DENSITY BASED TRAFFIC CONTROL SYSTEM

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ABOUT THE BOOK

Nowadays congestion in traffic is a serious issue. The traffic congestion can also be caused by large Red Light Delays, etc. The delay of respective light is hard coded in the traffic light and it is not dependent on traffic. Therefore, for simulating and optimizing traffic control to better accommodate this increasing demand is arises. In this mini project report the optimization of traffic light controller in a city using microcontroller is done. The system tries to reduce possibilities of traffic jams, caused by traffic lights, to an extent. The microcontroller used in the system is KL25Z. The system contains IR transmitter and IR receiver placed on the side of the roads. The IR system gets activated whenever any vehicle passes on road between IR transmitter and IR receiver. This IR sensor then sends the signal to the microcontroller that controls the traffic of that particular road by giving the green signal for more than allotted time. The traffic light is situated at a certain distance from the IR system.

In future the system can be extended for the vehicle count and controller varies the time with respect to density and the recorded vehicle count data can be used in future to analyze traffic condition at respective traffic lights connected to the system and can be used to inform people about the traffic condition.

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