U UDACITY

≡

PROJECT

PID Controller

A part of the Self-Driving Car Engineer Program

| PROJECT REVIEW |
| CODE REVIEW **2** |
| NOTES |

SHARE YOUR ACCOMPLISHMENT! 🐦 📘

Requires Changes

1 SPECIFICATION REQUIRES CHANGES

Good job implementing the PID controller. There is one small thing to fix in the code itself.
You are almost there. Keep up the good work.
Also, in future submissions, please submit only the project (i.e. PID project only) and not repository with all your work on the nanodegree so far.

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.

Your code complied without any errors!

Implementation

🔄

It's encouraged to be creative, particularly around hyperparameter tuning/optimization. However, the base algorithm should follow what's presented in the lessons.

Great job with your implementation of the controller. You have initialized error vars to 0.1, 0.001, 0.1. This is incorrect implementation because these should be calculated from cte values only. Please init error vars to zero and I'm sure your code with work and you will pass this project.

Reflection

✓

Student describes the effect of the P, I, D component of the PID algorithm in their implementation. Is it what you expected?

Visual aids are encouraged, i.e. record of a small video of the car in the simulator and describe what each component is set to.

All aspects of the PID controller are discussed and explained. Excellent!
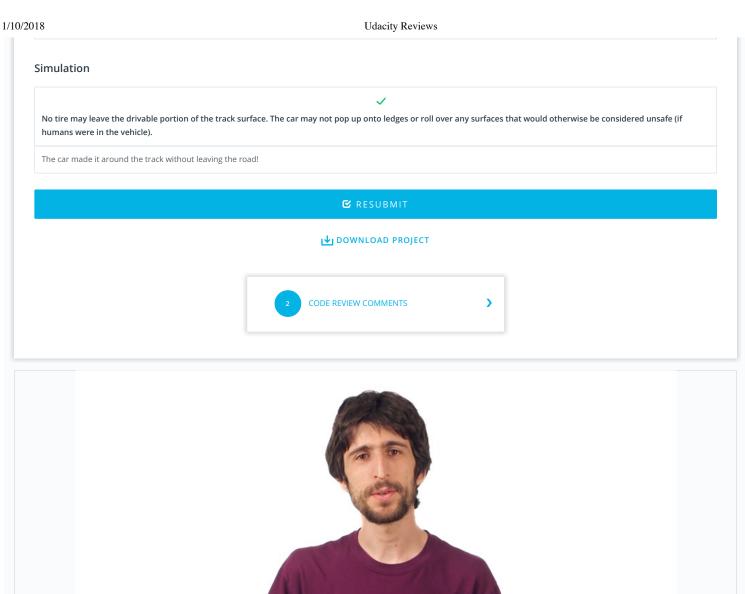
✓

Student discusses how they chose the final hyperparameters (P, I, D coefficients). This could be have been done through manual tuning, twiddle, SGD, or something else, or a combination!

Great job describing how you tuned your parameters!
Here is another resource to learn more about other tuning methods!
https://udacity-reviews-uploads.s3.amazonaws.com/_attachments/41330/1493863065/pid_control_document.pdf

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).

The car made it around the track without leaving the road!

☑ **RESUBMIT**

⬇ **DOWNLOAD PROJECT**

2   **CODE REVIEW COMMENTS**   ❯

Best practices for your project resubmission

Ben shares 5 helpful tips to get you through revising and resubmitting your project.

⊙ Watch Video (3:01)

RETURN TO PATH

Student FAQ