

# KIRILL ELAGIN

KIR@ELAGIN.ME  
HTTPS://KIR.ELAGIN.ME

**Principal Systems Engineer** bridging the gap between **software performance and developer productivity**. Combines extensive **C++**, **functional programming (Haskell)**, and **Linux** experience with modern build toolchains (**Nix**, **CMake**) to deliver reproducible, high-performance computing environments. Technical leader capable of diagnosing kernel-level issues and driving cross-team architectural improvements.

## WORK EXPERIENCE

---

[a hedge fund] (New York, USA; Zug, Switzerland) 2022 .. now

**Lead Engineer** (2026) ← Senior Engineer

- **Infrastructure ownership**: Owning release management of the firm's core C++ simulation infrastructure; designed and introduced a hermetic *CMake/Nix* build system to replace legacy Makefiles.
- **Storage optimisation**: Designed and implemented an alternative backend for the internal storage library (handling 100s of PB), achieving a **1000x** performance improvement for specific use cases.
- **Computational efficiency**: Led cross-team efforts to optimise research algorithms (SIMD/AVX, memory patterns), reducing CPU and memory usage by **3x–50x**.
- **Systems expertise**: Serves as the subject matter expert on Linux internals (ELF, libc, dynamic linking), implementing custom LD\_AUDIT hooks, and resolving complex kernel-level issues.

Serokell (remote) 2017 .. 2022

**Chief Technology Officer** (2020) ← Staff Engineer (2018) ← Software Engineer

- **Engineering leadership**: Scaled the engineering team from 5 to 50+ developers (**10x** growth), establishing the company's first SRE team and defining technical hiring strategy.
- **R&D delivery**: Directed the delivery of complex consulting projects, including secure block-chain smart-contract design and Language Server Protocol (LSP) implementations, while maintaining hands-on coding involvement in *Haskell*.
- **Process improvement**: Turned around a failing critical project upon promotion to Staff Engineer, subsequently standardising project management and development best practices used across the entire organisation.

JetBrains Research (St. Petersburg, Russia) 2015 .. 2017

**Researcher / Software Developer**

- **Compiler development**: Contributed to the core *Java* implementation of the Arend proof assistant and type checker within the HoTT (Homotopy Type Theory) group.
- **IDE engineering**: Engineered an experimental projectional web-based IDE that operated directly on Abstract Syntax Trees (AST), solving complex challenges in language and tooling design.

## EDUCATION

---

**M.Sc.** in Theoretical Computer Science (*summa cum laude*) 2013 .. 2015  
St. Petersburg Academic University (St. Petersburg, Russia)

**B.Sc.** in Applied Mathematics and IT 2009 .. 2013  
ITMO University (St. Petersburg, Russia)

## OPEN SOURCE AND COMMUNITY

---

⌚ [github.com/kirelagin](https://github.com/kirelagin) (9k+ commits in public repositories)

✍ [stackoverflow.com/users/603094/kirelagin](https://stackoverflow.com/users/603094/kirelagin) (13k+ reputation)

✿ [Nix/Nixpkgs/NixOS](#): community member and contributor since 2012

👉 [Teaching](#): Functional Programming (Haskell), Types in Programming Languages