# **Qiaochu Feng**

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### **EDUCATION**

#### **University of Michigan**

Master of Science in Quantitative Finance and Risk Management

Relevant Courses: Stochastic Processes, Financial Analysis, Computational Finance, Machine Learning

#### Shanghai University

Bachelor of Science in Mathematics and Applied Mathematics (cumulative GPA: 3.57/4.0) Sept.2019 - Jul.2023

• Relevant Courses: Operations Research and Optimization, Data Analysis(Python), Statistical Methods, Data Structure (C)

### SKILLS

- Programming: proficient in Python (sklearn, numpy, pandas, seaborn), familiar with C/C++, MATLAB, SQL
- Machine Learning: Logistic Regression; Decision Tree; Random Forest; Time Series Analysis; PCA
- Language: English (fluent), Mandarin (native)
- Certificate: FRM Level I Candidate

# **PROFESSIONAL EXPERIENCES**

## Guotai Junan Securities Co., Ltd.

#### **Quantitative Research Intern**

- Contributed to weekly industrial reports by collecting historical financial data of electronics companies via Wind and Choice, conducting data cleaning and visualization via Excel about 3 times a week.
- Used Python to conduct stock backtesting, analyzed historical stock data from 2008 to 2020 and studied price trends of 7 sectors' indexes around 2 Chinese statutory holidays to assist in industry research.

#### DFJ Dragon Fund (Shanghai) Equity Investment Management Co., Ltd. **Part-time** Assistant

- Gathered information from Crunchbase and LinkedIn, conducted industry research and enterprise investigations by analyzing financial reports and participated in corporate finance conferences twice a week.
- Attended online enterprise exhibitions and forums focusing on blockchain and education sectors and completed 5 competitiveness analysis reports to assist the supervisor in investment evaluation and screening.
- Contributed to the Mr. Sailfish's business plan in conducting background research and competitive comparison.

# Webasto Shanghai Co., Ltd.

**Project Controlling Intern** 

- Learned basic financial accounting knowledge and participated in factory costs and standard costs accounting.
- Assisted in reconciling financial statements and calculating profit in 3 company projects.

# PROJECTS

## User Default Prediction Based on Lending Club Kaggle Dataset

An Application of machine learning models

- Conducted supervised machine learning to predict the user loan status based on labeled data via Python.
- Preprocessed data set by feature selecting, transforming and filling missing value through Pearson coefficient matrix calculation, one hot encoding and standardization, etc.
- Trained models including Logistic Regression, Random Forest and K-Nearest Neighbors and dealt with overfitting problem through regularization with optimized hyperparameters.
- Evaluated the model performance (best accuracy 98%) with confusion matrix and ROC curve and analyzed feature importance to identify the most influential characters.

## Internship Selection Strategies for Undergraduates--A Recommendation Algorithm

Mathematics Practice Course Paper

- Led team to establish a scoring process by combining the analytic hierarchy process (AHP) with K-means.
- Adopted algorithms including decision tree, collaborative filtering, and matrix decomposition via Python to deal with situations when user-scoring matrix had different degrees of sparsity.
- Adjusted the parameters using Alternating Least Squares (ALS) method when decomposing the matrix and found that the model performed efficiently (within 6.7 seconds to give a job recommendation) with learning rate 0.01.

# **Machine Learning in Quantitative Finance**

Research Seminar Group Study

- Constructed asset price model based on Merton's Jump-Diffusion Model in a multi-asset market, simulated a two-year price series via Python, derived the density function of the daily log return and calculated the parameters by OLS.
- Assisted with hedging problem description and neural network establishment via Python.
- Compared the performance of three neural networks in one-dimension problem, applied the best performer (Mogrifier-LSTM with Huber Loss 9.48E-01) to the five-dimension problem and found a converging loss trend.

Oct.2021 - Dec.2021

Jan.2021 - Feb.2021

Aug.2023

Shanghai, China

Ann Arbor, MI

Shanghai, China

Sept.2023 - Dec.2024 (Expected)

Jun.2022 - Sept.2022

Jul.2021 - Sept.2021

Shanghai, China

Shanghai, China

Jul.2022 - Aug.2022