Alvin J. Zhang

alvinjz2@illinois.edu | (510)-378-5717

github | linkedin | website | chess | goodreads

Education

University of Illinois Urbana-Champaign — August 2020 - Dec 2023 (est.)

Relevant Coursework — GPA: 3.77 — *B.S in Statistics and Computer Science*

Algorithms and Models of Computation, Data Structures, Discrete Structures, Intro to Computer Systems, Computer Systems & Programming, Artificial Intelligence, Statistics and Probability I & II, Database Systems, Game Development

Languages — Python, C, C++, C#, Go, Javascript, Typescript, SQL (PostgreSQL, SQLite), NoSQL (MongoDB)

App Development — React.js, Next.js, Flask, Markdoc, Blazor, HTML, CSS, Tailwind CSS

Technologies— Selenium, Xunit, Git, Azure DevOps, AWS (S3, EC2)

Work Experience

VertexGraph Inc. — Software Engineer Intern — May 2022 - August 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
- Lead efforts on creating the product's documentation site, picked up Next.js, Typescript, and Markdoc quickly.
- Responsible for all of the web dev (component design, routing and styling.) Developed a dynamic and interactive multi tiered page navigation system. Smoothly integrated 6+ interns' documentation work into the application
- Agile development— completed projects ahead of schedule consistently, finished documentation site in 2 weeks
- Effective CI practices with Git, streamlined development+code reviews for the team, assisted other interns with Git

Software QA Testing

- Wrote structured and comprehensive unit tests for individual product features and user flow using Xunit
- Utilized Azure DevOps efficiently to document repro steps, track bugs, and integrate 20+ 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 Tailwind CSS, hosted on GitHub Pages. Interactive elements and reusable design principles

Arbitrage in the TF2 Economy

- 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. Arbitraged with profit margin being prioritized
- Estimated ~7.0s of time taken to load, scrape, and process data before sending trade offers

Investigating Unusual Options Trades

- Utilized TwitterAPI to fetch and parse tweets from UnusualWhales which alert stocks with unusual options activity
- Made scatter plots with Matplotlib to visualize data and spot trends between options data and stock movement