



# Crafting your Career /

## JOIN US

### Master's Thesis Student/Intern (m/f/d) Electrification R&D

We are looking for a **Master's Thesis Student/Intern (m/f/d) in the field of Electrification R&D** to join our engineering team at our office in Wegberg near Aachen.

#### / Background /

The main research themes are model predictive control and machine learning, which will be applied to optimally control the vehicle speed and traffic flow by using information about the driving conditions ahead. The application area could be extended to driving route optimization. In order to evaluate and validate the performance of the newly developed functions at an earlier stage, building up an advanced traffic simulation environment is required. You will also participate in the activities related to the public funded project "Hy-Nets" and collaborate with associated research partners: <http://www.hy-nets.de/en/partners/>. You will get the opportunity to work in an international E-Mobility team with support from your colleagues, university professors and associated companies. Furthermore, there will be the possibility to work at the collaborating German universities for a certain period.

#### / What you'll do /

- Support development & validation for predictive control
- Support building new concept for future traffic flow optimization
- Enhance existing simulation models of vehicle dynamics and city traffic
- Validate results for both, single and multi-cars, through X-in-the-loop (XiL, e.g., MiL, SiL)
- Support in creating scientific reports and papers
- Deeply engage with other related institutes and associated companies

#### / What you'll need /

- Enrolled student in electrical engineering / control systems / informatics science or similar
- Good programming and computer skills (Matlab/Simulink, C / C++, etc.)
- Basic knowledge of optimal control or numerical optimization
- Experience in vehicle and traffic simulation is an advantage
- Knowledge of neural network and TensorFlow/ Python is an advantage
- Capability to work scientifically, creativity, flexibility, team ability
- Very good English knowledge (written & spoken) and good German skills

#### / Are you interested? /

Please apply via email to [jobs@denso-auto.de](mailto:jobs@denso-auto.de) by providing the job number 2019DNDE12. For more information please contact Mr. Constantin Köntges (Human Resources), phone: 02432 / 4919 – 333 or via email: [jobs@denso-auto.de](mailto:jobs@denso-auto.de).

**DENSO**  
Crafting the Core