Russell Cohen

CONTACT INFORMATION	285 Washington Street Melrose, MA 02176	rcoh@rcoh.me

EDUCATION

Massachusetts Institute of Technology, Cambridge, MA   June 2013

Computer Science and Engineering (6–3), *GPA:* 4.9/5.0

Relevant coursework:

Distributed Systems Engineering (6.824)	Computer Systems Security (6.858)
Performance Engineering (6.172)	Operating System Engineering (6.828)
TA for Computer Language Engineering (6.035)	Advanced Datastructures (6.851)

WORK EXPERIENCE

AWS, Melrose, MA (Remote)   Senior Software Engineer, July 2020 — Present

- Design and build smithy-rs, a client and server code generator for the Smithy IDL. smithy-rs generates clients for the AWS SDK, dozens of internal AWS services, and several external customers.
- Found and lead team to build AWS SDK for Rust.
    + Work with Rust language and SDK stakeholders to design an SDK balancing ease-of-use, flexibility and performance. The Rust SDK is among the fastest AWS SDK with overhead of 20-30μs per request.
    + Build wire-level traffic record-and-replay framework for deterministic testing and fault simulation.
    + Implement high-performance parser and serializer generators for XML and JSON.
- Lead organization-wide initiative to code generate endoint resolution across all SDKs. This reduces custom code and implementation time while eliminating a class of common SDK bugs.

Self Employed, Redwood City, CA   Freelance Software Engineer, February 2016 — 2020

- Consult on key scalability and architecture decisions
- CTO/Senior engineer for hire at small startups (architect/implement MvP, design interview & engineering process process, etc.)
- Join companies for 1-3 months to finish high-value projects.
- Recent Projects:
    + Angle grinder, a popular CLI app written in Rust for log analytics
    + Crossword.Tools, a tool for creating Newspaper-quality crossword puzzles. Core fill algorithm written in Rust, compiled to WASM.
    + Architect, code and deploy a new webhooks delivery architecture that reduced latency by 60x
    + Design a domain specific language that compiles to Spark
    + More projects at https://rcoh.me/hire-me

Sumo Logic, Redwood City, CA   Software Engineer Lead, February 2014 — February 2016

- Lead search performance team to improve search latency and throughput
- Developed optimizer for the Sumo Logic query language
- Authored open source ElasticSearch library
- Scala, Java, MySQL, Elasticsearch, Cassandra, Lucene, AWS

Filepicker.io, San Francisco, CA   Principal Engineer, January 2013 — January 2014

- Scaled highly available service to >300QPS while reducing the number of servers required
- Optimized use of MongoDB, Nginx, Haproxy, uWSGI
- Python, Node.js, iOS, MongoDB, Postgres, Haproxy, Nginx, uWSGI, Flask, EC2, S3

SKILLS

Rust, Java, Scala, Python, Go, (my/Postgre)SQL

INTERESTS

rock climbing, mountain biking, trail running