Research Summary

**The theme of our project is:** "Self driving Car".

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**About the project:**

In this project we will deal with an autonomous car. Self-driving cars have a variety of sensors to perceive their surroundings, radar systems, leader, sonar, GPS, uterine flooring devices and inertia units. Advanced control systems interpret sensory information to identify navigation paths can be appropriate, as well as obstacles and relevant signage.

Our project will deal with the identification and re-analysis of the autonomous driving system in a simulated vehicle, as the vehicle will pass various and multiple obstacles.

On our way to the required outcome (we will expand on this later), we will need to get to know and understand the basic role of the control system.

We face a difficult task that involves many obstacles. Eventually the autonomous car will know how to direct itself to the safest way to its destination while avoiding obstacles like humans crossing the road or other cars on the track.

The division of tasks will be really equal when we perform each work session in classic pair programming, with one leading in writing code and navigating tasks and the other reviewing and checking bugs at every stage of project development.

Our programs are systems that form a good basis for creating such a project and couple programming that constitutes proper load sharing.

**Credits:**

The following project is the best we have seen and selected as an open source for our project. This is a simulation of an autonomous vehicle on a road of which there are various obstacles. Our goal is to improve the code by adding more difficult obstacles that simulate situations from our reality. Adding a manually operated car that competes with the autonomous car and thus we will see the difference in performance.

Link:

<https://github.com/mattbradley/dash>

Additional links that helped us develop the project:

<https://github.com/lexfridman/mit-deep-learning>

<https://github.com/lexfridman/mit-deep-learning/blob/master/tutorial_driving_scene_segmentation/tutorial_driving_scene_segmentation.ipynb>

The following code leads to an autonomous car (unlike the others, a small car). The project has a whole python code that is open for sharing.

<https://github.com/vinzeebreak/ironcar>

The next project we will also present is a project that belongs to a deep learning department at MIT and deals with the integration of the autonomous car in road traffic, earning 1.3 k stars.

<https://github.com/lexfridman/deeptraffic>

The next project belongs to Udacity (5.2k stars), who have developed open source for a self-driving car.

<https://github.com/udacity/self-driving-car>

The next project is a kind of game of autonomous vehicle driving with obstacles added manually

<https://github.com/Demarsch/self-driving-car-sim>