Guided Research

Build a Test Selection Tool for Mobile App Tests in Natural Language

Testing mobile apps is crucial to ensuring functionality, usability, reliability and performance across various devices and operating systems. In addition to automated UI tests, mobile apps are often tested manually by a human tester, using test cases written in natural language (e.g., English). Manual testing enables testers to explore scenarios and find edge cases which might be overlooked by automated tests.

However, manual testing is time-consuming and leads to scalability issues as the mobile test suite grows over time. Therefore, we want to help testing teams to perform test selection, i.e., finding a subset of only the "important" tests to run.

You will be building a tool to assist testers during the manual testing process of mobile apps (iOS/Android) by

- Recording the code coverage during manual test runs (e.g., using *Frida* [1])
- Comparing the coverage to recent code changes
- Recommending a subset of tests to run next

[1] https://frida.re/docs/home/

Feel free to contact me directly if you are interested in this topic!
Please include your current **CV** and **grade report**, as well as a short **motivation letter** and **when** you intend to start your thesis.

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