Izzy Huang

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EDUCATION

Northwestern University, IL — *McCormick School of Engineering* Expected June 2025
MS in Computer Science (Planned), BS in Chemical Engineering GPA: **3.92/4.00**
Relevant Coursework: Basics of Options, Intro to Options Market Making, Stochastic Models
Generative Deep Models, Financial Math Models, Design & Analysis of Algorithms

WORK EXPERIENCE

Google — *Incoming Software Engineering Intern (Fall 2024)* Present
Chicago Trading Company — *Quant Trading Intern, Returning Intern (Summer 2024)* Jun 2023 – Present

- Investigated term structure of vol ratios across VIX options to examine exposure from mean reversion
- Built Bloomberg economic calendar parsing algorithm to facilitate event-stimulated trading for Nasdaq
- Ranked #1 among 35 trading interns in mock trading, excelled in intern options curriculums
- Developed sheet mock trading system for quoting market and strategies during CTC's annual HackWeek

Northwestern FinTech Club — *Quant Strategy Researcher, Software Developer* Sep 2022 – Present

- Researched gamma scalping and implemented a high-frequency trading strategy to trade derivatives
- Built Pandas-based BackTester for monitoring securities data running on servers for trading algorithms
- Developed a Kafka clone platform by optimizing broker-client communication and scaling using RUST

Jane Street — *Selected as one of 38 SEE Trading Program Participants* May 2023
Fresenius Kabi — *Data Engineer Intern, Embedded Software Developer* Jun 2022 – Mar 2023

- Improved the pressure reading precision of the AmiCORE apheresis device by 21% by cleaning logfile data with MySQL, developed regression model with sci-kit learn, and implemented the regression models
- Shortened fluid prime process time by 15% through risk evaluation of alerts and fluid flow optimization
- Migrated VBA codes into python codes for coefficient estimator software implementation
- Optimized red cell exchange procedure that reduces sickle cell composition by minimizing the transfusion blood required for a red cell exchange procedure through the depletion/exchange strategy

PROJECT EXPERIENCE

Early Stage Alzheimer's Diagnosis Classifier — *Project Manager* Nov 2022 – May 2023

- Led my team to develop web application and process images through spatial normalization and skull stripping
- Built a convolutional neural network model that classifies early-stage Alzheimer's with 94% accuracy
- Ranked #1 among Northwestern project teams, currently applying for patents and working with hospitals

Design Thinking and Communication — *Project Lead* Sep 2021 – Jun 2022

- Led a team of four engineers to successfully design a fingerless Lyocell glove with a Velcro pocket to store a scratch sensor that effectively monitors scratching signals of people with eczema or atopic dermatitis
- Collaborated alongside project partner, end users, Sonica Health, and dermatologists through design iteration
- Presented poster and final prototype at the Fall Design Expo to end users and occupational therapists

CORE COMPETENCIES

Programming: Python (fluent), MySQL (intermediate), C++ (beginner), MATLAB, RUST, ReactJS, LaTeX
Libraries and Tools: NumPy, Pandas, Scikit-learn, Matplotlib, AWS, Git, Terminal, R, SAS, SolidWorks
Personal Interests: Piano, Archery, Licensed Real Estate Broker (IL), Go (4-dan), Northwestern Triathlon

HONORS / AWARDS

Kohlberg-Manacher Foundation Ninja Professional Development Scholarship Jun 2023
UChicago Trading Competition Market Making Case - 3rd Place April 2023
Northwestern Mathematics Award for Excellence by a First-Year Student May 2022
Selected as American Mathematics Regional League Chicago B Team Mar 2021
American Math Contest 12 Distinguished Honors Roll Feb 2021
US National Chemistry Olympiad Chicago Local Section winner, top 150 Apr 2020