

Research and design of an autonomous device control system for automatic obstacle avoidance and environmental incident detection.

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Abstract: This topic focuses on researching and designing a control system for autonomous devices to automate the process of obstacle avoidance and detection of environmental incidents in real-world scenarios. The goal is to improve the safety and operational performance of autonomous devices by combining machine learning methods with image recognition systems. Thereby, the topic not only has high applicability in the field of industrial automation but also contributes to environmental protection. The implementation method is based on a combination of theoretical research and practical application deployment, ensuring flexibility and effectiveness in problem-solving.

Keywords: autonomous, control system, environmental fault detection, machine learning, image recognition