

## **Data acquisition process for intelligent traffic light using vision sensor**

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### **ABSTRACT:**

The traffic jam frequently occur in a large town and city caused by the crowd of vehicle and many traffic light within short distance. Normally, the emergency vehicle could not reach the destination during emergency due to heavy traffic. To overcome this problem, this project has been developed using vision sensor based on Camera-closed Circuit Television (CCTV) to search for emergency vehicles on the road. The existence of an emergency vehicle will be captured by CCTV and the traffic light will be controlled by the intelligent system. This paper presents the analysis of data acquisition process to determine the best position and angle to capture the video. Hence this paper show with suitable position and angle of the camera, it contribute 94% accuracy to the system.

### **KEYWORDS:**

intelligent traffic light; vision sensor; image processing.

## REFERENCES

1. Yoo, Jae Bong; Kim, Jihie; Park, Chan Young; , "Road Reservation for Fast and Safe Emergency Vehicle Response Using Ubiquitous Sensor Network," Sensor Networks, Ubiquitous, and Trustworthy Computing (SUTC), 2010 IEEE International Conference on , vol., no., pp.353-358, 7-9 June 2010.
2. Buchenscheit, A.; Schaub, F.; Kargl, F.; Weber, M.; , "A VANETbased emergency vehicle warning system," Vehicular Networking Conference (VNC), 2009 IEEE , vol., no., pp.1-8, 28-30 Oct. 2009.
3. Masters, P.H.; Lam, J.K.; Kam Wong; , "Incident detection algorithms for COMPASS—An advanced traffic management system," Vehicle Navigation and Information Systems Conference, 1991 , vol.2, no., pp. 295- 310, 20-23 Oct. 1991.
4. Mahmood, F.; AzzamulAsar; Adnan Mahmood; , "GPS and Remote Sensing for Emergency Vehicle Navigation and Communication," Advances in Space Technologies, 2006 International Conference on , vol., no., pp.33-36, 2-3 Sept. 2006.