Cameron Roberts

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PROFILE

Detail-orientated lead data analyst with a robust quantitative analytical skillset, passionate about transforming complex data into actionable insights. As a data enthusiast with a first-class Master's degree in Computer Science and a strong background in statistics, economics and product management, I specialise in leveraging robust statistical and machine learning models and applying solid UX/UI design principles to streamline inefficiencies, optimise performance and solve complex problems with data.

My approach to challenges is marked by a calm and practical attitude, ensuring effective problem-solving even in high-pressure situations. With a unique blend of adaptability and strong interpersonal skills, I foster positive working relationships contributing to successful team dynamics.

Beyond my professional work, I am committed to advancing my technical expertise by researching and integrating cutting-edge methodologies into my workflows. As AI-driven tools like GPTs reshape the field, I actively explore new models and apply prompt engineering to enhance my productivity. This commitment to a growth mindset underscores my readiness to meet the evolving demands of my roles, where precision and execution are paramount. I am eager to take on new challenges and drive meaningful change through innovative data science.

SKILLS

Technical Skills:

- **Python:** Data analysis (Pandas, Polars, NumPy, SciPy), creating GUIs & visualisations (PyQt6, Plotly, Dash, Streamlit, Gradio), web development (Flask), web scrapers & APIs (Beautiful Soup, Request), and ML frameworks (XGBoost, Scikit-learn, PyTorch).
- **SQL:** Writing complex, optimised queries to govern and profile varied data sets in BigQuery.
- **Algorithms**: Designing and implementing advanced algorithms, including Markov Chain Monte Carlo (MCMC) for Bayesian time series regression, audience clustering using Louvain, k-Nearest Neighbors for regional group identification, SARIMAX for forecasting, differential evolution for optimisation problems and causal inference.
- **Graph Databases**: Experienced in building knowledge graph solutions using Neo4j and Cypher, integrating with LLMs via LangChain and RAG architectures to optimise team assignments and enhance customer insights.
- **Data Storage:** Expertise in working with large datasets and data storage solutions, including JSON, Parquet and HDF5, optimising workflows and designing scalable pipelines using ERDs.
- **JavaScript/HTML/CSS**: Developing geo experiment and A/B testing web applications for internal and external use.
- **Version Control & Documentation:** Experienced in using Git and GitHub for version control, collaboration and maintaining reproducible workflows.

Professional Skills:

- **Presenting:** Skilled in disseminating complex data-driven insights to key stakeholders by creating professional decks, dashboards and strategic discussions.
- **Process Optimisation**: Identifying and implementing structured efficiency improvements, increasing profitability and enhancing client satisfaction.
- **Product & Project Management**: Leading teams through the development of data processing packages and Geo/A/B testing frameworks, overseeing the complete product lifecycle.
- **Communication:** Excellent ability to convey complex technical concepts to both technical and non-technical audiences. Adept at translating data insights into actionable recommendations and fostering collaboration across teams. Strong written and verbal communication skills, ensuring clarity in reporting, documentation, and stakeholder engagement.
- **Team Management:** Experienced with mentoring and guiding team members, focusing on professional growth and skill development. Responsible for setting objectives, providing strategic direction, and supporting direct reports on projects.

PROFESSIONAL EXPERIENCE

Lead Data Analyst, *Independent Marketing Sciences* 11/2024 – present | London

As the sole Lead Data Analyst in the company, this role has allowed me to take on a lot of responsibility and I have proactively stepped up in team leadership, revenue generation and product development, driving measurable business impact.

Through my role, I have been required to take a big-picture approach, which has cultivated a versatile skill set spanning data science, product analytics, data engineering and managing multiple workstreams while identifying inefficiencies and implementing scalable solutions that align with business objectives.

Without guidance, I proactively took responsibility for expanding the business into a new segment of causal inference and uplift analysis. This resulted in an additional ARR of £125K for the business.

Key Achievements:
- Led product management for Geo, A/B, and incrementality tests web application, designed in Flask, to drive revenue diversification and enhance customer experience.
- Designed and implemented customer segmentation models using feature engineering and clustering, identifying optimal audiences and leveraging GWI insights to refine targeting strategies.
- Assisted clients in organising databases using ERD diagrams to ensure accurate data collection for projects, collaborating with external stakeholders to enable efficient, accurate and secure data exchange.
- Designed and implemented a knowledge graph integrated with an LLM using RAG and LangChain, enabling Cypher query execution to optimise project team assignments based on skillsets, boosting organisational efficiency.
- Worked as part of a team to migrate an OLS regression modelling tool from R into a new Python-based application built in PyQt6, as well as implementing Bayesian time series regression optionality and integration with other tools including a forecaster and optimiser.

Senior Data Analyst, *Independent Marketing Sciences* 06/2023 – 10/2024 | London

During my time as a Senior Analyst, I predominantly spent my time in two key areas. The first was in statistical modelling and regression analysis, which taught me the importance of constructing accurate and robust models that satisfy statistical criteria, which is integral for building accurate forecasts, simulations and optimisations.

The second part of the role was focused on the development and building of key infrastructure to make sure that the company had the right process in place for efficient and profitable projects, as well as making sure results could be trusted and replicated.

Key Achievements:
- After identifying that projects had shared processes, and the need for a reusable and scalable solution, I directed a team of four to develop a comprehensive data processing and web scraping package, successfully publishing it to PyPI (imsciences), with widespread applicability across industries.
- Developed an XGBoost-based automatic seasonality detection model for feature extraction and forecasting, achieving minimising the MAPE. This solution strengthened client retention and increased billable hours.
- Managed econometrics projects across diverse industries, gaining deep insights into business operations, challenges, and opportunities. Partnered with clients to optimise spending strategies, driving improved ROI and operational efficiency.

Data Analyst, *Omnicom Group* 02/2022 – 06/2023 | London

Responsibilities:
- Applied Bayesian statistics to build econometric models and analyse business KPIs across diverse industries, delivering actionable insights to inform strategic decision-making.
- Developed algorithms to streamline data collection processes by integrating APIs and building web scrapers with Beautiful Soup, efficiently sourcing key variables for modelling workflows.
- Gained strong skills in distilling complex technical concepts into accessible, high-level insights through client meetings and pitches, enabling informed and impactful business decisions.

EDUCATION

University of Bath, *MSc Computer Science, Distinction* 09/2020 – 09/2021

Thesis: Optimising Momentum-Based Algorithmic Trading with Deep Reinforcement Learning
- I successfully compiled a program in Python that interacted with open-source libraries to increase returns when trading individual stocks
- I utilised three learning models, A2C, PPO and DQN, in an MLP Network. The algorithm resulted in a performance increase of between 108% and 116% against the buy-and-hold strategy, depending on the learning model used

Relevant Modules: Algorithms and complexity, Machine Learning, Functional programming and Software Engineering

University of Reading, *BSc in Economics, First Class Honors* 09/2017 – 06/2020

Applied Econometrics:
- Achieved the highest mark in my cohort for the Applied Econometrics module.
- Developed proficiency in risk management metrics, particularly Value at Risk and Expected Shortfall. Constructed sophisticated return models incorporating various GARCH specifications, including asymmetric news impact models that more accurately captured market responses to external shocks. Applied these models to real-world financial data to quantify and forecast volatility patterns under different market conditions.

Relevant Modules: Accounting and Finance, Statistics and Mathematics in Finance, Financial Economics, Applied Econometrics.