A Minor Project Report

On

FOOTBOARD ACCIDENT PREVENTION SYSTEM
Submitted in partial fulfilment of requirements for the award of the Degree of

BACHELOR OF TECHNOLOGY
in
ARTIFICIAL INTELLIGENCE AND DATA SCIENCE

Under the guidance of

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BONAFIDE CERTIFICATE

Certified that this project report "FOOTBOARD ACCIDENT PEVENTION SYSTEM" is the bonfire work of "ASWIN SIDHARTH V S (927621BAD005), DHARANI DHARAN R (927621BAD009), SANJAY S (927621BAD044) ,THANISH SURIYA T (927621BAD058)who carried out the minor project work during the academic year 2023 under our supervision. Certified further, that to the best of our knowledge the work reported herein does not form part of any other minor project report or dissertation on the basis of which a degree or award was conferred on an earlier occasion on this or any other candidate.

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ABSTRACT

Public transportation systems play a crucial role in urban mobility, providing a cost-effective and sustainable means of commuting for millions of people. However, accidents related to passengers riding on the footboard of moving vehicles pose a significant safety concern. This project aims to design and implement a Footboard Accident Prevention System (FAPS) to enhance the safety of passengers during their journey.

The Footboard Accident Prevention System employs a combination of sensors, actuators, and intelligent algorithms to detect and mitigate potential accidents involving passengers on the footboard. The system integrates cameras and proximity sensors to continuously monitor the exterior of the vehicle, identifying instances where passengers are in unsafe positions on the footboard. Advanced computer vision algorithms analyze real-time footage to distinguish between safe and hazardous footboard conditions.

Upon detecting a potential safety risk, the system activates a series of preventive measures. These measures may include audible warnings to the passenger, alerts to the vehicle operator, and automated interventions such as slowing down the vehicle or activating safety barriers to prevent accidents. The system's responsiveness and precision are crucial to ensuring effective accident prevention without causing unnecessary disruptions to the transportation service.

CONCLUSION

The project successfully demonstrated the technical feasibility of developing a system to prevent footboard accidents.

The chosen components (sensors, controllers, actuators) functioned as intended and achieved the desired outcome.

Further optimization and testing are recommended to enhance performance and reliability.