***Project Proposal on:***

***Finding steering angles and self-braking using Deep Learning.***

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***Abstract:***

A driverless car or self-drive or autonomous car is a vehicle that can guide itself without any human conduction. These cars use different technologies for navigation like GPS sensing and use different sensors to avoid collisions. In recent years, rapid progress in the autonomous driving to improve the safety of the driver and the road users. This rapid increased is achieved by intelligent processing of information received from multiple cameras, GPS etc., mounted on the car. Autonomous driving become possible with the help of deep learning.

***Project problem and solution:***

We need to design neural networks to predict the steering angles and self-breaking. For this, we have a set of images with different steering angles, captured by the camera placed behind the windshield. These images are called dataset and captured in real-time. These networks used these datasets as an input and calculate the steering angles and compare this calculated angle with the actual steering angle observed in real-time to minimize the Root Square Mean Error (RSME). To find the self- braking, we use computer vision methods in which traffic signs would be observed and action would be taken based on these observed signs.

The project contains the following steps:

* Data Generation for autonomous system.
* Training the autonomous system.
* Testing the autonomous system.

**Reference papers:**

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* Eraqi, Hesham M, Mohamed N Moustafa, and Jens %J arXiv preprint arXiv:.03804 Honer. "End-to-End Deep Learning for Steering Autonomous Vehicles Considering Temporal Dependencies." (2017).
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**Conference Link:**

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