Chan (Colin) Wei Hua

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EDUCATION

The University of Chicago — **Chicago, IL**
Master of Science in Financial Mathematics — **Expected December 2025**

- Courses: Portfolio Theory & Risk Management, Python, Option Pricing, Probability & Stochastic Processes
- Competitions: Selected for Akuna's Quantitative Trading Challenge

National University of Singapore — **Singapore**
Bachelor's of Business Administration (GPA: 3.89/4.0) — **May 2024**
Bachelor's of Computing (IS) (GPA: 3.56 /4.0)

- Courses: Data Structures & Algorithms, Stochastic Models, Risk Analytics, ML, Systematic Trading, Finance
- Awards: NUS Merit Scholarship, Beta Gamma Sigma, 3x Dean's List, Distinctions in Computing Focus Areas
- Thesis: Beyond Borders: Exploring MEV and Risks in Cross-Domain Arbitrage between CEX and DEX

SKILLS

Computing: Python, Jupyter, SQL, Java, Linux, Solidity, Typescript, WebSocket, Airflow, MS Office, GCP
Knowledge: Financial Markets, Machine Learning, Data Engineering, Data Analysis, Statistical Modelling
Trading Products: Futures, Options, Equities, Fixed Income, Cryptocurrencies
Languages: Mandarin (fluent), Cantonese (conversational)

EXPERIENCE

Chaos Labs — **Tel Aviv, Israel (Remote)**
Economics & Risk Researcher — **January 2024 - April 2024**

- Back-tested the robustness of price oracles using historical data, statistically evaluated compositions using the Granger-Causality tests, and conducted Monte Carlo simulations to improve mechanism designs for trading and liquidations

Ripple — **Singapore**
Quantitative Trader Intern — **September 2023 - December 2023**

- Analyzed order books and price data for FX and digital assets for transaction cost analysis to improve execution
- Designed data pipelines to consume and process data, created bash scripts to deploy automated trading strategies, and enhanced code for monitoring of XRP repurchases across exchanges, which were implemented by the Markets team

Binance — **Singapore**
Macro Research Analyst Intern — **January 2023 - August 2023**

- Published research reports on macro trends with a monthly viewership of over 100,000, performed data analysis, and prepared the Institutional Crypto Outlook Survey which involved over 200 global institutional investors
- Monitored market news and led the Monthly Market Insights edition to visualize trends and movements

Genesis Trading (Subsidiary of Digital Currency Group) — **Singapore**
Trader Intern — **May 2022 - December 2022**

- Developed real-time analytical tools for OTC trading in Dash to visualize market flows, improving quotes by an average of 10bps; bots to detect on-chain activities and data mining for news which were adopted across the firm
- Created a trade blotter in React for derivatives pricing to asynchronously calculate Greeks, theoretical, current edges for futures and multi-legged options using the Black Scholes model and compare it with the in-house volatility surface

RESEARCH

Ethereum Foundation — **Singapore (Remote)**
CEX-DEX Arbitrage, *Maximal Extractable Value - "MEV"* (Grant: $10,000) — **June 2023 - April 2024**

- Developed a novel methodology to identify arbitrages from 38 million transactions on Ethereum, quantified potential revenue ($27.48 million), and risks, and multinomial logistic regressions to determine the influence of toxic flow
- Published research articles with Ethereum Foundation Researchers on the empirical analysis using the Loss Versus Rebalancing Model and aided in the data collection to classify block builders' behavior in the block space market

National University of Singapore — **Singapore**
Covered Interest Parity Deviations of Stablecoins — **Jan 2024 - May 2024**

- Estimated the CIP deviations for stablecoins using perpetual funding rates against US Treasuries and lending markets
- Determined the influence of crises (SVB and FTX Collapses) on deviations, using Vector Autoregressive models, and regressions to analyze the inconvenience yield arising from transaction frictions on-chain. Link here

dYdX — **Singapore (Remote)**
Liquidity Program Rewards Formula Optimization (Grant: $20,000) — **April 2023 - June 2023**

- Analyzed the ~$12M LP program by reconstructing order books using historical trade data to visualize changes and resilience during FOMC, CPI, and PPI releases. Recommended rebates, dynamic volatility fees, and DMMs