

OFFIS is a 1991-founded, internationally active Research and Development Institute for information technology based in Oldenburg, Lower-Saxony. In an average of 70 ongoing projects OFFIS, with its 300 employees, carries out research and prototypical development work on the highest international level in the areas of energy, health, manufacturing and transportation. OFFIS cooperates with more than 700 business and scientific partners worldwide.



R&D-Division: Energy  
Group: Energy-efficient Smart Cities

Work hours: up to 42 hours / month  
Start: immediately or by arrangement

## Student research assistant (f/m/d) Development of an energy trading system based on user preferences

### FOCUS OF THE RESEARCH GROUP:

The Energy-efficient Smart Cities group looks at different aspects of digitization, which are becoming increasingly indispensable for the creation of energy-efficient districts and cities. The group's flagship project is the „Energetic Neighbourhood Quarter at Oldenburg Air Base“ project, in which the practical implementation of an energyoctimized quarter within the scope of the real laboratory at Oldenburg Air Base is aimed at.

### YOUR TASKS:

You support the team to develop an energy trading system that will be based on orderbooks. Participants can define their preferences for the energy they want to consume, e.g. the CO<sub>2</sub> footprint or the price. Based on these preferences, the system shall automatically place bids in a marketplace that is based on orderbooks. The results shall then be translated into commands for energy systems so that they generate the appropriate amount of electricity. The system is already conceptualized in a bachelor thesis and shall now be built. The existing systems in this project are based on Java microservices with Spring Boot. They mainly use REST and AMQP / MQTT for communication. Even if the new trading system does not necessarily need to be developed with the exact same technologies, it would be useful if these technologies are also used in the new trading system.

### YOUR PROFILE:

- > Matriculation in a university or university of applied science
- > Experience in software development with Java. Other languages such as Python are also possible.
- > Experience with distributed software development with Git and CI / CD are desirable
- > Ability to integrate in our development process
- > Ability to work independently and accurately

### WE OFFER YOU:

- > Participation in an innovative and local research project
- > Working with up-to-date technologies
- > Possibility to be involved in the design and development process and to bring in own ideas and interests
- > Flexible working times
- > Remuneration in line with the universities in Lower Saxony: 10,69€/hour (without Bachelor) and 12,43€/hour (with Bachelor)

**CONTACT:** Please send your application to: : [bewerbung@offis.de](mailto:bewerbung@offis.de)

If you agree to our considering your application for other vacancies, then please inform us accordingly by including an informal consent in your covering email or attaching our [consent form \(PDF-Download\)](#) to your application..

**Contact Person:**  
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