# AURENCE JIN

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# **EDUCATION**

# CARNEGIE MELLON UNIVERSITY, TEPPER SCHOOL OF BUSINESS

New York, NY

M.Sc. in Computational Finance - MSCF

GRE Quant: 170 / 170

First Class Honors

8/24 - 12/25

• Upcoming Coursework: Stochastic Calculus, Machine Learning, Financial Computing (Python, C++) & Optimization, Simulation Methods for Option Pricing

#### THE CHINESE UNIVERSITY OF HONG KONG

Shatin, Hong Kong

B.Sc. in Quantitative Finance and Risk Management Science

9/19 - 7/24

- Cumulative GPA: 3.66 / 4.00; Major GPA: 3.73 / 4.00 (Minor in Statistics)
- Relevant Coursework: Stochastic Modelling & Simulations, Stochastic Processes, Statistical Computing & Inference, Time Series, Advanced Derivatives, Data Structures & Algorithms, Database Systems, Deep Learning
- Honors and Awards: Department of Statistics Scholarships (top 2 in RMSC major), Dean's List, Master's List

MCGILL UNIVERSITY Montreal, Quebec

Semester Exchange Student, Faculty of Science

1/23 - 5/23

Term GPA: 4.00 / 4.00

• Relevant Coursework: Matrix Numerical Analysis, Statistical Learning, Ordinary Differential Equations

#### **EXPERIENCE**

DYMON ASIA CAPITAL (HK) LTD. (Leading hedge fund in Asia with US\$5.7 billion AUM) Quantitative Research Intern, MSIF-Portfolio Management Department

Central, Hong Kong 8/23 - 12/23

- Responsible for data loading and verifying from various financial vendors, including Bloomberg, MSCI, FactSet, etc.
- Designed efficient SQL database schemas and optimized query performance to ensure seamless data retrieval
- Developed web scraping tools (Selenium) to automate data extraction; facilitated data accuracy and consistency

PRUDENTIAL HOLDINGS LTD. (Global leading insurance and asset management company) Actuarial Intern, Asset / Liability Management (Group Investment)

Central, Hong Kong 5/23 - 8/23

- Generated stochastic simulation sets under risk-neutral scenarios; deeply involved in data collection, parameters refinement and testing to meet calibration targets
- Assisted in research and further development of modelling process, improved the workflow using Python automation
- Performed market-consistent valuations for multiple countries and real-world projections based on simulation sets

CHINA GALAXY SECURITIES CO., LTD. (Top-tier investment bank in China)

Beijing, China

Data Analyst Intern, Securities Finance Department

6/22 - 8/22

- Calculated P&L, VaR and sensitivities of several portfolios, implemented P&L attribution analysis and backtesting
- Investigated on stock ratings and trading behaviors, collaborated in pricing model refinement and optimization
- Tracked domestic financial market movements and regulatory environment, analyzed credit market data using Python

#### MINSHENG EQUITY INVESTMENT FUND MANAGEMENT CO., LTD.

Beijing, China 5/21 - 8/21

Industry Research Intern, Investment Management Department

- Conducted research and analysis on target client profiles and relevant industry (photovoltaic, autonomous vehicle)
- Appraised comparable listed companies valuation (EV/EBITDA, P/E, DCF) and comparable transactions valuation
- Assisted in drafting pitch books for potential transactions, composed marketing materials for reporting purposes

# **PROJECTS**

# A QUANTITATIVE PORTFOLIO CONSTRUCTION STRATEGY (\*)

1/24 - 4/24

- Integrated Bayesian shrinkage, Black-Litterman model and multi-factor models in re-evaluating posterior predictive moments of stock returns, reduced estimation errors by optimizing the balance between bias and variance
- Backtested the portfolio performance via Backtrader and QuantStats (Python packages), achieved a Sortino ratio of 1.1 and a CAGR of 15.89% over a four-year period

# STRUCTURED PRODUCTS PRICING (Equity-Linked Note)

9/23 - 12/23

- Derived and interpolated the Black-Scholes implied volatility surfaces with real option quotes from Bloomberg, implemented Dupire's equation and Gatheral's method to calibrate local volatility surfaces for simulation purposes
- Designed, restructured and optimized Python algorithms for numerical methods in matrix computations / differentiation, successfully decreased the program's calculation time by at least 80%

CUSELL (An online second-hand trading platform for CUHK students)

1/22 - 4/22

- Scripted in HTML / CSS / JavaScript; designed and developed ornamented, user-friendly UI & web pages
- Built connection and integrated front-end user-facing interfaces with back-end web server framework (Python Django)
- Regularly maintained, managed, and updated project codes on GitHub with the latest dependencies

# ADDITIONAL INFORMATION

- Software: Experienced with Visual Studio Code, GitHub, Bloomberg, Wind, Microsoft Azure, SSMS
- Programming: Python (OOP, data analysis & visualization), R, MATLAB, Excel VBA, Java, C, C++, Linux Command
- Database Management: Knowledgeable in DBMS (SQL Server, MySQL, Microsoft Access, etc.)