IMPLEMENTATION OF VIOLA JONE'S ALGORITHM TO EYE BALL TRACKING FOR DROWSINESS DETECTION TO PREVENT ACCIDENTS

A Project report submitted to Jawaharlal Nehru Technological University, GV

in the partial fulfillment of the requirements for the award of degree of

BACHELOR OF TECHNOLOGY

In

ELECTRONICS AND COMMUNICATION ENGINEERING

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CERTIFICATE

This is to certify that the project entitled "**IMPLEMENTATION OF VIOLA JONE'S ALGORITHM TO EYEBALL TRACKING FOR DROWSINESS DETECTION TO PREVENT ACCIDENTS** " is being submitted for the partial fulfillment of requirements for the award Bachelor of Technology in Electronics & Communication Engineering is a bonafide work done by **B. TULASI (20811A0415), M. PAVAN KUMAR (20811A0444), M. PAVALLIKA (20811A0443), B. UDAY KAMAL (20811A0408)** of under my guidance during 2023-2024 and it has been found suitable for acceptance according to the requirements of the University.

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ABSTRACT

Worldwide, drivers are increasingly being blamed for fatal auto accidents. Though it can also be brought on by substance abuse, untreated sleep disorders, or irregular work schedules, this usually happens as a result of inadequate sleep. Cars must therefore have systems in place to keep an eye on, and verify the identification of the people operating them. Which includes head posture, eye movement, and eye health should all be considered. By monitoring the amount of times a driver blinks his or her eyes, this study suggests a technique for determining when a driver is tired. A prolonged amount of time when the driver closes his eyes will trigger an alert. In order to make sure the driver is making an attempt to prevent falling asleep behind the wheel, if the driver is seen to be dozing off more frequently than a few times. The outcomes of the article on Deep Learning technology show how well the system performs in detecting driver weariness and in order to lower the amount of accidents that happen while driving. The system utilizes a Viola Jones basis algorithm for accurate detection of human face with inbuilt camera mounted. The outcomes of this paper on deep learning technology show how well the system performs in detecting driver weariness and lowering the frequency of accidents that happen while driving.

Keywords: Driver Drowsiness Detection, deep learning, Viola Jones, face detection. web camera, MATLAB module.