# Hang Yu

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#### **EDUCATION**

## The University of Chicago

Chicago, IL

#### **Master of Science in Financial Mathematics**

**Expected December 2025** 

• Courses: Portfolio Theory & Risk Management, Python, Option Pricing, Probability & Stochastic Processes

#### **University College London (UCL)**

London, UK

# **Bachelor of Science in Mathematics (2:1 Class Honors)**

May 2024

Courses: Linear Algebra, Probability and Statistics, Stochastic Calculus, Machine Learning, Numerical Methods, PDE,
Optimization Algorithms in Operational Research, Financial Mathematics

#### **SKILLS**

Computing: Python (Tensorflow, Scikit-Learn, Statsmodels, Pandas, Numpy, Matplotlib), Jupyter, MS Office

Knowledge: Financial Markets, Machine Learning, Statistical Modeling, Data Analytics, Data Structure and Algorithms

## **EXPERIENCE**

## Fullgoal Fund Financial Engineering Intern

Shanghai, China

**August 2023 – October 2023** 

- Constructed stock random walk sequences from bipartite fund-stock graphs, leveraging transition probabilities to model stock relationships; results used to capture latent stock properties for optimizing technical indicators
- Designed a signal-triggering mechanism for the crowding of industries in Python, accurately predicting the history congestion at 52 critical moments and still warning the company
- Created a market-neutral strategy by establishing long and short positions at the stock market and the stock index futures market, achieving an annualized return of 13.7%

### Zhentou Capital Quantitative Research Intern

Shanghai, China

May 2023 – August 2023

- Developed and implemented a rotational industry model in Python by triggering the signals of the industry bottoming and the top reversal, predicted index trends with a winning rate of 92%
- Discovered and back-tested an information distribution factor in Python with an IC of 0.04 by cleaning and processing the variance of the minute-level trading volume of A-share stocks in last three years
- Initiated the creation of a CSI 300 enhanced indexing strategy with a 3-year Sharpe ratio of 2.73 by selecting constituent stocks for the portfolio based on the trading order structure of stocks

### Shanghai Futures Exchange Futures Derivative Intern

Shanghai, China

**August 2022 – October 2022** 

- Enhanced the company's existing option pricing model with SABR and Nelder-Mead algorithm in Python to handle the non-constant volatility of the underlying asset
- Analyzed 20 logistic companies' dynamic options hedging strategies and created a slideshow to visualize hedging principles and critical findings for the team's decision-making by hockey stick graphs

#### RESEARCH

# **Imperial College London**

London, UK

#### **Quantitative Portfolio Management**

**January 2023 – April 2023** 

• Constructed an EMA momentum strategy for the S&P 500 based on the CAPM Model by applying a ridge regression between the EMA and excess returns and a cross-validation

#### **EXTRACURRICULAR**

### **University College London (UCL)**

London, UK

## **Quantitative Finance Club**

October 2022 - October 2023

- Engaged in quantitative finance-related talks, study workshops, and projects among students across colleges
- Organized and coordinated various UK on-campus and off-campus events for the alumni career networking

### ADDITIONAL INFORMATION

**Languages:** English (Fluent), Mandarin (Native)

Interests: Volunteer work, painting, poker and other card games, piano, basketball