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Accident Prevention System using IOT for Car Safety

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Abstract: *Car accidents truly can be considered as one of the most disastrous phenomena. Though the reasons can be different for those accidents like the main problem can be driver's unawareness as well as speed. With the help of IoT we can try to prevent as well as reduce the number of accidents. IoT (Internet of things), is one of the most growing technology in IT industries and is used to decrease the burden of human beings. With the help of IoT we are creating a solution for the accident prevention. This is an intention to implement an innovative solution for this problem by developing An Accident Prevention System Using IOT for Car Safety.*

In this project, we are developing a system which will monitor and help to reduce those accidents. This paper discusses the process of developing a accident prevention system. With the growing population the use of car as became superfluous and this has led to increase in the number of accidents at the alarm rate. This project aims at preventing the accident. In this project, we first applied Eclat algorithm to group the crime locations into 0 level, 1 level, 2 level accident location. Eclat algorithm takes accident level count as a factor to cluster the locations. Then we will use association rule mining to identify these locations. The rules show different factors associated with road Accident at different locations. For all this we will provide Accident data that are issue from Transport Ministry Officer. Safety driving suggestions will be marked based on Accident data. This idea is designed based on Arduino Microcontroller board and helps in controlling accidents. The system will also notify you if a driver has been that the speed limit has been exceeded then it is indicated through buzzer and displays on LCD. When accelerometer is triggered, it helps in detecting the accident and sending the signal to the Arduino of the system. The GPS technology is used to locate the position of the car in the form of latitude and longitude coordinates. So that police can trace the location through the GPS modem and necessary action will be taken. This idea is useful in preventing the accidents.

Keywords: Eclat algorithm, Clustering, Classification, GPS tracking, Accident.

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