



Software Engineer V

Compilers and Programming Languages

Highlights

- 📍 Fully Remote (Global)
- 💰 \$100k - \$175k + $\geq 0.1\%$
- 👥 Reports to Compiler Team
- 📅 Unlimited Time Off
- 🏖️ Paid Vacation Expenses
- 💻 \$4k Device Allowance
- ❤️ Medical/Dental/Vision
- 🏋️ Gym Allowance
- 📖 Learning Allowance

About Us

At **Formal**, we're rethinking serverless *from scratch*: we're building a new computing stack for instant, globally available, truly elastic, soundly isolated execution. We want anyone to be able to easily deploy their software on our machines and have it instantly react to inbound requests with bare-metal performance. We leverage formal methods and languages to build OS interfaces with low overhead, formally verified isolation without containers or VMs. Our stack is simultaneously more secure and performant than anything else out there. Our immediate goal is to build the world's first serverless networking infrastructure.

We believe in moving deliberately, with care, and breaking nothing. Incredible developer experiences govern how we think about the software we write.

Our Tech Stack

We write in Rust and Rocq, use `git`, prefer CLIs to GUIs and love OSS.

Equal Opportunities

Formal is an equal opportunity workplace. We understand, accept, and value differences amongst people and their backgrounds. We provide everyone fair opportunities to attain their full potential and actively promote a sense of belonging and wellness.

Expectations

You'll work closely with the Formal Methods team to build a compiler for a new Rust-like language to run in kernel space. You'll spend lots of time writing Rust to formal specifications, proposing architectural or implementation ideas, reviewing code, and learning from experienced teammates. In the future, you'll collaborate with the OS, Networking, and Security teams to integrate the language into production environments.

Responsibilities

- Implement compiler(s) in Rust according to specifications
- Collaborate actively with the Formal Methods team
- Participate in both sides of code reviews
- Write software to continuously test and verify correctness
- Actively document your code, process, and ideas
- Collaborate and co-design with OS, Networking, and Security teams to integrate the language into production
- Actively anticipate and communicate future roadblocks

Qualifications

- 2+ years of software engineering experience
- Extensive experience writing Rust and ideally C
- Understanding of system-level concerns such as binary formats, loading, ABIs, linking, and machine targets
- Understanding of and experience with compilation: lexing, parsing, type checking and other analyses, code generation
- Some understanding of type systems and logic systems: formal specification, design, implementation, and trade-offs
- Ability to translate language specifications into code
- High level of independence and autonomy
- Ability and willingness to document, teach, and explain complex technical problems and solutions

Compensation & Benefits

Compensation includes a competitive salary and stock grant with vesting. Benefits include unlimited paid vacation, reimbursable vacation expenses (travel/lodging up to \$1k), triennial \$4k device allowance, comprehensive health insurance, \$120/month gym allowance, and \$250/year for educational expenses.