

COMBINING STUDY AND RESEARCH IS NOT POSSIBLE.

YES.

Join Fraunhofer IVI in Dresden.

VISIONARY TOPICS ARE YOUR SOURCE OF INSPIRATION, AND EXCELLENT PROGRAMMING SKILLS ARE YOUR STRENGTH? WE AT FRAUNHOFER IVI OFFER YOU THE OPPORTUNITY OF WRITING A MASTER THESIS OR COMPLETING AN INTERNSHIP ON THE TOPIC OF

SENSOR DATA FUSION AND ARTIFICIAL INTELLIGENCE IN INGOLSTADT

The **Fraunhofer Application Center "Connected Mobility and Infrastructure"** focuses on current and future topics of automated and cooperative driving. Diverse competences in the fields of sensor technology, communication and artificial intelligence are combined, fostering synergies with the local industry and aiming for close cooperation with the city of Ingolstadt and its partners. With research on urban air mobility, the application center is opening up further fields of technology in the areas of autonomous systems, digitization in traffic, and vehicle and traffic safety.

For our 5GoIng project we are looking for excellent students who would like to write their thesis or complete an internship in the field of sensor data fusion and artificial intelligence. The "Erste Meile" test bed, which is equipped with the latest sensors (camera and LiDAR sensors), is available for the work.

What you will do

- development of algorithms for 3D multi-object tracking based on heterogeneous sensor data fusion (classical and/or AI-based approaches)
- creation of a digital twin of the test bed "Erste Meile" in the simulation environment CARLA
- implementation of the tracking framework within the simulation environment
- simulative generation of a data set for training AI algorithms
- validation of the developed algorithms and execution of tests on the test bed "Erste Meile"

What you bring to the table

- student in Computer or Data Science, Mechanical Engineering, Mathematics, Physics, Electrical and Information Engineering, or a related field
- very good programming skills in Python
- interest in topics of artificial intelligence
- experience with frameworks such as ROS and PyTorch/TensorFlow
- structured, self-dependent and result-oriented way of working
- ambition, creativity and commitment in the daily work routine
- high motivation and ability to work in a team

What you can expect

- challenging tasks in cutting-edge and application-relevant subject areas
- interdisciplinary research on promising technologies
- adequate remuneration and flexible working hours
- a modern research infrastructure
- a young, dynamic team in an open and friendly working environment

Fraunhofer is Europe's largest application-oriented research organization. Our research efforts are geared entirely to people's needs: health, security, communication, energy and the environment. We are creative. We shape technology. We design products. We improve methods and techniques. We open up new vistas.

At the three locations Dresden, Ingolstadt and Berlin, Fraunhofer IVI's researchers develop technologies and concepts in the fields of mobility, energy and security – from forward-looking research to practical application. The institute cooperates closely with TU Dresden, TU Bergakademie Freiberg and TH Ingolstadt.

Please register at the career portal of the Fraunhofer-Gesellschaft and send us your meaningful application:

[Career Portal](#)

If you have any questions, please contact:

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