CAN I COMBINE SCIENCE AND BUSINESS IN A SINGLE JOB?

YES.

We´ll show you how at Fraunhofer IIS.

For the **»Self-Learning Systems«** group in **Nuremberg**, the Fraunhofer Institute for Integrated Circuits IIS is currently seeking

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Student Assistants

for DEEP REINFORCEMENT LEARNING AND AUTO ML

The **»Self-Learning Systems«** group at Fraunhofer IIS is part of the »Precise Positioning and Analytics« department and located at the institute's Nuremberg site. Our team members have diverse academic backgrounds from computer science, engineering and physics. We combine expertise in a range of advanced machine learning topics. One of our research goals is to provide robust and safe algorithmic solutions for control and decision-making tasks for systems in complex dynamic environments. To this end, we employ deep learning in combination with reinforcement-learning techniques. These techniques are only useful when combined with methods for reliable and interpretable artificial intelligence (AI). Another goal is to make machine learning more energy efficient to be used on the edge, while optimizing the transmission of learned information. For this we work on deep compression and distributed learning. Here, methods for reinforcement and automated machine learning can be employed as well. But when optimizing drastically and automatically, it is vital to know that the systems perform their intended task. Therefore, this is another area that requires reliable AI. We also want to explore the capabilities of adaptive quantum algorithms, so-called variational quantum circuits, for integration into our reinforcement-learning pipeline.

Your tasks:
- You will implement and compare different types of reinforcement learning algorithms (e.g. value-based, policy-based, offline)
- You will evaluate adaptive methods on diverse use cases from self-driving cars to human movement modelling
- You will learn to work with simulator frameworks like CARLA

Your profile:
- You are currently enrolled in a physics, mathematics or computer science program
- You have some **machine learning** background and have already worked with machine learning frameworks (preferably PyTorch)
- You are interested in **deep reinforcement learning**
- You speak English and/or German fluently

What you can expect from us
- An **open and cooperative** working environment
- Collaboration in **interesting and innovative projects**
- Many opportunities to gain **practical experience and attend seminars**
- Flexibility concerning your working hours

Interested?
Please apply for this position using the following link: https://recruiting.fraunhofer.de/Vacancies/54895/Description/2

Applications are possible **in English and German**. Please include a cover letter, your CV and your latest transcripts of records (as PDF) and quote ID number 54895-LV. Address your application to Nina Wörlein.

Please let us know how you learned about this job opportunity.

Additional information is available on our website: www.iis.fraunhofer.de/en