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РОЛЬ ИСКУССТВЕННОГО ИНТЕЛЛЕКТА В ПРИНЯТИИ РЕШЕНИЙ: ВОЗМОЖНОСТИ И РИСКИ ДЛЯ ЛИДЕРОВ БИЗНЕСА

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Аннотация. Искусственный интеллект (ИИ) трансформирует процессы принятия решений во всех отраслях, предоставляя компаниям беспрецедентные возможности для повышения эффективности, оптимизации операций и получения конкурентных преимуществ. Аналитика на основе ИИ, алгоритмы машинного обучения и предиктивное моделирование позволяют руководителям компаний принимать решения на основе данных с большей точностью и скоростью. От финансового прогнозирования до управления цепочками поставок - ИИ поддерживает стратегическое планирование и оперативное исполнение, снижая неопределенность и человеческую предвзятость. Однако наряду с этими возможностями ИИ несет в себе и значительные риски, включая этические проблемы, вопросы конфиденциальности данных и возможность принятия необъективных или ошибочных решений. Растущая зависимость от ИИ при принятии решений в бизнесе поднимает вопросы о подотчетности, прозрачности и балансе между автоматизацией и человеческим надзором. В данной статье рассматривается двойная роль ИИ в принятии решений, изучается как его трансформационный потенциал, так и проблемы, которые он ставит перед руководителями компаний.

Ключевые слова: искусственный интеллект, принятие решений, бизнес-стратегия, машинное обучение, предиктивная аналитика, этические риски, автоматизация.

Introduction

Artificial Intelligence (AI) has emerged as a transformative force in business decision-making, reshaping industries through data-driven insights, predictive analytics, and automation. In today's

competitive landscape, organizations are leveraging AI to enhance efficiency, reduce risks, and gain strategic advantages. From financial forecasting to supply chain optimization, AI enables business leaders to make faster and more accurate decisions, minimizing uncertainty and human bias. The rapid advancements in machine learning, natural language processing, and deep learning have expanded AI's capabilities, allowing it to analyze complex datasets, recognize patterns, and provide actionable recommendations. As businesses continue to adopt AI-driven decision-making tools, understanding their opportunities and risks becomes essential for effective implementation.

This study explores the role of AI in decision-making, examining its benefits, challenges, and impact on business leadership. The primary objective is to analyze how AI enhances decision-making efficiency while addressing the potential risks associated with algorithmic biases, data privacy concerns, and the ethical implications of AI-driven automation. By investigating real-world applications and case studies, the study aims to provide insights into the balance between AI-powered automation and human oversight in corporate decision-making.

To guide this research, the study focuses on several key questions: How does AI improve decision-making processes in business? What are the primary risks and limitations of AI-driven decisions? How can business leaders integrate AI while maintaining ethical and strategic control over decision-making? These questions form the foundation for analyzing AI's role in shaping future business strategies.

The structure of this paper is organized to systematically address these questions. The first section provides an overview of AI's evolution in decision-making, followed by an exploration of its opportunities for businesses. The subsequent sections discuss the challenges, including ethical and operational risks, and propose strategies for balancing AI and human judgment. Case studies of AI implementation in various industries offer practical insights, while the concluding section summarizes key findings and provides recommendations for responsible AI adoption.

The Evolution of AI in Business Decision-Making

Artificial Intelligence (AI) has undergone significant development since its inception, evolving from theoretical models to practical applications in business decision-making. Initially, AI was limited to rule-based systems that automated simple tasks, but advances in machine learning, neural networks, and deep learning have enabled AI to assist in complex business decisions. Early AI applications in business were primarily focused on data processing and pattern recognition, with limited predictive capabilities. Over time, the integration of AI into business strategy has become more sophisticated, enabling data-driven decision-making, automation of routine tasks, and optimization of business processes.

The key milestones in AI development for decision-making include the introduction of expert systems in the 1980s, which provided structured decision-making tools for industries such as finance and healthcare. The 2000s saw the rise of machine learning algorithms that allowed businesses to analyze vast datasets and predict market trends. More recently, AI-driven decision support systems, including generative AI models like ChatGPT, have been integrated into business strategies to enhance forecasting, automate decision workflows, and improve customer interactions. AI adoption in business is now centered on predictive analytics, real-time decision-making, and AI-driven automation, significantly improving efficiency and reducing human biases in strategic decision-making.

Current trends indicate that AI is becoming a core component of business operations across multiple industries. Companies are leveraging AI for competitive intelligence, risk assessment, and workflow optimization. AI-powered business analytics is enabling organizations to extract actionable insights from complex datasets, improving both operational efficiency and strategic planning. Additionally, the rise of generative AI is reshaping business intelligence, allowing organizations to automate content generation, enhance customer interactions, and drive innovation. As AI technology continues to evolve, its role in business decision-making is expected to expand further, integrating ethical AI governance, transparency, and regulatory considerations to ensure responsible AI deployment in corporate environments.

Opportunities of AI in Business Decision-Making

Artificial Intelligence (AI) is revolutionizing business decision-making by enhancing efficiency, accuracy, and strategic planning. AI-powered systems analyze vast amounts of data in real time, allowing businesses to make data-driven decisions with higher precision and speed. One of the most significant advantages of AI is its ability to automate routine decision-making processes, freeing up human resources to focus on complex strategic tasks. AI-driven automation minimizes human error and ensures consistency in decision-making, which is crucial in industries such as finance, healthcare, and supply chain management.

Predictive analytics, a key feature of AI in business, enables companies to anticipate future trends, customer behavior, and market fluctuations. Machine learning algorithms process historical data and generate insights that help businesses make proactive decisions rather than reactive ones. For instance, AI-driven forecasting models improve financial planning, inventory management, and risk assessment, leading to increased profitability and operational efficiency. Additionally, AI enhances personalization in customer interactions by analyzing consumer preferences and tailoring marketing strategies accordingly. AI-powered customer relationship management (CRM) systems

help businesses deliver personalized recommendations and improve customer engagement, fostering brand loyalty and higher conversion rates.

Another significant opportunity AI offers is in data-driven strategic planning. AI tools enable businesses to analyze competitors, assess market dynamics, and identify opportunities for expansion. AI-powered business intelligence systems assist executives in making more informed strategic decisions by integrating real-time data from multiple sources. Furthermore, AI optimizes decision-making in human resources by streamlining talent acquisition, workforce management, and performance evaluation. AI-driven tools can analyze employee productivity, detect skill gaps, and recommend personalized training programs to enhance overall workforce efficiency.

With AI continuing to evolve, its role in business decision-making is expected to expand further, providing organizations with enhanced competitive advantages. By leveraging AI's capabilities in automation, predictive analytics, and strategic planning, businesses can achieve greater efficiency, agility, and long-term growth. However, to maximize these opportunities, organizations must ensure responsible AI adoption by addressing ethical considerations and maintaining human oversight in critical decision-making processes.

Risks and Challenges of AI in Decision-Making

Artificial Intelligence (AI) has revolutionized business decision-making by providing enhanced analytics, predictive modeling, and automation. However, as AI adoption increases, so do concerns related to its ethical implications, security risks, and regulatory compliance. Organizations must navigate these challenges to ensure AI-driven decisions remain transparent, accountable, and aligned with business objectives.

One of the most pressing concerns is ethical bias in AI algorithms. AI systems are trained on historical data, and if this data contains biases, the algorithm may reinforce and amplify them. Bias in AI can lead to discriminatory outcomes in areas such as hiring, lending, and law enforcement, raising ethical and legal concerns. Organizations must prioritize fairness and inclusivity in AI model training by implementing bias detection tools and ensuring diverse and representative datasets [Ошибка! Источник ссылки не найден.].

Another major challenge is data privacy and security risks. AI systems require vast amounts of data to function effectively, which raises concerns about data breaches, unauthorized access, and misuse of sensitive information. Businesses handling customer data must comply with global data protection regulations such as the General Data Protection Regulation (GDPR) and the California Consumer Privacy Act (CCPA). Failure to secure AI systems can lead to reputational damage and financial penalties.

Over-reliance on AI and loss of human judgment is another growing concern. While AI improves decision-making accuracy, excessive dependence on automated systems can lead to a lack of critical thinking and human oversight. Business leaders must strike a balance by integrating AI as a decision-support tool rather than a complete replacement for human expertise. This approach ensures that AI-driven recommendations are supplemented with human intuition and contextual awareness.

Additionally, transparency and accountability in AI-driven decisions pose significant challenges. Many AI models function as "black boxes," meaning their decision-making processes are not easily interpretable by humans. This lack of transparency makes it difficult for organizations to justify AI-driven decisions, particularly in high-stakes fields such as finance and healthcare. Establishing AI governance frameworks that prioritize explainability and model interpretability is essential for responsible AI adoption.

Finally, regulatory and compliance challenges remain a critical issue for businesses implementing AI-driven decision-making. Governments and industry regulators are continuously updating policies to address AI-related risks, including ethical concerns, liability issues, and security standards. Businesses must stay informed about evolving regulations and implement AI compliance measures to mitigate legal risks and maintain consumer trust.

As AI continues to play an integral role in business decision-making, organizations must proactively address these risks to harness AI's full potential while maintaining ethical integrity and regulatory compliance.

Balancing AI and Human Oversight in Decision-Making

As AI continues to play an integral role in business decision-making, the balance between automation and human oversight has become a critical challenge. While AI offers significant advantages in processing vast amounts of data and improving efficiency, human judgment remains essential in ensuring ethical, strategic, and context-aware decisions. Organizations must adopt governance frameworks that combine AI capabilities with human expertise to mitigate risks such as algorithmic bias, ethical concerns, and security vulnerabilities.

One of the key aspects of balancing AI and human oversight is fostering AI-human collaboration. AI excels at analyzing structured data and recognizing patterns, but human intuition and experience are necessary for evaluating unstructured information and making nuanced decisions. Businesses are implementing hybrid decision-making models, where AI assists in routine tasks and predictive analytics while human experts provide oversight and contextual understanding. For example, in financial risk management, AI can assess market trends and generate forecasts, but

investment decisions ultimately require human expertise to consider external factors such as economic policies and geopolitical risks.

Ethical AI governance frameworks are crucial in ensuring responsible AI use. Transparency, accountability, and fairness must be embedded into AI systems to prevent biased decision-making and unintended consequences. Many organizations are adopting explainable AI (XAI) methodologies, which provide insights into AI decision-making processes, allowing human auditors to validate AI-driven recommendations. Regulatory bodies are also imposing stricter compliance requirements, emphasizing the need for human oversight in high-risk AI applications, such as healthcare, hiring, and criminal justice.

To effectively manage AI-related risks, businesses must implement risk mitigation strategies that include continuous monitoring, employee training, and compliance audits. AI governance policies should clearly define when human intervention is required, particularly in cases where AI decisions have ethical or legal implications. Additionally, organizations must invest in AI literacy programs to equip employees with the knowledge and skills to critically assess AI-generated insights and challenge erroneous outputs.

Case studies from industries such as healthcare and cybersecurity demonstrate the importance of human-AI collaboration in decision-making. In cybersecurity, AI-driven threat detection systems identify potential cyberattacks in real time, but human analysts play a crucial role in assessing the severity of threats and implementing appropriate countermeasures. Similarly, in healthcare, AI assists in diagnosing diseases and recommending treatments, but final medical decisions remain under the supervision of physicians to ensure patient safety and ethical considerations.

As AI adoption expands, organizations must establish structured frameworks that integrate automation with human oversight. By leveraging AI's computational power while maintaining ethical, strategic, and regulatory safeguards, businesses can optimize decision-making processes without compromising accountability or transparency.

Table 1

AI Case Studies in Business Decision-Making

Business Function	AI Applications	Case Examples	Study	Key Benefits
Financial Decision-Making & Risk Management	AI-driven fraud detection, algorithmic trading, credit risk assessment, automated financial advisory	JPMorgan's powered detection, BlackRock's AI-driven management	AI-fraud AI-portfolio	Enhanced fraud prevention, real-time risk analysis, optimized investment strategies

Supply Chain Optimization & Operations	AI-powered demand forecasting, route optimization, automated inventory management, predictive maintenance	Amazon's AI-driven warehouse automation, DHL's AI-based logistics optimization	Reduced operational costs, improved logistics efficiency, minimized supply chain disruptions
Marketing & Customer Relationship Management (CRM)	AI-driven customer segmentation, personalized marketing campaigns, chatbot-driven customer service, sentiment analysis	Netflix's AI recommendation engine, Coca-Cola's AI-driven social media analysis	Enhanced customer engagement, improved marketing ROI, real-time personalized customer experiences
HR & Talent Management	AI-based recruitment and resume screening, predictive employee performance analytics, workforce planning, AI-driven training programs	Unilever's AI-driven hiring process, IBM's AI-powered workforce analytics	Increased hiring efficiency, reduced bias in hiring, optimized workforce allocation, improved employee retention

Analysis of AI's Impact in Different Sectors

- AI in Financial Decision-Making and Risk Management

AI has revolutionized financial decision-making by improving risk management, fraud detection, and investment strategies. For instance, JPMorgan Chase employs AI-powered systems to detect fraudulent transactions by analyzing millions of data points in real time. Similarly, BlackRock, a global asset management firm, uses AI-driven portfolio management systems to optimize investments based on market trends and predictive analytics. These applications reduce human errors and enhance risk assessment, making financial institutions more secure and efficient.

- AI in Supply Chain Optimization and Operations

Supply chain management has benefited significantly from AI-driven solutions. Amazon, for example, uses AI-powered warehouse automation and demand forecasting to optimize its logistics operations. Its AI-based robotics and machine learning algorithms improve inventory management, reducing delays and operational costs. DHL also integrates AI into its logistics operations by using machine learning to optimize delivery routes, resulting in faster and more cost-effective transportation solutions.

AI in Marketing and Customer Relationship Management (CRM)

AI is transforming marketing and customer engagement strategies. Netflix's AI-driven recommendation engine analyzes user behavior to provide personalized content suggestions, increasing customer retention. Similarly, Coca-Cola leverages AI to analyze social media trends and customer sentiment, allowing the company to optimize its marketing campaigns in real-time. These AI-driven approaches improve customer engagement, enhance brand loyalty, and drive marketing efficiency.

- AI in HR and Talent Management

HR departments are increasingly using AI to improve hiring, workforce planning, and employee engagement. Unilever has implemented AI-powered recruitment processes that assess candidates based on video interviews and machine learning algorithms, reducing hiring bias and improving efficiency. IBM's AI-driven HR analytics system predicts employee performance trends and helps with workforce planning. These AI applications streamline HR operations and ensure companies attract and retain top talent.

Conclusion

Artificial Intelligence (AI) has become a transformative force in business decision-making, offering both opportunities and challenges across various industries. By leveraging AI-driven analytics, predictive modeling, and automation, businesses can enhance efficiency, reduce risks, and optimize strategic planning. AI applications in financial decision-making, supply chain management, marketing, and human resources have demonstrated significant improvements in fraud detection, logistics optimization, customer engagement, and workforce planning. The integration of AI has enabled organizations to make data-driven decisions with greater accuracy and speed, leading to increased competitiveness and operational efficiency.

However, despite its advantages, AI presents several challenges, including ethical concerns, data privacy risks, algorithmic biases, and regulatory compliance issues. Over-reliance on AI without human oversight can lead to unintended consequences, including reduced transparency and accountability in decision-making. Businesses must adopt a balanced approach, combining AI's computational power with human judgment to ensure ethical, fair, and strategic decision-making. Implementing ethical AI governance frameworks, ensuring compliance with evolving regulations, and fostering AI-human collaboration are crucial steps in mitigating these risks.

Looking ahead, AI's role in business decision-making will continue to evolve, with advancements in machine learning, explainable AI, and ethical AI governance shaping its future impact. Organizations that embrace AI responsibly, invest in AI literacy, and align AI strategies with long-term business objectives will be better positioned for sustainable growth. The key to successful AI integration lies in leveraging its capabilities while maintaining human oversight, transparency, and ethical considerations to ensure responsible AI adoption in business leadership and decision-making.

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THE ROLE OF ARTIFICIAL INTELLIGENCE IN DECISION-MAKING: OPPORTUNITIES AND RISKS FOR BUSINESS LEADERS

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Abstract. Artificial Intelligence (AI) is transforming decision-making processes across industries, offering businesses unprecedented opportunities to enhance efficiency, optimize operations, and gain competitive advantages. AI-driven analytics, machine learning algorithms, and predictive modeling enable business leaders to make data-driven decisions with greater accuracy and speed. From financial forecasting to supply chain management, AI supports strategic planning and operational execution, reducing uncertainty and human bias. However, alongside these opportunities, AI presents significant risks, including ethical concerns, data privacy issues, and the potential for biased or erroneous decision-making. The increasing reliance on AI in business decision-making raises questions about accountability, transparency, and the balance between automation and human oversight. This paper explores the dual role of AI in decision-making, examining both its transformative potential and the challenges it poses for business leaders.

Key words: Artificial Intelligence, Decision-Making, Business Strategy, Machine Learning, Predictive Analytics, Ethical Risks, Automation.