Christopher Schnick

Software Engineer

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Summary

Software engineer experienced in the Java ecosystem and desktop application development. Passionate about designing innovative solutions for end users and learning new technologies and tools when needed.

Education

University of Stuttgart — *Stuttgart, Germany*

Master of Science in Computer Science — *Oct 2019 - Apr 2022*

University of Stuttgart — *Stuttgart, Germany*

Bachelor of Science in Computer Science — *Oct 2016 - Oct 2019*

Experience

University of Stuttgart — *Stuttgart, Germany*

Research Assistant (Part Time) — *Oct 2020 - Apr 2021*

- Enabled researchers to perform large-scale simulations on the university's clusters and supercomputers by maintaining SGpp, a large C++ scientific simulation library for sparse grid methods.
- Experimented with new scientific approaches to high-dimensional function interpolation and regression with sparse grids in conjunction with my master's thesis.
- Enabled several external customers and researchers to run simulations on their systems by implementing a separate build workflow for an MSVC++ build on Windows for the previous Linux-only library project.

Projects

XPipe — *Apr 2022 - Present*

- A new remote file manager written in Java that utilizes an entirely new connection concept that improves the productivity of professionals.
- Integration of popular solutions like Docker, Kubernetes, LXD, and more into the application via their respective APIs.
- Setup of a complex CI/CD pipeline for testing, distribution, and updates of many versions across multiple platforms.
- Management of a complex multi-project Gradle build with many interconnected components and plugins.
- Utilization of the bleeding-edge GraalVM Ahead-Of-Time native image compilation for performance-critical components.
- Creation and implementation of a robust security concept to handle sensitive information of users in security-critical contexts.

Pdx-Unlimiter — *Jan 2020 - Present*

- A graphical savegame manager and editor written in Java for players of grand strategy games from Paradox Interactive.
- Enabled more than 35,000 people so far to easily keep track of all their campaigns, resulting in a more enjoyable gaming experience.
- Implementation of a highly efficient data parser that must handle hundreds megabytes of data with a minimal processor and memory footprint.
- Distribution and integration for all operating systems, automatic CI/CD pipelines for distribution, plus the handling of automatic updates.
- Conceptualization and implementation of an user-friendly interface and workflow for the application with JavaFX.

PDX Tools — *Oct 2020 - Present*

- A web-based interactive map and leaderboard for the strategy game Europa Universalis 4 that allows players to relive and analyze past campaigns, allowing them to understand and visualize complex game mechanics.
- Moved entire rendering pipeline of the map visualization from the CPU to the GPU using WebGL2.
- Achieved rendering speed increases of more than 100x compared to the old renderer, leading to a much improved user experience.
- Integrated rendering logic into the existing Typescript-based website codebase.

Skills

Languages	Java, C++, Python, HTML/CSS, Typescript, WebGL, SQL
Java	Gradle, Maven, GraalVM AOT, JDBC, Jackson, JPMS, JavaFX
Other	Docker, Kubernetes, Ansible, Amazon Web Services (AWS), GitHub Actions, CI / CD