Karujan Jeyaseelan

07377815592 — Karujanjeyaseelan@gmail.com — linkedin.com/in/karujan-jeyaseelan — https://kj22a.github.io/Portfolio/

Skills

- **Microsoft Office:** Excel, Word, PowerPoint
- **Version Control:** GitLab, GitHub
- **Frameworks and Libraries:** TensorFlow, NumPy, Pandas, Sk-learn, Keras, Flask
- **Visualisation tools:** Tableau, Plotly, Seaborn, VBA
- **Tech:** Arduino, CAD (SolidWorks)
- **Programming languages:** Python, Bash, SQL, HTML, MATLAB, C#, LaTeX

Education

University of Cambridge **Oct 2022 – Jul 2023**
Meng in Electrical & Electronics Engineering
minors: Information and Computer engineering

- Focused on the fundamentals of Software Engineering using Python.
- Executed a final year project on light trapping analysis, employing mathematical analysis and numerical implementation (FDTD), securing a 2.1 grade, showcasing strong performance and efficient time management.

University of Cambridge **Oct 2019 – Jul 2022**
BA in Control Engineering & Instrumentation

- Explored fundamental principles of Software Engineering as applied in robotics.
- Collaborated in developing a Fruit-Picking Robot with a team of six, applying programming, control systems, and mechanical design skills to achieve a functional and efficient solution.

St Ignatius College **Sept 2012 – Jul 2019**
A level
Mathematics (A*), Further Mathematics (A), Physics (A*)
GCSE
16 certifications (A*-A)

Courses/Certification

- MIT - Statistical Thinking and Data Analysis
- MIT - Matrix Methods in Data Analysis, Signal Processing, and Machine Learning
- Coursera - API development, NumPy, Excel Skills for advanced Business Specialisation
- Kaggle - Python, Pandas, Data cleaning, Machine learning, Data visualisation, etc
- Harvard - Statistics 110: Probability
- Tableau - Desktop specialist certification (in progress)

Professional experience

8-Week SQL Challenge **May 2024**
Database management and SQL

- Currently participating in the SQL Challenge as part of the Data with Danny virtual internship program.
- Crafted efficient queries for diverse databases, addressing real-world problems.

Accenture **February 2024**
Data Analyst and Visualisation

- Finished a 3-day job simulation, analysing 7 datasets to uncover content trends and provide strategic recommendations for a hypothetical social media client.
- Delivered a 12-slide PowerPoint and a 10-minute video presentation, effectively communicating insights to the client and internal stakeholders.

Quantium **January 2024**
Data Analyst

- Completed a 5-day data analytics simulation, utilising data preparation and customer analytics to extract insights, clean datasets, and deliver actionable commercial recommendations.
- Identified 5 benchmark stores for uplift testing and created a 15-slide presentation with Seaborn-generated graphs, providing strategic insights for the Category Manager.

Personal Projects

Each project details and code are available on my interactive GitHub portfolio.

Machine Learning

- Developed a loan approval model using advanced statistical tests and stacked classifiers, achieving 91% accuracy in predicting loan approvals.
- Deployed a diabetes prediction model using key health indicators, achieving reliable performance with a user-friendly web interface.

Statistical Analysis

- Analysed pain relief treatments across age groups, revealing Ibuprofen's overall effectiveness, with age-specific benefits for Acetaminophen and Codeine.
- Applied A/B testing to analyse marketing campaigns, using statistical methods and visualisations to optimise engagement and efficiency.

Deep Learning

- Leveraged statistical tests, DBSCAN, 3D Plotly visualisations, and neural networks to analyse, optimise, and compare predictive models for door dash.
- Predicted medical insurance costs using Tensorflow, outperforming random forests with a Coefficient of Determination of 0.88.

Mathematical Modelling

- Created a Python simulation of roulette to analyse betting strategies and visualise outcomes using interactive graphs.
- Forecasted GBP/USD exchange rate using HMM, XGBoost, ARIMA, and Monte Carlo simulations.