

Ngoc Le

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Experience

Product intelligence research associate | SPINS LLC

Mar 2025 - July 2025

- Developed automation scripts using Python, SQL, Windows Batch to streamline product research workflows.
- Helped maintain and update a 3M+ SKU product database for the U.S. Consumer Packaged Goods industry by conducting in-depth product research using market information, UPC-level POS and panel data across 180+ brand attributes.

IT business analyst intern | Doccen

Dec 2024 - Mar 2024

- Crafted technical documentation including user stories, user flows, feature logic, and UI wireframes in Figma, informed by basic grasp of full-stack development (frontend, backend, database and APIs).
- Led Agile workflows with Jira, prioritising backlog and facilitating cross-functional communication.
- Conducted User Acceptance Testing i.e. inspecting UI elements, verifying API responses & database interactions in PostgreSQL.
- Redesigned the company sitemap and implemented slug generation rules to optimise SEO.

Machine learning research student | ICLS Tech

Apr 2024 - Sep 2024

- Contributed to an academic research paper by cleaning, preprocessing, and engineering features (Hidden Markov Chains & mutual information) on 1M+ FOREX data points; applied a triple-barrier labelling method to improve predictive accuracy in volatile markets.
- Utilised automated machine learning to assess backtest overfitting risk (Probability of Backtest Overfit & Deflated Sharpe ratio) different cross validation methods in financial time series.

Education

Western Sydney University Vietnam | Applied Finance Major

Aug 2022 - Aug 2024

Awards & honours

- 5-time Academic Scholarship recipient (₫211M) - GPA: 6.435 / 7.000
- Early graduation by 1.5 years; Graduated with Distinction & Dean's Merit List
- Top 4 Local Finalist (P&G Peakathon Business Competition 2024)
- 1st place winner (British Council IELTS Talent Contest, Southern Vietnam Division)

Extracurricular activities

- Project leader - University English club: Led a 40+ member team and organized two campus-wide events with 250+ attendees.
- Country representative - ASEAN Bridge++ Business Forum: Represented Australia at a regional forum engaging 500+ diplomats and business leaders on sustainable trade.
- Tech fellowship mentee - Project X program: Participated in a selective tech mentorship program focused on leadership & innovation.
- Innovation participant - LaunchPad Venture Makers: AI for Impact: Developed an AI-driven business solution addressing UN SDGs.
- Research assistant - University English Faculty: Cleaned and organized data for a study on peer tutoring and emotional engagement.
- Pianist - University music club: Produced and performed piano tracks for two official university music videos.
- Graphic designer - University clubs & freelance: Created 200+ marketing materials for international clients & on-campus initiatives.

Skills

- Statistical modelling** | R, Stata, SPSS, Minitab
- Data engineering & ML** | Python, SQL, Spark
- Software development** | Technical documentation (Confluence), project management (Jira), UX/UI (Figma), HTML, CSS
- Business strategy** | Product research, market research, consumer behaviour, financial analysis & modelling
- English** | Professional working proficiency with 4+ years of overseas study experience, IELTS 8.0

Data projects

Comprehensive strategic, competitive, financial analysis of Hoang Anh Gia Lai company

Research, finance

- Using news & public data to conduct strategic, financial & valuation analysis on HAG (2018-2022) using 3F model, SWOT & Porter's 5 forces - identify revenue drivers (bananas, durians, pig farming), key risks (e.g. rival intensity, equity failure) & competitive position.
- Built composite stock valuation via DCF, APV & CCA; applied regression-based forecasting, scenario/sensitivity analysis, Monte Carlo simulation, Altman Z-score & VaR to assess price resilience, default risk & investment viability.

ETL data pipeline and FastAPI for World Bank data ingestion

Data engineering, API

- Built an ETL module using Python, SQLAlchemy ORM, PostgreSQL, pandas, and requests to ingest, transform, and load World Bank indicator data with relational models, time-series structures, upsert logic, and separate dimension and fact table handling.
- Built an API module using FastAPI, pydantic to serve the data with CRUD endpoints, schema validation, and model definitions.

Stock analysis & Value-at-Risk estimation for major US tech companies

Statistics, quant finance

- Performed exploratory data analysis & time-series visualisation (line plots, histograms, kernel density estimation) on 1 year of adjusted close prices & returns for AAPL, AMZN, GOOG & MSFT to identify volatility trends & return distributions.
- Implemented value at risk estimation using (1) historical simulation, (2) parametric method via mean-variance approach & (3) Monte Carlo simulation using geometric Brownian motion with drift & stochastic shock components, incorporating daily return bootstrapping.

Surveying social media usage as a predictor of students' performance and wellbeing

Statistics, communication

- Constructed and deployed an online survey (n=112), defined ordinal and Likert-scale variables for GPA, study hours, self-rated productivity, and mental wellbeing.
- Applied chi-square tests and one-way ANOVA to test predictive relationships; found no significant associations between social media usage and GPA, productivity, or mental wellbeing.