HONG NGOC LE

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EDUCATION

WorldQuant University — Remote
Master of Science in Financial Engineering — Oct 2024 – Current

Western Sydney University Vietnam — Ho Chi Minh City, Vietnam
Bachelor of Business – Applied Finance Major (advanced graduation - degree completion in 2 years) — May 2022 – May 2024
- Dean's Merit List for Academic Excellence - Distinction Award (GPA: 6.43/7.00; equivalent to 3.67/4.00)
- Awarded 96,000,000VND+ in scholarships over 2 years (Highest-tier First-year, Second-year, and Third-year Vice-Chancellor's Academic Excellence Scholarships; third-year scholarship awarded a year ahead of cohort).
- Selected by HCMC Department of Industry and Trade & HCMC Women Entrepreneurs Association to represent Australia at the ASEAN++ Bridge Forum, engaging with over 500 diplomats, consuls, business associations, including Australian Consul-General Ms Sarah Hooper, to promote sustainable development.
- Achieved High Distinction (A+ equivalent) in Econometrics, Philosophical Economics, Securities & Business Valuation, Financial Institutions & Markets, Management, Accounting, Economics, Enterprise Law, Consumer Behaviour, International Business, Corporate Finance, and Human Resources.

VNU-HCM University of Economics and Law (UEL) – Discontinued — Ho Chi Minh City, Vietnam
- Awarded 36,000,000VND in scholarships over 1 semester (Valedictorian Entrance Scholarship for highest SAT/IB/ACT score; Academic Scholarship for highest GPA in Semester 1).
- 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 (93/100) and Mathematics Extension 1 (47/50); Top 8.4% for all-subject performance in State of NSW
- High School Student Academic Excellence Award | University of Sydney
- School Science Award | Victor Chang Cardiac Research Institute
- 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 — Ho Chi Minh City, Vietnam
ICLS Tech — 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-validation schemes.

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.

EXTRACURRICULARS

- 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.
- YOLA English | Tutored students, ranging from school-age to working professionals, in IELTS preparation and general English language proficiency.
- University English club EFFI | Project leader of a team of 40+ members, organised two successful projects attracting over 250 participants.
- University Music club SOL | Member of the piano team, in charge of piano-related production for 2 music videos.
- Project X IT mentorship programme | 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).

SKILLS

- Technical tools | Python, R, PostgreSQL, LaTeX, Markdown, CSS, Excel, SPSS, Minitab, Stata, PowerBI
- Languages | Proficient English (CEFR C2, 4.5 years of overseas study experience), Elementary Chinese, Elementary Korean, Elementary French
- 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
- Graphic design | Adobe Photoshop, Adobe Illustrator

TECHNICAL PROJECTS

Evaluate backtest overfit in popular financial cross-validation schemes using AutoML (research paper) | Machine learning, Python — Not published yet
- Used regime-switching models (Hidden Markov Chain) and Entropy Theory of Information for feature construction and engineering FOREX and CRYPTO data
- Evaluated 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 — 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).
- Initiated 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).

Stock analysis & Value-at-Risk estimation for major US tech companies | Finance, Python — Link
- Provided analysis of the stock performance (AAPL, AMZN, GOOG, MSFT), incl. closing prices, trading volumes, moving averages, daily returns using real-time data
- Estimated 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 — Link
- Built a kNN model from scratch to predict loan approval and simple linear regression to improve accuracy