deeply

Thesis: Development of Face-based Heart Rate Measurement 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:

To improve the interaction with smart devices, it is important that the device can recognize the arousal of the user. The heart rate a valid indicator for the arousal of humans. Research shows that it is possible to measure the heart rate from the faces in color videos[1] [2]. 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
- … select available data sets for training
- … assess implementation possibilities and develop an evaluation procedure
- … port your approach to an embedded system, such as Raspberry Pi

What you should bring…

- … motivation for 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!

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[1] https://www.cv-foundation.org/openaccess/content_cvpr_2016/app/S11-03.pdf
[2] http://ieeexplore.ieee.org/abstract/document/6346392/