

## YIJIN HAO

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### EDUCATION

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#### NEW YORK UNIVERSITY

New York, NY

#### The Courant Institute of Mathematical Sciences

#### M.S. in Mathematics in Finance (expected - December 2022)

- **Coursework:** correlation analysis, extreme-value theory, java, risk-neutral valuation, one-factor interest rate models, the log-normal hypothesis, interest rate & FX models, monte carlo

#### UNIVERSITY OF WISCONSIN-MADISON

Madison, WI

#### B.S. in Mathematics & B.S. in Economics (Feb 2018 - May 2021)

- **Coursework:** Econometrics, ODE & PDE, probability, linear algebra, stochastic processes, Financial Derivatives, Black-Sholes, Python
- **Awards:** Dean's list (6 semesters)

### EXPERIENCE

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#### PENGYANG ASSET MANAGEMENT Co., Ltd(top 33%)

Beijing, China

#### *Quantitative Investment Department Intern* (Jul. 2020 – Sep. 2020)

Remote

- Evaluated the basis of each contract by analyzing the given data and identified the trends of premium and discount for different periods with Python
- Constructed a quantitative hedging portfolio of stock index futures to minimize the loss by 7%-10% caused by the contract discount
- Analyzed and computed correlation between 28 industries from Chinese economy and used quartile-based coefficient of variation to understand their fluctuation with Python and Excel
- Determined more than 1000 firms ranking from 4 sectors based on their market price, trading volume, percent change of adjusted closing price
- Built portfolios to earn alpha based on sector rotation and got 27% as return compared to 12% from portfolios with even weights on sectors

#### *Fixed Income Department Intern* (Jul. 2019 – Sep. 2019)

Remote

- Wrote two reports: Relationship between Currency Policy and Trend of Chinese Economy; Relationship between Market Interest Rate and Chinese Bond Market

### PROJECT

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#### ZHONNAN UNIVERSITY OF ECONOMICS AND LAW

Wuhan, China

#### *Research on Development of Private Economy in Hubei Province* (Aug. 2020 – Nov. 2020)

Remote

- Calculated indexes of more than 100 companies to analyze the current development and business environment of private economy in Hubei province
- Applied two weighting methods in index calculation (subjective weighting method and variance contribution rate by Python)

#### UNIVERSITY OF WISCONSIN MADISON

Madison, WI

#### *Relationship of covid-19 infection rate and the level of outdoor activities* (Spring 2021)

- Analyzed the relationship of covid-19 infection rate with outdoor activity indicators: percent of people home, restaurants open, shopping mall sales, and stringency index
- Used python matplotlib to plot the relationships to further display the trend
- Applied machine learning to build model specifically focused on indicators of outdoor activity to predict the infection rate with r2 score -1.5 and analyzed the effectiveness of model

### COMPUTATIONAL SKILLS/OTHER

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**Programming Languages:** Python, R, Stata, SQL, Java

**Languages:** Chinese, English

