Baron Gracias

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SUMMARY

Senior Data Scientist specialising in payments and fraud analytics; with **4 years** applying Python, SQL and BI tools to build robust ML models, deliver revenue-generating projects and publish government insights. Proactive self-starter who translates complex data into clear, compelling narratives for stakeholders. Highly commended by executives for cultivating internal culture and community through sports, events, and charity.

EXPERIENCE

Mastercard
Senior Data Scientist 2025 – Present

- Awarded sponsorship and sabbatical for Machine Learning & AI master's at the University of Cambridge.
- Published industry-to-industry payment flows **report** with the Office for National Statistics, directly supporting the government predict economic shock and provide granular insights about UK supply chains.
- Deployed **XGBoost** model to classify **15m** accounts per month as business/personal with over **85%** accuracy; parallelised and optimised execution plans to process billions of FPS/Bacs/ICS transactions.
- Led proof-of-value on **fraud** data provider; applied **PCA** and distribution/cluster analysis on superimposed data to assess feature vector similarity, early detection rate improvements and presented value-add.
- **Director of Sports**; founded several sports teams, charity fundraised **£20k**, solely hosted Women in Tech football event, pitched to C-suite to manage **£100k** fund and led Team USA to FIFCO World Cups.

Data Scientist II 2024 – 2025

- NLP for Pay.UK; mapped business names to Companies House with tokenised fuzzy matching, achieving **88%** accuracy for 50m accounts. Classified profanity in transaction reference field with sentiment analysis.
- Developed payment category mapping model and payment statistics module for Open Banking product, providing insights analogous to "Spotify Wrapped"; **A/B testing** indicated over **80%** user satisfaction.
- Conducted EDA on the emergence of **economic crime** in a new payment system; built models to compare fraud classification feature importance during system growth and monitor early fraud detection signals.

Data Scientist I 2020 – 2021 & 2022 – 2024

- Internal **strategy**, **operations** and **portfolio performance** role; applying advanced analytics, data mining and statistical techniques to improve existing methodologies and optimise project management.
- Published a high-impact **"60-second"** dashboard in DOMO, enabling senior leadership to make rapid **data-driven decisions** with real-time KPIs; crisis response time decreased by up to **75%**.
- Created a resource management tool, prescribing allocation volumes for PMs with an accuracy of **99.6%**; increased utilisation by up to **3x** and corrected **£3m/year** in financials from mismanaged timesheets.

EDUCATION

University of Cambridge 2025 – 2026
MPhil Machine Learning & AI with Physics, *Expected Distinction*
High-Performance Computing, Machine/Deep Learning, Image Analysis, Agentic AI, Bayesian Statistics

University of Bath 2018 – 2022
BSc (Hons) Physics, *High First Class, 1:1*

CERTIFICATIONS & SKILLS

Stanford, Machine Learning Specialization; covering un/supervised ML and reinforcement learning (2024)

IBM, Data Science Specialization; research methodologies and applications using Python, SQL, R (2024)

- **Languages & Tools**: Python, SQL (Oracle, SSMS, Teradata), C++, Spark, Git, CI/CD, Docker
- **Machine Learning**: PyTorch, Scikit-learn, OpenCV, HPC, Parallelisation, Classification, NLP, PCA
- **Analytics & BI**: Predictive/Prescriptive Analytics, A/B Testing, R&D, PowerBI, DOMO, Tableau