

# Peihua Mai

Institute of Operations Research and Analytics | National University of Singapore

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## Education

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### National University of Singapore

Singapore

*Master of Science in Business Analytics (Specialize in Big Data Vertical)*

Aug. 2020 – Aug. 2021

- **GPA:** 4.81/5.0

### Sun Yat-sen University

Guangzhou, China

*Bachelor of Management in Accounting*

Sep. 2016 – Jul. 2020

- **GPA:** 4.3/5.0, **Rank:** 1/255
- **Awards:** Excellent Graduate of Sun Yat-sen University (2020), SYSU Outstanding Graduation Thesis (2020), National Scholarship (2018, 2017), First-class Scholarship for Excellent Students of Sun Yat-sen University (2019, 2018, 2017)

## Research Interest

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Federated Learning, Blockchain, Recommendation System

## Research Experience

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### Federated Recommendation System

Singapore

*Research intern at NUS BAC center*

May. 2021 – Aug. 2021

- Developed collaborative movie recommendation system based on matrix factorization in federated setting;
- Incorporated content features to improve the performance of algorithm and solve cold-start problem;
- Applied homomorphic encryption to enhancing the security of federated recommendation system.

## Professional Experience

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### WorkClass

Singapore

*Data Science Intern*

Jan. 2021 – April. 2021

- Automated data summary updated process with MySQL and Mailchimp API, and provided insights in marketing strategy;
- Supplemented the missing value in database through web crawler strategy, and wrote script to conduct daily update on database;
- Performed resume information extraction, including job titles and nationality, in Python.

### GF Securities

Shanghai, China

*Research Intern for bank industry*

May 2020 – Aug. 2020

- Analysed over 10 data points of over 100 China banks to assess their asset quality and risk preference;
- Developed a webcrawler with Python to extract data for financial products from ChinaWealth website, saving about 30% in time;
- Carried out research on the disposition of failed Japanese bank asset, and drew conclusions on the impact of various solutions on depositors and subordinated debt holders;
- Conducted fundamental analysis with Excel (functions and vlookup) for WeBank and MYbank, compared their competitive advantages including business patterns and technology strategy.

### Haitong Securities

Shanghai, China

*Research Intern for chemical industry*

Sep. 2019 – Mar. 2020

- Extracted data from WIND database and kept track of inventories for chemical products and their futures price movement;
- Wrote an in-depth equity research report for Wanshun Xincai, published on Sina Finance and other major financial websites;
- Finished main sections for the annual investment strategy report and industry special report.

### Essence Securities

Foshan, China

*Quantitative Intern (Financial Engineering Department)*

Jul. 2019 – Aug. 2019

- Imported raw equity and future data from Wind in Python and created features and labels for the data;
- Visualized the relationship between generated features and future returns, identified statistical arbitrage opportunities.

## Skills

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**Programming Skills:** Python, R, SQL, Spark;

**Languages:** Mandarin-Native; Cantonese-Native; English-TOEFL 108; GMAT 750; GRE 335