Assignment 8: Motion Planning

Mar. 19th, 2019

Objectives

- To generate smooth and comfortable trajectories for an autonomous vehicle
- To avoid dynamic obstacles based on sensor data
- To modify driving behaviour to follow the rules of the road

In this assignment, you will be developing a trajectory planner that can handle highway driving while surrounded by dynamic obstacles moving at various speeds. The planner will interface with a driving simulator to allow you to visualize the ego vehicle in motion.

Resources and Instructions

This assignment requires you to complete the following assignment:
https://github.com/udacity/CarND-Path-Planning-Project

Instructions for how to finish the project can be found in the README. The simulator can be downloaded here:
https://github.com/udacity/self-driving-car-sim/releases/tag/T3_v1.2

Deliverables

The deliverable for this project is a zipped project folder containing your developed code. Your submission should compile and run. Please do not include the simulator in your submission.

Please follow the naming convention for your zip file: a8_<user_id>.zip .

Due Date

11:59 PM, Monday Apr. 1st, 2019.
No late submissions will be accepted. There will be no extensions.

Marking Scheme

Assignments are marked on a 0-5 point scale.

2 points will be given for a planner that plans trajectories that satisfy the acceleration and jerk constraints and also track midpoint of a lane. 2 point will be given for collision-free trajectories & speed regulation based on the lead vehicle. 1 point will be given for the ability to change lanes when it is safe to do so.

Policies

Collaboration
You can discuss the problem with peers, but you must design and implement your own solution independently.

Use of online resources
You may consult online resources for inspiration, but you must develop your own code.