

Luke Jones

Software Engineer

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Personal statement

I am a highly focused software engineer with a broad range of skills. I am passionate about open source software, Linux, and systems programming in Rust or C/C++. I contribute to open-source projects. In my free time I research and write game + physics engines. My career aspirations are to specialise in systems and hardware programming, or game programming of some form.

Core skills

- Deep understanding of hardware and writing code for performance.
- Experienced in Rust, C, C++ and Assembly as primary languages with Python, JavaScript, and Haskell as secondary.
- Rust skills of note are:
 - Concurrency and multithreaded apps.
 - FFI in Rust for safer C style library creation, plus API design.
 - Low-level Rust to implement performance critical code within safe abstractions.
- University level experience in many topics including but not limited to:
 - Software architecture, logic and CPU design.
 - Programming for constrained hardware.
 - Algorithm design and analysis.
- Utilising language idioms, best practices and standards (de-facto or official).
- Broad knowledge of: Linux, version control, profiling, debugging, build tools and environment, and distro packaging.
- Flexible and versatile with strong problem solving and research skills.
- I work well remotely and am highly self-motivated.

Work History

Jasic Technology Europe - Mobile App Developer

(December 2019 ++)

- Main role is mobile application development, with many additional tasks when required. Future roles may include embedded development, and or management.

Sphere Identity - Core Developer

(November 2017 - December 2019)

Distributed applications development, cryptography and protocol development using the Rust language.

I developed the encryption and data sharing protocol the identity platform is based on, which is used in AWS Lambdas, Wasm for client-side browser use, Android, and iOS. It is written in Rust. I made heavy use of FFI, unit and CI testing, and documentation abilities of Rust.

We effectively use Agile methodology to plan and accomplish tasks. We also have daily stand-up. Both of these I have managed well while working remotely.

Other tasks include:

- Research, and validation of technologies.
- Unit testing and improving existing code.
- Writing internal articles:
 - code style, optimization, git, FFI & wasm guides.
- Writing AWS Lambdas in JS and custom runtimes including Rust.

Google Summer of Code 2017 (participant).

(May-August 2017)

I researched and began implementing the infrastructure to use Rust language in GJS (Gnome JavaScript) with the aim of reducing memory leaks and other issues associated with C and C++. When it was seen that this wasn't a suitable approach, the knowledge gained from the application of Rust was then applied to the C++ codebase to improve memory safety and apply ownership models. A summary is available at <https://ljcode.org/gsoc-2017/>.

Unrelated Work Experience.

(2000 - 2014)

Mechanic, welder/fitter/turner, engineer at a race-car chassis shop, computer repair.

Education

Massey University

(2014-2017)

BSc in Software Engineering (one semester left to complete).

Apprenticeship in Heavy Fabrication (AMTEC Engineering)

(2006-2009)

Apprenticeship focused on fitting/welding heavy fabrication

References

Katherine Noall

CEO of Sphere Identity

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Philip Chimento

Mentor for Google of Code project

Employed at Endless Mobile Inc.

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