



# Conduire

Driver Assistance Platform

**By Team ASEV**

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# Irresponsible and Negligent Driving





# Why Irresponsible Driving is an important problem?

- In 2015 alone there were around 1.5 Lakh deaths on the road in India
- About 80% of these were because of rash and negligent driving

<https://timesofindia.indiatimes.com/india/90-deaths-on-roads-due-to-rash-driving-ncrb/articleshow/61898677.cms>

A report released by India's ministry of road transport says:

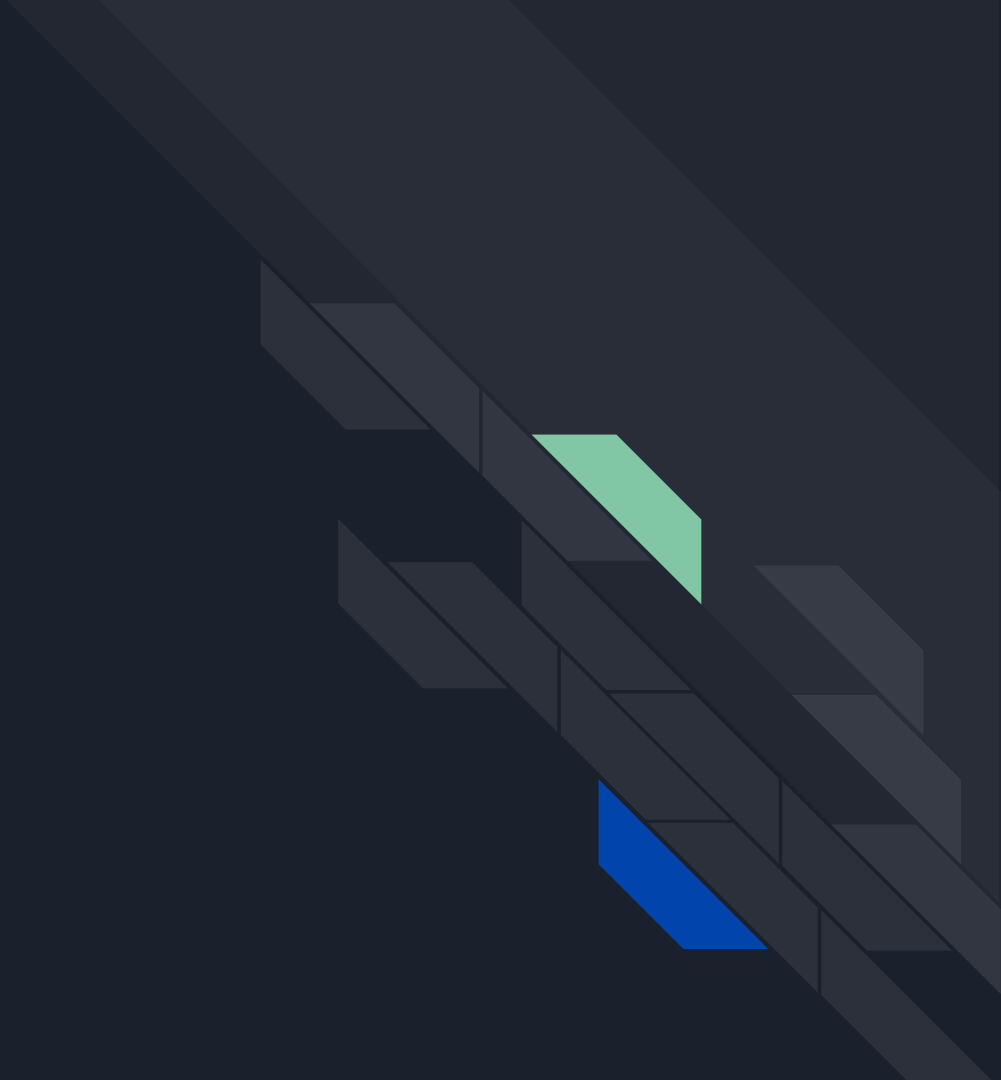
- 146,133 people were killed in road accidents in India in 2015, up from 139,671 in 2014
- There were 501,423 road accidents in 2015 - or 1,374 accidents every day - up from 489,400 in 2014
- 500,279 people were injured in road accidents in 2015, up from 493,474 in 2014
- 400 road deaths take place every day on India's roads
- 13 states, including Tamil Nadu, Maharashtra, Madhya Pradesh, Karnataka, Kerala and Uttar Pradesh, accounted for more than 80% of all road accidents and fatalities
- Nearly eight in ten accidents were caused by drivers, with 62% of those blamed on speeding.



# The solution

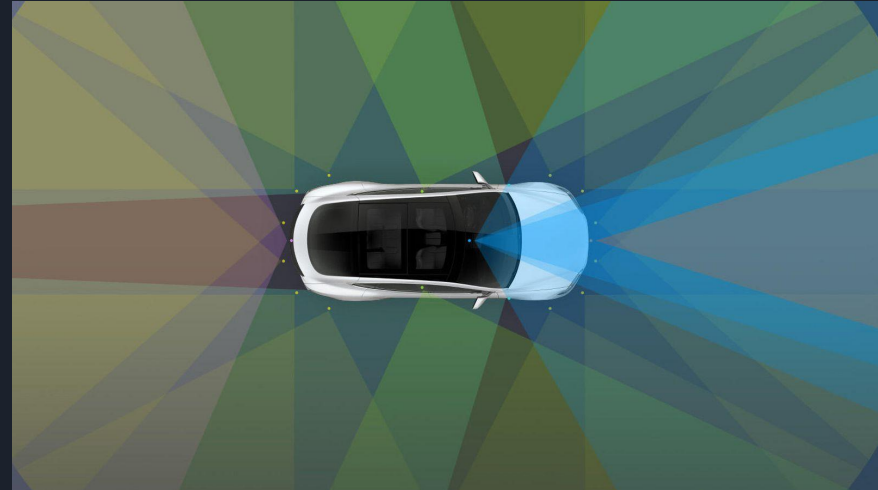
- A driver assistance platform
- Notifies drivers about the best course of action to prevent accidents
- Uses a driver profile system built from the driving habits to determine aggressive driving.

Demo



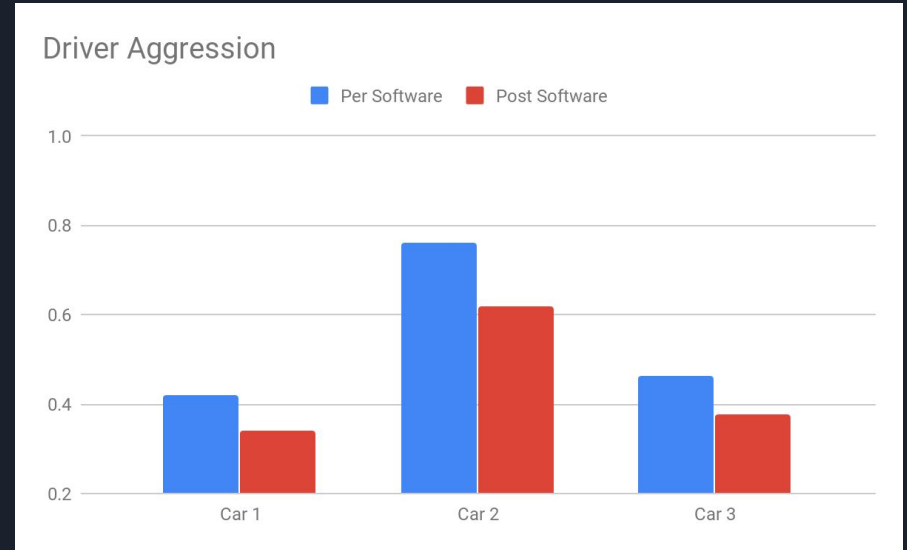
# What is the competition?

- Exists only in high-end vehicles
- Tesla's autopilot feature exists, but starts in cars at ₹ 30 Lakhs or more



# Pilot Program

- So far, tested solution on three cars for two weeks
- Driving data from the cars analysed against baseline data
- From this minimal data, we say on average an 18.46% drop





# Challenges Faced

- It was difficult adapting our solution to various vehicles types and thus for the pilot programme choose one vehicle type, the crossover, and used cars like the Terrano and Brv.
- Applying a neural network to recognize patterns was also quite difficult, as various types of networks such as CNN's, RNN's, LSTM's, and more had to be constantly trained and tested.



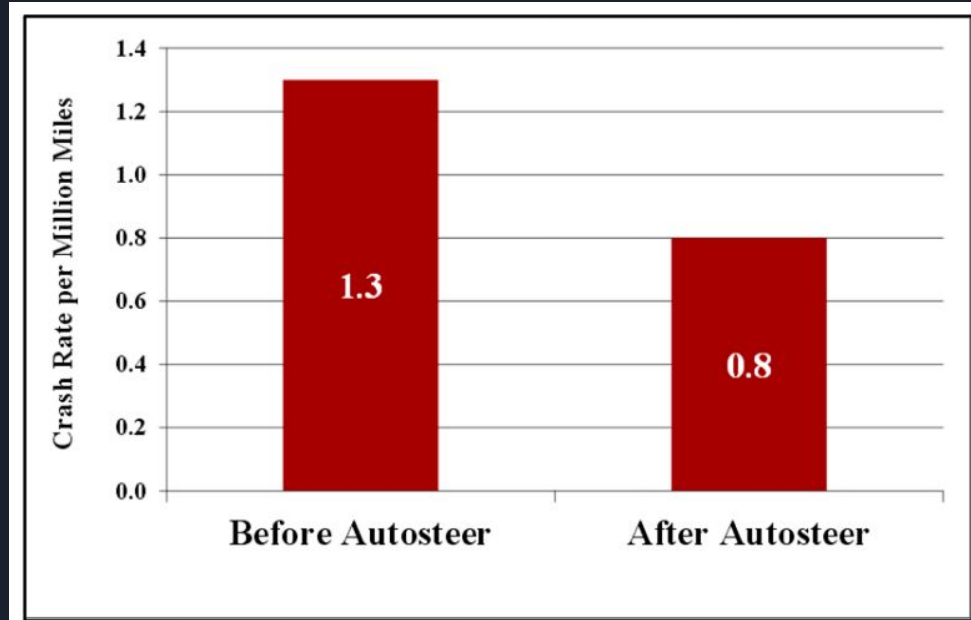


# Scaling our Pilot Programme

- With increased funding we plan to scale our programme to accommodate far more vehicles and even types of vehicles.
- We have approached our school to outfit these devices on the school buses.
- With scale, we estimate the product that cost around Rs 4000 now can be brought down to as low as Rs 1500

# Future Impact of Solution

- Less aggressive and safer drivers
- Decrease in accidents
- Overall Improved Safety on the road
- An option to make any car assist a driver



*Figure 11. Crash Rates in MY 2014-16 Tesla Model S and 2016 Model X vehicles Before and After Autosteer Installation.*



# How this experience changed us

- Huge learning opportunity
  - Lot of technical skills acquired
  - Business and Financial Skill developed
- A chance to give back to the community
- Contribute towards fixing Bangalore's Traffic Problem

# Questions and Feedback

