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THE PROCESS OF INTEGRATING ARTIFICIAL INTELLIGENCE TECHNOLOGIES INTO MODERN MANAGEMENT SYSTEMS

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This article examines the process of integrating artificial intelligence (AI) technologies into modern management systems. The implementation of AI technologies within management systems is analyzed as a crucial avenue for enhancing organizational efficiency on a global scale. The application of AI in management is explored, covering both its potential capabilities and its limitations. Conclusions are drawn regarding the capacity of AI technologies to improve management efficiency.

KEYWORDS: *Artificial Intelligence, Technologies, Management, System, Integration, Process, Global Economic Transformation, Leadership, Personnel.*

INTRODUCTION

The process of integrating artificial intelligence technologies into modern management systems is emerging as a key driving force of global economic transformation at the beginning of the 21st century. The integration of artificial intelligence (AI) into modern management systems is the process of implementing machine learning algorithms, big data analysis, and neural networks directly into business processes, CRM, ERP, and analytical platforms to automate decision-making processes.

According to the World Economic Forum, AI technologies are projected to increase global GDP by 14% over the next decade, largely through improved management efficiency. The role of AI in management theory and practice is seen not simply as a technological innovation, but as a paradigm shift in organizational behavior. This shift involves not only the automation of operational processes, but also a fundamental rethinking of strategic decision-making mechanisms.

The main stages of integrating artificial intelligence (AI) into management systems are related to data and infrastructure auditing, selection or development of an artificial intelligence model, and technical integration (APIs and modules) .

METHODOLOGY

Let's look at the step-by-step process of integrating artificial intelligence . The transition from traditional management to intelligent management consists of 5 main stages:

1. Strategic analysis and audit: Setting clear business goals (e.g., reducing logistics costs by 15 percent) and assessing the organization's existing IT infrastructure.

2. Data Engineering: AI cannot function without high-quality data. In this phase, historical data from CRM, ERP, and other management systems is collected, cleaned, and labeled.

3. Develop or select an AI solution: The organization decides whether to build a custom model itself (for example, using libraries such as TensorFlow or PyTorch) or integrate ready-made, cloud-based API solutions from major technology vendors.

4. Technical integration and testing: Connecting AI modules to existing interfaces using APIs. Testing is conducted on a small section or limited tasks to assess the accuracy of predictions.

5. Scaling and continuous learning (MLOps): Deploying the system across the entire organization, training employees to work with AI-generated prompts, and continuously retraining the model based on new incoming data.

Integrate AI services into existing corporate systems (e.g. CRM, WFM, access control systems or ERP).

The complex challenges facing modern organizations - global competition, rapidly changing market conditions, increasing customer demands and stricter regulatory requirements - clearly demonstrate the limitations of traditional management methods. In this situation, AI technologies are demonstrating their uniqueness not only as a tool for solving problems, but also as a creator of new opportunities. The main directions of AI, such as cognitive computing, machine learning and natural language processing, are proving their effectiveness at all levels of management processes - from strategic planning to operational control. At the same time, the application of these technologies also carries a number of objective limitations and

risks, which require their proper assessment and a balanced approach.

The integration of artificial intelligence (AI) technologies into modern management systems has become one of the most important directions for improving the efficiency of organizations worldwide. The use of AI in management processes not only increases the speed of data processing, but also significantly improves the quality of decision-making. Modern research shows that artificial intelligence technologies have wide application potential at all levels of organizational management - from strategic planning to operational management.[1]

The main capabilities of AI technologies in the field of management are manifested in data analysis and forecasting capabilities. The ability to work with large volumes of data (Big Data) gives the organization's management a deep understanding of market trends, customer needs and internal processes.[2] Machine learning algorithms using management systems own activity permanent accordingly optimization and study ability has This is decisions acceptance in doing error level reduces and answer to give speed increases .

Management efficiency AI in development the most important from the possibilities one is this processes automation and optimization . Robotics processes using automation (RPA) recurring tasks automatic is done , this and of employees time strategic tasks solution to do to direct opportunity gives .[3] Also , AI- based analysis systems financial reports preparation , risks assessment and resources distribution processes noticeable at the level accelerates .

Strategic AI technologies in management forecasted predictive analytics capabilities presented Through this organizations in the market changes in advance perception , competitors movements forecast and new opportunities determination ability has will be .[4] For example , customers purchase to do behavior analysis to do through demand forecast and backup amount optimization done increase It is possible . It is not only expenses reduces , maybe customers needs also high in satisfaction to efficiency to achieve help gives .

Staff AI technologies in management wide opportunities opens . Employees work activity assessment , qualifications determination and develop programs Personalization using AI effective done increase possible. From this except , in personnel choice processes optimization , the most suitable candidates determination and from work to leave probability forecast such as tasks also using AI solution will be done.

Financial in management artificial intellect technologies expenses control to make a budget planning and investment decisions acceptance in doing important role AI algorithms play. financial in the data anomalies detection , fraud behavior prevent to take and credit risk in evaluation high accuracy shows. [5]This is organizations financial stability provide and losses minimize opportunity gives .

Customers with relationships AI technologies in CRM customers needs deep analysis to do and individual approach provide opportunity Chatbots and virtual assistants available 24/7 to customers service show , queries again work and issues solution in doing effective tool This is the case . customers satisfaction level increase and service show quality to improve take is coming .

However, AI technologies in management in use one row restrictions and problems available . First in turn , data quality and existence issue AI systems efficiency directly of information quality and to the amount related . Incorrect , complete not been or outdated information based on acceptance made decisions organization to the activity negative impact to show possible .[6]

Technological restrictions are also important importance profession AI systems current to grow high level technician infrastructure, skilled personnel and big financial requires resources. Many organizations, especially small and middle business subjects this technologies complete implementation to do for enough to resources has it's not.[7] Also, AI systems complexity and them management The difficulty is serious. problem is considered.

Security and privacy issues also include AI technologies in use main from restrictions Cyberattacks , data leak output and personal of information wrong usage risks This is organizations reputation and financial to the state serious damage to deliver possible.

Ethics and social issues are also taken into account to be taken In AI systems bias problem , decision acceptance to do processes transparency lack and human factor loss such as problems This is especially true personnel management and customers with at work important importance profession will reach.

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[5]*Kozlova, E. A. (2022). Digital transformation system management: challenges and opportunities. 5(92), 123-131.*

[7]*Brynjolfsson, E., & McAfee, A. (2022). The Business of Artificial Intelligence: What it can and cannot do for your organization. Harvard Business Review, 95(7), 3-11.*

Table 1
AI technologies in management applicability - possibilities and restrictions analysis

Industry	Opportunities	Limitations
Strategic management	Predictable analysis, trend detection, competition analysis	Information uncertainty, long term forecast difficulty
Operative management	Procedures automation, real -time monitoring	Technological complexity, high expenses
Staff management	Work activity analysis, qualification evaluation , selection optimization	Ethics issues, personal information privacy
Financial management	Risk assessment, fraud definition, budget optimization	Regulatory restrictions, high accuracy demand
Customers management	Personal approach, 24/7 service , needs forecast	Human communication lack of technical errors

Government and state management level of AI technologies application separately importance profession E -government systems, social services presented to grow and state resources AI in management opportunities wide[8] However, this transparency and accountability in the industry and citizens rights protection to do issues current become remains.

AI technologies in management successful application for one row conditions execution First , the organization needs to be equipped with AI . relatively positive culture formation need. Leadership and employees this of technologies opportunities and restrictions about right to the concept has to be important. Secondly , a step-by-step approach application , that is , AI step by step current to grow strategy working exit necessary .

Information Management is also important. aspect is considered. Organizations own information right organization quality provide and safety guarantee according to systematic approach application This [9]is the AI systems effective performance for necessary condition is considered.

Artificial intellect technologies management efficiency in progress opportunities and restrictions complex analysis to do this shows that this technologies modern management paradigm inseparable part become in time although, their successful implementation many aspect and thorough requires an approach. AI 's main strength - great in size information again work , patterns determination and forecasted analysis to do ability - to organizations market to the dynamics faster adaptation and competition advantage provide opportunity However, this opportunities only information quality , technological infrastructure and human capital between balanced development only under the circumstances complete done increase It is also possible that AI systems are " black" box " problem, algorithmic bias and decision acceptance to do in the processes human of control decrease such as restrictions this of technologies critical evaluation and caution with current requires.

CONCLUSION

Conclusion as In other words, AI technologies management efficiency in progress opportunities very wide, but their right and effective application for technological, organizational and human factor aspects into account received without complex approach necessary. In the future, AI technologies further development and their management in the field application circle expansion is expected.

So artificially intelligence (SI) of modern management to systems integration to be done just technological update not, maybe management principle It is a fundamental change in itself. AI management systems human mistakes minimizes , operational mistakes eliminate will and real time in mode huge information sets again works — this human hand insufficient opportunities . AI human managers does not replace them; on the contrary, usual from tasks free. Algorithms operational control manages, this and to the management strategic planning, creative affairs and changes to manage attention focus opportunity AI integration success straight away the company digital maturity Depends. High good quality, clean and combined information database without creating any neuron network current to grow his/her own economic basis loses.

Theoretical research based on conclusion made important aspect is that AI technologies in management complete potential to come true release for human intellect and with car study between synergy based on built hybrid management models are optimal and in the future this in the direction research to deepen need that there is shows.

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