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ANALYSIS OF THE IMPACT OF ARTIFICIAL INTELLIGENCE ON ENTERPRISE MANAGEMENT MODELS AND RESEARCH ON COUNTERMEASURES

YANG KE¹, SUPERVISOR PROF. DR RAEMAH ABDULLAH HASHIM²

¹Students City University Malaysia

²DBA(UUM); MBA (Ohio U); DTA(UITM)

Head of Doctor of Business Administration

HOP DBA APEL Q

University Malaysia

raemah.hashim@city.edu.my

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ABSTRACT

This study aims to analyze the impact of artificial intelligence (AI) on enterprise management models and propose corresponding countermeasures. First, it introduces the research background and significance, clarifies the research objectives and methods. Then, it explores the impact of AI on enterprise management models, including automation and intelligent production processes, data analysis and decision support, innovation and product development, customer relationship management and marketing, as well as human resource management. Furthermore, it analyzes the challenges brought by AI to enterprise management models, including technical challenges, organizational and cultural challenges, as well as ethical and moral challenges. Subsequently, countermeasure research is proposed, covering technological development and digital transformation, talent cultivation and organizational structure adjustment, risk management and legal compliance, as well as ethical frameworks and social responsibility. Then, through case studies, the transformation of enterprise management models applying AI is explored in manufacturing, cultural industries, and financial industries. Finally, the main points and findings are summarized, and the future development direction is discussed.

INTRODUCTION

With continuous technological advancements, artificial intelligence has become a hot topic in today's society. The rapid development of AI technology has had a profound impact on enterprise management models, presenting both challenges and opportunities for traditional enterprise management. Therefore, studying the impact of AI on enterprise management models and proposing corresponding countermeasures is particularly important.

The background and significance of this study lie in a deep analysis of the impact of AI on enterprise management models, exploring the changes and challenges it brings. The purpose of this study is to provide enterprises with countermeasure suggestions to address the transformations and challenges brought by AI. Through an in-depth study of AI's impact on enterprise management models, enterprises can better grasp the development trends of AI technology, adapt to and lead the transformation of the times, and achieve sustainable development.

THE IMPACT OF ARTIFICIAL INTELLIGENCE ON ENTERPRISE MANAGEMENT MODELS

1. Automation and Intelligent Production Processes

AI technology enables enterprises to achieve automation and intelligent production. By introducing robots and automated equipment, companies can delegate heavy, repetitive, and hazardous tasks to robots, thereby reducing employee workload and safety risks while significantly improving production efficiency and workplace safety.

For example, in the manufacturing industry, robots can replace human labor for assembly, welding, and packaging, greatly enhancing production speed and product quality. AI technology enables continuous improvement of production processes and iterative product updates through production data analysis and optimization. Machine learning and deep learning allow enterprises to rapidly analyze and mine vast production data, identifying potential problems and areas for improvement. For instance, by analyzing sensor data from



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production lines, equipment failures can be detected and predicted in advance, preventing downtime and losses.

Additionally, AI technology can optimize production scheduling by comprehensively analyzing orders, inventory, transportation, and other factors to achieve optimal resource allocation. In logistics, for example, intelligent algorithms can optimize delivery routes, reducing transportation time and costs while improving customer satisfaction.

2. Data Analysis and Decision Support

AI technology can process large-scale data and extract valuable insights through machine learning and data mining techniques. These insights help enterprises understand market trends, consumer demands, and competitors' situations, allowing them to make more accurate and targeted decisions.

By building predictive models based on historical and real-time data analysis, AI can forecast market trends, sales patterns, and consumer behavior. Enterprises can use these predictions to adjust and optimize resource allocation and supply chain management, reducing risks and improving efficiency.

Moreover, AI technology can facilitate the development of automated decision-making systems, enabling intelligent adjustments and real-time optimizations of business operations and management processes.

3. Innovation and Product Development

AI provides new opportunities for enterprise innovation and product development. By processing and analyzing large-scale data, AI can deeply understand market trends, consumer needs, and user feedback. Identifying hidden patterns and correlations in big data allows companies to better seize market opportunities and develop innovative products that cater to user demands.

In product design, AI can reduce design costs and integrate cross-platform design processes. In product manufacturing, big data analysis supports intelligent product customization to meet diverse customer preferences. In product development, virtual simulation and model generation technologies enable rapid prototyping and testing, allowing for early problem identification and iterative improvements, significantly shortening the product development cycle.

4. Customer relationship Management and marketing

Artificial intelligence technology can help the Marketing Department of an enterprise to establish a customer relationship management system and effectively improve the marketing effect. By mining and analyzing large-scale customer data, we can fully understand customer preferences, needs and behavior patterns, and build a comprehensive customer information database. With data-driven customer insights, companies can better understand customer segments, optimize customer relationship management systems, implement targeted marketing campaigns, and optimize product design and service delivery. Based on the analysis of customer data, companies can also implement personalized product and service recommendations, which effectively improve customer satisfaction and loyalty. Using natural language processing and sentiment analysis technology, companies can build intelligent customer service robots to achieve intelligent customer service and communication for customers

For 24-hour online advice and support. At the same time, through the analysis of customer feedback and emotional information, enterprises can find and solve problems in time, and continuously improve the quality of products and services. In terms of marketing, with the help of artificial intelligence technology, enterprises can communicate with the market

Field marketing strategy is optimized. Through data analysis and predictive models, key competitive factors such as market demand, competitive situation and product pricing are assessed to provide decision support and strategic guidance for decision makers. At the same time, artificial intelligence marketing can also realize intelligent advertising and marketing promotion, constantly optimize marketing activities, and improve the input and output effect of marketing costs.



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5. Human Resource management

The innovation of technology also brings great influence to the enterprise human resource management. The recruitment process can be improved through automation and intelligent technology. For example, by using AI algorithms to screen resumes and match candidates, it is possible to more quickly and accurately screen out the most qualified candidates for the job. In addition, under the premise of obtaining authorization, by analyzing the candidate's social media and in

Line behavior data can further understand a candidate's skills and potential and assist HR departments in making more accurate hiring decisions.

Based on learning algorithms and data analysis, enterprises can customize personalized training content or recommend learning paths according to employees' abilities, interests and learning progress in employee training and human resource development programs. In the design of training courses, through virtual reality and augmented reality technology, immersive training experiences can be provided to help employees better master skills and cope

Complex work scenarios.

In terms of human performance evaluation and auxiliary management, by analyzing a large number of employee data and performance indicators, enterprises can obtain a more objective and accurate performance evaluation perspective and build a multi-dimensional evaluation system. In terms of the style and interpretation of performance reports, the automatic generation of performance reports and data visualization charts can help managers better understand the performance of teams and individuals, give corresponding rewards and optimize incentive measures. In terms of welfare program design, through data analysis and prediction model, enterprises can identify the needs and preferences of employees, develop personalized welfare programs, and effectively improve employee satisfaction and sense of gain.

THE CHALLENGES BROUGHT BY ARTIFICIAL INTELLIGENCE TO ENTERPRISE MANAGEMENT MODE

1. Technical challenges

The application of artificial intelligence technology requires enterprises to have the digital information foundation, deep technical ability and necessary resource investment. At the same time, the rapid development of technology also requires enterprises to continuously invest resources in technological improvement and innovation to adapt to new needs and challenges.

2. Organizational and cultural challenges

The application of artificial intelligence requires enterprises to adjust their organizational structure and culture. Companies need to establish cross-functional cooperation and communication mechanisms, train employees with AI technology, and change old ways of working and thinking.

3. Moral and ethical challenges

The widespread use of AI technology also raises some moral and ethical issues. For example, issues such as privacy protection, data security and algorithmic bias need to be addressed to ensure that AI technologies are applied in accordance with ethical guidelines and social values.

COUNTERMEASURE RESEARCH

1. Technology construction and digital transformation

Enterprises should increase the research and development and introduction of artificial intelligence technology. Through cooperation with technology companies, universities, etc., research and development centers or laboratories can be established to focus on the application of artificial intelligence technology in business management. At the same time, advanced artificial intelligence technologies and solutions can also be introduced through mergers and acquisitions or cooperation. First, companies need to build technology platforms and infrastructure to support the application of AI. Including cloud computing, big data storage and processing, distributed computing and other technologies, as well as the corresponding network and security facilities. The necessary digital infrastructure can provide powerful computing and storage capabilities for the training



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deployment of AI algorithms and models to ensure efficient operation and maintain scalability. Second, companies need to strengthen their data management and analysis capabilities to maximize the use of AI. This includes establishing a robust data management system to ensure data quality, security and compliance; Carry out data clearing

Wash, integrate and model to make data more analytical; Develop a team of data experts and analysts to improve data analysis and mining capabilities.

2. Personnel training and organizational structure adjustment

Enterprises should focus on cultivating interdisciplinary talents with artificial intelligence technology and enterprise management ability. The skills of employees can be continuously upgraded through internal training, external training courses and professional certification. It can also cooperate with universities and scientific research institutions to set up artificial intelligence laboratories or research centers to train professionals in the field of artificial intelligence.

In the recruitment process, enterprises should focus on selecting talents with AI technology background and potential, and can attract potential candidates by expanding recruitment channels and flexibly using social media and online platforms. In addition, you can also actively pay attention to the flow of talent and talent reserve in the industry, and take the initiative to recruit and introduce talent.

Enterprises should actively adjust their organizational structure, break traditional departmental barriers, and promote information sharing and collaboration. Cross-departmental teamwork can be used to set up a dedicated AI team or a cross-departmental digital transformation project team. In addition, knowledge-sharing platforms can be established to promote communication and cooperation among employees and promote innovation and the common accumulation of knowledge.

Enterprises should take the initiative to promote the change of corporate culture and create a positive, open and inclusive innovation culture. Encourage employees to come up with new ideas and try out new technologies to create an atmosphere that encourages innovation and learning. At the same time, it is necessary to strengthen the incentive and reward mechanism for employees to encourage them to actively participate in the application and innovation of artificial intelligence.

Corporate leadership should have an understanding and awareness of AI technology, and actively lead the process of digital transformation and AI application, providing clear goals and strategic direction for the team. In addition, leaders should pay attention to cultivating innovative thinking, establishing decision-making capabilities and decision-making models that match the digital system, constantly adapting to the rapidly changing market environment, and seizing market development opportunities.

3. Risk management and legal compliance

Enterprises should pay attention to the risks brought by artificial intelligence and establish a sound risk management system. Before introducing AI technology, enterprises should conduct a comprehensive risk assessment to assess possible risks to security, privacy, ethics, etc. Risk assessment and vulnerability screening can be carried out in cooperation with professional organizations. According to the evaluation results, develop the corresponding risk control measures. When collecting, storing and processing data, enterprises should comply with relevant laws and regulations and establish strict data privacy protection measures. Include explicit data

The purpose of use is to obtain user consent, adopt appropriate data encryption and desensitization technology, and establish a sound rights management mechanism.

Companies should establish a dedicated legal compliance team or department responsible for monitoring and ensuring compliance with enterprise AI applications. The compliance team shall pay timely attention to changes in relevant laws and regulations, formulate corresponding policies and operating procedures, and take necessary compliance control measures and effective actions in a timely manner. Enterprises can also actively participate in the formulation of relevant standards and norms to promote the development of self-discipline and norms in



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the industry. At the same time, it responds to regulatory requirements and cooperates with regulatory authorities to provide the necessary information and data. Companies should regularly monitor and evaluate AI systems to identify and address potential security and risk issues in a timely manner.

4. Ethical framework and social responsibility

Companies should establish clear ethical guidelines and ethical frameworks that clarify the application limits and basic principles of AI technology. This includes avoiding discriminatory decisions such as race, gender, and age, respecting user privacy and data security, and protecting human values. Companies should encourage diverse participation and opinions, and ensure broad stakeholder participation and review in the development and application of AI systems. This includes cross-sectoral collaboration, collaboration with relevant industry organizations and academia, as well as ongoing dialogue and communication channels with the public. Enterprises should assume social responsibilities, actively participate in social public welfare undertakings, and solve social problems through artificial intelligence technology support. For example, free or discounted AI services can be provided to those in need, supporting innovation in areas such as education, environmental protection, and health care, and contributing to the achievement of the Sustainable Development Goals. Enterprises should establish a sound ethical review mechanism and accountability system to ensure

AI applications comply with ethical guidelines and laws and regulations. For example, a dedicated ethics committee or consultant could be set up to regularly assess the ethical risks of AI projects and provide effective guidance and advice.

CASE ANALYSIS

The impact of artificial intelligence technology on enterprise management mode is profound, it can change the traditional production process, decision-making and customer relationship management. The following is an analysis of the actual cases encountered in the operation of enterprises, and put forward corresponding countermeasures and suggestions.

1. Manufacturing sector

Case: By introducing artificial intelligence technology, an old traditional manufacturing enterprise has realized the automation and intelligence of the production process, effectively improved the production efficiency and reduced the number of defective products, and the revenue scale and profit level have been rapidly improved. However, at the same time, some posts in the original production line were replaced by technical function modules, and redundant employees were dissatisfied with the enterprise due to temporary waiting for their posts

It affects the working enthusiasm of the staff.

Countermeasures: First, enterprises should actively communicate with employees, jointly face the problem and provide training and transfer opportunities to help them adapt to the new working environment. Second, companies can consider working with educational institutions to jointly launch training courses to upgrade the skills of their employees. In addition, enterprises can also create more jobs by expanding market share and opening up new product areas.

2. Cultural industry

Case: An Internet cultural enterprise uses artificial intelligence technology for content planning, content creation and media promotion. Relying on technical support, enterprises can plan multiple categories of products at the same time, and synchronously introduce them to the market, which has gained strong exposure and user attention. Through real-time collection of user feedback information, big data analysis and deep mining, to help enterprises adjust the direction of content creation, effectively improve the efficiency of content development and promotion accuracy. But at the same time, with the rapid expansion of content products, product quality has also been criticized, facing many problems such as content homogeneity, lack of creativity and emotional appeal of works. Countermeasures: First of all, enterprises should position AI as an auxiliary tool, led by human creators, to coordinate the planning and creation of content. Second, enterprises continue to strengthen research and development and investment in artificial intelligence technology to improve its performance in sentiment analysis, emotional computing and artistic creativity. In addition, companies can continuously inject multicultural values and innovative aesthetic experiences into their content by collaborating with cross-industry professionals



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such as artists and architects.

3. Financial sector

Case: In the upgrading of management system, a regional medium-sized bank innovatively introduced artificial intelligence technology to open up information islands and build a digital basic information platform. The new system uses artificial intelligence technology to analyze and mine customer data, provide personalized financial products and services, and effectively improve user satisfaction and user retention. But at the same time, because of the communication of information and the retention of a variety of information, use

Households have certain concerns about information security, and enterprises may also face data privacy and security risks in information management.

Countermeasures: First, strengthen data security and privacy protection measures to ensure the security and confidentiality of customer data. Secondly, enterprises can cooperate with relevant regulatory agencies and industry associations to develop corresponding management systems and industry standards to regulate the application scenarios of artificial intelligence technology. In addition, enterprises can also strengthen customers' awareness of data use through customer communication and strengthening popular science publicity, and continue to enhance brand trust.

SUMMARY AND PROSPECT

This paper systematically analyzes the influence of artificial intelligence on enterprise management mode, and puts forward corresponding countermeasures. The introduction of artificial intelligence technology has brought great opportunities and challenges to enterprise management, which requires enterprise managers to fully understand and grasp the potential of artificial intelligence technology, and actively change management concepts and ways of thinking. In the future, with the increasing development and continuous innovation of artificial intelligence technology, its

The impact on enterprise operation mode and management mode will be more profound and extensive. Therefore, enterprise managers must have a forward-looking vision, formulate strategies in advance, actively respond to challenges, and take the initiative to seize development opportunities. At the same time, it is also necessary to continue to pay attention to and solve the moral, ethical and social problems that artificial intelligence technology may bring, and ensure that the development and application of artificial intelligence technology is in line with social values and overall interests.

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