**Project Report**

On

**Automatic Accident Detection and Rescue Management System**

*Submitted*

*In partial fulfilment*

*For the award of Degree of*

**PG Diploma in Embedded Systems and Design**

**(PG-DESD)**

**(C-DAC, ACTS (Pune))**

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## **Abstract**

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## **Introduction**

**1.1 Introduction**

The constant improvement of technology, population and economy is leading to expansion of human civilization in search of better prospects. As expected an implosion of transportation system is observed and managed everyday. These increment in number of vehicles on road, air or sea result in increased chance of vehicular accidents [1][2].

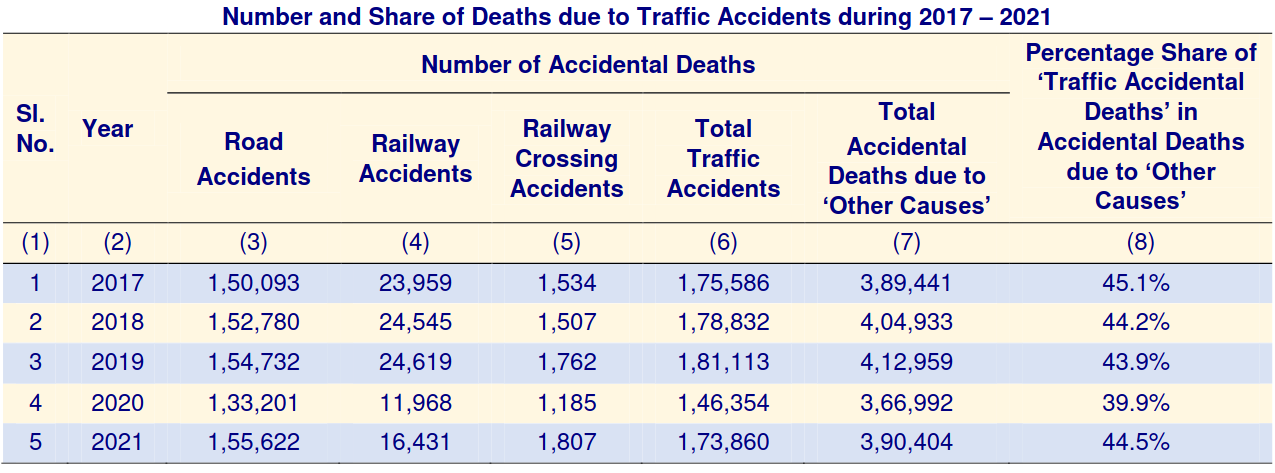
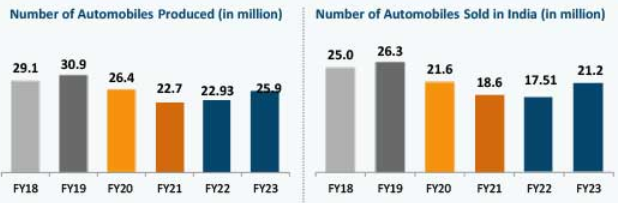
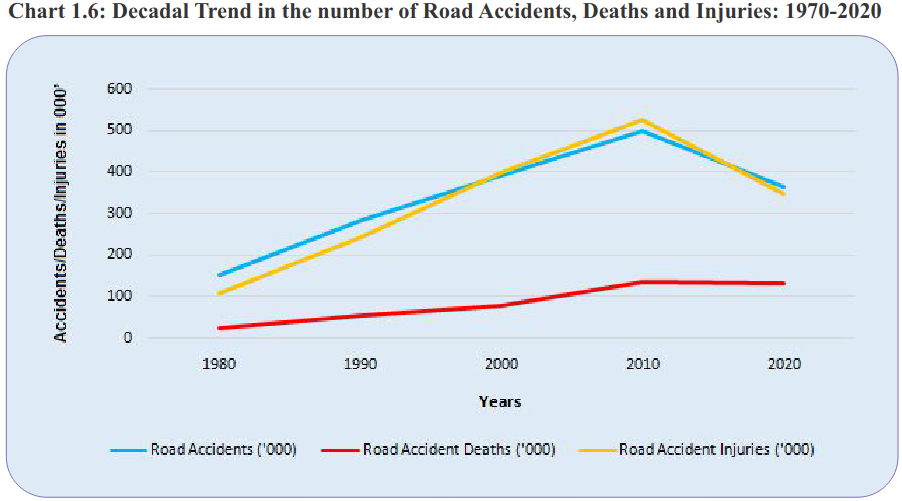
Figure 1 Rise of accidents according to National Crime Records Bureau of India

Figure 2 Rise in vehicles in India according to India Brand Equity Foundation

The accidents must be reported immediately in order to provide quick and proper medical assistance. There is also a rise in unreported accidents and undocumented amounts of property damage [3].

Figure 3 Rise in vehicular accident related deaths according to Ministry of Road Transport and Highways

**1.2 Objective and specification**

**Objective:**

The objective of our project are:

1. Detect accidents as quickly as possible.

2. Have minimum false detection.

3. Immediately message the current location and call for help.

**Specification:**

Components: 1x ESP32-WROOM-32

1x MPU-6050

1x SIM900A

1x HCSR-04

1x BH1750

1x Buzzer

1x Display

1x Piezoelectric crystal

OS: FreeRTOS

Protocol: MQTT

UART

**Literature Review**

[1]https://ncrb.gov.in/sites/default/files/ADSI-2021/adsi2021\_Chapter-1A-Traffic-Accidents.pdf :

This Report states the record of rise of accidents by National Crime Records Bureau of India. There is increment in recorded number of vehicular accidents as years pass, 2020 being outlier due to COVID-19 pandemic

[2] https://www.ibef.org/uploads/industry/Infrographics/large/automobile-infographic-may-2023.pdf

This report records rise in vehicles sales in India according to India Brand Equity Foundation. There exists a constant rise in number

[3] https://morth.nic.in/sites/default/files/RA\_2021\_Compressed.pdf

**Methodology/Techniques**

**3.1 Approach and Methodology/ Techniques**

**3.2 x preparation**

**3.3 x preparation**

**Implementation**

**4.1 Implementation**

**4.2 Flow Chart Of Application**

**Results**

**5.1 Results**

**Conclusion**

**6. Conclusion**

**References**

**7.1 References**

[1] https://ncrb.gov.in/sites/default/files/ADSI-2021/adsi2021\_Chapter-1A-Traffic-Accidents.pdf

[2] https://www.ibef.org/uploads/industry/Infrographics/large/automobile-infographic-may-2023.pdf

[3] https://morth.nic.in/sites/default/files/RA\_2021\_Compressed.pdf