificial Intelligence (AI) Impact Market Offerings? *MIT Sloan Management Review*, 59(3), 1–5.
- [7] Gandomi, A., & Haider, M. (2015). Beyond the hype: Big data concepts, methods, and analytics. *International Journal of Information Management*, 35(2), 137-144.
- [8] Dumbill, E. (2012). Making sense of big data. *Big Data*, 1(1), 1-2.
- [9] Chen, M., Chiang, M., & Storey, V. (2012). Business Intelligence and Analytics: From Big Data to Big Impact. *MIS Quarterly*, 36(4), 1165-1188.
- [10] Smith, J., Miller, A., & Johnson, R. (2017). "The Role of Artificial Intelligence in Decision Making." *Journal of Business Analytics*, 20(3), 123-135.
- [11] Johnson, L., & Brown, M. (2019). "AI-Driven Analytics in Software Management: A Case Study Approach." *International Journal of Software Engineering*, 15(2), 67-82.
- [12] Chen, Q., Wang, S., & Li, P. (2018). "Artificial Intelligence and Advanced Analytics: Transforming Decision-Making in Organizations." *Journal of Management Information Systems*, 25(4), 175-192.
- [13] Davenport, T. H., & Harris, J. (2007). *Competing on analytics: The new science of winning*. Harvard Business Press.
- [14] Bertino, E., Sandhu, R., Sandhu, S. (2017). *Role-Based Access Control*. CRC Press.
- [15] LaValle, S., Lesser, E., Shockley, R., Hopkins, M. S., & Kruschwitz, N. (2011). Big data, analytics and the path from insights to value. *MIT Sloan Management Review*.
- [16] Smith, J., Johnson, M., & Williams, R. (2018). Integrating AI into Business Processes: A Comprehensive Approach. *Journal of Business and Technology*, 14(3), 45-62
- [17] Mishra, A., & Sharma, S. (2016). System Analysis for Seamless AI Integration: Challenges and Solutions. *International Journal of Software Engineering and Applications*, 5(2), 28-41.
- [18] Lee, E., Kim, H., Park, J., & Choi, Y. (2018). Ethical Considerations in AI Implementation: A Framework for Decision-Makers. *Journal of Ethics in Technology & Business*, 7(1), 15-30.
- [19] Jackson, L., Turner, M., & Harris, C. (2019). Human-Centric AI Implementation: Strategies for Workforce Engagement. *Journal of Organizational Transformation & Social Change*, 16(4), 123-140.
- [20] Buolamwini, J., & Gebru, T. (2018). Gender Shades: Intersectional Accuracy Disparities in Commercial Gender Classification. *Proceedings of Machine Learning Research*, 81.
- [21] Lipton, Z. C. (2016). The Mythos of Model Interpretability. arXiv preprint arXiv:1606.03490.
- [22] Acemoglu, D., & Restrepo, P. (2019). Automation and New Tasks: The Implications of the Task Content of Production for Labor Demand. *Journal of Economic Perspectives*, 33(2), 3-30.
- [23] LeCun, Y., Bengio, Y., & Hinton, G. (2015). Deep learning. *Nature*, 521(7553), 436-444.
- [24] Atzori, L., Iera, A., & Morabito, G. (2017). The Internet of Things: A survey. *Computer Networks*, 54(15), 2787-2805.
- [25] Adadi, A., & Berrada, M. (2018). Peeking Inside the Black-Box: A Survey on Explainable Artificial Intelligence (XAI). *IEEE Access*, 6, 52138-52160.
- [26] Dery, K., Sebastian, I. M., & Guo, S. (2019). *AI in the Factory of the Future*. McKinsey & Company.
- [27] Liang, T. P., Huang, J. S., & Yeh, Y. H. (2017). How to Make Empowerment and Service Quality Work? The Case of AI Chatbots in Contact Centers. *Information & Management*, 54(7), 866-875.
- [28] Brynjolfsson, E., & McAfee, A. (2017). *The Business of Artificial Intelligence*. Harvard Business Review, 95(1), 1-11.
- [29] Westerman, G., Bonnet, D., McAfee, A., & McAfee, A. (2019). *Artificial Intelligence and*

the End of Work. MIT Sloan Management Review.

[30] Aral, S., & Weill, P. (2019). Why Every Organization Needs an Augmented Reality Strategy. *Harvard Business Review*, 97(6), 46-57.

[31] Yeung, K., Djelic, M. L., & Barton, D. (2017). Algorithmic Regulation: A Critical Interrogation. *Regulation & Governance*, 11(2), 105-125.