horseatplay

github.com/horseatplay

About me

Languages: Python, Rust, C++, Java, SQL
Tools: Git, AWS, Docker, sqlite, Numpy, Pandas
Interests: Bouldering, A24 films, Golf, Chess
Legal status: Canadian, eligible for TN status

Experience

Akuna Capital Chicago IL, US
Quantitative Developer Jul 2022 - Present
Junior Quantitative Developer Feb 2021 - Jun 2022
Quantitative Developer Intern Jun 2020 - Aug 2020

- Conducted research on methods of reducing network latency to the C++ market-data engine, leading to several millisecond performance gains on Binance and other exchanges.
- Built a service to automate and optimize capital allocation across exchanges by initiating on-chain transactions. Developed a linear programming algorithm in Python to minimize network fees.
- Improved time-in-market for the trading engine by developing a protocol for reconciling order states when receiving unreliable market data.
- On-boarded and managed a summer intern. Designed a project for them and supervised its completion.

Apption Software Ottawa, ON, Canada
Data Science Intern Jan 2018 - Apr 2018
Performed data analysis on procurement contract life-cycle data to identify trends and relationships.

Peraso Technologies Toronto, ON, Canada
Software Engineer Intern May 2017 - Aug 2017
Developed high-performance, low-latency firmware for multi-gigabit wireless embedded devices in C++.

Projects

C Compiler: Wrote a compiler for a subset of C, featuring loops, arrays, structs, and functions. It generated bytecode that could be interpreted by a virtual machine, or compiled to a CPU I designed.

Natural language processing: Generated trading signals based on a weighted sentiment analysis of experts, identified by web scraping social media accounts and comments online.

Trivia Question Solver: Developed a multiple-choice question solver for a popular trivia app using OpenCV to parse text from screenshots and NLTK to generate and rank search engine queries.

Awards and Scholarships

Fulbright Scholarship ($8,000): Studied maths and machine learning at Ithaca College, NY.

NSERC USRA ($6,000): Worked on WiGig wireless chipsets at Peraso.

Rotman International Trading Competition (2019): Placed 5th out of 52 schools. Developed algorithms and quantitative models to trade options, fixed-income, and commodities.

Education

University of Ottawa Ottawa, ON, Canada
BSc. Joint Honours in Computer Science and Mathematics, GPA: 3.9/4.0 Sep 2016 - Dec 2020
First place honors project: Deep RL for combinatorial games with exponential action spaces.