Density-Based Traffic Control Using Machine Learning

Shubham Shivaji Shidore, Amol Gorakhnath Shejul, Rike Yash Deepak
Department of Computer Science and Design Engineering
Dr. Vithalrao Vikhe Patil College of Engineering

Abstract: *The project is designed to develop a density-based dynamic traffic signal system. The signal timing changes automatically on sensing the traffic density at the junction. Traffic congestion is a severe problem in many major cities across the world and it has become a nightmare for the commuters in these cities. Conventional traffic light system is based on a fixed time concept allotted to each side of the junction which cannot be varied as per varying traffic density. Junction timings allotted are fixed. Sometimes higher traffic density at one side of the junction demands longer green time as compared to standard allotted time. The object detection in the traffic signal is processed and converted into a simulator then its threshold is calculated based on which the contour has been drawn in order to calculate the number of vehicles present in the area. After calculating the number of vehicles, we will come to know on which side the density is high based on which signals will be allotted for a particular side..*

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