

Student Research Assistant wanted!

Regression testing is regularly performed on software systems to ensure that changes have not inadvertently affected existing system behavior. With rapidly evolving code bases implying higher test frequencies and growing test suites, not all test cases can be executed after each newly introduced code change. Research on **Regression Test Optimization (RTO)** by Google, Facebook or Microsoft has proposed successful methods to increase the cost-effectiveness of regression testing by *prioritizing* or *selecting* relevant test cases.

Together with our industry partners IVU and CQSE, we are developing algorithms to bring RTO research closer to practice. Therefore, we are looking for a **motivated student research assistant** to support us with the implementation of advanced tools for optimizing Software Engineering processes.

Your tasks

- Support in implementation and maintenance of test optimization algorithms, connectors to third-party systems (e.g., GitLab, Travis), and CLI
- Code reviews in pull requests

We offer

- Work on a small to medium-sized software project at the intersection of research and industry
- Opportunity for a subsequent bachelor's/master's thesis or guided research
- Development in Python, Java/Kotlin, C++, and Java-/TypeScript
- State-of-the-art development process (including Git, GitLab CI, Docker, etc.)

Your qualification

- Motivation and ability to work and learn on your own
- Experience in **at least two** of the following languages: Python, Java/Kotlin, C++, and Java-/TypeScript
- Experience in UNIX and virtualization (e.g., Docker)

Compact information

Start	As soon as possible
Working hours/week	8 - 20 hrs, flexible work schedule
Contract	Initially set for 3 months, but extendable to 1 year.

Contact

To apply for the position, please send a CV and your current transcript of records to:

Daniel Elsner

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