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Hardware Based Driver Drowsiness Detection System

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Abstract: *Most of the road accidents occurred at the night are caused because of a sleepy or semi-conscious driver. This leads to risking the life of passengers and traffic. In road travel drivers are the most responsible part of the traffic, they are not just responsible for their own life but also for passengers and fellow traffic as well. So, to make sure that there are no such accidents we need a reliable system within the car itself to make sure the driver is not sleepy or at least he/she should be aware of his/her fatigue before risking the life of passengers. So to overcome these problems we are making a system called Driver drowsiness detection system. It will be a safety technology that will prevent accidents that are caused by drivers who fell asleep while driving or felt unconscious. In this system, we will be using Open CV for gathering the live feed of the driver's face and converting the data from the feed into a two-dimensional array using facial landmarks. Then the local binary pattern will compare the template data set and the data set from the live feed and will determine whether the eyes are closed or not. The buzzer will alert the driver by triggering the alarm or waking him up to prevent accidents.*

Keywords: OpenCV, Facial Landmark, Local Binary Pattern, Buzzer

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