We are looking for a student to work on

**Embedded Linux for a Xilinx Zynq SoC**

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**About us**

One of our main areas of research is the application of modern control theory to the field of power electronics and electrical drives. To be able to implement our control strategies rapidly, we want to develop a powerful control platform based on a Xilinx Zynq System-on-Chip (SoC), which combines an FPGA and multiple ARM processors in one chip. The multiple chip architecture allows to have dedicated processor cores for different tasks. One processor will be used to run a baremetal control algorithm, while a second core is operating an embedded linux which offers simple communication with other systems. For this task, we are looking for a student to help us with the implementation of an Embedded Linux operating system, e.g. PetaLinux, and subsequently the implementation of an OpenAMP framework to run an asymmetric multiprocessing system.

**Your tasks**

- Understanding requirements of the project
- Building virtual machine to build the PetaLinux
- Setting up OpenAMP environment for asymmetric multi-core processing
- Running PetaLinux and baremetal application on two different cores in parallel on a ZedBoard

**Necessary skills**

- Profound knowledge of software development for linux
- Experience in embedded programming
- Previous experience with developing for a Xilinx Zynq SoC is helpful
- Fluent in German or English

**What we offer**

- Engagement in an interesting research project
- Possible as bachelor thesis, seminar or research internship
- Flexible working hours, also working from home is possible
- Starting date: anytime

**Application**

We are looking forward to receiving your application. Please include your previous development experience and a short explanation why you fit the position. Send your application to eyke.liegmann@tum.de.

**Technical University of Munich**

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