

# VIVEK KARTHA

Senior Data Analyst | Analytics Engineering | MSc Computer Science

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## PROFESSIONAL SUMMARY

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Senior Data Analyst with 10+ years' experience driving user growth and product decisions through behavioural analytics, KPI frameworks, and decision-critical reporting. Played a key analytics role in scaling a blockchain gaming platform from 2,000 to 650,000+ users, and designed an in-app notification system delivering a 60% uplift in user engagement. Completing MSc Computer Science at Aberystwyth University (Sep 2026) with a dissertation on fraud detection using analytics engineering (dbt, BigQuery) and machine learning (XGBoost, SHAP). Eligible for the UK Graduate Visa on completion. Targeting Analytics Engineering, Senior Data Analyst, and Product Analytics roles in UK fintech, iGaming, and blockchain analytics.

## KEY SKILLS

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**Data & SQL:** SQL · BigQuery · MongoDB · PostgreSQL · MySQL · dbt · SQLAlchemy

**Languages:** Python (Pandas, NumPy, scikit-learn) · JavaScript · C++

**Machine Learning:** XGBoost · SHAP · Feature Engineering · Model Evaluation (AUC-ROC, PR-AUC)

**Visualisation:** Power BI · Redash · Chart.js · Streamlit · Matplotlib · Plotly

**Engineering:** FastAPI · REST APIs · Git · Linux · Docker basics

**Analytics:** Cohort Analysis · Funnel Tracking · Retention Modelling · KPI Design · A/B Testing · User Segmentation

**Domain:** Blockchain Analytics · Fraud Detection · Product Analytics · Behavioural Analytics · Agile / Scrum / Product Ownership

## PROFESSIONAL EXPERIENCE

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**Senior Data Analyst** — CropBytes (Blockchain Gaming Platform), India *Feb 2021 – Dec 2024*

- Owned end-to-end analytics and KPI frameworks across product, marketing, and operations, ensuring consistent metric definitions for a 650,000+ user blockchain gaming platform.
- Designed and shipped an in-app notification system using behavioural segmentation, delivering a 60% uplift in user engagement.
- Built decision-critical leadership dashboards monitoring growth, engagement, and platform health — directly used in quarterly roadmap prioritisation.
- Partnered with product and engineering teams to translate business questions into scalable analytics models supporting experimentation.
- Acted as the accountability point for data quality, resolving inconsistencies and improving organisational trust in analytics outputs.

**Data Analyst** — CropBytes, India *Feb 2019 – Jan 2021*

- Joined as early analytics hire and supported product growth from approximately 2,000 to 650,000+ users.
- Built core user behaviour, retention, and engagement analyses that informed marketing and product decisions during the platform's scale phase.
- Defined early KPI frameworks and reporting standards, establishing the foundation for the company's analytics function.
- Investigated data anomalies and user issues, improving confidence in analytics-driven decisions.

**Systems Engineer** — electroSome, India *Mar 2014 – Apr 2018*

- Designed and maintained a custom ERP system covering sales, procurement, inventory, and employee management.
- Led payment gateway integration, gaining hands-on production experience with transaction systems.
- Used SQL-based analysis to support operational decisions and improve internal workflows.
- Worked across backend systems, databases, and embedded platforms, developing strong end-to-end systems thinking.

## EDUCATION

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### **MSc Computer Science** — Aberystwyth University, UK

*Sep 2025 – Sep 2026*

- Dissertation: Fraud Detection Pipeline Using Analytics Engineering (dbt, BigQuery) and Machine Learning (XGBoost, SHAP). Supervised by Dr Bernie Tiddeman.
- Modules: Programming for Scientists, Fundamentals of Intelligent Systems, Data Modelling, Agile Software Development, Advanced Data Analytics, Research Topics in Computing.

## KEY PROJECTS

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### **MSc Research Project — Fraud Detection Pipeline Using Analytics Engineering & ML** *May – Sep 2026*

Building a production-style fraud detection pipeline on the IEEE-CIS Fraud Detection dataset (590K real anonymised transactions, 3.5% fraud rate). Architecture: Google BigQuery for raw ingestion, dbt for staging/intermediate/mart models, XGBoost classifier for prediction, and SHAP for feature-level explainability. Research question: does structured feature engineering through a layered dbt pipeline measurably improve fraud detection accuracy vs raw transaction inputs (evaluated using AUC-ROC and precision-recall). Supervised by Dr Bernie Tiddeman. Stack: Google BigQuery, dbt Core, Python, XGBoost, SHAP, Streamlit.

### **Commitly — Study Commitment Web Application**

*Jan – May 2026*

Served as Product Owner and backend developer in a seven-person Scrum team at Aberystwyth University. Designed the overall system architecture and led backend setup using FastAPI and PostgreSQL with JWT-based authentication. Contributed core backend logic for commitments and group features and handled cross-team integration. Delivered 67 automated test cases (100% pass rate) and an 8.8/10 user satisfaction score in UAT. Stack: FastAPI, PostgreSQL, SQLAlchemy, JWT, Python, HTML/CSS/JS.

### **Civic Tech Data Visualisation Dashboards**

*2024 – Present*

Built a series of single-file, deployable interactive dashboards on Indian civic and economic data: Union Budget Sankey diagram, Election Commission of India data dashboards, and a Progressive Web App redesign concept for myneta.info. Stack: HTML/JS, Chart.js, D3.

## CERTIFICATIONS & LANGUAGES

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- IELTS Academic — Overall Band 8.0 (Reading 8.5 / Listening 8.0 / Writing 8.0 / Speaking 7.0). British Council, Feb 2025.
- Languages: English (Bilingual, IELTS 8.0), Malayalam (Native), Hindi (Working proficiency).

## RIGHT TO WORK

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Currently on UK Student Visa (Aberystwyth University). Eligible for the UK Graduate Visa on completion of MSc in September 2026 — no employer sponsorship required for first two years post-graduation.