

Drowsiness Detection System

Status: Filled

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Project Description

Drowsiness is defined as a state of impaired awareness or decreased level of consciousness, which is related to a desire or inclination to sleep and the difficulty in remaining alert. It is considered one of the leading causes of vehicle accidents, causing economic as well as health or life losses – particularly when it comes to industries such as the transportation and mining. Hence, there is a need to detect and monitor operator drowsiness real-time and remotely. Physiological based drowsiness detection method is a reliable approach that may be implemented through the application of wearable devices. Hence, our ultimate aim in this study is to design a non-invasive and cost-effective wearable EEG system to collect brain activity. In this work, we look at the application of wearable technology to detect driver drowsiness for mining truck operators.

Project Main Objective(s):

The main objective of this capstone project is to design and implement an integrated communication system that features:

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- A Bluetooth communication channel
- A mobile app that is updated in real-time with the captured data
- A HMI (Human Machine Interface) and webpage that is updated in real time with the captured data
- A data base system for report and analyzing captured data

Industry Contact Information:

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