

## PROGRAMMING SKILLS

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LANGUAGES – Python, Typescript, Golang, Haskell, Rust

TECH/FRAWORKS – Kubernetes, Docker, \*Nix, React/Redux, SQL

## EXPERIENCE

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### Setter

*Full-Stack Developer Intern*

Rust, Typescript  
*Jan 2019 - April 2019*

- Rewrote critical parts of the Node backend in Rust, e.g. transactional email handling, realtime quote editor and service payment endpoints.
- Helped implement CI/CD (Travis, Docker) for microservices and investigate moving from GCP to AWS.

### Got It

*Software Engineering Intern*

Python  
*May 2018 - August 2018*

- Worked on the companies routing algorithms, the most technically involved part of the companies stack. Extended the system so we could perform real-time matching between professionals for mentoring.
- Created API's and real-time channels for the first mobile app used by our professionals. In particular wrote the backend service to showcase real-time demand and analytics to our pro's.

### Quantcast

*Software Engineering Intern*

Python  
*March 2017 - July 2017*

- Optimized performance of a real-time bidding configuration ETL (Extract, Transform, Load) pipeline. Cut down CPU time by  $\sim 30\%$ .
  - \* Abstracted complex business logic as a graph and then implemented efficient graph traversal algorithms to perform the original business logic.
  - \* Used indirection to reduce memory usage and number of sorts needed to shard domains.

## ADDITIONAL COURSEWORK

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### Real Analysis, Convexity and Optimization

Harvard Extension School

Upper-division pure math course focused on optimization problems with convex sets, normed infinite-dimensional vector spaces, and convex functionals.

### Learning From Data

Caltech Telecourse

Machine Learning Course: [github.com/zhiyanfoo/caltech-machine-learning/](https://github.com/zhiyanfoo/caltech-machine-learning/)

*I've been taking online college courses in addition to school or work since I was 16. It's how I started programming.* Complete list of additional coursework done can be found at [zhiyanfoo.github.io/learning/](https://zhiyanfoo.github.io/learning/).

## PROJECTS

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**Zen:** An alternative to python's virtualenvwrapper. <https://github.com/zhiyanfoo/zen>

## EXTRACURRICULARS

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Haskell Club Founder. Soccer. Basketball. Dungeons and Dragons.

## EDUCATION

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### University of Waterloo

*Candidate for Bachelors of Mathematics (Pure Math)*

Waterloo, CA  
*August 2017 – Present*