Alvin J. Zhang

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github | linkedin | website | chess | goodreads

Education

University of Illinois Urbana-Champaign   August 2020 - May 2024 (est.)

Relevant Coursework   *B.S in Computer Engineering, Minor in Business*

Algorithms and Models of Computation, Data Structures, Discrete Structures, Computer Systems & Programming, Artificial Intelligence, Analog Signal Processing, Statistics and Probability I & II, Introduction to Computing

Skills — Python, C, C++, C#, Go, Javascript, Typescript, HTML, CSS, Tailwind CSS, Blazor, React.js, Next.js, Node.js, Flask, SQL (PostgreSQL, SQLite), Selenium, Markdoc, Xunit, Git, Azure DevOps, AWS (S3, EC2)

Interests — Software Engineering, Corporate Finance, Equities, Robotics, Chess, Piano

Work Experience

VertexGraph Inc. — Software Engineer Intern   Summer 2022

Full Stack Development

- Developed an internal API in C# to manage deletion of files shared between users. Worked with Postgres DB and pgAdmin for this. Added async client functions to facilitate API calls from other repositories.
- Improved Blazor components to be interactive and intuitive. Created a page to manage a user's two-factor auth.
- Picked up Next.js, Typescript, Markdoc quickly to lead efforts on creating the product's documentation site. Responsible for all of the web dev and styling. Smoothly integrated 6+ interns' work into the Next.js application.
- Agile development— completed tasks ahead of schedule consistently, finished documentation site in 2 weeks
- Effective CI practices with Git, streamlined the development process and code reviews for the team

Software QA Testing

- Wrote structured and comprehensive unit tests for individual product features using Xunit
- Authored methodical testing procedures to simulate user flow across different facets of the product
- Utilized Azure DevOps efficiently to document, manage, and integrate 20+ bug fixes to the codebase

Quant Illinois — Quantitative Development   February 2022 - Present

Developer for Ceryx

- Designed and implemented an internal Flask API that allows Quant members to interact with various brokers using a singular interface. (Ex. Place buy/sell orders, get account P&L, etc using the Ceryx client).
- Secure authentication scheme by salting and hashing user info, also generating unique secrets to identify users
- Supports administrator/user access controls, as well as detailed logging of API requests by users

Developer for Plutus

- Parallel processing of ticker data using Go in order to make Plutus, the project that backs up our data to AWS timestream databases, more efficient

Personal Projects

Personal Portfolio Website

- Built with React.js and TailwindCSS. Interactive elements, reusable design principles. Hosted on GitHub Pages.

TF2 Arbitrage Bot

- Multithreaded website scraping of backpack.tf using Selenium to grab listings data of an in-game item (since no API is available) and store them in a threadsafe priority queue. Arbitrage in order of decreasing profit margin.
- Estimated ~7.0s of time taken to load, scrape, and process data before sending trade offers

FilterTickers

- Utilized TwitterAPI to fetch and parse tweets which alert stocks with unusual options activity
- Made scatter plots with Matplotlib to visualize data and spot correlations between options data and prices