

HAOYANG LI

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EDUCATION

NEW YORK UNIVERSITY

New York, NY

The Courant Institute of Mathematical Sciences

M.S. in Mathematics in Finance (expected Dec 2022)

- **Expected Coursework:** stochastic calculus, Black-Scholes, algorithmic trading, machine learning, time series analysis, Monte Carlo simulation, portfolio optimization and risk, VaR

UNIVERSITY OF CALIFORNIA, SAN DIEGO

San Diego, CA

B.S. in Mathematics (Applied) (Sep 2016-Jun 2020)

- **Coursework:** OOP in Java/C, data structures, calculus, probability, ODE, mathematical analysis, linear algebra, linear programming, PCA, SVM, linear regression, combinatorics
- **Awards:** Cum Laude (Top 14%), Department Honors in Mathematics (Applied) with Distinction

UNIVERSITY OF COPENHAGEN

Copenhagen, Denmark

Exchange Student (Aug 2018-Jun 2019)

- **Coursework:** database, data science, statistical modeling, algorithms

EXPERIENCE

CITIC BANK

Shenzhen, China

Quantitative Analyst Intern (Jul 2019-Aug 2019)

- Developed and collaborated in building Python program to read 20 million+ customers' credit card data and extract features for risk management models
- Optimized that program with Numba to save about 50% running time
- Simplified firm's internal SAS tutorial to make it easier for new employees to understand

PROJECTS

UNIVERSITY OF CALIFORNIA, SAN DIEGO

San Diego, CA

Randomized Numerical Linear Algebra Using Python (Oct 2019-Jun 2020)

- Researched accuracy and efficiency of randomized numerical linear algebra algorithms, including matrix multiplication, linear regression, and low-rank matrix approximation
- Implemented those algorithms in Python and compared them with those without randomness
- Integrated randomized low-rank matrix approximation into model based on support vector machine; saved 44% running time and maintained 82% accuracy in experiment
- Presented study progress weekly to classmates; created paper summarizing several algorithms and their applications

UNIVERSITY OF COPENHAGEN

Copenhagen, Denmark

Fake News Detection Using Python (Feb 2019-Jun 2019)

- Used Python to collect and clean 15,000 pieces of online political news (author, date, label, and other data)
- Designed relational database for news that enabled efficient SQL queries
- Visualized data with PCA and searched for suitable methods to encode it
- Built models with support vector machine and long short-term memory that detected fake news

COMPUTATIONAL SKILLS/OTHER

Programming Languages: Python (advanced), Java (intermediate), SQL (beginner), C++ (beginner)

Language: Mandarin (native)