Safehur

Saving lives on the Road

Intello Transpo Pvt. Ltd.

An IOT Solution to curb Rash Driving behavior

Safehur

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Winner FICCI Travel Tech Launchpad

Executive Summary

IIT & IIM pass-out Mr. Birendra Bisht decided to partner with Navyug Infosolutions to create a technology-enabled business solution to eradicate the problem of rash driving.

The Objectives of the solution were:

- Reduce Accident Counts
- Increase Road Safety
- Reduce Rash Driving
- Find culprit of road accidents
- Identify Factors leading to road accidents:

Safehur used a combination of a proprietary IoT technology and powerful pattern recognition algorithms to deliver real-time scoring of an individual's driving risk behavior.

Challenges

Frustrated with the way Indians drive on roads, the founder wanted to solve the menace of rash car driving.

Most of the solutions in the market had limited scope of covering GPS tracking or having limited no. of sensors. Mostly solutions were made with mobile sensors. Hence a large number of factors were neglected while counting on road safety. Also frequency of capturing information was very slow compared to SAFE-HUR.

Being a startup, developing something where human lives were at stake - the client wanted to develop a quality solution within their limited resources:

Technical challenges with the Device:

- Information needed to be captured at 200 millisecond
- The device had to be fitted into vehicle at the correct part for most accurate results
- There were severe heating issues as well as the packets were getting lost
- Packet loss issues
- Heating issues

Technical challenges with the Software:

- Scoring Algorithms
- Account for maximum factors to calculate driving score
- Process huge amount of data. Not losing any data

Use cases

Safehur has been tested at four organizations

- **Inox** - Gas cylinder delivering trucks

This organization need to check for daily distance covered, live tracking, hospitals visited list and risk associated with driving.

- **Varuna** - Logistics company with trucks

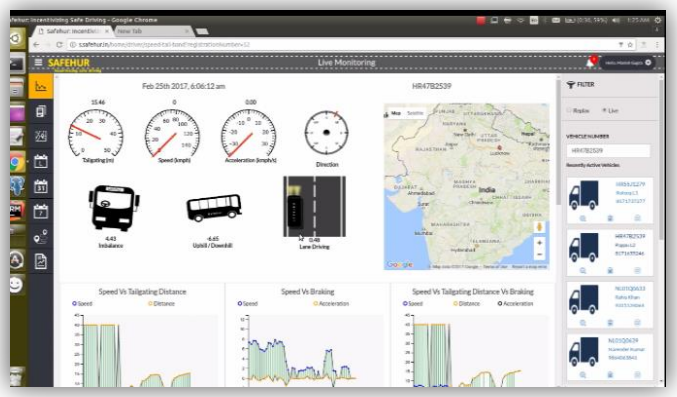
This organization need to check for daily distance covered, live tracking, and risk associated with driving.

- **MIET** - School Buses

Live tracking for admin and parents of students.

- **Indian Army** - Car

This organization need to check for their past records to know the complete records of vehicle.



Results

After taking feedback from the end user we were able to calculate:

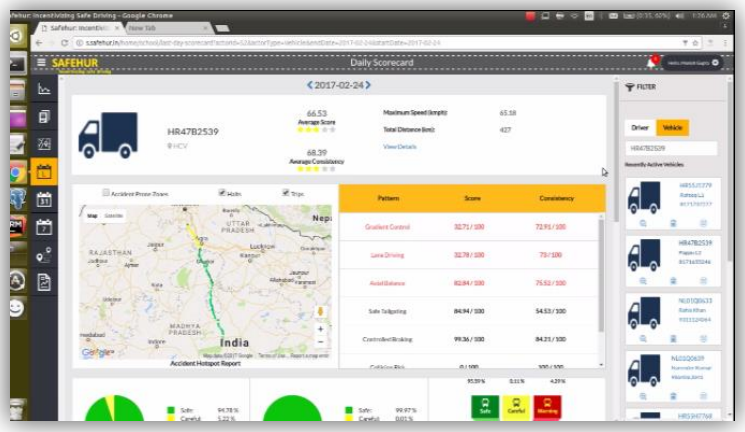
- 90% users admitted the product successfully educated them that by increasing the risk in driving, how much less time they were saving.
- 75% drivers who worked for organizations that are using Safehur devices have reported to reduced risk taking in their driving after the tests

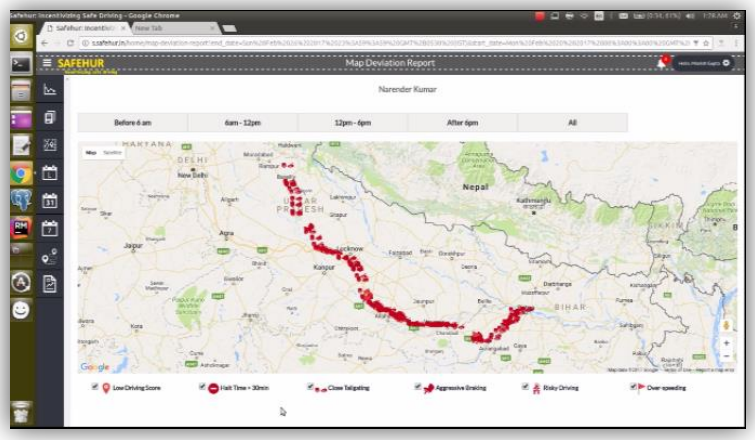
Competitive Successes

- Only product in the market which has capabilities to capture information at 200 milliseconds
- Largest number of sensors used
- Safehur was declared, Winner at FICCI Travel Tech Launchpad competition

Technology Matrix

Project Name	Technologies	Tools
Safehur Firmware	c, c++, electronics, MQTT, ARM, STM32, FAT32 file system, Quectel M95, L80 GPS, LSM9DS0, LIDAR Lite, Leddar One, Arduino	
Safehur Software	ruby : 2.3.0p0 rails : 4.2.6 Postgresql: 9.3.14 MongoDB Ember : 2.1.1 Sidekiq : 4.1.2 redis : 3.3.0 Python : 2.7.6 Faye RabbitMQ MQTT cron	Rubymine IDE, PGadmin, Trac, Gitlab PGAdmin, Sendgrid for emails





Team Safehur collecting the judge's choice award