## IJARSCT



## International Journal of Advanced Research in Science, Communication and Technology (IJARSCT)

International Open-Access, Double-Blind, Peer-Reviewed, Refereed, Multidisciplinary Online Journal

Volume 3, Issue 14, May 2023

## **Driver Drowsiness Detection System**

Yash Patil<sup>1</sup>, Pratham Mirgunde<sup>2</sup>, Omkar Kulkarni<sup>3</sup>

<sup>1, 2, 3</sup>Department of Electronics and Telecommunication Engineering JSPM's JayawantraoSawant college of Engineering, Hadapsar, Pune, India

Abstract: Fatigue and drowsiness are mainly leading causes of the accidents occurs on highways. The one of the effective solution to prevent this problem is detecting the drowsiness and alerting the driver. So in this project, we have thought of building a driver drowsiness detection system for drivers using raspberry pi, led, lcd and buzzer. In addition we have also used IR sensor and Vibration Sensor in the project. The basic purpose of this system is to track ,locate and analyse the driver face ,eyes and check whether the driver is drowsy .If the driver feeling drowsy ,then the system will trigger a warning message using a buzzer ,LED will be on and "Driver is sleeping" message will be displayed on LCD .We have used LED and LCD to alert the drivers who are driving the vehicle behind the vehicle in which driver is sleeping .In this project we have used Vibration sensor for accident detection.

Keywords: Raspberry pi, Camera, IR Sensor, Lcd

## REFERENCES

- [1]. B.Mohana, C.M.Sheela Rani, "Drowsiness Detection Based on EyeClosure and Yawning Detection", in International Research Journal ofEngineering and Technology(IRJET), 2019.
- [2]. AdityaRanjan, Karan Vyas, SujayGhadge, Siddharth Patel, SuvarnaSanjay Pawar, "Driver Drowsiness Detection System Using ComputerVision.", in International Research Journal of Engineering andTechnology(IRJET), 2020.
- [3]. Chris Schwarz, John Gaspar, Thomas Miller & Reza Yousefian, "Thedetection of drowsiness using a driver monitoring system", in Journal of Traffic Injury Prevention (Taylor and Francis Online), 2019.
- [4]. Jessen Joseph Leo., R. Monisha., et.al. : Vehicle movement control andaccident avoidance in hilly track, IEEE Int. Conf. on Electronics andCommunication Systems (ICECS).pp. 1-5(2014).
- [5]. Effect of driving duration and partial sleep deprivation on subsequent alertness and performance of car drivers. Otmani S, Pebayle T, Roge J, Muzet A. 2005.
- [6]. Effects of partial and total sleep deprivation on driving performance. Peters R.D., Wagner E., Alicandri E., Fox J.E., Thomas M.L., Thorne D.R., Sing H.C., Balwinski S.M. 1999.
- [7]. Jasper S. Wijnands, Jason Thompson, Kerry A. Nice, Gideon D. P. Aschwanden& Mark Stevenson, "Real-time monitoring of driverdrowsiness on mobile platforms using 3D neural networks", NeuralComputing and Applications, 2019.
- [8]. Rahul AtulBhope, "Computer Vision based drowsiness detection for motorized vehicles with Web Push Notifications", IEEE 4<sup>th</sup>International Conference on Internet of Things, IEEE, Ghaziabad,India, 2019.

