



# Prototyping a User-Controlled Data Market

In our research project *myneData* we investigate how to realize a viable *data market*. Currently, service providers on the Internet collect user data at large scale and process or even sell this data in manners that are not transparent to the user. Hence, the user effectively loses control the data the service collects about them and large service providers, who have access to the most data, have a significant advantage over small or middle-sized enterprises. With *myneData* we investigate data markets as a technical alternative to this status quo: A data market is a trustworthy platform that constitutes an intermediary between the users, who own data, and potential data processors, who are interested in statistical information about the users' data. The data market receives such queries from an external data processor and processes them on the data processor's behalf. The data market only bases its computations on data of users who gave consent that their data may be processed for the query's purpose and are reimbursed for sharing information about their data via a fee the data processor pays for the query.




For *myneData* we implement a Python-based research prototype and we currently have **multiple open student positions** for a variety of tasks:

- **Backend developer:** We are currently refactoring the initial version of our prototype for a much cleaner code base that builds upon modern Python libraries such as Celery, Connexion, and SQLAlchemy.
- **Microservice architect:** Our new architecture makes it easier to scale-out our platform. In conjunction with an external project partner, we plan to seize this potential via the container orchestration platform Kubernetes.
- **Web developer:** The functionality of our data market must be accessible via a simple-to-use web frontend that extensively uses our APIs.

## Requirements

- Good teamwork attitude and communication, previous experiences with multi-developer projects are a plus
- Strong Python coding skills, familiarity with libraries such as Celery, Connexion, and SQLAlchemy is a plus
- Knowledge of current best practices for Internet services (e.g., RESTful API design)
- HTML/JavaScript skills for the web developer position

## Contact

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