Master Thesis - Explainable AI for Autonomous Driving - REF70726W

Feladatok

To support our research in the field of "eXplainable AI," we are currently searching for a master's student (m/f/diverse) **starting as soon as possible** for a duration of **6 months** with a strong interest in applying explainable AI to a real-world application in autonomous driving in the AI lab Berlin. The regular presence in the office is highly encouraged.

As the AI systems developed for Autonomous Driving become more complex and transition towards large-scale end-to-end pipelines, inner functionality and encodings become even less transparent than in traditional AI systems. Recent approaches from the field of explainable AI (xAI) might help include transparency levels in these models, yielding valuable insights about learned and applied information.

The thesis's goals can be summarized as providing a better understanding of current AI models for autonomous driving, retrieving failure cases, and performing an xAI-based in-depth error analysis.

Your tasks will consist of:

- A profound literature review on existing approaches for explaining AI-based systems in autonomous driving
- Implementation and Adaptation of state-of-the-art algorithms in explainable AI
- Planning and Execution of scientific experiments
- Documentation of scientific results, as well as software documentation
- Communicating planned experiments and results to all stakeholders
- Contributing to our active research exchanges in our young research-focused team of students (m/f/d), Ph.D. students (m/f/d), and Ph.D.s (m/f/d) at our AI Lab Berlin

Profilja

- Students in the field of Artifical Intelligence, Computer Science, Computer Engineering or other MINT discipline
- (Practical) Knowledge in using **Deep Learning Models** for Computer Vision tasks
- Strong programming skills in, e.g., **Python**
- Familiarity with deep learning libraries like **PyTorch** and transformer-based architectures
- Interest in explainable AI
- Confident handling of MS Office-programs
- **Fluent English language skills**, written and spoken (German language skills are a plus)
- Self-directed and able to work without supervision
- Energetic and eager to learn

Job ID
REF70726W

Munkaterület
Információs technológia

Telephely
Berlin

Kontakt
Katharina Stangl

Jogi egység
co-pace GmbH

- Ability to work in a team and intercultural skills

Please remember to upload your current certificate of enrollment as well as your current transcript of grades and an excerpt from the current study regulations regarding completion of a thesis, as these are mandatory for processing your application. If required, please submit your valid residence permit as well as your work permit including the additional sheet.

Applications from severely handicapped people are welcome.

Ajánlatunk

- Our group offers a nice, friendly, and inspiring environment for performing research
- Support and close collaboration with experienced Research Scientists
- High-performance GPU infrastructure to conduct excellent work
- Excellent location in downtown Berlin at "co-working space AI Campus"
- Ability to join journal clubs, networking events and technical exchanges on the campus
- Together with our team, you will have the chance to apply and enhance your skills and let our robotics applications come alive in Berlin

[Diversity, Inclusion & Belonging](#) are important to us and make our company strong and successful. We offer equal opportunities to everyone - regardless of age, gender, nationality, cultural background, disability, religion, ideology or sexual orientation.

Ready to drive with Continental? Take the first step and fill in the online application.

Rólunk

Continental develops pioneering technologies and services for sustainable and connected mobility of people and their goods. Founded in 1871, the technology company offers safe, efficient, intelligent and affordable solutions for vehicles, machines, traffic and transportation. In 2023, Continental generated sales of 41.4 billion and currently employs around 200,000 people in 56 countries and markets.