Master Thesis World-Model based Sensor Fusion in the Autonomous Driving Domain (f/m/x)

Hiring organization
Candidate-1st

Employment Type
Full-time

Beginning of employment
asap

Job Location
Munich, DE

Working Hours
40

Base Salary
euro EUR 47K - 88K *

Date posted
June 5, 2024

Description

THE FUTURE WILL NEVER SIMPLY WORK IN THEORY.

SHARE YOUR PASSION.

World-leading technologies don't make it into a BMW until they've undergone one of the most challenging journeys imaginable. It takes dynamic teams with outstanding technical skills to take them from the drawing board to the road. That's why our experts will treat you as part of the team from day one, encourage you to bring your own ideas to the table – and give you the opportunity to really show what you can do.

We, the BMW Group, offer you an interesting and varied master's thesis within the area of autonomous driving sensor fusion.

In autonomous driving, state-of-the-art deep neural networks performing sensor fusion are trained as backbones for complex tasks (e.g., perception, prediction, planning). While end-to-end training on those tasks allows for specialization of those backbones, it also is restricted to labeled data. A pre-training based on world model understanding (i.e., sensor reconstruction) allows for using larger amounts of data and might lead to a better generalization that can be fine-tuned to specific tasks with supervised training.

What awaits you?

- Close collaboration in a team within the BMW research department.
- Explore different sensor fusion approaches for autonomous driving applications.
- Evaluate approaches of world model (unsupervised) pre-trained sensor fusion for fine-tuned (supervised) perception tasks in autonomous driving.
- You are working on state-of-the-art techniques and develop novel approaches on a cluster infrastructure.

Please note that your thesis must be supervised by a university on your part.

What should you bring along?

- Strong knowledge in machine learning.
- Knowledge in computer vision.
- Strong programming skills.
- Proficiency with Python and deep learning frameworks (PyTorch or TensorFlow).
- Good English skills.

What do we offer?

- Comprehensive mentoring & onboarding.
- Personal & professional development.
- Flexible working hours.
- Digital offers & mobile working.
- Attractive remuneration.
- Apartment offers for students (subject to availability & only Munich).
- And many other benefits – see bmw.jobs/benefits

You are enthused by new technologies and an innovative environment? Apply now!

At the BMW Group, we see diversity and inclusion in all its dimensions as a strength for our teams. Equal opportunities are a particular concern for us, and the equal treatment of applicants and employees is a fundamental principle of our corporate policy. That is why our recruiting decisions are also based on personality, experience and skills.

Find out more about diversity at the BMW Group at bmwgroup.jobs/diversity

Earliest starting date: from 07/01/2024

Duration: 6 months

Working hours: Full-time

Contact:
BMW Group HR Team
+49 89 382-17001

How the process will look like

Your teammates will gather all requirements within our organization. Then, once priority has been discussed, you will decide as a team on the best solutions and architecture to meet these needs. In continuous increments and continuous communication between the team and stakeholders, you’re part of making data play an even more important (and understood) part withing Brand New Day.

Job Benefits

EUR 47K – 88K *