DANIEL TISCHNER

Software Engineer

📱 +49 761 42994095

✉ daniel-tischner@web.de

in /in/daniel-tischner

○ ZabuzaW

▤ 2411243/Zabuza

Skills
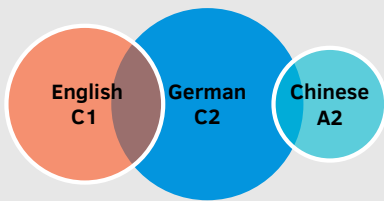
Overview

Programming

$$0\ LOC \longrightarrow 2\,600\,000\ LOC$$

Java

PHP • SQL • HTML • JS • CSS

C • C++ • C# • Python

Languages

Education

2016 - Present	**M. Sc., Computer Science**	University of Freiburg, Germany
2012 - 2016	**B. Sc., Computer Science** (GPA: 1.9)	University of Freiburg, Germany

Experience

Oct 2016 - Present — **Tutor** — University of Freiburg, Germany

- Course *Information Retrieval* - Students study, create and optimize typical functionalities of modern search engines
- Course *Algorithms and data structures* - Students learn all kind of typical data structures and learn how to analyze algorithms
- Course *System Design Project* - Students need to build and program a robot that is able to fulfil several given tasks, organization of a competition

Nov 2008 - Present — **Administrator & Content Creator** — FreewarWiki, Online

- Development of automated bots and scripts that execute recurring tasks, database management, creation of scripted templates to assist inexperienced user in content creation
- Extensive documentation of game elements and content
- Inspection, correction and improvement of contributions

Nov 2014 - Dec 2015 — **Board & Webadmin** — Gruppe W, Online

- Web development, performance improvement, development of automated web-integrated management software to ease workflow of all members
- Human resource management, project management, planning and giving conferences, mediator
- Development of modifications for ArmA 3, creation of 2D artwork and video editing

Mar 2007 - Jul 2012 — **Lead Programmer & Artist** — Tales of Freewar Team, Germany

- Programming a RPG game using the game framework RM2k3, responsible for game logic, implementing story, levels, conversations and battle logic
- Creation of 2D Art and sound editing, design and draft of maps

Awards

Jan 2017 — **SV-COMP 2017: Gold in Overall** — ETAPS/SV-COMP

- The competition compares state-of-the-art tools for software verification with respect to effectiveness and efficiency. The competition consists of two phases: a training phase and an evaluation phase.

Oct 2016 — **RERS Challenge 2016: Gold in Overall** — RERS / ISoLA'16

- The RERS Challenge provides a wealth of problems of increasing complexity, the more involved of which will probably be beyond any individual state-of-the-art method or tool. Characteristic for RERS is its wide scope, which addresses not only source code analyzers, but also (model-based) testers and (test-based) modelers, and in particular Free stylers.

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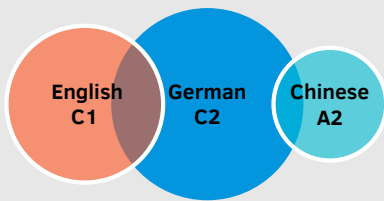
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Publications & Preprints

Mar 2017	**Minimization of Visibly Pushdown Automata Using Partial Max-SAT** — TACAS 2017/Springer
Mar 2016	**Minimization of Büchi Automata using Fair Simulation** — Preprint arXiv

Projects

Dez 2015 - Present

ULTIMATE

program-analysis, model-checking, reachability, termination

- Development, implementation, analysis and benchmarking of algorithms to generate random finite word, infinite word, nested word and tree automata (FA, NWA, TA) and also algorithms to minimize them

Apr 2016 - Present

Sparkle

api, selenium, mmorpg

- Creation of a robust Selenium driven API for a browser embedded MMORPG which uses web-crawling mechanisms.

Jun 2016 - Apr 2017

Mem-Eater-Bug

jna, memory-manipulation, code-injection, windows-api

- Familiarization with security technologies and reverse engineering
- Providing an API which is capable of hooking onto other processes in order to provide memory manipulation methods and the possibility to inject foreign code

Apr 2014 - Feb 2015

Antigen

game, real-time-strategy, game-design, scrum

- In a team of 5 develop a strategy game from scratch using Scrum as software development managing framework
- Draft and design of an idea for a real time strategy game, creation of a detailed game design document
- Implementation of the game, primarily its logic and fast collision detection solutions

May 2017 - Aug 2017

TreeFlood

parallel-computing, shared-memory, graph-algorithms, exploration

- Study and implementation of an algorithm which distributedly explores unknown tree graphs
- Creation of a demo GUI that step wise shows how the algorithm works, present the algorithm in a conference

May 2017 - Jul 2017

Parbot

chatbot, selenium, api, service

- Development of a robust chatbot service which is able to recover from errors
- Implementation of a robust client which uses the chatbot service to automatically interact with users of a browser embedded MMORPG