



# Aerodynamics

## Validation of aerodynamic package

## Green innovation meets performance

### Our Project

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Formula Electric Belgium is a team of engineering students who build a **Formula-Student racecar** to compete in international competitions. We design and build a brand-new car every year and compete with other teams in multiple worldwide competitions during the summer months. Formula Student is by far the biggest **engineering competition** in the world and continues to grow. From next year on, we will be competing in both the **electrical** and **driverless** competition. You can join the project as a volunteer. This allows you to contribute to the next race car whilst keeping a flexible schedule.

### Tasks

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**Aerodynamics** is an important part of the **performance** in a racecar. Numerous simulations are made in order to improve our aerodynamic package. However, these simulations are not a perfect image of reality. This is where the **validation step** comes in.

The goal of the validation process is to **make measurements** on the car, either on track or in a wind tunnel, in order to **compare** them with the simulation outputs.

The volunteer will have the task of designing the **pressure sensors setup** and a **5-hole probe** for flow direction measurement. He/she will be in contact with our partners who are providing us with the same material as in **Formula 1**.

He/she gets the freedom to work separately under supervision of an aerodynamic engineer.

### Profile

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- Knowledge and small experience about sensor processing
- Knowledge about incompressible flows
- Problem solving skills (creativity)
- Team player with a goal to learn

### Returns

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- A unique engineering experience
- Contact with companies at the leading edge of technology
- Applying your engineering skills in the real world
- Developing your hard- and soft-skills in a company-like environment
- Work in a team with young motivated engineers

### Up for the challenge?

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Want to perform a similar case-study within our team? Submit your **resume** and **motivation letter** (one page) to [volunteers@formulaelectric.be](mailto:volunteers@formulaelectric.be)