

Development of a data analysis tool for a formula student car



We are looking for motivated master students Engineering Technology

Project description:

Formula Electric Belgium (**FEB**) is a team of highly motivated engineering students that build an electric formula student race car. Just like Formula 1 the team builds a brand-new car each year to compete in multiple international competitions during the race season. Formula Student is the largest international engineering and design competition in the world. The competition is characterized by combustion vehicles, electric vehicles and since recently also autonomous vehicles. Formula Electric Belgium strives towards innovations and the raw performance of technologies. It is for this reason that the team will focus on the autonomous/electric race cars. Research and development applications will be made by postgraduate students in collaboration with thesis students from the KU Leuven and bachelor students from Thomas More.

Thesis description:

This thesis is about the development of a data analysis tool for a formula student car. Within our team, we are constantly looking for ways to make our cars faster. Next to improving the car, we are also focusing on improving our driver and more specifically the relationship between the setup of the cars and our drivers. Because of this, we are in need for a better tool to evaluate the input of the driver and the response of the vehicle. This tool needs to be fast, easy to work with and clear so that the trackside engineer can evaluate the driver and the setup as fast as possible.

Thesis objective:

The goal of this thesis is to develop a tool to clearly plot the data of a testrun without additional programming by the trackside engineer. The tool should clearly show inputs from the driver like: steering angle, pedal position, brake pressure,... as well as the output of the vehicle like: accelerations, yaw rate,....

The programming language in which this tool is made can be discussed with the student, as long as it is easy to implement and compatible with our current data files.

Profile:

- Interested in vehicle dynamics
- Interested in software development
- Able to work methodically
- Creative
- Teamplayer

What do you gain?

- A unique engineering- and team experience where hard work and team atmosphere are central.
- Work with innovative technologies in a realistic environment/application.
- Create added value for your curriculum and the team

Are you interested? Please send your resume with accompanying motivation to:

recruitment@formulaelectric.be

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