A
Report
on Semester Project-II
Anti-Sleep Alarm for Drivers

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CERTIFICATE

This is to certify that semester progress report-I on project entitled ***"Anti- Sleep Alarm for Drivers"****, being submitted by* ***Chavan Om Ramkrushna, Badgujar Jayesh Satish, Pardeshi Shubham Sunil*** *to Dr. Babasaheb Ambedkar Technological University, Lonere for the fulfilment of Semester Project - I Term Work, is a record of bonafide work carried out by them under my supervision and guidance during year 2021-2022.*

Date:
Place: Shirpur

Project Guide **Head of Department**

Abstract

Nowadays there has been a very large increase in road accident due to drowsiness of driver while driving which leads to enormous fatal accidents .The driver lose his control when he falls sleep which leads to accident .This is because when the driver is not able to control his vehicle at very high speed on the road. Driver in-alertness is a very important cause for many accident associated with the vehicles crashes. Driver fatigue ensuing from sleep deprivation or sleep disorders is a very important think about the increasing variety of the accidents on today's roads. Drowsy driver warning system will type the premise of the system to presumably cut back the accidents associated with driver's temporary state. This project will generate a model which may stop such accidents. To prevent this, we outlined a very simple and economical system which deals with this issue. In this project, when a driver falling asleep, an alarm is raised to warn the driver attached to the rear of the vehicle. The alarm continues for a minimum of 10 seconds so that the driver wakes and get ready to steady the vehicle he drives. Thus we can control the major accidents.

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Chapter 1

Introduction

In modern-times, owing to hectic schedules it becomes very difficult to remain active all the time. Everyone knows about the alarms that abruptly wake us from our slumbers each morning, but have you heard of alarms that can keep us awake while we're driving? We present - the Anti-sleep alarm. Anti-sleep alarm is an application to keep car drivers awake. Although it was designed for car drivers, it can also be used in any other situation where you need to stay awake.

Chapter 2

Literature Survey

This literature review of road safety in Africa has been organized by the main road safety sectors. South Africa's references were provided by TRL's local counterpart, the Centre for Scientific and Industrial Research (CSIR) in South Africa and they are included at the end of each section. This avoided the risk of the road safety work in South Africa overwhelming the rest of the region's efforts. The first source for the literature review was the IRRD database which contains references from over 30 institutes and organizations from 25 countries and includes references in English, German, Spanish and French. IRRD is reported to receive approximately 10,000 references each year and is updated on a monthly basis. The literature review was limited to those references published in the past decade and it was decided not to include the 1989 Second African Road Safety Conference. A few key older reports were included, such as UNECA's 1989 Road Safety manual on Low Cost Engineering Countermeasures which remains a practical reference. Articles were also identified from Conference Proceedings, including that of the 1997 Third African Road Safety Congress, TRL project files and from the personal libraries of colleagues.

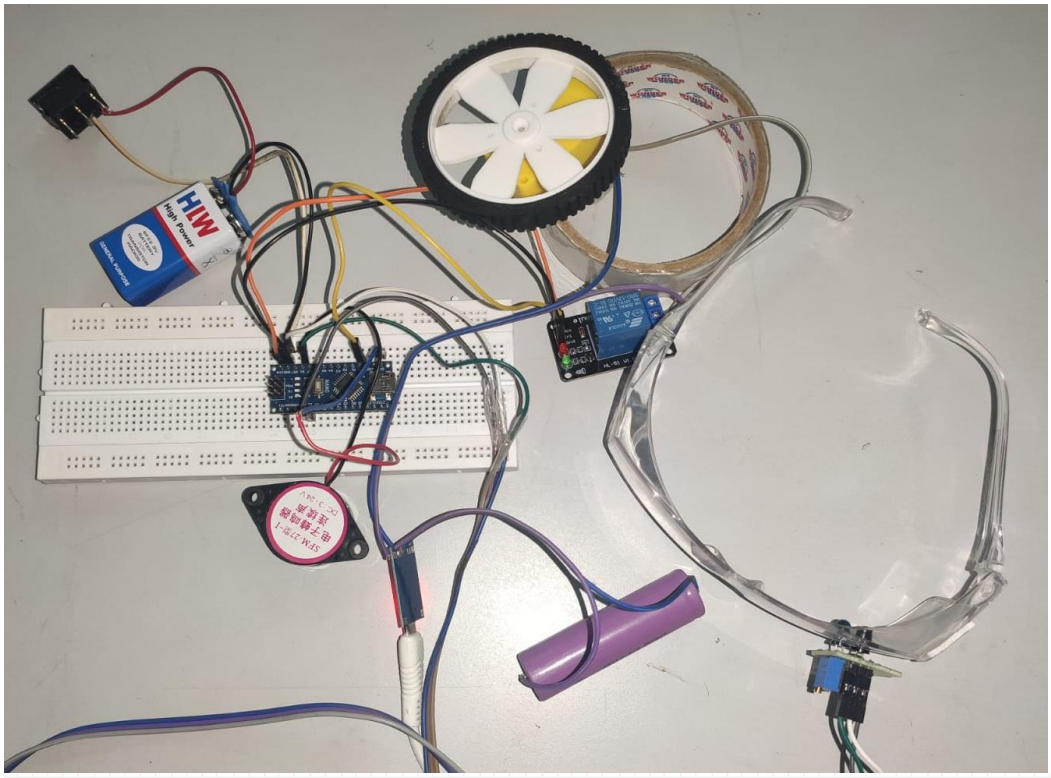
Chapter 3

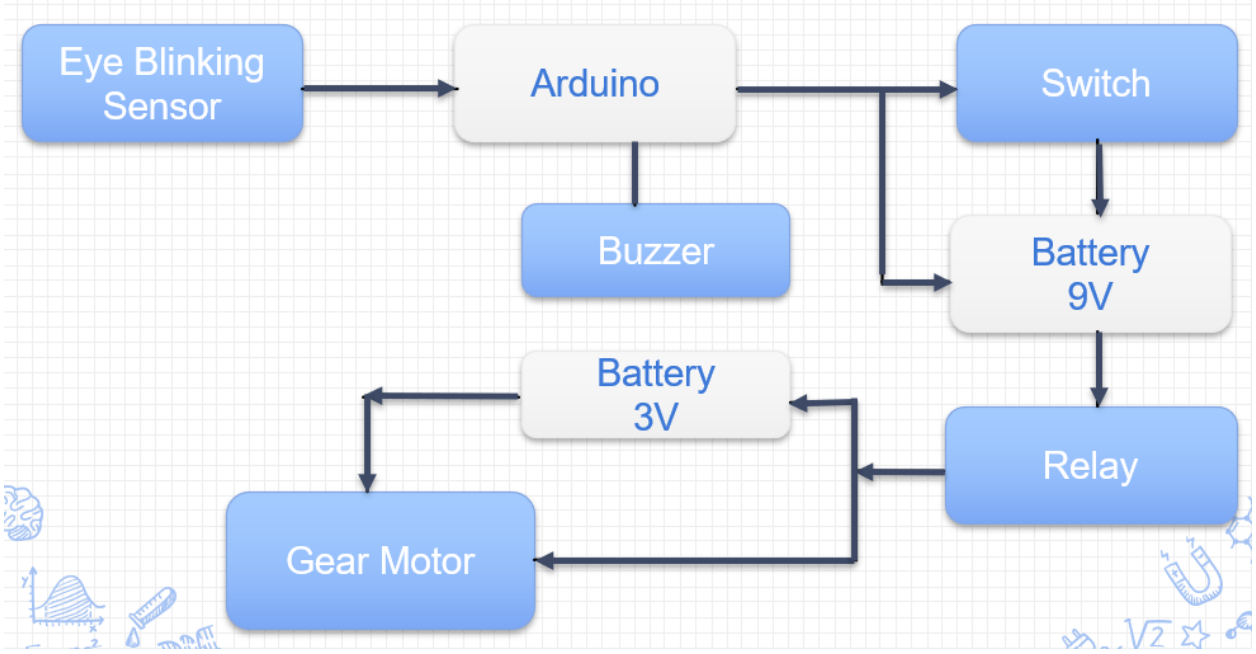
Theory

Our safety is the first priority while travelling or driving. One mistake of the driver can lead to severe physical injuries, deaths and significant economic losses. Nowadays there are many systems available in market like navigation systems, various sensors etc. to make driver's work easy. There are various reasons especially human errors which gives rises to the road accidents. Reports say that there is a huge increment in the road accidents in our country since last few years. The main reason occurring from the highway accidents is the drowsiness and sleepiness of driver while driving. It is a necessary step to come with an efficient technique to detect drowsiness as soon as driver feels sleepy. This could save large number of accidents to occur. We conduct the survey on various designs on drowsiness detection methods to reduce the accidents.

Chapter 4

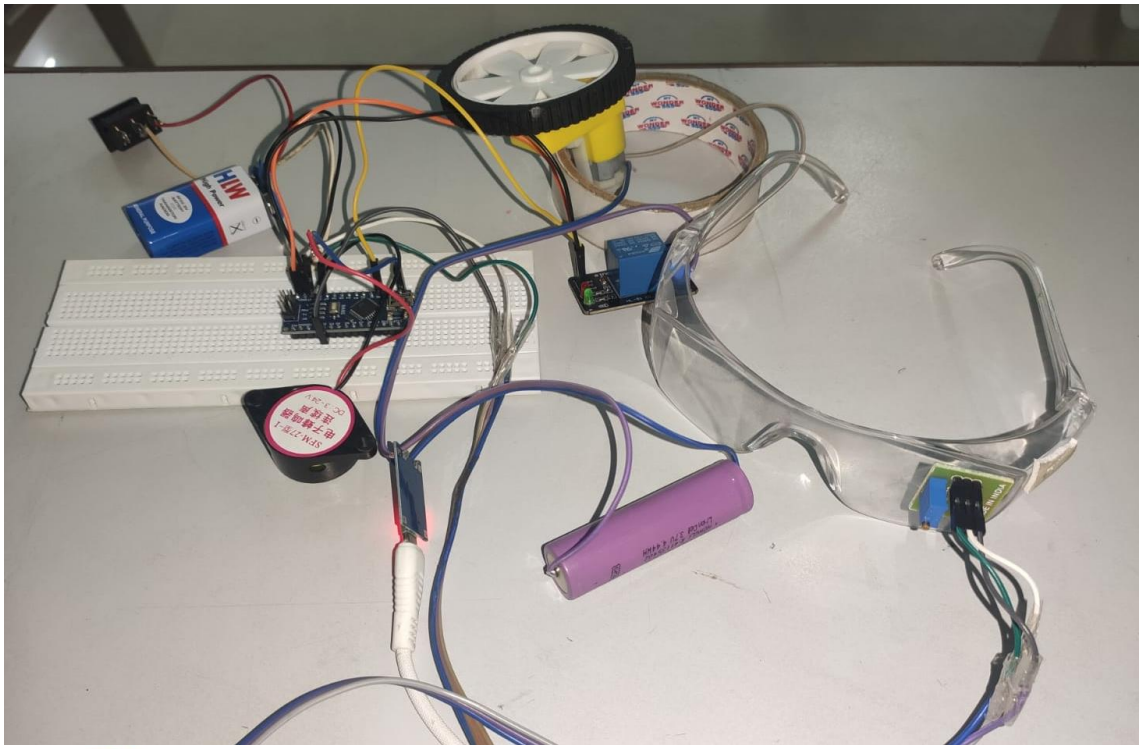
Implementation Details

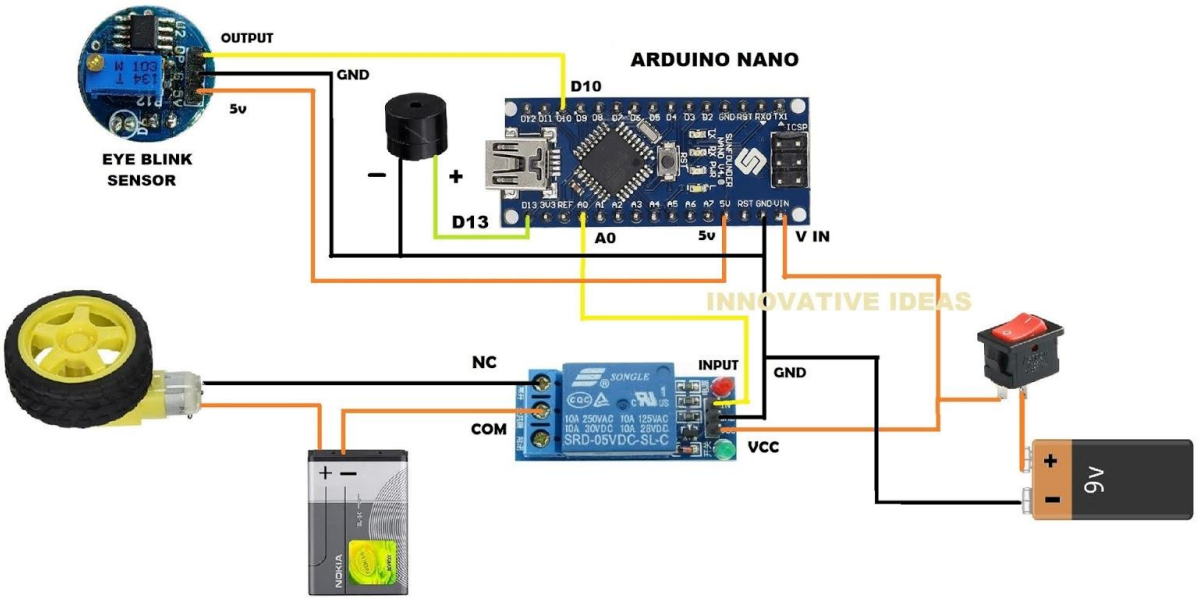




Chapter 5

Project Outcomes





Chapter 6

Conclusion

The Eye portion extraction is smooth and in real time with no delays on the computer. In addition, there is a bonus function in the software part – detection with glasses. To accept responsibility in making decisions consistent with the safety, health, and welfare of the public, and to disclose promptly factors that might endanger the public or the environment ; By using our Driver Sleep Detection and Alarming System, customers would be warned when his/her physical condition is not good enough for driving and thus to improve the understanding of technology; its appropriate application, and potential consequences; By using OpenCV and related libraries, we try to develop and improve algorithm for eye closeness detecting. We then apply this technology to our application in order to help drivers achieve a better and safer driving condition. The classification accuracy of this call tree classifier was reported to be eighty seven.47%. Chang and Wang (2006) applied non-parametric classification tree techniques to analyze accident data from the year 2001 for Taipei, Taiwan. A CART model was developed to determine the link between injury severity and driver/vehicle characteristics, highway/environment variables, and accident variables. The most important variable associated with crash severity was the vehicle type, with pedestrians, motor cycles, and bicyclists having the highest injury risks of all driver types in the Transfusing one clustering (Simple Means) and three classification (J48, naïve Bayes, and One R) algorithms, Srisuriyachai (Srisuriyachai 2007) analyzed road traffic accidents in the Akhenaton province of Bangkok. Considering the descriptive nature of the results and classification performance, the J48 algorithm was sufficiently useful and reliable. The outcome of the analysis was traffic accident profiles, which the author presented as a useful tool for evaluating RTAs in Akhenaton.

References

[1] Mr. Sarvesh Thaware, Mr. Nilesh Pathare, Mr. Prasad Mane, Mrs. Saniya Ansari, "Accident prevention and automatic speed control using eye blinking head movement and alcohol detection", Journal of Research in Engineering and Technology, vol. 3, no. 3, pp. 994-998, 2016.

[2] Google.com

[3] https://en.wikipedia.org/w/index.php?title=Special:Search&search=eye+blinking+sensor&fulltext=1&profile=default&ns0=1