Project ID: PW21RBA03

Project Title: Automated Traffic Lights Control and Violation Detection System

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Project Abstract: The density of vehicles on roads is rapidly increasing which has given rise to problems like accidents, traffic, and bottlenecks. As we all know, traffic lights can only be controlled by advanced technologies as it requires a lot of surveillance and monitoring to control the traffic. Due to the large number of these traffic signals it is impossible to monitor all of them. Hence, we need to make an automated traffic light system that enables the flow of traffic as and when required by it. To help traffic policemen solve this problem, we need an automated system which can at the very least help the policeman and the government to curb this problem. We propose to build a system which can monitor and report potential violations. The basic methodology of our project is that we use image processing techniques for all the image recognition and measurement, the density of vehicles, speed of vehicles can be computed. Capturing images of moving vehicles can also be done.

Code Execution: For backend part – run $python apis.py
For frontend part - host CSS and HTML files in "htdocs" folder of XAMPP server.
Upload the videos in "home" folder for automation and in "resources" folder for violation.
Click on any of the four categories that are present on website to execute particular feature.