Moyuan Chen

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EDUCATION

Imperial College Business School — **London, UK**

M.Sc. Risk Management and Financial Engineering — **Sep 2024 – Jul 2025**

- **Core Courses:** Applied Quantitative Macro Strategies; Investment and Portfolio Management; Financial Engineering; Financial Statistics; Stochastic Calculus; Market Microstructure; Big Data in Finance.

University of California, San Diego — **San Diego, CA**

B.Sc. Physics (**GPA**: **3.7**/4.0) — **Sep 2016 – Mar 2020**

- **Awards:** Admitted to the ERC Honour College in 2016 for excellent academic performance; Selected for Provost's Honour in 2016 and 2018 for academic achievements and community involvement
- **Core Courses**: Quantum Mechanics; Statistical & Thermal Physics; Linear Algebra; Computational Physics; Mathematical Reasoning; Object-Oriented Programming; Data Structure and Algorithms

PROJECTS AND AWARDS

Crypto Funding Arbitrage High-Frequency Trading Project — **London, UK | Oct 2025**

- Designed, developed, and deployed a low-latency, concurrent, and parallelized high frequency trading program; implemented highly scalable modular design that minimizes development time for new features or strategies
- Measured, profiled and refactored performance critical section of the code base using C++ and pybind, reduced the end-to-end latency by more than 70% and the slippage by more than 50%

Dijkstra-Bellman SSSP Solver C++ Implementation — **London, UK | Aug 2025**

- Implemented from first principles in C++ a novel algorithm combining the Dijkstra and the Bellman-Ford algorithms solving the Single Source Shortest Path (SSSP) problem with significantly improved complexity
- Designed an innovative data structure for recursively partitioning a frontier region of the graph to achieve superior performance via a divide-and-conquer strategy

Optiver Algorithmic Trading Competition — **London, UK | May 2025**

- Developed a full-stack dynamic quoting model using a Poisson distribution to predict order fill probability, systematically adjusting pricing based on time-to-close and inventory risk
- Engineered a millisecond-latency, passive market-making strategy for the Optibook limit order book (LOB), achieved first place in Sharpe Ratio (0.97) and second place in P&L (6500/hr) in the trading competition

Morgan Stanley Hackathon Quantitative Finance Simulation — **London, UK | Sep 2024**

- Designed and constructed systematic long-only daily trading strategies based on individual constituents of the S&P 500 Index using moving average convergence/divergence (MACD) using Python
- Achieved a consistent P&L of 50% over 2017-2019 using real data trading simulation in a high-pressure, real-time trading environment, earning first place in both rounds of the competition

PROFESSIONAL EXPERIENCE

Blockhouse Capital — **Remote**

Quantitative Developer — **Jul 2025 – Aug 2025**

- Engineered a distributed data pipeline to reconstruct limit order books in parallel from Market-by-Order data using Kafka, providing the foundational layer for market microstructure research
- Accelerated the quantitative research lifecycle by architecting a distributed data processing framework on AWS EC2, enabling researchers to vastly expand the scope of hypothesis testing

Institute of Science and Technology Austria — **Klosterneuburg, Austria**

Research Scientist — **Sep 2021 – Mar 2024**

- Applied advanced statistical models and signal analysis to experimental Brownian systems to extract quantitative insights from noisy, high-dimensional time-series data
- Built and optimised Python-based data pipelines and custom visualisation tools to analyse dynamic complex systems, improving interpretability and decision making under uncertainty

Materiali Molli Lab — **San Diego, CA**

Research Assistant — **Jun 2020 – Aug 2021**

- Applied principles of stochastic calculus to build and test active random walk sedimentation simulations, generated key insight on mechanism behind spatially dependent orientation polarization
- Implemented large-scale parallelised Monte Carlo simulations on remote **Linux** clusters using **Python**, developing proficiency with high-performance computing for quantitative research

SKILLS AND INTERESTS

- **Computing Skills**: Python; C++; Unix Systems; MATLAB; Mathematica; SQL; AWS; Excel; PowerPoint; Data Manipulation and Visualisation; Machine Learning; Dynamic Programming; Bloomberg Terminal
- **Language Skills**: English (fluent); Chinese (fluent); German (basic)