

COMBINING STUDY AND RESEARCH IS NOT POSSIBLE.

**YES.**

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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

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## MASTER THESIS ON **MONOCULAR DEPTH ESTIMATION FOR AUTONOMOUS DRONES USING DEEP LEARNING AND COMPUTER VISION** IN INGOLSTADT

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The **Fraunhofer Application Center »Connected Mobility and Infrastructure«** at the Technische Hochschule Ingolstadt (THI) 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 current projects we are looking for excellent students who would like to write their thesis in the area of Computer Vision and Deep Learning. The thesis(es) will develop cutting-edge methods for monocular depth estimation, which will be applied in the environment perception of autonomous drones.

### **What you bring to the table**

- student of Computer or Data Science, Mathematics, Physics, Electrical and Information Engineering or similar
- strong background in the areas of Deep Learning and Computer Vision
- excellent academic performance
- very good programming skills in Python
- experience with frameworks like PyTorch and/or TensorFlow
- own work in the field of Computer Vision
- deep understanding of neural networks and transformer architectures
- 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
- professional supervision
- adequate remuneration
- a modern research infrastructure
- flexible working hours
- 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.

The Fraunhofer Institute for Transportation and Infrastructure Systems IVI in Dresden employs more than 150 research fellows in five departments and collaborates closely with the TU Dresden, the TU Bergakademie Freiberg and the Technische Hochschule 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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