

Individual Project Contribution Report

IOT based smart drowsiness detection and notification system

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Project Group No.-Ecsc-44

Abstract: This project presents an design to improve driver safety through real-time monitoring. Leveraging machine learning algorithms, it accurately detects drowsiness indicators like eye closure, providing immediate alerts to prevent fatigue-related accidents. With over 90% detection accuracy and a user-friendly interface, this technology significantly enhances road safety and serves as a vital tool for future transportation systems.

Individual contribution and findings: Designed and assembled the hardware setup, carefully selecting sensors and microcontrollers for optimal performance. Ensured hardware compatibility with the software by conducting integration tests. Developed hardware schematic diagrams and assembly instructions for future reference. Assisted in troubleshooting and refining hardware components based on test results.

Individual contribution to project report preparation: Provided detailed descriptions and diagrams for the hardware components, including sensor selection, circuit design, and assembly processes. Authored the hardware section of the report, documenting the hardware testing procedures, challenges faced, and performance evaluations. Assisted in creating visual representations like hardware schematics and technical illustrations for the report.

Individual contribution for project presentation and demonstration: Handled the live demonstration of the hardware components, explaining the selection of sensors, microcontrollers, and the overall hardware architecture. Showcased the assembly and functionality of the system in real-time, focusing on how hardware interacts with the software to detect drowsiness. Answered technical questions related to hardware design and performance during the Q&A session.

Full Signature of Supervisor/s:

Full signature of the student:

A handwritten signature in black ink that reads "Tanmay Singh". The signature is written in a cursive, flowing style with a large initial 'T' and 'S'.