

# Severyn Kozak

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github.com/sevko

## SKILLS

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**Languages** Python, C, C++, Haskell, Go, x86, Java, Javascript  
**Tools** Linux, Git, Nginx, PostgreSQL, Elasticsearch, AWS, MongoDB, Flask, Node.js  
**Experience** algorithmic trading, HPC, operating systems, distributed systems, security, crypto, compilers, graphics, machine learning, AI, inference, web, geographic information systems (GIS), various math

## EXPERIENCE

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**Software Engineer** at [Ansatz Capital](#) (NYC) *Sep 2020 - now*  
Quantitative development and high-performance software engineering for high-frequency trading.

**Contract Software Developer**, self-employed (remote) *summer 2020*  
Developed a [web-security API](#) for domain owners to analyze the threat level of typo'd domains. Developed a baby name website that combines public name datasets with multilingual translations, machine-learned ethnic breakdowns, suggestions for similar names, and more.

**Trading/Engineering Intern** at [Tsuru Capital](#) (Tokyo) *summer 2019*  
Algorithmic options market-making on the KRX in a prop-shop setting. Solved problems across our stack, in trading strategies, simulation, viewers, and infrastructure.

**Systems Engineering Intern** at [Tower Research Capital](#) (NYC) *summer 2018*  
Worked on 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](#) (Paris) *summer 2017*  
Worked on software that automatically identifies cryptographic vulnerabilities in Java software. Automated our product for CI integration, writing backend APIs and build-system plugins. Researched how to map Java crypto-provider versions to their known vulnerabilities.

**Software Engineering Intern** at [MongoDB](#) (NYC) *summer 2016*  
Worked on performance regression testing at MongoDB. Improved our test analysis, which identifies performance regressions based on diagnostic data from stress tests (resource usage, throughput, etc.)

**Software Engineering Intern** at [Mapzen](#) (NYC) *Jul 2014 - Jun 2015*  
Interned at Mapzen, an open-source and open-data geographic software startup, during my gap year. Worked on our Node.js/Elasticsearch-based geocoder, [Pelias](#), as well our high-volume map [vector tile service](#)'s PostgreSQL, Python, and AWS infrastructure.

## EDUCATION

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**MIT M. Eng. in Computer Systems** 2019-'20

- TA for 6.172 Performance Engineering
- Ultra-low performance variability research with the Supertech group ([thesis](#))

**MIT B.S. in Computer Science, Minor in Mathematics** 2015-'19

- Varsity Lightweight Rowing (4 years)
- Parallel Computing research on the Cilk platform with the Supertech group

**Stuyvesant High School** 2010-'14