Interdisciplinary Project
Stand: 08.06.2017

The Fraunhofer Institute for Building Physics is offering an Interdisciplinary Project at its working group Building System Solutions about the following topic:

"IoT Data Acquisition and Annotation"

Fraunhofer IBP is a multifaceted research and development institute within the Fraunhofer Society and works in all fields of building physics. The working group of building system solutions works, among other things, on analysis methods for discovering and identifying faults in the operation of building installations for optimizing their operation. In doing so, data from the building automation services of various origins must be prepared and transformed in order to be able to use them meaningfully.

Within the scope of the work a concept for flexible data transformation and storage is to be created and integrated into an existing data processing platform. The meta-information about the incoming data should be automatically entered into a transformation process by non-experts with the help of a web application, and translated into a semantic information model.

This includes the following tasks:
- Design and implementation of a process for data collection of incoming data streams (e.g. MQTT), data transformation based on variable data models and processing filters and storage of this data in a database with 'WSO2'
- Preliminary preparation of a semantic data model for the description of the meta information
- Create a very simplified web application for entering the meta information by users and their translation into the defined data model for the automatic semantic annotation of the incoming data

Desired personal attributes for the candidate:
- Study of computer science or a related subject
- Comprehensive knowledge of the methods of software design and in particular of data models
- Extensive hands-on experience with the Java programming language
- Comprehensive knowledge of web-based programming
- The ability to work independently into a new issue
- A conceptual and analytical approach as well as good communicative skills
Please contact in case of questions related to the topic to:
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