

SUYANG XIAO

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Education

University of Hong Kong , Hong Kong	Sep. 2022 – May. 2026
<ul style="list-style-type: none"><i>BSc: Mathematics (Intensive), Physics (Minor)</i>, Full ride scholarship (President's Scholar)GPA: 4.77/4.30 (3.80/4.00 WES), First Class HonoursCoursework: Financial Calculus, Probability Theory, Linear Algebra 2, Introduction to Optimization, Game Theory	
University of Oxford , United Kingdom	Oct. 2024 – Jun. 2025
<ul style="list-style-type: none"><i>Visiting student program, St. Peter's College</i>, First Class Honours (Predicted)Coursework: Probability Measure and Martingales, Differential Equations 2, Statistical Machine Learning	
St. Joseph's Institution International , Singapore (IB: 45/45 , 99 th percentile)	Jan. 2020 – Jan. 2022

Honors and awards

- Ranked 5/64** – Oxford CSSA Poker Tournament (2025)
- Dean's List (Top 10% of Faculty)**– HKU Faculty of Science (2023, 2024)
- Bronze Award** - Singapore Mathematics Olympiad (Open Division) (2021)
- Silver Award** – Singapore Chemistry Olympiad (2020)

Experience

Oxford Alpha Fund , <i>University of Oxford</i>	Nov. 2024 – Mar. 2025
<i>Quantitative Analyst, Options and volatility group</i> <ul style="list-style-type: none">Researched the VIX index by modelling volatility regimes using a Hidden Markov Model (HMM), fitted using a custom dispersion parameter and other indices such as VVIX and SWAP.Designed a volatility arbitrage strategy on variance swaps and VIX futures using HMM signal, backtested using CBOE data, with a Sharpe ratio of 1.21 (Accounting VIX quote slippage and transaction costs in backtest).	
University of Hong Kong, Department of Mathematics	Jun. 2024 – Sep. 2024
<i>Summer Research Fellowship</i> , Quantum algorithm option pricing Supervisor: Prof. Zhang Zhiwen, Mathematics <ul style="list-style-type: none">Researched Independently the pricing of European options with stochastic volatility using variational quantum algorithms, constructed an ansatz (parameterized wave function) unique to initial condition of the option.Priced a toy option for proof of concept, beyond what is done in literature, with a classical simulation of the quantum algorithm using Qiskit in Python.	
<i>Teaching Assistant</i> (MATH1009: Basic Mathematics for Business and Economics)	Sep. 2023 – Dec. 2023
<ul style="list-style-type: none">Held 6 revision classes to a class of 120 students, covering topics leading up to multivariable optimization.Designed revision class notes independently using Latex, and further assisted the Lecturer on student Q&A.	

Research and Projects

Exploitive Poker (Supervisor: Dr. Nazem Khan, University of Oxford)	Jun. 2025 -
<ul style="list-style-type: none">Currently researching in designing a poker playing algorithm that actively exploits sub-optimal play.Working on reproducing Counterfactual Regret Minimization to produce an ϵ-Nash Equilibrium strategy.	
Mean Reversion Trading	Aug. 2024 – Sep. 2024
<ul style="list-style-type: none">Performed tests for cointegration, such as the Engle-Granger test, Johansen test and Augmented Dickey-Fuller test on over 10 cryptocurrencies and 20 forex pairs.On the AUD/NZD pair, designed a statistical arbitrage strategy, where a dynamic spread is calculated over a 360-day window, using spread volatility as signal for entering position.Backtested on daily-frequency data, with a Sharpe ratio of 3.0, Max drawdown of under 6%, achieved a 5x on initial capital (assuming 10:1 leverage, reasonable due to low max drawdown).	
Orderbook Simulation (HKU Quantitative Investment and Data Science Society)	Mar. 2023 – Jan. 2024
<ul style="list-style-type: none">Researched into simulating price distribution of Limit Order Books using Poisson distributed Zero-Intelligence agents, and developed a trade matching prototype to give a better simulation of the stock exchange market.Conducted validation of stylized facts, such as mean-reversion and volatility clustering via the autocorrelation of asset return, using minute frequency data over 20 years from the Shenzhen Exchange.	

Extra Curriculars

LSE Summer School (IR105-Understanding Foreign Policy: The Diplomacy of War, Profit, and Justice)	Jul. 2025
HKU Quantum Bit Demonstrator Group , Hong Kong, <i>Speaker</i>	Sep. 2022 – Sep. 2023
<ul style="list-style-type: none">Acted as a speaker at HKU Innoshow, covering concepts such as quantum locking and superconductivity.	
HKU Judo Club , Hong Kong, <i>General Secretary</i>	Sep. 2022 – Sep. 2023
<ul style="list-style-type: none">Represented HKU at Inter-college Judo Competition, achieved silver medal as a team.	

SKILLS

Technical /Computer Skills: Python, Latex, Matlab
Languages: English (fluent), Chinese (fluent)