



PROSPECTS OF APPLYING ARTIFICIAL INTELLIGENCE IN THE AUTOMOTIVE INDUSTRY

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Abstract: *This article describes the application of artificial intelligence in various areas of the automotive industry, its advantages and disadvantages, which are currently used in a wide range of areas and contribute to the development of a specific sphere.*

Keywords: *Artificial intelligence, sensors, red light, automatic stopping system, car parking, diagnostics.*

Introductory

Artificial Intelligence (SI) technologies have brought about revolutionary changes in several industries in recent years. The use of artificial intelligence in the automotive sector will also help make transport systems more efficient, safe and convenient. From the manufacturing process of vehicles to their control and safety, SI technology is used for a wide range.

Artificial intelligence is used in several key areas in the automotive industry:
Self-driving cars: Today, many automakers are developing automatic control systems based on artificial intelligence. These systems make it possible to drive the car independently, without human intervention. With the help of sensors, cameras, and other high-tech technologies, artificial intelligence analyzes the car's environment, ensuring safety.

Safety and Driver Assistance Systems : SI play a major role in improving the safety of the vehicle. For example, there are systems that use cameras to detect driver

fatigue or loss of focus. In addition, the cars will include "red light" systems, automatic parking systems, speed control and other safety systems.

Machine diagnostics and repair: With the help of artificial intelligence, it becomes easier to assess the technical condition of vehicles and identify possible faults. The machine will be able to monitor its performance parameters in advance and determine in advance the necessary repair or maintenance.

2. Advantages of artificial intelligence in the automotive industry

Improve safety: With the help of SI, cars reduce driver errors and continuously monitor the environment. This will allow you to quickly react to the hazards that arise on their roads, as a result of which the number of road accidents will decrease.

Increasing efficiency: Artificial intelligence will help make the movement of cars more efficient. Automatic parking systems, for example, can adjust the speed of the vehicle depending on the condition of the road, which increases the stability of the road and reduces the cost of the road.

Resource saving: Artificial intelligence in machine diagnostics and car repair can help to anticipate potential failures, and also save resources required for parts and services.

3. Further application of artificial intelligence in the automotive industry.

In the future, the growth of artificial intelligence technologies in the automotive industry is expected to accelerate further. Cars will not only have automatic control systems, but they will also have systems based on learning the driver's needs and habits. These systems will be able to better understand the driver's mental state, lifestyle, and safety needs.

Also, network systems based on artificial intelligence can be developed to improve transport infrastructure. These systems analyze vehicle and traffic data to provide the most efficient and safe roads. However, new advances in electric cars and autonomous vehicles are also contributing to the further development of the autonomous transport system.

Conclusion

The application of artificial intelligence in the automotive industry not only helps to make cars safer and more efficient, but also contributes greatly to the overall improvement of transport systems. With the development of technology, the application of artificial intelligence in the automotive industry will expand further, bringing new opportunities and challenges. This will take the future of the transport system to a new level.

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