HONG NGOC LE

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## **EDUCATION**

#### WorldQuant University

Master of Science in Financial Engineering

Remote

Oct 2024 - Current

## Western Sydney University Vietnam

Bachelor of Business - Applied Finance Major (advanced graduation - degree completion in 2 years)

Ho Chi Minh City, Vietnam May 2022 - May 2024

- Dean's Merit List for Academic Excellence Distinction Award (GPA: 6.43 / 7.00)
- First-year Vice-Chancellor's Academic Excellence Scholarship, highest tier
- · Second-year Vice-Chancellor's Academic Excellence Scholarship, highest tier
- · Third-year Vice-Chancellor's Academic Excellence Scholarship, highest tier (awarded 1 year in advance)
- · High Distinction in Econometrics, Philosophical Economics, Securities & Business Valuation, Financial Institutions & Markets, Management, Accounting, Economics, Enterprise Law, Consumer Behaviour, International Business, Corporate Finance, Human Resources

#### VNU-HCM University of Economics and Law (UEL) - Discontinued

Ho Chi Minh City, Vietnam

- · Academic scholarship for highest GPA in Semester 1 across all students in the cohort
- Highest GPA enrolment scholarship (SAT/IB/ACT pathway)
- · Assisted with qualitative data analysis for a paper titled "Peer Tutors' Agency and Emotions in Tertiary English Education in Vietnam" and participated in Sociology and Cross-Cultural Studies classes for Master's students

## Condell Park High School

Sydney, Australia

- · Valedictorian / Dux of High School and First in Course throughout all academic years
- HSC Band 6/6 for Mathematics Advanced and Mathematics Extension 1
- School Science Award | Victor Chang Cardiac Research Institute
- $\circ~$  High School Student Academic Excellence Award  $\,\mid~$  University of Sydney
- · Distinction & Merit awards | Australian Mathematical Olympiad (AMO) & Australasian Problem Solving Mathematical Olympiads (APSMO)
- · Top 8% of students in Australia in English | University of New South Wales International Competitions and Assessments for Schools
- · Earned advanced standing, skipping 1 academic year based on outstanding performance
- Nominated for the NSW International Student Award | State of New South Wales, Australia

### Tran Dai Nghia High School for the Gifted - Discontinued

Ho Chi Minh City, Vietnam

## RELEVANT EXPERIENCE

#### Quantitative research assistant

ICLS Tech

Ho Chi Minh City, Vietnam April 2024 - Current

• Performed comprehensive data cleaning, preprocessing, and feature engineering on FOREX and CRYPTO datasets, ensuring high-quality inputs for machine learning models.

· Applied a triple-labelling method for labelling FOREX and CRYPTO data, integrating regime-switching models such as Gaussian Mixture Models and Hidden Markov Chains to enhance prediction accuracy in volatile market conditions.

Developed and implemented automated machine learning pipelines to assess the probability of backtest overfitting and evaluate the robustness of existing cross-

### Product assistant

Ho Chi Minh City, Vietnam YOLA English

Jan 2022 - Jan 2023

- · Assisted the Product Manager in developing an English learning app and web extension, conducting market research and executing targeted marketing strategies; increased the app's user base by 25,000 and the extensions by 15,000, achieving a monthly active user rate of ~50%.
- Collaborated with external artists to implement user nurturing strategies, resulting in a 7-10% retention rate for the 21-day user cohort.

## TECHNICAL PROJECTS

Evaluate backtest overfit in popular financial cross-validation schemes using AutoML (research paper) | Machine learning, Python

Not published vet

- · Use regime-switching models (Hidden Markov Chain) and Entropy Theory of Information for feature construction and engineering FOREX and CRYPTO data
- · Evaluate the extent of overfit in K-Fold, Purged K-Fold, Walk Forward, Combinatorial Purged & Embargoed Cross Validation (CPCV) using Automated ML pipelines

Stock analysis & Value-at-Risk estimation for major US tech companies | Finance, Python

- Provide analysis of the stock performance (AAPL, AMZN, GOOG, MSFT), incl. closing prices, trading volumes, moving averages, daily returns using real-time data
- · Estimate Value-at-Risk using 3 methods: historical, parametric and Monte Carlo simulation.

Business model analysis and stock valuation of public company - Hoang Anh Gia Lai | Finance, Excel

Link

- Analysed HAG's 3F business model, SWOT, Porter's competitive positioning analysis, financial ratios, valuation risk (sensitivity analysis and scenario analysis) and investment risks (Altman's Z-Score, Kupiec POF test and Monte Carlo simulation).
- · Initiate coverage on HAG with a BUY recommendation based on a target price of 11,220 VND through a weighted mix of DCF, APV, and relative valuation (CCA).

Loan approval prediction using k-Nearest-Neighbour model built from scratch | Machine learning, Python

Build a kNN model from scratch to predict loan approval and simple linear regression to improve accuracy

#### **SKILLS**

- · Technical tools | Python, R, SQL, LaTeX, Markdown, PostgreSQL, CSS, Excel, SPSS, Minitab, Stata
- Finance | Financial machine learning (time series forecasting, predictive modelling, algorithmic trading), securities analysis, company valuation, corporate finance & capital structure, portfolio management, economic and financial modelling, international finance
- Business strategy | Consumer behaviour analysis, customer segmentation, market research, strategic management, consulting, international business strategy
- Language | English (IELTS 8.0, 4.5 years of overseas study experience)
- · Graphic design | Adobe Photoshop, Adobe Illustrator

# **EXTRACURRICULARS & NON-ACADEMIC ACHIEVEMENTS**

- P&G PEAKathon 2024 | Top 4 Local Finalists of Vietnam
- HCMC Department of Industry & Trade & HAWEE ASEAN++ Bridge Business Forum | Represented Australia at the high-profile business networking event, attracting over 500 global business leaders, promoting sustainable development in the ASEAN region.
- UEL English Club EFFI | Project leader of a team of 40+ members, organised two successful projects attracting over 250 participants.
- YOLA | Tutored students, ranging from school-age to working professionals, in IELTS preparation and general English language proficiency.
- Project X | Participated in a non-profit fellowship program to connect tech startups with the Vietnamese students interested in IT and offer mentorship, career orientations, and technical / soft-skills training through events/workshops and building communities
- · Vietnam's Southern region IELTS Talent Contest 2021 | First place award (month) and Merit award (quarter)
- Freelance graphic designer | Designed 200+ presentations, logos, marketing and product materials in accordance with strict regulatory requirements (U.S. FDA standards) for export to international markets such as Japan, New Zealand, and the U.S; experience in preparing materials for both digital and print production