



Analysis of the Impact of Artificial Intelligence on Modern Enterprise Management

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Abstract: The report of the 20th National Congress of the Communist Party of China proposed to “accelerate the development of the digital economy, promote digital industrialization and industrial digitization, promote the deep integration of the digital economy and the real economy, and create a digital industry cluster with international competitiveness.” In this context, this article analyzes the application of artificial intelligence in decision support, talent management, security control, and other aspects. It proposes that enterprises should establish a data-driven management system, cultivate talents in the field of AI, and build intelligent management systems and other strategies. By introducing advanced AI technology and building a digital enterprise, enterprises can improve operational efficiency, enhance market insight and rapid response capabilities, and achieve high-quality development. It is highly in line with the national strategy of promoting the construction of a digital China and accelerating the development of the digital economy. Enterprises should seize the opportunity of digital transformation, utilize AI empowerment, enhance core competitiveness, and maintain a leading advantage in the era of intelligence.

Keywords: artificial intelligence, modern enterprise management, data driven, talent cultivation, intelligent system

1. Introduction

The government work report of the 2023 National People’s Congress and Chinese People’s Political Consultative Conference pointed out the need to “accelerate the implementation of the innovation driven development strategy, strengthen basic research and original innovation, and increase the support of national strategic forces for key core technology research and development.” In the new round of technological revolution and industrial transformation, artificial intelligence, as one of the key core technologies, is accelerating its deep integration with the real economy, reshaping production methods, economic structures, and business models. Currently, China is in a critical period of economic transformation and upgrading. Enterprises face many challenges, such as complex and ever-changing market environments and tightening resource constraints. The traditional management model is no longer able to meet the needs of the times. Artificial intelligence, with its high efficiency, precision, and intelligence, provides a new path and driving force for the transformation of modern enterprise management.

2. The impact of artificial intelligence on modern enterprise management

Artificial intelligence can quickly process massive amounts of data through technologies such as big data analysis and machine learning, providing enterprises with more accurate market predictions and decision support. Traditional enterprise decision-making often relies on the experience and intuition of managers, which inevitably leads to subjectivity and limitations. AI systems can comprehensively consider various internal and external factors, establish complex mathematical models, and simulate decision-making effects in different scenarios. For example, by using AI for sales forecasting, enterprises can accurately assess market demand, adjust production plans and inventory management in a timely manner, thereby improving operational efficiency and customer satisfaction. For example, AI can also help enterprises optimize pricing strategies, site planning, etc., providing scientific and efficient decision-making references for managers.

Artificial intelligence can assist enterprises in talent recruitment and employee training. Traditional human resource management often relies on the experience and judgment of HR personnel, resulting in low efficiency and significant deviations. By utilizing AI technology, the scientificity and accuracy of human resource management can be significantly improved. Through natural language processing and semantic analysis techniques, AI can efficiently screen resumes, match job requirements, and reduce the workload of HR personnel. AI systems can analyze the educational background, work experience, skills, and strengths of job seekers, quickly identify the most suitable candidates, and greatly shorten the recruitment cycle[1].

Meanwhile, AI can also optimize employee training and development. By utilizing virtual reality (VR) and augmented reality (AR) technologies, AI can provide employees with an immersive and interactive training experience. Compared

to traditional classroom teaching, VR/AR training can simulate actual work environments, allowing employees to learn operational skills and cope with unexpected situations in virtual scenes, greatly improving training effectiveness. AI can also automatically push personalized training content based on the learning progress and mastery level of employees, achieving personalized teaching.

3. Strategies for strengthening enterprise management in the context of artificial intelligence

3.1 Establishing a data-driven management system

In the era of artificial intelligence, enterprises should build a management system centered on data, fully utilize the advantages of artificial intelligence in data processing and analysis, and achieve data-driven scientific decision-making and refined management.

Enterprises need to establish a sound data governance mechanism, including clarifying the processes and standards for data collection, storage, management, and application, ensuring the accuracy, integrity, security, and compliance of data. Enterprises should establish a dedicated data management department, equipped with professional data engineers and analysts, responsible for the daily maintenance, development, and utilization of data. At the same time, it is necessary to establish a data quality monitoring and evaluation system, regularly review the effectiveness and value of data, and continuously optimize data assets.

Enterprises should actively adopt advanced data collection and processing technologies, by utilizing methods such as the Internet of Things and mobile connectivity to achieve automatic data collection and real-time transmission, and through big data platforms and cloud computing architecture to achieve efficient storage, computation, and analysis of data. Utilizing tools such as ETL and data warehouse can achieve data cleaning, integration, and management, laying the foundation for subsequent analysis. At the same time, AI algorithms such as machine learning and deep learning should be used to explore the correlation patterns and predictive trends in the data, and extract valuable business insights.

Enterprises need to integrate data analysis into various stages of business decision-making. By collecting and analyzing customer data, enterprises can gain insights into user needs, optimize product design, improve service experience, and achieve precision marketing and personalized recommendations. By analyzing market data, enterprises can grasp industry trends, predict competitive trends, discover new business opportunities, and formulate more flexible competitive strategies. By analyzing operational data, enterprises can monitor business conditions in real-time, optimize resource allocation, reduce operational costs, and improve operational efficiency and profitability.

3.2 Cultivating talents related to artificial intelligence

The development and application of artificial intelligence cannot be separated from the support of professional talents. Enterprises need to fully recognize the crucial role of talent in AI strategies and strengthen the cultivation of talents in the field of artificial intelligence, including data analysts, algorithm engineers, machine learning experts, intelligent system architects, etc. These versatile talents need to be proficient in the theoretical knowledge and programming skills of artificial intelligence, as well as have a deep understanding of industry characteristics and business needs, and be able to seamlessly integrate technology and applications. They will help enterprises better utilize artificial intelligence technology, optimize business processes, innovate products and services, and enhance core competitiveness.

Specifically, companies can take the following measures to strengthen AI talent cultivation:

(1) Collaborating with universities and research institutions to establish professional degrees or courses in artificial intelligence, and jointly cultivating AI professionals. Encouraging employees to participate in academic education and on-the-job training on artificial intelligence, and providing learning time and financial support.

(2) Establishing internal AI colleges or training centers, and developing AI training courses tailored to different positions and levels. Inviting industry experts and technical experts to give lectures, imparting cutting-edge theories and practical experience. Through online learning platforms to achieve the sharing of training resources and personalized learning.

(3) Conducting practical AI projects and competitions to provide employees with opportunities for hands-on practice. Encouraging employees from different departments and specialties to form cross-border teams and explore AI applications for practical business problems. Commending and promoting excellent projects to create an innovative atmosphere.[2]

(4) Improving the career development channels and incentive mechanisms for AI talents. Setting up job positions such as data analyst, algorithm engineer, and AI architect to provide a vertical development path. Establishing a scientific performance evaluation and compensation system to provide reasonable rewards for the contributions of AI talents and stimulate their innovation motivation.

(5) Attracting and retaining external AI talents. Providing competitive compensation and benefits, creating an open and inclusive corporate culture, and providing a platform for them to showcase their talents. Thus strengthening communication and cooperation with industry leaders and technology communities and enhancing the brand influence of enterprises in the field of AI.

To cultivate a high-quality AI talent team, enterprises need to undergo systematic changes in strategy, organization, culture, and other aspects. It is a long-term system engineering that requires a visionary vision and persistent investment. Only by placing talent strategy at the core of AI transformation can enterprises take the initiative and win development opportunities in the era of intelligence.

3.3 Building an intelligent enterprise management system

An intelligent enterprise management system is an important carrier for enterprises to achieve digital and intelligent transformation. By introducing advanced AI technology and tools, building an intelligent system that covers the entire business process and connects all aspects of management can significantly improve the operational efficiency and decision-making level of enterprises.

An intelligent management system can automatically handle a large number of repetitive and regular daily tasks, freeing up manpower and improving work efficiency. For example, intelligent financial systems can automatically perform invoice recognition, accounting processing, report generation, etc., saving financial personnel a lot of time. The intelligent personnel system can automatically calculate wages, attendance, social security, etc., reducing the error rate of manual operations. Intelligent customer service systems can utilize natural language processing technology to automatically answer common customer questions, improve response speed and service quality.[3]

An intelligent management system can provide real-time business monitoring and early warning, helping managers to timely insight into problems and optimize decision-making. For example, an intelligent production management system can collect real-time equipment operation data, use machine learning algorithms to predict equipment failures, arrange maintenance in advance, and reduce downtime losses. The intelligent logistics system can track the status of goods in real time, optimize path planning, and improve delivery efficiency. Intelligent marketing systems can analyze customer behavior in real-time, push targeted marketing content, and improve conversion rates.

An intelligent management system can utilize big data analysis and machine learning techniques to mine insights and predictive information in business data, providing reference for decision-making. For example, an intelligent sales forecasting system can comprehensively analyze historical sales data, market trends, competitive intelligence, etc., predict future sales for a period of time, and help enterprises optimize production plans and inventory management. The intelligent risk control system can analyze transaction data, user behavior, etc., build risk models, and identify potential fraud or violation behaviors. The intelligent investment decision-making system can analyze massive financial news, industry reports, and financial reports of listed companies, predict market trends, and optimize investment portfolios.[4]

Building an intelligent management system requires enterprises to plan and integrate systems in areas such as data, technology, and processes. To break through the data barriers of various business systems, establish a unified data center, and provide high-quality data support for intelligent applications, we should choose mature and reliable AI platforms and tools that are compatible with the enterprise IT architecture, and avoid duplicate construction and chimney style systems. To streamline and optimize business processes, embed AI into key processes, and achieve deep integration of business and technology. At the same time, emphasis should also be placed on the ease of use and human-computer interaction design of the system, so that intelligent technology can truly empower the business and create value for employees and customers.

4. Conclusion

Artificial intelligence is influencing every aspect of modern enterprise management at an unprecedented speed and breadth. Only by actively embracing this wave of change can enterprises stand invincible in the fierce market competition. Faced with the opportunities and challenges brought by artificial intelligence, enterprises need to assess the situation and formulate scientific development strategies. On the one hand, we need to increase investment in the field of artificial intelligence, establish a data-driven management system, and create intelligent business processes and decision-making mechanisms. On the other hand, we should attach great importance to talent cultivation and team building, introduce and cultivate a group of composite talents who understand both management and technology, and build a new working mode of human-machine collaboration and complementary advantages. Standing at the starting point of the new era, enterprises should embrace change with an open, innovative, and collaborative attitude, take artificial intelligence as their wings, ride the wind and waves, and embark on a new journey of intelligent management.

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