



Thesis: Development of a State-of-the-art Gaze Estimation Solution for Embedded Systems

Already disappointed with your Amazon Alexa? We create empathic human-machine interaction!

Deeply enables smart devices to see and understand the user. So that your mobile devices or digital assistants can interact empathically. In totally new way, because we have a deeper user insight than what is possible today. What makes us special – our performance on embedded solutions. We create innovation with passion and work in an exciting environment with industry leaders.

We are looking for you:

With the use of facial analytics, we take a simple 2D camera output to understand who's around, where, attention, age, gender, and even emotions. To improve the interaction with smart devices, it is important that to understand where the user is looking at. Approaches for gaze estimation solve this problem by analyzing the eyes of the user. Based on the position of the pupils, a gaze vector relative to the camera can be calculated. Goal of this thesis is to select a promising approach and implement a prototype on an embedded system.

Do you want to...

- ... elaborate on current deep learning approaches for gaze estimation
- ... assess implementation possibilities of promising approaches
- ... select available data sets for training and evaluation
- ... develop an evaluation procedure
- ... port your approach to an embedded system, such as Raspberry Pi

What you should bring...

- ... motivation and independent and goal-oriented project work
- ... good knowledge of C++ (especially C++11)
- ... first experience in image processing and machine learning
- ... ideally experience with CMake und cross compiling

What we offer...

- ... use of cutting edge technology to take human-machine interaction to the next level
- ... startup atmosphere: Flat hierarchy, friendly atmosphere, possibility to learn new technologies & shape the project
- ... opportunity to stay as working student/full-time employee
- ... all the snacks & coffee you want! :)

If that sounds interesting, send us an E-mail including your CV and a short description of your project experience to career@deeplyapp.de.

We are looking forward to getting to know you!

