Arun Chatha

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Education

University of Nottingham, Computer Science	**Nottingham, UK**
Grade: Merit	*Sept 2020 – Oct 2022*

Key Projects: Designed a Police database using SQL and implemented a web interface employing PHP and JS, Created an arcade game using Python, Data mining, modelling and analysis using R, Thesis on novel evolutionary algorithms for portfolio optimisation

University of Manchester, BA Economics	**Manchester, UK**
Grade: 2:1	*Sept 2017 – July 2020*

Professional Experience

EFB	**London**
Machine Learning Analyst	*Sept 2024 – Present*

- Built automated valuation models using XGBoost, Ridge regression, and Lasso regularisation achieving 4.2% MAPE across office, retail, and industrial sectors. Reduced valuation time by 75% while incorporating 150+ location, building, and economic features
- Developed time-series forecasting pipeline using ARIMA, Prophet, and LSTM networks with 92% directional accuracy for quarterly rental trends across 25+ UK submarkets
- Engineered geospatial and macroeconomic features leveraging SQL databases and cloud-based ETL pipelines to enhance model performance

Dynium	**Remote**
Machine Learning Engineer	*Jan – May 2023*

- Developed and deployed a CNN for autonomous strawberry ripeness classification achieving 92% accuracy, enabling precision harvest timing recommendations and real-time crop maturity detection across commercial operations
- Delivered yield forecasting insights that reduced crop waste by 20% through improved harvest predictions, eliminating conservative underquoting practices and minimizing financial penalties from supermarket agreements
- Managed a team of 8+ labellers to curate 50,000+ annotated images, implementing quality control protocols that maintained 95%+ inter-annotator agreement and accelerated model training cycles by 30%

Nvidia	**Santa Clara, USA**
Financial Planning and Analysis Internship	*Jul – Aug 2019*

- Attended strategic planning meetings for NVIDIA-Audi autonomous driving partnership, analysing capital expenditure requirements for lidar camera technology and sensor development programs
- Assisted in financial forecasting by tracking capital equipment pricing trends and preparing OpEx/CapEx reports to support quarterly budget reviews for autonomous vehicle R&D initiatives
- Contributed to financial road mapping analysis for commercializing autonomous driving technology

Projects

Healthcare App for Prostate Cancer Patients (In Progress)
- Developing full stack React healthcare application partnered with a Radiography PHD student for prostate cancer patients with predictive analytics to optimise cancer surveillance protocols
- Aim to reduce reliance on CT imaging by enabling continuous symptom tracking and early anomaly detection, thereby minimising cumulative radiation exposure
- Designed intelligent clinical decision support system that analyses patient data (nutrition, symptom severity) to identify early warning indicators and rank imaging necessity

Portfolio Optimisation Solver with Risk Analysis for Fantasy Premier League
- Framed fantasy sports as a portfolio optimisation problem, optimising for risk adjusted returns with Sharpe ratio, value-at-risk (VaR), and expected points return under budget, squad building and transaction costs constraints
- Developed a multi-objective optimisation framework for Monte Carlo simulations with 10,000+ iterations to model player performance uncertainty, integrated ML techniques including XGBoost and LTSM networks for form analysis
- Achieved superior risk-adjusted returns compared to expected points maximization strategies, delivering 12% higher cumulative points while reducing week-to-week variance by 25%

Technical Skills

Proficient Languages:	Python, SQL, Java, R, PHP	Databases:	MySQL, Access
ML:	Pytorch, TensorFlow, scikit-learn,	Web Technologies:	HTML5, CSS, JavaScript
	Computer Vision, NLP,	Data Science:	pandas, NumPy, matplotlib
	Time Series, Deep Learning	Cloud:	Git, Azure, AWS, MongoDB

Extracurricular Activities

Travelled Asia and Australia	*May 2023 – Aug 2024*

Member of UoM Economics and Finance societies, Founder and Captain of Rusholme AFC

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