# DeepCars
## (Simulation of self-driving car by using Deep Neural Network)

## Funding Required: Rs. 70,195

**Proposal submitted in connection with the**

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## Batch: 2019-20


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## Abstract/Summary

As we know that humans are non-deterministic in nature. So if we hire a person as driver it may be possible that one day he gets sick or he may have any emergency. In both scenarios we have to compromise on our commitments or schedule so why not design a car which never lets us down. Technology is progressing at a very fast pace and the things that seemed to be impossible 10 years ago are now possible and human needs are also changing day by day. 15 years ago when someone gave the idea of driverless cars everybody thought that it was a waste of time and money but nowadays, almost every automobile organization is researching self-driving cars but no one is able to make a perfect model and our course work has told us to simulate everything before going towards deploying because it is a cost efficient way.

## Project Synopsis

In an article, we have studied that the pioneer of electric and self-driving cars, Tesla motors, requires human interaction for switching between lanes of the road when the car next to it is slow. So in this project we will work on:

1. Designing of an environment.
2. Designing of an Agent.
3. Finding the reaction of the agent's action.
4. Designing of Deep Neural Network that will maximize agent's utility
5. Testing of agent-environment collaboration to check for optimal results.

## USPs

- The chances of road accidents will become low because self-driving cars use their specified speed lanes.
- If the owner of the car interrupts to drive fast, traffic police will have an idea of that if the government embedded its own program into it to keep an eye because robots don't tell a lie.
- The government will be able to have the proper data of road incidents in order to make new policies and transport projects if such type of transport came into the market.

## Cost Breakdown

List the items and their description (if needed). Add or delete the rows accordingly.

| S.No | Items/Testing/Service etc. | Amount in Rupees |
|---|---|---|
| 1 | Documentation(Reporting) | 20,000 Rupees |
| 2 | Some of the Add-ons for environment modeling software. | €200 = 50,195 Rupees |
| | TOTAL AMOUNT | Rs. 70,195 |