

Program Analysis for Network Research

Introduction

To help with our research in the SYMBIOSYS project we are looking for a motivated and capable student research assistant.

Our group does program analysis for network research, especially using *Symbolic Execution*. For this, we develop, implement and evaluate new analysis techniques, analyze real-world software and systems (such as the emerging *QUIC* protocol originally developed by Google), and extend existing open-source tools.



As part of our project we are, e.g., doing research on symbolic liveness analysis, testing the code of the Apollo 11 rocket, contributing to the open-source projects *KLEE* and *LLVM*, and developing *KleeNet*, a Symbolic Execution engine for analyzing distributed systems.

Your Task

Our research assistants are actively involved in our current research and work closely together with us. Example tasks include implementing (parts of) new analyses, maintenance of our infrastructure, and surveying possible research areas.



In exchange, we offer interesting and challenging work on real-world projects, and working on state-of-the-art research topics together in a motivated and competent team.

Useful Skills

You will often be working on somewhat large and nontrivial C++ projects (e.g., <https://klee.github.io>). You should therefore have a firm grasp of memory management.

Prior knowledge of Symbolic Execution is explicitly *not* required, although we encourage interested students to check out <https://klee.github.io/publications> beforehand.

Contact



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