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Surveillance Car

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Abstract: A surveillance car is a vehicle equipped with advanced technology to monitor, record, and transmit data in real- time, primarily used by law enforcement, private security, and government agencies. These vehicles serve multiple purposes, including traffic monitoring, public safety enforcement, crime detection, and emergency response. Outfitted with high-resolution cameras, GPS tracking, infrared sensors, and sometimes radar or LIDAR systems, surveillance cars are capable of operating in various environmental conditions, both day and night. Many systems are integrated with artificial intelligence for facial recognition, license plate reading, and behavioral analysis to enhance situational awareness and automate threat detection. The effectiveness of surveillance cars relies heavily on connectivity and data management, with real-time transmission to command centers via secure networks. Recent advancements include the integration of machine learning algorithms to improve predictive capabilities and automate responses. However, the deployment of surveillance cars raises ethical and privacy concerns due to the extensive monitoring of public spaces. Balancing public safety with personal privacy remains a critical challenge, calling for transparent regulations and safeguards to prevent misuse.

Keywords: Arduino Uno, Bluetooth module, Sound detection sensor, IC 555 timer

