PROJECT TITLE: ACCIDENT PRONE AREA ALERT SYS **TEM**

ABSTRACT

In this era of rapid growth of vehicles, the ratio of Road accidents increases day by day. Nowadays, Traffic incidents are persistent problems in both developed and developing countries which result in huge loss of life and property.

Accidents occur due to many reasons mainly overspeed,bad road conditions,sudden turns,heavy traffic junctions.These accidents can be minimized upto an extent by alerting the people to slow down the vehicle speed whenever they are about to approach a accident zone.

This project is an innovative solution to minimize the road accidents by sending alert messages to people who are heading towards an accident zone through an mobile application.This helps people to know about the accident zone and slow down the vehicle and be able to avoid the accident.

A mobile application built using **react native** and **javascript** is used to retrieve the current location of the vehicle by **GPS** and gets the nearby accident zone coordinates from a **firebase** realtime database(nosql) which stores the locations of various accident zones in the form of coordinates(latitude,longitude) to send alerts.

The application uses **GPS** technology for location mapping and sends alerts whenever a vehicle is about to enter into an accident zone.Accident zones are determined by clustering the coordinates(latitude,longitude) of accident prone areas or most probable accident happening areas plotted on a map.This can be performed by **unsupervised machine learning clustering** techniques like **DBSCAN.**

In this way this mobile application can be used to avoid the accidents upto an extent by alerting the person about the accident zone.