
PROGRAMMING SKILLS

LANGUAGES – python, Haskell, C, javascript, Lisp, L^AT_EX, Mysql, PostgreSQL

TECH/FRAMEWORKS – Git, *Nix, Flask, Django, numpy

EXPERIENCE

Got It

Software Engineering Intern

Hanoi, Vietnam

May 2018 - August 2018

The Company: Got It matches people with questions to professionals who can answer them.

The Projects

- Designed and implemented nominally RESTful API's (as well as real-time channels). In particular designed the API's for the first mobile app to be used by our professionals.
- Worked on the companies routing algorithms, which was the most technically involved part of the companies stack.

Quantcast

Software Engineering Intern

Singapore

March 2017 - July 2017

The Company: Quantcast uses big data to target advertisements at an online audience.

The Projects

- Primarily worked on RTBconf, an ETL (Extract, Transform, Load) Django App that took data from heterogeneous sources, and sorted them into an internal file format (protobuf).
- Improved performance of the sharder: a RTBconf component that split the master configuration file so that bidding engines in different geolocations only received the necessary data. Cut down CPU time from around 18 minutes to around 13 minutes.
 - 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 blacklisted and whitelisted domains.

ADDITIONAL COURSEWORK

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

Introductory Machine Learning course focused on mathematical rigor. Machine Learning algorithms built from scratch include Perceptron with Stochastic Gradient Descent, hard-margin Support Vector Machines and Logistic Regression. For hard-margin SVM, an external convex optimization package was used.

Source Code : 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/.

PROJECTS

crunch-shake: A python library that evaluates scripts on the Bechdel Test and other similar metrics.

Source Code : github.com/zhiyanfoo/crunch-shake/.

EXTRACURRICULARS

Haskell Club Founder. Soccer. Dungeons and Dragons.

EDUCATION

University of Waterloo

Candidate for Bachelors of Mathematics

Waterloo, CA

August 2017 – Present