Nathan Lilienthal

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Summary: I'm a flexible programmer with a focus on efficiency, user experiance, and writing solid, maintainable code. I have 6+ years of experiance working in a variety of environments, from small scale companies, to fortune 500 companies. I'm happy to work either in an office, remote, or a hybrid schedule.

Languages: Rust, Java, Ruby, C/C++, LUA, Racket, Shell. Java/Typescript, Python, and more...
Systems: UNIX, Linux, Git + Hub/Lab, Rails, Heroku, Postgres (PostGIS), SQLite, AVR/ARM, WoW (ask me about it).

Professional Experience

- **Software Engineer** — 2021 − 2022
  Aetion Inc. — *Remote / Boston, MA*
  - Profiled and optimized core platform routines, as well as contributed to broader efforts to design new architecture for efficiently running our large analytic jobs
  - Developed a standalone Java tool to assist with templated spreadsheet population for science team deliverables
  - Worked on-call for production issues ranging from identifying user-error, workarounds, and long term solutions.

- **Research Programmer** — 2019 − 2021
  Northeastern University, Intelligence Advanced Research Projects Activity (IARPA) — *Boston, MA*
  - Collaboratively developed a hybrid-mode secure programming language design for multi-party computation (MPC)
  - Represented my team at both remote and in-person technical exchange meetings with other researchers
  - Built a prototype implementation of our language, which is forked from the Rust programming language

- **Sr. Software Engineer** — 2018 − 2019
  Forward Financing Inc. — *Boston, MA*
  - Developed a client wrapper library for an Algolia search implementation
  - Quickly performed various application performance improvements, making use of Scout APM and other tools
  - Planned architecture refactoring, including object model improvements and a new data permissions system
  - Led efforts to create an orchestration CLI for managing a complex Heroku + Salesforce microservice system

- **Software Engineer** — 2016 − 2017
  Apple Inc. — *Cupertino, CA*
  - Built a Ruby library (`radic`) and CLI (`radish`) for interacting with Apple's bug management system (aka Radar)
  - Participated in a cross-functional web design work group to help create common components for the hardware teams
  - Contributed to an internal tool for managing hardware validation, inspired in part by Travis CI
  - Contributed to an internal tool for analysing large amounts of pre-production device test data

Notable Projects

- `alacritty`, a cross-platform, GPU-accelerated terminal emulator (contributor)
- `galos`, an Elite: Dangerous ZMQ subscriber, database, and starmap
- `oursh`, a multi-language shell which aims to be POSIX compatible, written in Rust
- `lalrpop-lambda`, parser and reductions for the lambda calculus with a minimal webapp
- `nrf24l01`, basic working AVR firmware for the Nordic Semiconductor's nRF24L01+ radio transceiver

Education & Coops/Internships

- **Bachelor of Science in Computer Science** — 2011 − 2016
  Northeastern University — *Boston, MA*
  - *Teaching Assistant, Fundamentals of Computer Science 1* — *Fall of 2012, 2013, 2014, and 2015*
  - *Independent Study, Multi2Sim – A Heterogeneous System Simulator* — *Fall 2014*

- **Software Developer − Intern** — Summer 2012
  HOMER Energy — *Boulder, CO*

- **Software Developer − Full-time Coop** — Jan. 2013 − June 2013
  Bluesocket - Adtran — *Burlington, MA*

- **Web Developer − Full-time Coop** — Jan. 2014 − June 2014
  Americas Test Kitchen — *Boston, MA*

- **Software Engineer − Full-time Coop** — Jan. 2015 − Aug. 2015
  Apple Inc. — *Cupertino, CA*