

Alvin J. Zhang

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

[github](#) | [linkedin](#) | [website](#) | [chess](#)

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, HTML+CSS, Blazor, React.js, Flask, Git, Selenium, SQL, SQLite, Matplotlib, Xunit

Work Experience

VertexGraph Inc. — Software Engineer Intern

Summer 2022

VertexGraph is a MIT based startup focusing on solving IT needs by providing a centralized platform for IT admins and organizations to access storage, applications, and identity providers in both the office and cloud.

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.
- Retooled Blazor components to be interactive and intuitive. Created a page to manage a user's password.
- Effective CI practices with Git, streamlined the development process for the team and code reviewers

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

Quant is UIUC's premiere Quantitative Finance Organization. The quantitative development division applies data science techniques to quantitative finance to draw correlations between different asset classes.

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 hashing user info and generating unique user secrets
- Supports administrator/user access controls, as well as logging of actions taken by users

Developer for Plutus

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

Projects

TF2 Arbitrage Bot

- Multithreaded website scraping of backpack.tf using Selenium to grab listings data of an in-game item and store them in a threadsafe priority queue. Arbitrage away any opportunities based on 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