

# BRYAN WEI XUAN CHEONG

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## EDUCATION

**Imperial College London** – MSc in Business Analytics (Predicted Distinction) Aug 2024 - Aug 2025  
*Modules:* Generative AI & LLMs, Statistics & Econometrics, Financial Analytics, Energy Analytics, Digital Marketing Analytics, Text Analytics, Network Analytics, Logistics & Supply Chain Analytics, Optimisation & Decision Models, Data Visualisation

**University College London** – BSc in Computer Science (2:1, Grade 68%) Sep 2021 - Jul 2024  
*Modules:* Machine Learning, Reinforcement Learning, Mathematics & Statistics, Algorithms, OOP, Software Engineering, Security

## SKILLS

<b>Programming</b>	Python, SQL, R, JavaScript, SvelteKit, TailwindCSS, HTML (Proficient); Java, Haskell, C (Basic)
<b>Libraries</b>	pandas, scikit-learn, Plotly, XGBoost, PyTorch, statsmodels, SHAP, FastText, SciPy, NetworkX, tidyverse (R)
<b>Technical Tools</b>	Git, AWS (EC2, S3; Exploring Bedrock), Docker, PostgreSQL, dbt, Power BI, Google Analytics, VWO, Selenium
<b>Languages</b>	English (Native), Cantonese (Fluent), Mandarin (Intermediate), Malay (Intermediate)

## PROFESSIONAL EXPERIENCE

**Anavio Capital Hedge Fund** London, UK  
Equity Analytics Intern – Long/Short Strategy Jul 2023 - Sep 2023

- Built a Python screening dashboard integrating 15+ capital-efficiency metrics to support uncorrelated long/short strategies
- Scaled coverage from 10 to 200 tickers, automating 80% of manual work to accelerate insight delivery
- Enhanced pipeline robustness with 100+ Pytest tests and six error-handling decorators, reducing downtime and debugging
- Translated complex logic into clear flowcharts and wireframes for management, halving delivery time and improving alignment

**GSE-M Technology Sdn. Bhd** Malaysia  
Enterprise Resource Planning (ERP) Assistant May 2023 - Jul 2023

- Partnered with ERP users across five departments to gather 30+ requirements, identify operational challenges, and find critical bugs
- Tailored ERP functionalities with consultants, improving process efficiency by 25% and aligning system with departmental needs
- Co-led daily conference room pilots, training 90 employees to ensure smooth adoption and usage of the new ERP system

**British Red Cross** London, UK  
Data Analyst Sep 2022 - Apr 2023

- Developed a Power BI app with 20+ interactive dashboards to analyse complaints data, delivering actionable insights to support teams and senior stakeholders; reduced resolution time by 50%
- Built an ETL pipeline in Power BI Dataflows to extract data from four sources, modelled into fact and dimension tables, and leveraged DAX for geographical drill-downs and slicing, enabling consistent and scalable reporting
- Secured future development by presenting a streamlined issue resolution system along with a deployment manual to the Head of Data

**Subplace (B2C Subscription E-commerce Platform)** Malaysia  
Software Reliability Intern Jun 2022 - Aug 2022

- Cut maintenance time by 60% via modular templates and systematic test cases, improving platform stability
- Resolved 200+ issues and introduced agile, test-driven development practices to enhance reliability and support continuous delivery

## PROJECTS

**Multi-Channel Attribution (DMEF Dataset from WRDS)** Analysed 3.3M contacts and 240K orders to evaluate catalogue vs. email campaign effectiveness using PostgreSQL and Python. Computed response rates under first-, last-, and linear-click attribution, revealing catalogue’s six-times higher conversion on average. Segmented customers into 125 RFM cells, calculated CLV with retention-adjusted discounting, and recommended cost-effective targeting strategies by estimating breakeven cost per email relative to catalogue

**Portfolio A/B Testing and Analytics.** Ran A/B tests with VWO to measure impact of clickbait vs professional phrasing on my portfolio website’s “Download CV” CTA; the professional version saw a 70.3% higher CTR ( $p = 0.043$ , statistically significant). Drove traffic via social media, Selenium bots, and a targeted Google Ads campaign; tracked conversions and bounce rate using event-based analytics

**Beat The Bookies.** Engineered a Premier League match predictor using 18 features across 5 seasons (earlier data showed performance decay), achieving 51% validation and ~40% test accuracy with CatBoost. Feature-engineered Pi-rating variants with tuned hyperparameters and selected key variables using SHAP. Explored pre-game sentiment as a predictive signal using LLMs and the Nitter API

**RIE Cleaning of Lagged Covariance Matrices.** Developed a cleaning algorithm for high-dimensional lagged covariance matrices using Rotationally Invariant Estimators (RIEs), correcting spectral distortions via the Marchenko-Pastur law. Achieved 100% noise reduction in AR(0) models and ~20% signal-to-noise improvement in AR(1), with larger gains as dimensionality increased. Applicable to portfolio risk modelling, time series forecasting, and signal processing

**Text Analytics on Song Lyrics.** Modelled 40,000+ lyrics using LASSO with n-grams and FastText embeddings to explore drivers of song popularity. Identified eight genre-level trends in explicitness and themes. Applied unsupervised techniques like PCA-filtering and cosine similarity on averaged word vectors to quantify deeper semantic shifts across albums of popular artists

**Logistics and Supply Chain Optimisation Game.** Simulated a multi-region supply chain using hybrid demand forecasting and cost-benefit analysis to guide factory and warehouse expansion. Applied adjusted reorder points and Silver-Meal heuristics to manage seasonal inventory, securing 2nd place in Imperial’s cohort

**Energy Demand Forecasting Model.** Developed and tuned XGBoost model to forecast UK electricity demand, engineering features like Heating Degree Days, holiday dummies, and temporal lags. Achieved 96.3% R<sup>2</sup>; generalises well with low residual autocorrelation

**Gas Plant Risk & Hedging Strategy.** Analysed profitability and downside risk of a gas-fired plant using market data and 10,000 copula-based simulations of gas and electricity prices. Designed a hedging strategy by longing electricity futures and shorting gas futures, reducing 95% Expected Shortfall by 29% while accounting for outages and market correlations

**Gas Infrastructure Valuation with Real Options.** Valued a two-stage gas project using NPV and real options. Identified a break-even gas price of \$0.136/m<sup>3</sup> and option values of \$1.25M (start-of-year) and \$1.15M (mid-year), highlighting the effect of timing on valuation. Deferring Stage 2 added \$1.25M in value, demonstrating the financial benefits of flexibility under uncertainty

**TetrisAI.** Implemented a Tetris heuristics evaluation AI, scored 28,000+ points using 400 blocks, 80th percentile in UCL’s cohort

AWARDS AND CERTIFICATIONS

AmplifyME – Mergers and Acquisition Simulation with UBS	Feb 2025
Boston Consulting Group – Introduction to Strategy Consulting (Forage)	Oct 2024
Goldman Sachs – Software Engineering Experience Program (Forage)	Jul 2024
Harvard University – CS50x Puzzle Day: Perfect Score (Teams of Six, Top 13% in the World)	Apr 2020