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Artificial Intelligence Research

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Abstract: *This article presents data on artificial intelligence and its application in industry.*

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Artificial intelligence is a system or machine that can simulate human behavior to perform tasks and gradually learn using the collected information. Artificial intelligence is not a format or a function; it is a process and the ability to think and analyze data. With the word "artificial intelligence", many imagine intelligent humanoid robots striving to conquer the world. However, AI is not designed to replace humans. Its purpose is to enhance human skills and abilities. This makes it a valuable business resource.

Developers use artificial intelligence to more efficiently perform tasks that would otherwise have to be performed manually, interact with customers, identify patterns and solve problems. Developers will need mathematical knowledge and the ability to use algorithms to get started with Artificial Intelligence.

According to US data, only 20% of large industrial organizations have implemented artificial intelligence, despite the fact that 83% believe that it gives excellent results.

Knowledge in this field is extremely important for the successful introduction of artificial intelligence into production. In this regard, a career in the field of artificial intelligence, along with the professions of data architects, cloud computing specialists, data engineers and machine learning engineers, is relevant and is on the rise.

According to scientists, by 2027, the artificial intelligence market in production will be worth USD 16.3 billion, increasing from 2022 to 2027 with a growth rate of 47.9% CAGR. Currently, the market is estimated at 2.3 billion US dollars.

The importance of production data is fueled by artificial intelligence, and machine learning perfectly combines with them. It is easier for machines to analyze analytical data, of which there are a lot in production. Hundreds of variables affect the production process, and although it is difficult for a person to study them, machine learning models can predict the impact of individual variables in these difficult conditions.

Robotics combined with artificial intelligence can save workers from performing highly specialized tasks. Many industrial manufacturers use intelligent technologies to reduce the cost of products, protect workers and improve efficiency.

Manufacturers can use AI to significantly reduce labor costs while increasing overall productivity and efficiency in their enterprises.

A striking example of production automation is Siemens. The company cooperates with Google* to increase the productivity of workshops through the use of computer vision, cloud analytics and artificial intelligence algorithms.

Artificial intelligence is most in demand in quality control in the manufacturing sector. Even industrial robots are capable of making mistakes. Although they are much less common than in humans, allowing defective products to come off the assembly line and be shipped to consumers can be costly.

Artificial intelligence and machine learning combine human intelligence with powerful technologies to revolutionize manufacturing operations.

For example, artificial intelligence can detect minor defects in equipment or products that robots may not notice. Products can be analyzed by AI software to automatically detect defects using hardware such as cameras and Internet of Things sensors. Then the computer can automatically make decisions about what to do with defective products.

This contributes to improving the overall product quality and productivity of the finished product. This is the main reason why many manufacturing companies today use automation based on artificial intelligence and reliable tools to detect flaws in the manufacturing process or defects in product design. Manufacturers ensure high product quality and reduced time to market by conducting extensive quality testing using artificial intelligence.

BMW Group uses automated image recognition for quality control, inspections and elimination of pseudo-defects. As a result, they have achieved a high level of production accuracy.

The European Commission estimates that up to 50% of production in some industries may be completely discontinued due to defects.

Planning and forecasting requires a higher level of complexity and sensitivity to failures. Manufacturers are now using machine learning and deep learning to reduce operations while increasing capacity. They are increasingly turning to artificial intelligence to improve the efficiency of pallet preparation and the accuracy of packaging time by eliminating scanning.

Conclusion: Thus, as a result of the study of ways to use artificial intelligence in industry, it was revealed that artificial intelligence now occupies a central place in the manufacturing industry, and its scale is growing every year. The product assembly line is being improved and computer vision-based methods are being used to scale their business. Taking into account current trends, it can be concluded that the scope of artificial intelligence will only expand in the future and new ways of using artificial intelligence in industry will appear.

References

1. Ableev S. R., Modelirocanie soznanie I iskusstvenny intelekt: predely vozmojnostey // Vestnik ekonomicheskoy bezopasnosti. 2015. №3. URL:
2. Marks. K., Engel's F. Vosemnadcatoe bryumera Lui Bonaparta // Essay. 2nd ed. T. 16, M.: Politizdat, 1960. 833 p. P.374-376.
3. Chto takoe iskusstvenny intelekt? Podrobnee ob iskusstvennom intellekte — Rejim dostupa: URL — https://www.oracle.com/cis/artificial-intelligence/what-is-ai/