

CAN I COMBINE SCIENCE AND BUSINESS IN A SINGLE JOB?

YES.

We'll show you how at Fraunhofer IIS.

Student Assistant / Intern / Thesis Student – Improvement of a Deep Neural Networkbased Video Codec

Due to the growing popularity of video-on-demand providers as well as constantly increasing image resolutions and frame rates, an efficient compression of video data is essential to save costs and relieve the internet infrastructure. To this end, new software solutions are being developed at Fraunhofer IIS to reduce the data rate during video transmission and storage compared to existing approaches, preferably without impairing the perceived image quality.

One current area of research is the application of deep learning approaches, which are intended to completely replace or supplement classic video codecs in the future. The development of a first version of a Deep Neural Network-based video codec has recently been finalized at Fraunhofer IIS. Your task is to improve this codec by modifying the training process and adding new modules to the codec. Subsequently, the results need to be evaluated and compared with the state of the art.

You are interested in the field of Video Codecs and would like to develop further in the field of deep learning?

Then have a look at our offer!

What you will do

- You familiarize with concepts of data compression with neural networks
- You extend a Deep Neural Network-based video codec
- You evaluate and document the results

What you bring to the table

- You are currently studying computer science, information and communication technologies or a related field
- You have good knowledge of Python and the TensorFlow framework
- You have knowledge of concepts in classical video coding
- You may have experience with recurrent neural networks

What you can expect

- **Flexible** working hours
- **Open** and **friendly team work**
- **Varied** tasks with room for **creativity**
- Exciting **seminars** and **events**
- **Networking** with scientists
- **Active contribution** in applied research
- **Interesting** an **innovative** projects

Weekly working hours are determined by agreement. You can start from now on (as a student assistant from **15** to **20** hours a week or as an intern for a period of at least three months). You can reduce your hours before exams and increase them during semester breaks. You can flexibly determine the working days. After your studies, you have the option of working with us full or part time.

We would be happy to offer you the opportunity to write a bachelor's or master's thesis in cooperation with us in the above-mentioned subject area. The thesis will be assigned and carried out in accordance with the rules of your university. For this reason, please discuss the thesis with a professor who can advise you over the course of the project.

We value and promote the diversity of our employees' skills and therefore welcome all applications - regardless of age, gender, nationality, ethnic and social origin, religion, ideology, disability, sexual orientation and identity.

Interested?

Apply [online](#) now (PDF: cover letter, CV, transcripts). We look forward to getting to know you!

Fraunhofer-Institute for Integrated Circuits IIS

www.iis.fraunhofer.de/en

Requisition Number: 50143

Application Deadline: none

Location: Erlangen

