UDACITY

PROJECT

Model Predictive Control (MPC)

A part of the Self Driving Car Engineer Nanodegree Program

PROJECT REVIEW | CODE REVIEW | NOTES

Meets Specifications

SHARE YOUR ACCOMPLISHMENT

Hello there! Congratulations on being the first student I nominate for an outstanding submission. I did my best to make pointers in the code but found myself enjoying your work and acknowledging that not many improvements are needed! I loved your README and the visuals supplied with it. Thanks for giving me a great project to overview and excited to see what you do in Term 3!

Compilation

Code must compile without errors with `cmake` and `make`. **Given that we've made CMakeLists.txt as general as possible, it's recommend that you do not change it unless you can guarantee that your changes will still compile on any platform.**
Code compiles without a problem!

Implementation

Student describes their model in detail. This includes the state, actuators and update equations.

Phenomenal job with articulating your model and the respective update equations!

Student discusses the reasoning behind the chosen *N* (timestep length) and *dt* (elapsed duration between timesteps) values. Additionally the student details the previous values tried.

Great job with sharing your experimental endeavors for other timesteps.

A polynomial is fitted to waypoints.

If the student preprocesses waypoints, the vehicle state, and/or actuators prior to the MPC procedure it is described.

Preprocessing on waypoints is discussed in detail. Great!

The student implements Model Predictive Control that handles a 100 millisecond latency. Student provides details on how they deal with latency.

Well, I must say you annihilated this section and did a better job than I think anyone else who has attempted this project. I learned a great deal in your articulation and appreciated your execution in the problem.

Simulation

No tire may leave the drivable portion of the track surface. The car may not pop up onto ledges or roll over any surfaces that would otherwise be considered unsafe (if humans were in the vehicle).

Car does an excellent job in the simulator!