

Fuzzy Signal Light Control System for Pedestrian Crossings

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ABSTRACT

In this article, we bring forward a fuzzy signal light control system for Pedestrian Crossings with the scope of minimizing delay experienced by drivers and pedestrians at signal crossings. Here, we use a fuzzy logic system to input the number of waiting pedestrians and the vehicle flow rate to determine the pedestrian waiting time before the red light is lit. To determine the number of waiting pedestrians and the vehicle flow, image processing techniques are used. The results show higher accuracy in the pedestrian detection while the determined vehicle flow rate highly correlates with the real data. The main advantage of this system is its speed, and the pedestrian detection is done using a single image thus this system can be applied to any crossing independent of the background.