![KIT — Karlsruhe Institute of Technology]

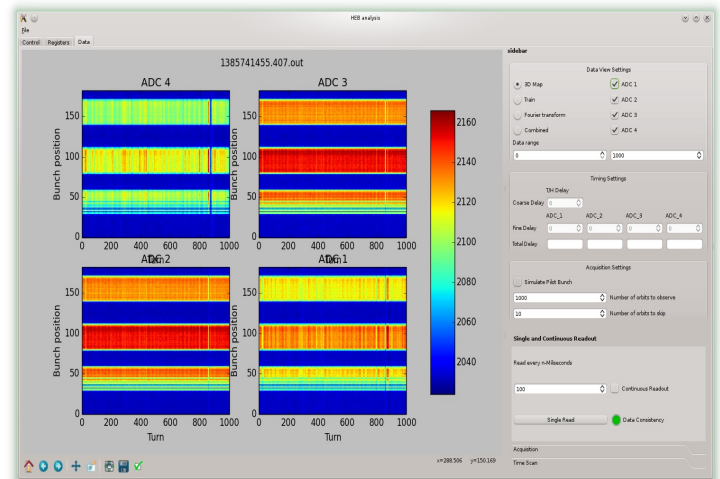# GUI Development and Visualization in Python with Qt Framework

HiWi position at IPE

At the Institute for Data Processing and Electronics we develop an ultra fast readout system with picosecond time resolution for advanced cryogenic sensors used to investigate beam characteristics of the ANKA synchrotron at KIT.

To aid the scientists in setting up and using the readout system, a graphical user interface was written in Python to configure the readout hardware, record, process and visualize output data, using the Qt framework.

We are currently looking for a HiWi to support us in maintaining and further developing the GUI. Optionally, the data acquisition workflow could be improved by writing appropriate Python bindings for the underlying communication library that interfaces with the hardware.

The student will be integrated in the IPE electronics group and is expected to contribute to the current development of the applied software, maintaining and further developing the graphical user interface for the readout system.

Current version of the Readout System GUI
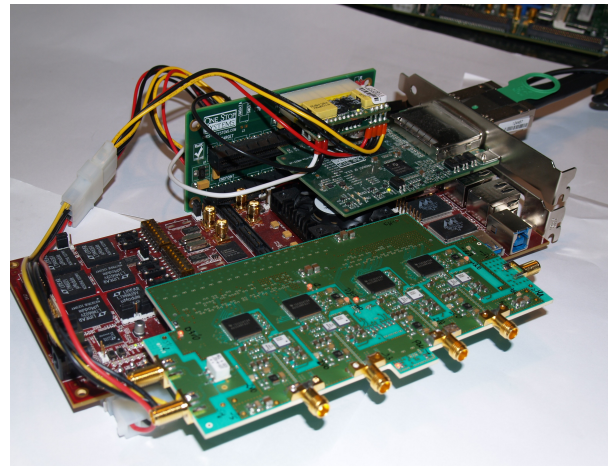
Required Skills:

- Solid knowledge of Python

- Visualization

- Usability and design of graphical user interfaces

Optional Skills:

- Qt framework

- C

- Basic understanding of hardware and low-level communication

Conditions:

The position is intended as a long-term engagement with a work time of about 30-40h per month.

A prototype of the readout hardware

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