FELIX FABER

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Education

RWTH Aachen   **October 2018 – September 2023**

Bachelor of Science in Computer Science

- Bachelor Thesis: *Comparison of Symbolic Maximal End Component Decomposition Algorithms*
- Final Grade: 1.9

Konrad Adenauer Gymnasium   **July 2018**

Abitur

- Final Grade: 1.8

Experience

Areus   **Since February 2024**

Software Developer

- Maintaining, refactoring and modernizing C++ projects
- Deduplicating code across multiple projects

RWTH Aachen   **October 2021 – February 2022,   April 2022 – May 2022**

Student Assistant

- Development of a Java application, which generates C-Code to test the performance of various Model Checkers
- Refactoring existing Java Code to improve readability and maintainability
- Planning, designing and implementing new requirements
- Documenting program modules and interfaces as well as creating tests to automatically detect code regressions

Projects

C Debugger | *C*

- Development of a (from scratch) C Debugger for Linux
- Reads the debug information (DWARF) of a C program from its ELF sections
- Runs the program and shows the corresponding C source code line to be executed
- Supports common debug operations such as step-over, step-into and step-out
- Shows the current call stack of the program

Bachelor Thesis | *C++*

- Title: *Comparison of Symbolic Maximal End Component Decomposition Algorithms*
- Implementation of symbolic decomposition algorithms into a custom build of the model checker STORM
- Formalization of two different symbolic representations, as well as developing a novel symbolic algorithm to convert between these representations
- Experimentally evaluated the algorithms' performance by using the QUANTITATIVE VERIFICATION BENCHMARK SET
- Grade: 1.3

University-Project: Reversi Bot | *Java*

- Implementation of an extended version of the board game REVERSI
- Each game is played by sending and receiving moves over the network
- The bot decides its next move within a given time constraint by using an evaluation function for the board and searching in the space for possible moves using Alpha-Beta pruning
- Grade: 1.0 and an offer for the student assistent job described above

Skills

Languages: C, C++, C#, Java, Python, SQL
Human Languages: German (native), English (fluent, C1), French (B1), Dutch (A1)
Tools: (Neo)Vim, Visual Studio (/ Code), IntelliJ, CLion, Visual Studio
Interests: Learning how things actually work, playing guitar and piano