JIMMY HUANG

(217) 299-7259 | jthuang@andrew.cmu.edu | linkedin.com/in/jimmy-huang-b4913922b/

EDUCATION

Master of Science in Computational Finance, Carnegie Mellon University *January 2026*

Bachelor of Science in Math & Computer Science and Statistics, University of Illinois Urbana-Champaign *May 2024*

- **GPA:** 3.89/4.0
- **Coursework:** Algorithmic Market Microstructure, Time Series Analysis, Machine Learning, Numerical Analysis, Stochastic Processes, Differential Equations, Financial Engineering, Data Structures, Algorithms, Computer Architecture, System Programming, Abstract Linear Algebra, Graph Theory, Probability and Statistics, Statistical Modeling, Bayesian Statistics

EXPERIENCE

Quantitative Research Mentee, JPMorgan Chase *May 2024 — Aug 2024*

- Collaborated with experienced quant researchers to explore quantitative modeling techniques through case studies, achieving **15%** improvement in model accuracy for return predictions by calibrating **LSTM** models
- Priced call option using Monte Carlo simulation, achieving **0.01%** error tolerance compared to Black-Scholes

Software Development Engineer Intern, Amazon Web Services *May 2024 — Aug 2024*

- Spearheaded integration and performance benchmarking of **GSPMD** within **Annapurna Labs'** ML compilation process with **PyTorch XLA**, debugging issues to facilitate sharding and increase training and inference speed by over **200%**
- Enhanced NeuronX Distributed library by refactoring code and adding test cases for new models such as Llama3, reducing time spent in onboarding new models by over **50%**

Software Engineer Intern, JPMorgan Chase *Jan 2023 — Aug 2023*

- Increased rate of detection of anomalous spikes in alerts volume by **200%** by training machine learning models including DBSCAN, Isolation Forest, **LSTM**, SARIMA, and Prophet on time series data
- Reduced developers' search time for anomalous data points by **50%** by building predictive analytics dashboard with **React**, **Express**, **Node**, **Cassandra**, and **Splunk**
- Achieved **90%** reduction in data retrieval time by utilizing **Apache Kafka** for real-time streaming, allowing for continuous model updates and prediction generation

Undergraduate Researcher, Illinois Risk Lab *Aug 2022 — Dec 2022*

- Reviewed literature on **representation learning** and implemented novel framework from key paper on **LSTM** model for textual data, achieving **70%** reduction in number of potentially important words and phrases

Software Engineer Intern, State Farm *Aug 2022 — Dec 2022*

- Decreased time spent searching for data points by **40%** by developing **REST API** using **AWS Lambda** to query **DynamoDB** audit table for troubleshooting data asset issues
- Ensured **100%** test coverage using **pytest** and adhered to strict **CI/CD** pipeline protocols by configuring pipelines on **GitLab** with **Terraform**, ensuring reliable deployment and resource management

Software Engineer Intern, COUNTRY Financial *May 2022 — Aug 2022*

- Decreased manual accounting time for IT infrastructure uptime by **40%** by building web application with **Angular**, **Express**, and **Node** to dynamically render tabular view, replacing outdated Excel spreadsheet
- Reduced crop quote generation time by **50%** by implementing new quoting interface with **React**, **Bootstrap**, **Express**, **Node**, and **Postgres**, reducing reliance on outdated Excel spreadsheet
- Cut cloud resource configuration time by **30%** by deploying applications to **Azure**, utilizing **GitLab CI/CD** for tests and code quality scans, and managing resources with **Ansible**

PROJECTS

LSTM Trading Strategy

- Trained **LSTM** model on IEX stock data in **Python**, achieving MAPE of **1%**, then utilized **C++** to integrate model into Strategy Studio for real-time return predictions and trade execution
- Enhanced model accuracy by incorporating trade size, volatility, and S&P 500 returns into multidimensional training set, resulting in **5%** improvement in predictive performance

ACTIVITIES

Options 201 Course, Akuna Capital *Aug 2023 — Aug 2023*

- Learned about **options strategies**, **greeks**, **volatility**, and **market making** in exclusive course after passing **4** assessments

Prosperity Trading Challenge, IMC Trading *Mar 2023 — Mar 2023*

- Placed in top **1%** of **8,000+** teams by programming trading strategies in **Python** based on mean reversion and lead-lag effect

SKILLS

Languages: Python, C++, C, Java, R, HTML/CSS/JS, TypeScript, SQL, Matlab

Libraries & Tools: NumPy, Pandas, PyTorch, Tensorflow, Scikit-learn, React, Angular, Node.js