# Xincheng Yao

# EDUCATION

#### University of Michigan, Ann Arbor, MI

M.S. in Quantitative Finance and Risk Management **Nanjing University** 

Bachelor in Financial Engineering

## **PROFESSIONAL EXPERIENCE**

Guangdong DE Xin Yue Bi Wealth Investment Center

Quantitative Researcher - Internship

- Utilized Python programming, applying a combination of machine learning methodologies and Prospect Theory, to forecast the expected value of equities.
  - Employed Multi-Logit regression model to predict the probability of extreme return events.
  - Calculated the expected value of the stock according to the return distribution and prospect theory.
  - Executed this strategy across the entire A-share market during the 2012-2021 backtest interval, yielding a notable average annual excess return of 16.3%.

## HaiNan ShengGuanDa Private Fund Management

Quantitative Trader - Internship

- Collaborated in quantitative trading, leveraging Python for robust transaction data processing and analysis. Implemented real-time market and portfolio monitoring to make timely, informed decisions.
- Introduced the machine learning model, constructed the T0 strategy to enhance the portfolio return.
- Achieved a consistent monthly return of 3.5% for the assigned products.

## **China Securities**

Quantitative Researcher - Internship

- Implemented regression model to develop an industry rotation model based on fund position estimations.
  - Employed the Lasso regression method to accurately estimate the holdings of a single fund in different sectors.
  - Conducted backtesting of the strategy 2011-2022, resulting in an annualized excess return of 10.34%.
- Applied the ridge regression method to forecast the prosperity of the home appliance industry, constructing quantitative fundamental timing strategies.
  - Achieved a high level of precision, with average prosperity deviations of less than 1%.
  - Extensive backtesting from 2007 to 2022 demonstrated an impressive annualized return of 20.48%, with a maximum retracement of -28.40%.

# **RESEARCH EXPERIENCE**

#### University of Cambridge: Al Algorithm Analysis of Economic Impact

Research Assistant

- Trained data of CMRC2018 by CEBRT-wwm with:PrLM encoder, sentence-level self attention and Fusion cross-attention layer, with average accuracy rate reaching 78.1% and F1-score reaching 86.8%.
- Realized intelligent parsing function of an express delivery platform, by analyzing unstructured text and extracting user's information with F1-score reaching 95.4%, precision rate 95.3% and recall rate 95.5%.
- Massachusetts Institute of Technology: Machine Learning in Finance Exchange Research Program
- The Implementation of Double-ensemble for Stacking Model to Predict Return of the Cryptocurrency (Bitcoin).
  - Proposed a robust and effective ensemble model Double-Ensemble for financial market forecasting through learning trajectory-based sample reweighting and shuffling-based feature selection.
    - Implemented a stacking method to nest a new model. Accuracy of Double-Ensemble+stacking model reached 56%

# SKILLS

- Python(4 years):Numpy, Pandas, Tensorflow, Pytorch; R(4 years); C(1 year)
- Machine Learning(NLP, Neural network, Decision tree), Regression Model(Logit, Lasso, Ridge)

#### Aug. 2023 – Dec. 2024 (Expected) GPA: 1st semester Sept. 2019 - Jun. 2023 GPA:3.85/4.0

# Jun. 2023 - Present

Guangdong

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# Jan. 2022 - Jun. 2022

Shanghai

Jul. 2022 - Oct. 2022

Jun. 2022 - Sep. 2022

Mar. 2023 - Jun. 2023 Shanghai