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Managing Digital Transformation: The Role of Artificial Intelligence and Reciprocal Symmetry in Business

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Abstract

This study aims to understand better how corporate organizations may manage digital transformation by utilizing reciprocal symmetry and artificial intelligence (AI). The study aims to investigate the effects of artificial intelligence (AI) technologies on conventional business models, assess the possibilities and difficulties of attaining reciprocal symmetry in the context of digital transformation, and pinpoint methods for efficient AI integration that maintain organizational preparedness and alignment. Using a secondary data-based review methodology, the study synthesizes previous research on digital transformation, AI integration, organizational adaptation, and extant literature. Key conclusions show how crucial it is to have a culture of innovation, collaborate across functional boundaries, and plan strategically to maximize the advantages of digital transformation projects and achieve reciprocal symmetry. The policy implications underscore the necessity of allocating resources towards digital infrastructure, skills enhancement, and regulatory frameworks to facilitate the responsible adoption of AI and tackle obstacles such as limited resources, skills disparity, and cultural opposition. Organizations may handle technology upheavals and promote competitiveness and sustainable growth in the digital era by adopting reciprocal symmetry and supportive policies.

Keywords

Digital Transformation, Artificial Intelligence (AI), Business Strategy, Reciprocal Symmetry, Technology Adoption, Disruptive Technologies, Strategic Management

INTRODUCTION

In the current dynamic corporate environment, digital transformation has surfaced as a crucial necessity for enterprises hoping to maintain their competitive edge and relevance in an ever-digitizing world. A vital component of this shift is the use of cutting-edge technologies, most notably artificial intelligence (AI), which is changing conventional corporate structures and tactics. The concept of reciprocal symmetry provides a fresh perspective on the intricacies of digital change and technological breakthroughs.

The purposeful adoption and integration of digital technologies into all facets of a company are known as "digital transformation," it radically changes how companies function, provide value, and interact with stakeholders. This paradigm change goes beyond automation and includes a core reorganization of services, organizational culture, and processes. Digital transformation is fundamentally motivated by the need to use technology to improve customer experience, efficiency, and creativity.

Artificial intelligence (AI) is an essential factor in accelerating digital transformation. AI technologies, including robotic process automation, machine learning, and natural language processing, enable businesses to make better decisions by automating repetitive operations and extracting insights from massive amounts of data. AI-enabled technologies are revolutionizing corporate operations across industries, from chatbots that provide personalized customer service to predictive analytics that optimize supply chain operations.

However, more than implementing technology alone will be required to achieve successful digital transformation; a comprehensive plan that considers the interactions between strategy, technology, and organizational dynamics is needed. At this point, reciprocal symmetry becomes essential. Economist Brian Arthur used reciprocal symmetry to describe the reciprocal link between technology and the organizations that use it. It emphasizes the idea that organizational structures, procedures, and behaviors both influence and are influenced by technology.

Reciprocal symmetry highlights how crucial it is to match corporate goals and culture with technology capabilities in digital transformation. It acknowledges that technology impacts employee responsibilities, organizational structure, leadership styles, and operational efficiency. By embracing reciprocal symmetry, businesses can use technology as a strategic enabler rather than just a tool, promoting synergy between organizational adaptation and technological innovation.

In this essay, we explore the complex interactions between artificial intelligence, reciprocal symmetry, and efficient management techniques to navigate the digital transition in commercial settings successfully. We look at how artificial intelligence (AI) changes businesses and how reciprocal symmetry is essential to implementing effective digital changes. We want to help managers and executives use AI and reciprocal symmetry to drive sustainable digital transformation projects. We will examine theoretical frameworks and real-world case studies to provide insights and practical tactics.

The latter sections of this article will discuss the main ideas, difficulties, and recommended approaches related to overseeing digital transformation in the age of artificial intelligence and reciprocal symmetry. We will discuss how to maintain reciprocal symmetry between business processes and technology while employing AI to achieve strategic objectives, develop organizational readiness, and overcome implementation difficulties. This investigation adds to the growing conversation on digital transformation and how it affects modern corporate management.

STATEMENT OF THE PROBLEM

Artificial intelligence (AI) is rapidly advancing and being widely used in digital transformation, which presents businesses with both difficult obstacles and previously unheard-of potential. The potential advantages of AI-driven digital transformation are well known. However, there is still a significant knowledge vacuum about managing this process effectively, especially in maintaining reciprocal symmetry between organizational dynamics and technology adoption.

Reciprocal symmetry is the harmonic alignment of technology capabilities with organizational structures, procedures, and culture. The research gap is the need for more thorough knowledge and recommendations on how organizations might strategically exploit AI while upholding this principle. As more and more firms invest in artificial intelligence (AI) to drive digital transformation, it is imperative to investigate how technology innovation and organizational adaptability interact.

This study looks into reciprocal symmetry and how artificial intelligence (AI) affects digital transformation in commercial enterprises. It looks into the possibilities and difficulties of reaching organizational alignment during this transformation process. The study also seeks to determine practical approaches for incorporating AI technologies while maintaining organizational preparedness. The development of theoretical frameworks and valuable insights to support strategic decision-making and the execution of digital transformation projects in corporate environments will result from this research.

This study is critical because it can help managers, corporate executives, and policymakers effectively use AI technologies to drive digital transformation. In an increasingly digital economy, this research enhances organizational resilience, agility, and competitiveness by clarifying the importance of reciprocal symmetry in managing AI-driven transitions.

The study also has significance for theoretical advancement and scholarly research in organizational behavior, technological adoption, and management. By incorporating ideas from academic literature and practical experience, this study attempts to increase understanding of the complex dynamics driving successful digital transformation programs.

This study aims to close the gap between theoretical understanding and real-world application by examining how businesses can leverage AI without sacrificing reciprocal symmetry, essential for adaptive and sustainable digital transformation in modern corporate settings.

METHODOLOGY OF THE STUDY

The management of digital transformation is examined in this paper using a secondary data-based review methodology, with an emphasis on the function of artificial intelligence (AI) and reciprocal symmetry in business. The approach entails a thorough analysis of the body of knowledge about organizational dynamics, AI integration, digital transformation, industry reports, academic studies, and industry case studies. To manage digital transformation activities within business organizations, secondary data analysis is carried out to uncover relevant trends, issues, best practices, and policy implications. This methodology makes it possible to thoroughly review pertinent literature and synthesize current knowledge to inform the study's goals and conclusions.

DIGITAL TRANSFORMATION: STRATEGIC IMPERATIVE FOR ORGANIZATIONS

Digital transformation has become a strategic necessity for businesses looking to innovate, adapt, and prosper in today's quickly changing business world. This chapter examines the importance of digital transformation as a catalyst for competitive advantage and organizational success.

Definition and Scope of Digital Transformation

The complete integration of digital technologies into all facets of corporate operations, procedures, and strategies is called "digital transformation." It uses technologies like artificial intelligence (AI), cloud computing, data analytics, and the Internet of Things (IoT) to improve productivity, adaptability, and response to market demands. Digital transformation is a broad term that includes organizational, cultural, and strategic shifts and technology adoption to help firms fully utilize digital capabilities.

Key Drivers of Digital Transformation

Organizations are undergoing a digital revolution due to several significant factors:

- **Changing Consumer Expectations:** Businesses must adapt and innovate in response to shifts in consumer behavior and tastes toward digital interactions and personalized experiences.

- **Market Disruptions:** To stay competitive and relevant, disruptive technologies and new market entrants force enterprises to adopt digital strategies.
- **Operational Efficiency:** Digital technologies present prospects for work automation, resource allocation optimization, and process streamlining, all of which contribute to increased operational efficiency and cost savings.
- **Innovation and Growth:** Innovation is encouraged by digital transformation because it makes it possible to create new goods, services, and business models that cater to changing consumer demands.

Impact on Organizational Strategies and Objectives

Digital transformation has a significant impact on company goals and strategies:

- **Customer-Centric Focus:** To increase customer happiness and loyalty, organizations prioritize customer-centric strategies informed by data and tailored to individual experiences.
- **Agile Decision-Making:** AI and real-time data analytics enable businesses to respond swiftly to market changes and make well-informed decisions based on facts.
- **Cross-Functional Collaboration:** Departmental silos are broken down by digital transformation, which promotes cooperation and communication throughout the whole company.
- **Talent Development:** Businesses upskill staff members to develop digital skills and foster an innovative, ever-learning culture.

Benefits of Digital Transformation

Adopting digital transformation has several advantages for businesses.

- **Enhanced Customer Experiences:** Personalized communications, channel engagement, and frictionless transactions improve client retention and satisfaction.
- **Improved Operational Efficiency:** Cost-saving measures such as predictive analytics, streamlined procedures, and automation of repetitive operations improve resource allocation.
- **Innovation and Competitive Advantage:** By fostering innovation through digital transformation, organizations can introduce new products, penetrate new markets, and acquire a competitive edge.
- **Adaptability and Resilience:** Organizations are better equipped to respond to challenges and seize new opportunities thanks to agile strategies and digital capabilities.

In a digital-first economy, digital transformation is more than just a technology change; it is a strategic necessity for businesses to be relevant and competitive. In today's dynamic business environment, companies can drive innovation, achieve sustainable growth, and unlock new opportunities by embracing digital transformation initiatives, leveraging artificial intelligence, and fostering reciprocal symmetry between technology adoption and organizational dynamics. This chapter emphasizes how crucial organizational preparedness, leadership commitment, and strategic vision are to navigate the challenges of digital transformation for businesses successfully.

HARNESSING ARTIFICIAL INTELLIGENCE FOR BUSINESS INNOVATION

In the age of digital transformation, artificial intelligence (AI) has become a disruptive force, altering organizational strategies and driving commercial innovation. This chapter examines artificial intelligence (AI)'s vital role in opening new avenues, streamlining procedures, and spurring creativity in various fields and businesses.

AI: Catalyst for Innovation

Artificial Intelligence (AI) comprises various technologies, such as robots, computer vision, machine learning, and natural language processing. These technologies can transform how businesses function and provide value. Organizations can use AI to automate processes, extract valuable insights from data, and create intelligent systems that complement human abilities (Liu et al., 2017).

Critical Applications of AI in Business

AI is used in a variety of commercial contexts to promote efficiency and innovation:

- **Customer Experience:** AI-driven chatbots, recommendation engines, and tailored marketing campaigns improve consumer happiness and engagement.
- **Operations Optimization:** AI is used in inventory management, supply chain optimization, and predictive maintenance to optimize processes and cut expenses.
- **Data Analytics and Decision-Making:** AI algorithms analyze large datasets to find patterns, forecast trends, and facilitate data-driven decision-making (Tang et al., 2016).
- **Product Innovation:** AI makes it easier to create, prototype, and test products, which results in the creation of cutting-edge goods and services.

Benefits of AI Adoption

Utilizing AI technologies can assist organizations in a big way.

- **Improved Efficiency:** Human resources can concentrate on higher-value tasks by automating routine jobs and workflows, increasing output and efficiency.
- **Enhanced Insights:** AI-driven analytics facilitate proactive decision-making by providing real-time insights into consumer behavior, industry trends, and operational performance.
- **Innovation Acceleration:** AI promotes innovation by enabling the rapid prototyping, testing, and refinement of new concepts, goods, and business models.
- **Competitive Advantage:** AI-enabled businesses get an advantage over rivals by being more responsive, agile, and able to adjust to shifting market conditions.

Challenges and Considerations

Even with its revolutionary potential, adopting AI comes with concerns and challenges:

- **Data Privacy and Ethics:** Ensure data is used responsibly and address moral questions around bias, transparency, and AI algorithms.
- **Skills Gap:** Requirement for ongoing training and upskilling of current personnel due to lack of qualified AI specialists.
- **Integration Complexity:** Careful planning and execution are necessary when integrating AI technology with current workflows and systems.
- **Change Management:** Encouraging corporate readiness for AI use while overcoming cultural barriers.

Future Outlook and Opportunities

Artificial intelligence will only grow and present more commercial innovation opportunities as we progress. Technological developments in artificial intelligence, including explainable AI, automation powered by AI, and human-AI cooperation, can spur additional innovation, improve consumer experiences, and change entire sectors (Ramprasad et al., 2017).

To remain competitive and prosper in the digital age, businesses must use artificial intelligence to drive innovation. Companies may use AI to catalyze growth, differentiation, and long-term success by embracing AI technologies, resolving obstacles, and promoting an innovative and adaptable culture. This chapter emphasizes the revolutionary power of AI on business strategy and the necessity for enterprises to embrace AI-driven innovation as a component of their digital transformation journey.

ACHIEVING RECIPROCAL SYMMETRY IN TECHNOLOGY ADOPTION

In digital transformation, reciprocal symmetry is the harmonious alignment of organizational dynamics and technology uptake. This chapter explores the significance of obtaining reciprocal symmetry and the tactics businesses can use to guarantee the acceptance and integration of new technologies.

Understanding Reciprocal Symmetry

Reciprocal symmetry emphasizes matching technological projects with organizational goals, culture, and skills. It entails adopting technology comprehensively, considering organizational impact, change preparedness, and technological considerations in addition to technical ones. Reaching reciprocal symmetry guarantees that investments in technology support strategic goals and produce favorable results for the entire company.

Critical Components of Reciprocal Symmetry

Reciprocal symmetry can only be achieved by paying close attention to a few crucial elements:

- **Strategic Alignment:** The Company's mission, vision, and objectives should all align with its technological ambitions. Well-defined goals and a well-defined plan align technology adoption with business aims.
- **Organizational Culture:** For technology adoption to be successful, organizational culture must be recognized and addressed. A culture that prioritizes creativity, teamwork, and ongoing development encourages adaptability to change and technology-driven transformation.
- **Stakeholder Engagement:** Including customers, partners, executives, and staff members, among other stakeholders, guarantees support and buy-in for technological efforts. Active participants offer insightful opinions and ideas that improve technology adoption.

Strategies for Achieving Reciprocal Symmetry

Organizations can use a variety of tactics to attain reciprocal symmetry in the adoption of technology, including:

- **Cross-Functional Collaboration:** Creating cross-functional teams with members from several departments promotes cooperation and guarantees that technological solutions cater to various business requirements.
- **Change Management:** Adopting robust change management procedures promotes organizational change preparedness and reduces resistance to technology adoption. Support, training, and communication are essential to an efficient change management strategy.
- **Continuous Evaluation and Adjustment:** Ongoing alignment with business objectives is ensured by routinely evaluating the effect of technology adoption on organizational performance and making adjustments based on feedback and insights.

Overcoming Challenges and Barriers

Reaching reciprocal symmetry could present difficulties like these:

- **Resistance to Change:** Proactive change management techniques and leadership dedication are needed to address cultural opposition and overcome lethargy.

- **Lack of Alignment:** Misalignment between company goals and technology projects might result in inefficiencies and lost opportunities. It's critical to evaluate and change alignment regularly.

Benefits of Reciprocal Symmetry

Reaching reciprocal symmetry in the uptake of technology has several advantages.

- **Improved ROI:** Technology investments aligned with corporate goals and priorities provide more significant returns.
- **Enhanced Organizational Agility:** In dynamic contexts where technology facilitates strategic flexibility, responsive and adaptive organizations flourish.
- **Employee Engagement and Satisfaction:** Contented workers help foster innovation and successful technology adoption, which boosts retention and job happiness.

Achieving reciprocal symmetry in adopting technology is crucial for companies starting their digital transformation processes. Businesses can use technology as a catalyst for growth, innovation, and competitive advantage by coordinating technology projects with strategic goals, addressing organizational culture, involving stakeholders, and implementing effective change management procedures. This chapter highlights the importance of holistically adopting technology, prioritizing organizational dynamics, and aligning strategy to achieve successful digital transformation.

POLICY FRAMEWORKS FOR RESPONSIBLE TECHNOLOGY INTEGRATION

Robust regulatory frameworks must be established to guarantee responsible technology integration, effectively manage digital transformation, and utilize artificial intelligence (AI). This chapter covers the significance of policy frameworks, essential factors, and suggested methods for organizations and policymakers.

Importance of Policy Frameworks

Policy frameworks provide standards, rules, and regulations that govern technology integration's operational, ethical, and legal aspects. These frameworks are essential in encouraging the ethical use of technology, safeguarding the interests of stakeholders, and reducing possible hazards related to the application of AI and digital transformation.

Critical Considerations in Policy Development

Several important variables must be taken into account when developing effective policy frameworks:

- **Ethical Guidelines:** Policies should cover issues of fairness, transparency, data privacy, and AI algorithms from a moral standpoint. Public trust is upheld, and responsible technology use is ensured by ethical standards (Huang & Leu, 2014).
- **Regulatory Compliance:** Policy frameworks should align with current regulatory requirements and industry norms
- to guarantee legal compliance and reduce legal risks connected with technology adoption.
- Data Governance: Policies should lay out precise rules for gathering, storing, processing, and sharing data to safeguard its security and privacy.
- **Bias and prejudice:** Policies that guarantee justice and inclusivity in the application of technology should address biases and prejudice in AI algorithms.

Recommended Approaches for Policy Development

Organizations and legislators can use the following strategies to create frameworks for responsible technology integration that work:

- **Multi-Stakeholder Engagement:** Involve stakeholders in the policy-development process, such as academic institutions, business groups, government agencies, and civil society organizations, to promote a diversity of viewpoints and cooperative decision-making.
- **Risk Assessment and Mitigation:** Perform thorough risk assessments to identify possible hazards related to technology adoption and develop mitigation plans to address them.
- **Transparency and Accountability:** Encourage accountability in AI systems by revealing the workings of algorithms and establishing procedures for responsibility if unfavorable results occur.
- **Continuous Monitoring and Evaluation:** Establish systems for ongoing assessment and monitoring of technology adoption to gauge adherence to policy frameworks and pinpoint areas that need development.

Policy Recommendations

The following policy suggestions are made for responsible technology integration in light of the factors and methods mentioned above:

- **Data Protection and Privacy Laws:** Enact strong privacy and data protection legislation that upholds people's rights and mandates ethical data management procedures.
- **Ethical AI Guidelines:** To address biases, prejudice, and ethical considerations, define and implement ethical rules for AI research and deployment(Chen, 2017)
- **Skills Development Initiatives:** Fund educational and training initiatives to help the workforce acquire AI-related competencies and skills, close the skills gap, and promote responsible technology use.
- **International Collaboration:** Encourage worldwide alignment, ease cross-border technological integration, promote international collaboration, and standardize AI rules.

Table 1**:** A phased roadmap for AI integration

Phase	Key Milestones	Timeline	Responsible Stakeholders
Discovery	Identify AI use cases	Month 1 - 2	AI Steering Committee, Business Analysts
	Assess data availability and quality.	Month 1 - 2	Data Scientists, IT Team
	Conduct stakeholder interviews	Month 2	Project Managers, Department Heads
Preparation	Establish data infrastructure	Month 3 - 4	IT Team, Data Engineers
	Acquire necessary AI tools and software.	Month 3 - 4	IT Procurement, Data Scientists
	Define project scope and objectives.	Month 4	Project Managers, AI Steering Committee
Experimentation	Develop AI prototypes and models	Month 5 - 6	Data Scientists, AI Engineers
	Conduct pilot tests and evaluations.	Month 6	Cross-Functional Teams
	Gather feedback from the pilot	Month 7	Project Managers, Stakeholders

	phase.		
Implementation	Full-scale AI deployment	Month 7 - 12	Project Managers, IT Team
	Scale AI solutions across the organization	Month 8 - 12	IT Team, Implementation Specialists
	Conduct training for end-users	Month 9 - 10	HR, Training Department
	Monitor performance and optimize	Ongoing	Data Analysts, AI Engineers

Policy frameworks are crucial for guaranteeing responsible and ethical technological integration in the context of digital transformation and the deployment of artificial intelligence. Organizations and legislators may foster innovation, safeguard stakeholders' interests, and increase confidence in technology-driven projects by creating thorough policy frameworks that consider ethical, legal, and operational issues. Proactive policy development and cooperative governance are essential to manage digital transformation effectively and ethically. This chapter emphasizes these points.

MAJOR FINDINGS

Digital transformation management emphasizing artificial intelligence (AI) and reciprocal symmetry has revealed important insights and discoveries for business executives and organizations navigating technological transition. This chapter summarizes the key insights from the talks on digital transformation, AI integration, and organizational adaptability.

Digital Transformation Drivers and Impact: The findings emphasize the strategic importance of digital transformation due to technical advances, shifting consumer behaviors, and competitive challenges. Digital transformation boosts operational efficiency, customer satisfaction, and market adaptability. Successful digital transformation programs require strong leadership, organizational preparation, and technological alignment with company goals.

Role of Artificial Intelligence (AI) in Business Transformation: AI can automate tasks, analyze large datasets, and provide actionable insights, transforming business. The findings show that AI adoption requires strategic planning, data infrastructure investment, and a culture of creativity and experimentation. AI integration helps companies improve procedures, innovate, and compete digitally.

Importance of Reciprocal Symmetry: Reciprocal symmetry—the harmonious alignment of technology uptake and organizational dynamics—is crucial for digital transformation. The findings show that reciprocal symmetry requires cross-functional collaboration, clear communication, and strategic technology-business process integration. Reciprocal symmetry helps organizations overcome change management, cultural opposition, and organizational silos.

Strategies for Effective AI Integration: The study recommends setting clear goals, investing in data infrastructure, encouraging experimentation, embracing cross-functional collaboration, prioritizing ethical AI practices, developing talent, and monitoring performance for effective AI integration. These ideas help firms navigate AI adoption and integrate technology with business goals.

Organizational Adaptation and Learning: Organizational flexibility, agile frameworks, constant learning, and talent development are essential to digital transformation. The findings emphasize leadership commitment, cross-functional teamwork, and promoting innovation and resilience. Organizations that prioritize adaptability and learning can handle technological challenges and seize opportunities.

Addressing Challenges and Leveraging Opportunities: The key conclusions emphasize the need to address data governance, skills gaps, cultural opposition, and resource restrictions. In today's digital economy, firms can sustain development, innovation, and competitiveness by proactively tackling these obstacles and embracing digital transformation and AI integration.

The main findings show that digital transformation and AI may revolutionize business strategies and operations. Organizations may traverse technological change and succeed in the digital age by embracing reciprocal symmetry, encouraging organizational flexibility, and executing successful AI integration techniques. These findings offer corporate leaders and managers' actionable insights and ideas for using digital technology to drive innovation, growth, and organizational resilience.

LIMITATIONS AND POLICY IMPLICATIONS

Managing digital transformation focusing on AI and reciprocal symmetry has many benefits, constraints, and policy concerns.

Limitations

- **Resource constraints:** Many firms, especially SMEs, may need more cash, trained labor, and infrastructure for digital transformation.
- **Skills Gap:** The need for AI and associated technology experts hinders technology integration and uptake.

Policy Implications

- **Investment in Digital Infrastructure:** Policymakers should prioritize digital infrastructure investments to promote technology adoption and fair access to digital resources.
- **Skills Development Initiatives:** AI and digital technology education and training policies are required to close the skills gap and generate a skilled workforce.
- **Regulatory Frameworks:** Responsible technology integration and governance require explicit data privacy, ethical AI, and technology standards regulations.

Addressing these limits and applying suitable policy measures can enable responsible digital transformation, boost AI integration advantages, and reduce dangers.

CONCLUSION

Finally, managing digital transformation with an emphasis on AI and reciprocal symmetry brings opportunities and problems for firms striving to prosper in today's changing business world. Several significant findings in this study emphasize strategic planning, organizational flexibility, and responsible technology integration.

Technology and market changes drive digital transformation, which improves operational efficiency, customer experiences, and innovation. AI transforms processes, generates insights, and enables data-driven decision-making. More than technology deployment, AI integration demands clear goals, robust data infrastructure, and an innovative learning culture.

Reciprocal symmetry—aligning technology uptake and organizational dynamics—is essential for digital transformation success. Cross-functional collaboration, change management, and strategic technology integration into corporate processes are needed for reciprocal symmetry.

Despite budget limits, a skills gap, and cultural resistance, companies can use policy implications, including digital infrastructure investments, skills development, and regulatory frameworks, to encourage responsible digital transformation.

Managing digital transformation with AI integration needs strategic planning, organizational readiness, and ethical considerations. Organizations may handle technological change and succeed in the digital age by embracing reciprocal symmetry, building innovation ecosystems, and enacting supportive policies. This study helps company executives and policymakers use digital technology to boost growth, innovation, and competitiveness in today's fast-changing business environment.

REFERENCES

Chen, M. H. (2017). The Analysis of Model for Electronic Commerce - Artificial Intelligence. *Journal of Asian Business Strategy*, *7*(2), 39-43. https://doi.org/10.18488/journal.1006/2017.7.2/1006.2.39.43

Huang, T. H., Leu, Y. H. (2014). A Mutual Fund Investment Method Using Fruit Fly Optimization Algorithm and Neural Network. *Applied Mechanics and Materials*, *571-572*, 318-325. https://doi.org/10.4028/www.scientific.net/AMM.571-572.318

Liu, F., Shi, Y., Liu, Y. (2017). Intelligence Quotient and Intelligence Grade of Artificial Intelligence. *Annals of Data Science*, *4*(2), 179-191. https://doi.org/10.1007/s40745-017-0109-0

Ramprasad, R., Batra, R., Pilania, G., Mannodi-Kanakkithodi, A., Kim, C. (2017). Machine Learning in Materials Informatics: Recent Applications and Prospects. *NPJ Computational Materials*, *3*, 1-13. https://doi.org/10.1038/s41524-017-0056-5

Tang, V., Yanine, F., Valenzuela, L. (2016). Data, Information, Knowledge, and Intelligence. *International Journal of Innovation Science*, *8*(3), 199-216. https://doi.org/10.1108/IJIS-07-2016-0022

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