Abstract

Traffic monitoring system has now become an essential administrative part in most of the developed and developing countries. In general, such systems monitor/identify the vehicles exceeding speed limits, or monitor the vehicles crossing the stop line at red traffic signal. It may also be used for registering the vehicles getting entry in a shopping mall or in a railway station or in an airport. The key modules of these monitoring systems are: (i) localization of license plates within the image and (ii) recognizing the license number using an OCR system. The present work addresses the first module of the system. The color information of the license plate is used as the knowledge base for training an artificial neural network system using back propagation algorithm. The trained network is then used to find the potential license plate region within a new traffic image. The scheme is applied in a real life outdoor environment at some road crossings in an Indian city. The result is found to be quite satisfactory giving an accuracy of
around 80%.

Reference


Index Terms

Computer Science  
Image Processing
Key words

- RGB-HSI
- Connected component labeling
- Sobel edge detector
- Hough transform
- Back propagation algorithm