HONG NGOC LE

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# **EDUCATION**

#### WorldQuant University

Master of Science in Financial Engineering

Remote

Oct 2024 - Current

May 2022 - May 2024

Ho Chi Minh City, Vietnam

# Western Sydney University Vietnam

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

- 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

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

- 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). Link

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.

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