CACC Demonstration with a Carrera Track

In this project, the student has to build a Carrera Track demonstrator where cars are using CACC and driving in a platoon. First, the Carrera Track has to be build up where each car can be accessed and controlled from a Raspberry Pi. Then, a object tracking system needs to be implemented in cooperation with TU Braunschweig, which outputs the position of each vehicle on the track. After this, a controller needs to be programmed which uses the position data to form a platoon. Now, the program needs to be split up in such a way, that each instance is controlling only one vehicle and communicating with the others. At last, a use case of a crash has to be simulated, where the 2nd vehicle in the platoon is sending wrong data (e.g. the vehicle is accelerating but sending a deceleration).

⚙ Project

8/16 LP

This project is suitable for students with knowledge in python and interest in object tracking as well as CACC

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If your are interested or you need additional details, feel free to contact me or drop by for a non-binding chat.