DANIEL TISCHNER

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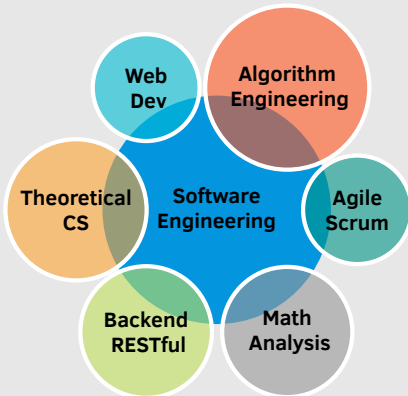in /in/daniel-tischner

⬤ Zabuzard

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19,451 Rep. ⬤ 7 ⬤ 42 ⬤ 64

Skills

Overview

Programming

Java

C++

SQL • HTML • JavaScript • CSS

C# • Python • PHP

C • Lua • ActionScript • Perl

Profile

- **9 years** of professional programming experience, 13 in total
- **Master in Java**, expert in C++ and intermediate Fullstack knowledge
- **Math enthusiast** with large background in theoretical CS and analysis
- **Passionate teacher**, top user on *StackOverflow*, top helper on *Together Java*
- **Strong academic background** with focus on algorithm development and analysis

Experience

Nov 2018 - Present — **C++ Programmer (Intermediate)** — Ubisoft Düsseldorf, Germany

C++17　C++14　C++11　SQL　Boost　WinAPI　REST　AWS　protobuf
Selenium　CMake　Jenkins　Jira　Scrum

- Expert on all game download and upload topics in the companies game launcher (*Ubisoft Connect*/*Uplay*), including
  - command-line tool to upload games
  - revamping the patching system (based on *FastCDC*)
  - integrating a new progressive download technology
  - tools for savegame management and migration
- Technical consultant for Selenium based automation tests
- Contact for partners for technical questions (Google, Amazon, Tencent, Epic Games, Denuvo)
- Recruitment - CVs, interviews, test reviews, onboarding, mentoring
- Attending various leadership trainings

Oct 2016 - Nov 2018 — **Tutor** — University of Freiburg, Germany

C++11　Java 8　Python 3　Jenkins

- Assisting students understanding the contents of courses, organization of weekly meetings
- Courses:
  - *Programming in C++*
  - *Information Retrieval*
  - *Algorithms and data structures*
  - *System Design Project*

Nov 2014 - Dec 2015 — **Owner & Full Stack Developer** — Gruppe W, Online

PHP　HTML　JS　jQuery　PHP-Fusion　SQL　C++11　SQF　Photoshop
Sony Vegas　Audacity

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

Education

2016 - 2018 — **M. Sc., Computer Science** — University of Freiburg, Germany

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

Technologies ———

Java

Gson, Jackson, Selenium, JSoup, Apache HttpComponents, Swing

JUnit, Logback, SLF4J, Log4j, Checkstyle,

JNI, JNA, JMH, JProfiler,

JDBC, Hibernate, OneBusAway, Osm4j, Tomcat,

Apache Commons, Guava, protobuf, fastutil, Trove, Google Collections, Eclipse Collections,

JWBF, detectlanguage, JavaILP

Spring

Boot, Framework, Data, Security, Session, Batch, Web Flow, Web Services, Reactor, WebFlux, Cloud, Actuator, Hystrix

Frontend

AngularJS, Knockout, jQuery, Thymeleaf, Leaflet, PHP-Fusion

C++ • C#

Boost, WinAPI, VSProfiler, Qt, XNA, MonoGame

Databases

MySQL, SQLite, InfluxDB, NoSQL, H2, MariaDB

Networking

TCP, UDP, HTTP, HTTPS, FTP,

AWS, REST, JSON, protobuf

IDEs

Intellij, Eclipse, Visual Studio, VSC

Versioning

Git, SVN, Perforce, GitHub, GitLab, GitKraken, SourceTree, P4Merge, WinMerge

Build Management

Maven, CMake, Conan, Ant, Jenkins, SonarQube, Resharper, Checkstyle

Organization

GitLab Issues, Jira, Confluence, Toggl, Grafana, Kibana, SmartRecruiters, KeePass

Communication

Slack, Discord, Skype, MS Teams, MS Outlook

Image • Video

Photoshop, PhotoFiltre, Gimp, OBS Studio, Sony Vegas, Dxtory, Audacity

Awards

Jan 2017 — **SV-COMP 2017: Gold in Overall** ETAPS/SV-COMP
- Yearly international competition on Software Verification, comparing state-of-the-art tools with respect to effectiveness and efficiency.

Oct 2016 — **RERS Challenge 2016: Gold in Overall** RERS / ISoLA'16
- Challenges revolving around unsolved problems on the topic of Source Code Analysis, model-based testing and test-based modeling. Directly contributing to global research.

Publications

Sep 2018 — **Multi-Modal Route Planning in Road and Transit Networks** Preprint arXiv

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 (12 of 58)

Jul 2020 - Aug 2020 — **FastCDC4J** github/FastCDC4J
`Java 14` `Maven` `gnuplot`
- Highly customizable implementation of a state-of-the-art solution for data deduplication and patching

Nov 2019 - Nov 2019 — **Maglev** github/Maglev
`Java 9` `Maven`
- Sophisticated and customizable library for solving various shortest path problems using Module-Dijkstra, ALT and A*

Nov 2019 - Nov 2019 — **Closy** github/Closy
`Java 9` `Maven` `gnuplot`
- Compact library for nearest neighbor computation based on Cover Trees

Apr 2018 - Aug 2018 — **Cobweb** github/Cobweb
`Java 9` `Gson` `JUnit` `REST` `JDBC` `SQLite` `Logback` `SLF4J` `Apache Commons` `Ant` `AJAX` `jQuery` `Leaflet`
- Development of a backend for a multi-modal journey-planner
- Research, implementation, optimization and benchmarking of shortest path algorithms
- Processing OSM, GTFS and real-time data on huge traffic-networks

Languages

English C2 **German native** **Chinese A2**

Dez 2015 - Oct 2017 **Ultimate**

`Java 8` `JUnit` `gnuplot` `Jenkins` `SonarQube`

- 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 - Oct 2017 **Sparkle**

`Java 8` `Selenium`

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

Mar 2017 - Oct 2017 **BeedleBot**

`Java 8` `Selenium` `jQuery` `Local Storage` `HTML` `CSS`

- Creation of a robust Selenium driven semi-automatic bot that trades items in a browser embedded MMORPG with other players

May 2017 - Aug 2017 **TreeFlood**

`Java 8` `Swing` `gnuplot`

- Implementation of an algorithm to distributedly explore trees and creation of a GUI to visualize the algorithm.

Oct 2016 - Jul 2017 **LexiSearch**

`Java 8` `JUnit` `JavaScript` `Python 3` `Checkstyle` `REST` `gnuplot`

- Information Retrieval library based on inverted indices, q-grams and BM-25 ranking
- Server offering a search engine as REST API with a light frontend consuming it

Jun 2016 - Apr 2017 **Mem-Eater-Bug**

`Java 8` `JNI` `JNA` `WinAPI` `Attach API`

- 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

Aug 2016 - Aug 2016 **DiceCounter**

`Lua` `Blender` `Photoshop` `Tabletop Simulator API` `Steam Workshop`

- Tabletop Simulator mod that counts and displays pip frequencies of dices inside a custom box

Apr 2014 - Feb 2015 **Antigen**

`C#` `XNA` `MonoGame` `Nuclex` `C5` `Scrum`

- 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