Richard Zhao

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Education

Carnegie Mellon University
May 2018, Pittsburgh PA

Bachelor of Science in Physics 3.59/4.0 GPA, Dean's list f14, s15, s16

Pursuing a double major in Computer Science

Experience

Software Developer Intern
June - August 2016

Avvo

Developed highly concurrent, production API services with 12x faster mean response times and 8.3x greater throughput using Golang and Node.js.

Implemented parallelized continuous deployment pipelines to automate and speed up the build, test, and deploy cycle.

Collaborated as part of a multidisciplinary development team to architect a full stack application that generates personalized analytics reports for 400 high-profile customers.

Head Teaching Assistant
January 2016 - present

School of Computer Science, Carnegie Mellon University

Directs a staff of 20 teaching assistants by leading meetings, organizing logistics, supervising recitations, and communicating with students.

Leads exam review sessions, teaches a lab section of 20 students, holds office hours, grades assignments, and maintains the course website.

Writes robust autograding software which runs over 10,000 times each semester.

Manages hiring and on-boarding of new staff members.

In charge of maintaining the course management application, which releases assignments, accepts submissions, and hosts gradebooks.

Software Developer Intern
June - August 2015

Project 'Unlocked', Carnegie Mellon University

Researched teaching strategies and leveraged educational technology to improve learning, retention, and assessment.

Built a light weight, front-end user interface API in Javascript used by over 30 developers.

Teaching Assistant
August - December 2015

School of Computer Science, Carnegie Mellon University

Co-taught a lab section of 20 students and led review sessions. Assisted professors in developing assignments, teaching materials, and exams.

Relevant Coursework

- Great Theoretical Ideas of Computer Science
- Parallel and Sequential Data Structures and Algorithms*
- Computer Systems
- Functional Programming

Skills

Proficient

C, Javascript, Python, Ruby, SML, Git, UNIX

Familiar

C++, Golang, SQL, x86-64 Assembly, Node.js, Docker, AWS, Rails, iOS, Continuous Deployment, bash, Fortran, Matlab, LISP

Projects

Touch Calculator
May 2015

Python, Objective C

Machine learning driven touchpad calculator. Powered by a novel, vector-based feature detection algorithm.

Awarded 4th place at an end-of-semester showcase for Fundamentals of Programming and Computer Science.

resume.pdf.js
July 2016

Javascript (Node.js)

Resume generator that converts uncluttered, easy to read yaml files into clean, pdf-ready html documents (like this one). Designed for extensibility and ease of use.

richard-zhao.com
May 2015

HTML, CSS

Personal website and technology blog with articles focusing on productivity tips and development environment configuration and personalization.

CMU Sits
January 2016

Python, Javascript, C

An Internet of Things proof of concept that monitors chairs in study areas for occupancy using microcomputers that communicate with a live-updated web server.

Open Source
May 2015 - present

Javascript, C, Haskell, Python

Implemented custom environment imports in Hyperterm, a popular Javascript terminal emulator.

Made over 650 contributions in the last year to over 15 projects open to the public.