Fraunhofer IIS

Job-Titel:
Intern / Student Assistant - deployment of deep learning applications

Job-Beschreibung
FOR THE »MOVING PICTURES TECHNOLOGY« DEPARTMENT IN ERLANGEN, THE FRAUNHOFER INSTITUTE FOR INTEGRATED CIRCUITS IIS IS CURRENTLY SEEKING AN / A

INTERN / STUDENT ASSISTANT FOR THE DEPLOYMENT OF DEEP LEARNING APPLICATIONS ON EMBEDDED DEVICES

For over 30 years, the institute’s Audio and Media Technologies division has been shaping the globally deployed standards and technologies in the fields of audio and moving picture production. Starting with the creation of mp3 and continuing with the co-development of AAC and the Digital Cinema Initiative test plan, almost all consumer electronic devices, computers and mobile phones are equipped with systems and technologies from Erlangen today.

In this context, deep learning techniques have developed to be popular and effective tools for many tasks in the field of image and video processing. However, it is often not practical and feasible to use powerful remote cloud resources for the compute-intensive processing of sensor data / camera images because deep learning applications in this field are subject to limitations in data traffic, security issues as well as critical latency requirements. Therefore, embedded devices are the means of choice to process data directly at the sensor / camera.

Your responsibilities:
In general, your main task will be to deploy algorithms for deep learning on different platforms including embedded devices, such as the Nvidia Jetson Board or Google Coral. The respective deep learning applications range from standard models for image classification and object detection / segmentation to specialized models for depth estimation and view rendering in the area of light-field. You will set up autonomous demonstrators with a webcam and a screen where the input videos are processed in real time on the embedded devices. In order to maximize performance, you will make use of inference optimizers and deep learning compilers, such as TensorRT and TVM.

Additionally, you will assist in setting up an environment / infrastructure for deep learning applications on cloud services such as GCP or AWS, which may require the containerization of applications by means of Nvidia Docker.

What you can expect from us
- An open and cooperative working environment
- Flexibility concerning your working hours
- An interesting application-oriented field of research with innovative projects and a state-of-the-art laboratory environment
- Sufficient opportunity to develop your interests and skills
- Extensive professional support from scientific mentors

If you have any questions about this opening, please contact Christian Schinabeck: christian.schinabeck@iis.fraunhofer.de

Interested?
Please apply for this position using the following link: https://recruiting.fraunhofer.de/Vacancies/52182/Description/2
Applications are possible in German and English. Please include a cover letter, your CV and your latest transcripts of records (as PDF) and quote ID number 52182. 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

Anforderungsprofil
What we expect from you
- You are currently studying informatics, computer science, or a related field
You have experience in programming languages such as Python and C++
You are familiar with embedded devices / embedded hardware
You have some experience with deep learning frameworks such as Tensorflow or Pytorch
You are available from now on (as a student assistant: 10-20 hours a week or as an intern: for a period of at least four months)

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Jetzt bewerben: https://recruiting.fraunhofer.de/Vacancies/52182/Description/2

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