

## **Vehicle route tracking system based on vehicle registration number recognition using template matching algorithm**

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### **ABSTRACT**

Object Recognition Technology has become widely applied in various field in order to increase efficiency, security and lifestyles. One field particularly requires the utilization of such technology is for vehicle recognition system. Vehicle Recognition System provides access to information of particular vehicles whether for security or service purposes. This paper propose a vehicle route tracking system that provide recognition of vehicles and tracking of these vehicles within a network surveillance camera range. The system obtained data from cameras, conduct analysis on those data and finally can trace the route and present location of the targeted car to the user. The system utilizes a Template Matching Algorithm for recognition of the registration number and together with Global Positioning System information, a tracking system was develop. The system provide an accuracy around 80% confidence when detecting a vehicle plate number and successfully display the path of the vehicle based on the time and location of the vehicle detected.

### **KEYWORDS**

Artificial neural network; Pattern recognition; Vehicle tracking; Network camera

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