

## ABSTRACT

The proposed project is a Passenger Vehicle Master Control System that leverages IoT technology to count the number of passengers boarding and exiting a vehicle, monitor the location of the vehicle, and provide real-time alerts in case of emergencies. This system utilizes RFID tags, readers, and an IoT gateway, and is enhanced with a GPS module and a gyroscope sensor for accident detection. Additionally, a mobile application is used to analyze the data collected by the system. The motivation for this project is to improve passenger safety and prevent overcrowding in vehicles. The objective is to design and implement a scalable and efficient system that can accurately count passengers and monitor the location of the vehicle. The scope of the project includes hardware design, software development. The benefits of this system include improved passenger safety, increased efficiency in managing vehicle occupancy, and potential applications in institutional settings. Overall, the Passenger Vehicle Master Control System has the potential to revolutionize the way we monitor passenger transportation and improve safety for all.