ACCIDENT TACKER, REPORT, ANALYTICS AND ALERT SYSTEM

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Introduction

This paper proposes a system that track, report and alert about accidents happening throughout the country to notify drivers and other stakeholders in time. The proposed solution is a mobile app(android in this case) and a website for other operating systems. This system displays alerts on accidents that occurs on a particular area so that the concerned parties can take necessary action.

To implement this solution, the accidents occurrences are collected in real time all over the country and stored in a central database. This data is then grouped according to location and time of the accidents.

The users of the software including the will then receive alerts on areas where accidents occurred so that they can plan their routes or adjust their speeds accordingly. The users especially drivers can find information on the statistically dangerous routes so that they can avoid it. Families of accident victims can also use the system to know the status of their relatives and easily collaborate with the traffic personnel.

The accident data collected is with then be classified according to the area of occurrence and time of occurrences and then each cluster aggregated. This will then provide informative insights on the areas that are accident hot spots. It also provide information about time ranges when accidents occurs most. Other classes of data that will be classified include the causes of accidents and the types of vehicles involved in the accident.

Problem Statement

There has been a rapid increase rate of accidents in Kenya over the last decade. These accidents have claimed very many lives and made families poorer especially if breadwinners are involved and affected by the accidents. This has called for a system to track this incidents and provide insights to policy makers and drivers so that they can make informed decisions and in return have a greater chance at saving more lives.

Some of the problems currently faced include:

- Drivers driving blindly to accident scenes due to lack of prior knowledge

- Unidentified individuals in hospitals and morgues as families have no idea that a relative was involved in an accident

- Lack of factual knowledge that is available to the public about the accidents data

- No well established source of information that educates on causes and enablers of accidents therefore, less people learn from previous mistakes

Main Objective

The main objective of the proposed project is to provide a reliable accident tracking, report, analytics and alert mechanism built in to a system.

Other Specific Objectives

- Provide analytical data to policy makers regarding road safety laws

- Save time for drivers by letting them pick alternative routes to the ones with accident scenes

- Create awareness on various causes of accidents so that the involved stakeholders can take control measures

- Provide a corelation between location and time to accidents that can provide insights on the reason for influx in accidents

Justification

Introduction of this piece of technology to the transport sector will produce such advantages as:

- Limiting the number of accidents by identifying and creating awareness of root causes

- More informed and accurate policies regarding road safety are put in place out of factual data and not individual perceptions

- Responsible driving and more vocal passengers because they will be able to identify the causes of accidents

- Improving accident response time by stakeholders by providing real time alerts thus attending to severe injuries in time.