**Smart Drive**

Language: Android, Java

Backend: MySQL, SQLite

Technology: GPS, AI

Safe journey is a big problem on dates, many people killed and many are getting injured daily. As per the report the main issue is heavy traffic compared to past years and careless driving. In all cases we can’t say driver was the problem, instead the driving environment in another important fact. Most of the accidents occurred when drivers try to drive safely without falling in digs, humps and gutters on the road.

Here we propose an idea that helps to avoid falling in digs and humps as well as it will alert the accidents to the authority. No extra devices need to attach inside the vehicle. There is an application need to install in our smart phone, the phone will do everything else.

User has to place the mobile inside the in a stand or dash board itself. The application will monitor driving smoothness all over the journey. When the vehicle had a shake in improper way, that is when the driving smoothness interrupted the smart phone will ask the driver to get the reason. When the reason said by the driver it will save to the online server. Instead of listening driving smoothness the vehicle always looking for location based updates. This will check for any issues reported along moving location and speak out to assist the driver. This mechanism will help the driver to keep smooth driving.

Another facility of the application is accident detection and reporting. The application can detect if any accident occurred and it will alert the rescue services nearby the accident location. This facility will be more helpful while travelling through remote areas like forest and hilltops.

In addition to these features we have replaced all sign boards using GPS based alert methods. So that the user can hear the updates on turnings, curves etc. as voice alerts.

**Modules:**

**Smoothness verifier:** this module will always listen for running smoothness, if any variation found the system will ask the user. Then the user has to replay by voice.

**Live Updates monitoring:** looking for any issues reported by the users before. If any found the system will produce alerts before reaching the location.

**Speech Synthesizer:** works with Google which will provide service to convert text to speech and speech to text.

**Accident Detection:** this module looking for the state of vehicle, means whether the vehicle is in balance state or not. If the vehicle found to be unbalanced state it will report nearest stations and rescue stations with location.

**Locate nearby stations:** this module work with server, which will search the stations and calculate for nearest stations. Then the stations under the area will be used to send alerts.

**Signal Alerts:** this will alert the user about signal. Here this technology is used to replace all signal boards throughout the way. So that the driver can drive safely.

**GPS:** this service is used to locate the user on accidents and to update or listen the notifications referring online server.

**Existing System**

* Presently there are no applications for road safety available on the play store.
* There are no applications to assist drivers to find better transportation paths.
* A lot of road deaths occur due to latency in emergency response unit.
* No dedicated applications or software’s to store and report damages on roads.

**Proposed System**

* Detects any kind of gutters, humps and enquire the driver about the issue.
* Driver can verify whether it was any physical damages on the road and the data is stored in an online database.
* These data’s are used to alert other drivers passing through the same road.
* Detects occurrence of accidents and send alerts to nearby Emergency departments like police stations, hospitals etc. by sending a message automatically.
* Automated voice messages are transmitted to the emergency departments by using speech Summarizer Technology.
* Respective emergency departments can then track the location of the accident and respond immediately.