# Cone detection with machine learning

## Driverless

## OUR PROJECT

Formula Electric Belgium is a student-run electric race team which competes in Formula Student, the world's largest competition for engineering students. We aim to push the limits of performance, innovation and sustainability within electric racing every year, which is only possible with the help of our Thesis students. These pioneers are responsible for performance-defining innovations within the team, and we would love for you to join our team of highly ambitious and motivated engineers. As a Thesis student, you will research, design, prototype and test your innovations alongside the full-time members which make sure the team pushes itself and the car to new heights.

## AIM AND OBJECTIVE

The cone detection at this point only detects the colour of the cones it spots but doesn't localize them in the environment. There is currently another algorithm to localize the cones but it has quite a big margin we need to take into account.

This thesis will therefore try to improve the current localization algorithm by using object detection of machine learning to spot the cones more precisely. This needs to be done in a way that we can implement it easily in the current algorithms and by using a LIDAR for the detection.

## PROFILE

- Experience in Object-Oriented Programming
- Knowledge of C++
- Some knowledge of machine learning is preferred but not required
- Interested in machine learning is a must
- Well-organized
- Communicative

## RETURNS

• Practical experience in a high-end engineering context

• Work with the newest technologies and innovative companies

• Developing your hard- and soft-skills in a company -like environment

• Participation in the biggest student competition in the world

## INTERESTED?

Send us your contact details and field of interest to

recruitment@formulaelectric.be