

Severyn Kozak

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github.com/sevko

SKILLS

Languages: Python, C, Java, Javascript, Haskell, C++, x86

Tools: Linux, Git, Nginx, PostgreSQL, Elasticsearch, MongoDB, Flask, Jekyll, Node.js, AWS

Experience Areas: web, GIS, performance, security, crypto, graphics, compilers, machine learning, distributed systems, operating systems

EXPERIENCE

Trading Systems Engineering Intern at [Tower Research Capital](#) 06/2018 - 08/2018 (3 months)

Worked on our core trading infrastructure.

- improved the performance of order placement in strategies with sparse order patterns
- dealt with large C++ codebases, low-level optimization, and rigorous performance testing

Software Engineering Intern at [Cryptosense](#) 06/2017 - 08/2017 (3 months)

Worked on software that automatically identifies cryptographic vulnerabilities in Java software.

- automated our product for CI integration: wrote a backend API and Java client library, plugins for Gradle and Jenkins, and helped make a demo video for clients
- researched how to globally map Java crypto provider versions to the documented vulnerabilities that affect them, using OpenJDK security reports, CVE databases, and automated vulnerability tests

Software Engineering Intern at [MongoDB](#) 06/2016 - 08/2016 (3 months)

Worked on performance regression testing at MongoDB.

- focused on test analysis, which consumes the diagnostic data produced by performance tests and tries to identify performance regressions based on throughput over time, resource usage, logs, etc.
- improved our analysis logic, making it flag errors more intelligently and digest more diagnostic data
- added linting, testing, and helpful tooling to our Python codebase

Software Engineering Intern at [Mapzen](#) 07/2014 - 06/2015 (1 year)

Interned at Mapzen, an open-source and open-data geographic software startup, during my gap year.

- developed our Node.js/Elasticsearch-based geocoder, [Pelias](#)
- reduced data build times from days to hours, improved geo-hierarchies, added new datasets, etc.
- managed regular deployments in multiple environments and follow-up testing/QA
- worked on our high-volume map [vector tile service](#)'s PostgreSQL, Python, and AWS infrastructure
- worked with huge geographic datasets like OpenStreetMap, OpenAddresses, and GeoNames

Programming Mentor/TA at [CSTUY](#) 10/2013 - 05/2014 (8 months)

- mentored 25 high school students at weekly, three-hour programming sessions
- helped teach Python, databases, simple web-dev, and basic computer science

EDUCATION

MIT Master of Engineering in Computer Systems (not yet started) 2019-'20

MIT B.S. in Computer Science 2015-'19

Stuyvesant High School 2010-'14