

microcontroller based overload detection and control model in vehicles

MICRO-CONTROLLER BASED MODEL FOR OVERLOAD DETECTION AND CONTROL IN VEHICLES

1.0 Background of the study.

Throughout the world, roads are shared by cars, buses, trucks, motorcycles, pedestrians, animals, taxis, and other travelers. Road traffic injuries cause 1.3 million deaths and up to 50 million injuries each year. One of the major causes of the accidents included overloading. Vehicles react differently when the maximum weights which they are designed to carry are exceeded and the consequences can be fatal. Overloading a vehicle is an illegal offence which occurs when a vehicle's maximum permissible weight limit is exceeded

1.1 Statement of the problem

Road accident is the least expected thing to happen to a road user, though they happen quite often. The most unfortunate thing is that we don't learn from our mistakes on road. Most of the road users are quite well aware of the general rules and safety measures while using roads but it is only the laxity on part of road users, which cause accidents and crashes. Main cause of accidents and crashes are due to human errors.

1.2 Objective.

The main objective of this study is to design and implement a micro-controller based model for overload detection and protection.

Specific objectives.

- i. To investigate factors leading to overloading in vehicles.
- ii. To design a model for overload detection and control in vehicles.
- iii. To implement the model for overload detection and control in vehicles.
- iv. To validate the implemented model for overload detection and control in vehicles.

1.3 Methodology.

- i. Objective 1: Looking at the factors that lead to overloading in vehicles- Survey on literature -Explore existing models.
- ii. Objective 2 and 3: Design science approach will be used.
- iii. Objective 4: Proof of concept (POC) approach- This establishes whether software can actually be developed.

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