Qianwei Jia

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Education

University of Oxford Oxford, UK
MMath Oct 2020 – Jun 2024

- Selected Courses: Linear Algebra, Real Analysis, Probability, Measure and Martingales, Statistical ML, Financial Derivatives, Optimization for Data Science, Rings and Modules, Functional Analysis.

Work Experience

Goldman Sachs London, UK
Summer Quantitative Strategist, Asset Management Jun 2023 – Aug 2023

- Use iterative refinement to allocate corporate bonds budgets among different portfolios efficiently and fairly in order to maximize average yields among all portfolios, and achieved 50% improvement on test data compared with the original trading strategy;
- Build an optimization model based on derived pricing formulae to do curve fittings for bonds' spread in order to better predict newly issued bonds' value;
- Use the internal proprietary programming language Slang during the internship.

Zhongping Capital Shanghai, China
Investment Assistant Sep 2021 – Oct 2021

- Study the commodity pricing volatility pattern and alternative energy resources;
- Through market research and data analysis, produce reports on investment opportunities and risks in the energy sector.

Vision Academy Shanghai, China
Mathematical Tutor Jul 2020 – Aug 2020

- Tutoring on a variety of topics, including probability and combinatorics;
- >90% of students admitted to G5, and 3 admitted to Cambridge.

Research and Activities

Build-Your-Own-ChatGPT, AiCore Feb 2023

- A 3-week lecture series on generative large language models;
- Build a GPT2 model, and optimise a SFT model via PPO algorithm.

Women in Data Science Datathon, Kaggle Feb 2023

- Lead a team of 4; use decision trees and neural networks to predict climate trends;
- Achieved top 7% performance among all competitors around the world.

Mathematical foundation behind Stable Diffusion Nov 2022

- Give a talk in St Edmund Hall, Oxford Math Seminar on Stable Diffusion and its capability with Bayesian Optimisation and Entropy Theory.

Quantitative Financial Research Jul 2022

- Explore an improved method of calculating implied volatility based on the Black-Scholes model;

Oxford China Forum Jun 2021 - Mar 2022

- Organize a public event on the Philosophy of Artificial Life;
- Invited professors and philosophers from Oxford and Imperial College.

Academic Awards

Academic Rewards of £300, St Edmund Hall, Oxford Oct 2022
Principle's Scholarship of 2000 RMB in high school Jan 2020
The highest mark in the world for A-level Mathematics Oct 2019
Top 25% in the Euclid Contest Jun 2019
Gold Award, UK Mathematics Trust 2017 Feb 2018

Specialized Skills

Languages: Mandarin, English
Programming: Experienced with Python (including Numpy, Pandas and PyTorch), R, and MATLAB.