Bahria University
Discovering Knowledge

FINAL YEAR PROJECT REPORT

DRIVER DROWSINESS DETECTIN SYSTEM

By

ABDUL RAUF (43854)

YAHYA WASIM (43849)

HADIQA FATIMA (43861)

SUPERVISED BY

(DR. HUMERA FAROOQ)

BAHRIA UNIVERSITY (KARACHI CAMPUS)

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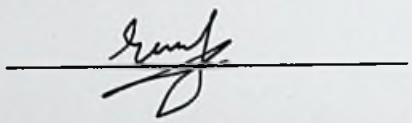
DECLARATION

We hereby declare that this project report is based on our original work except for citations and quotations which have been duly acknowledged. We also declare that it has not been previously and concurrently submitted for any other degree or award at Bahria University or other institutions.

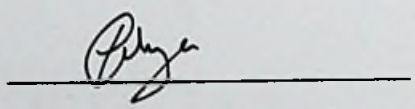
Name : Abdul Rauf

Reg No. : 43854

Signature : 

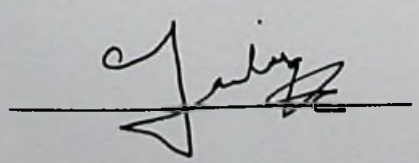
Name : Yahya Wasim

Reg No. : 43849

Signature : 

Name : Hadiqa Fatima

Reg No. : 43861

Date : 

APPROVAL FOR SUBMISSION

We certify that this project report entitled **"DRIVER DROWSINESS DETEECTION USING EEG SIGNALS"** was prepared by **Abdul Rauf, Hadiqa Fatima & Yahya Wasim** have met the required standard for submission in partial fulfilment of the requirements for the award of Bachelor of Information Technology (Honours) at Bahria University.

Approved by,

Supervisor : Ms. Humera Farooq

Signature : _____

Date : 11/2/2020

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DRIVER DROWSINESS DETECTION USING EEG

ABSTRACT

Road accidents are quickly expanding in various countries. Among numerous different elements, sleepiness is playing a significant role in these accidents. As indicated by the World Health Organization (WHO), 1.24 million individuals were executed in street road accidents in 2010 and by 2030 street mishaps will turn into the fifth significant reason for death (World Health Organization, 2013). Every year, around 20 to 50 million individuals endure non-lethal wounds because of road accidents. Just in Asia, these mishaps cause loss of $20 billion every year. Therefore, there is a need of system to be build up that will identify and inform a driver of his terrible psychophysical condition which keeps away from different road accidents created by drowsy driving. The proposed system is to use to detect driver drowsiness by analysing EEG (electroencephalogram) signals of the driver. Drivers' drowsiness is one of the main causes of car accidents. Before this Wireless and wearable EEG sensors such as eye blink (used to calculate eye-blink rate) and biomedical sensors (to calculate brain waves or pulse rates) we can detect drowsiness. Among every one of them EEG is the safest idea or approach to determine the sleepiness of drivers. A few known drowsiness systems use cameras or other optical sensors to distinguish a picture of the driver's face to dissect eyelid developments for indications of tiredness. Optical sensors may get covered by dirt. Besides, they might be insufficient when the driver is wearing eyeglasses or shades. Different gadgets which are to be worn by drivers during driving are wrist lashes, collars, headbands, glasses, and different gadgets. These reason inconvenience and there is no assurance that the driver will wear any of these gadgets. Among every one of them EEG is demonstrated to be protected and dependable.

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