

Control and monitoring of a lane-based traffic light system

Phạm Ngọc Tư

Abstract: In the modern context, effectively controlling and monitoring lane-based traffic light systems plays a crucial role in ensuring smooth traffic flow and safety for road users. This project aims to develop an automation solution based on sensors and wireless signal transmission networks to flexibly control traffic lights. The research methodology includes theoretical analysis of IoT and AI technologies, followed by experimental deployment on a real-world traffic intersection model. The expected results will contribute to improving the operational performance of urban traffic systems.

Keywords: automatic control, wireless sensors, IoT, AI, traffic monitoring