

Shreya Chakravorty

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Professional Summary

I am a Data Science postgraduate student at the University of Surrey with a background in Computer Science (MComp Hons, Newcastle University). I have hands on experience analysing large datasets, building data pipelines, and developing interactive dashboards using many tools such as Python, SQL, and Plotly. Through my MSc, I am expanding my skills in statistical modelling, commercial analytics, and reporting using tools like Power BI and advanced Excel. I am eager to contribute to Vertex's Global Insights, Analytics and Commercial Operations team by supporting KPI reporting, delivering clear commercial insights, and strengthening data quality within the GIACO team.

Education

University of Surrey | MSc Data Science with Professional Postgraduate Year

Sept 2025 – Sept 2027

- Relevant Modules: Statistical Data Science, Database Systems and Business Intelligence, Business Analytics with Data Visualisation, Machine Learning for Data Science.

Newcastle University | MComp Honours Computer Science – First Class

Sept 2021 – June 2025

- Relevant Modules: Machine Learning, Complex Data Visualisation, Project and Dissertation for MComp.

Experience

Software Developer | PHP, Laravel

Dec 2024 – Feb 2025

Quovoy

- Reviewed the codebase and identified 3+ vulnerabilities in data handling and database security. Documented manual and automated tests to address issues raised, improving system reliability and data integrity.
- Investigated root causes of environment errors (e.g., unresolved table column issues) through debugging and team collaboration.

Lab Support Assistant (LSA)

Sept 2024 – June 2025

Newcastle University

- Supported stage 1 students in practical sessions covering areas such as databases and system architecture.
- Applied teaching and mentoring techniques to explain concepts clearly to non-technical audiences, improving comprehension.

Projects

Streaming Platforms Comparison Dash Website | Python, Dash, Plotly, Pandas, NumPy

March 2025 – May 2025

Fourth Year, Dissertation Project

- Built 4 dashboards in an interactive dash web app comparing library size, genre, ratings, and content recency across Netflix, Prime Video, Hulu, and Disney+.
- Integrated and cleaned data from multiple sources (Kaggle + IMDb), created a reliable data pipeline from > 20000 rows, achieved > 60 % data coverage across critical fields, and produced linked visualisations with filters and tooltips for real time interaction.
- Ran usability testing with 11 participants, 54.5% rated the tool 5/5 overall, used results to refine tool and provide insights for users.

Complex Microbiome Data Visualisation | Python, Altair, Pandas, JavaScript

Jan 2025 – Feb 2025

Fourth Year, Individual Project

- Created an interactive dashboard visualising microbial abundance using coordinated views (bar chart, line graph, geographic mapping), enabling comparison of high dimensional data from the Tara Ocean project.
- Enabled filtering by taxonomic level, ocean depth, and layer of origin, and reflected on sources of uncertainty in data representation.

Comprehensive ML Analysis | Python (Scikit-learn), Pandas, NumPy, Matplotlib

Nov 2024 – Dec 2024

Fourth Year, Individual Project

- Performed data exploration, feature engineering, and hyperparameter tuning using GridSearchCV and cross-validation.
- Built ML pipelines for classification (Logistic Regression, XGBoost), regression (Random Forest, SVR), and NLP (text preprocessing, TF-IDF feature extraction) tasks. Evaluated models using accuracy, recall, and error measures.

Budget Management System | Python, Flask, Jinja2, SQLite, HTML, CSS, JavaScript

Feb 2024 – June 2024

Third Year, Dissertation Project

- Built a budget management website with user authentication, personalised budget calculations, tips, and quizzes.
- Applied agile planning (Gantt chart) and interface design to keep website consistent and easy to use throughout development.
- Implemented Flask routes with Jinja2 templates and used SQLAlchemy for database interactions, creating a smooth user experience.
- Added dynamic visualisations (line and pie charts) using chart.js to help users interpret their financial patterns.

Skills

- Programming Languages: Python, Java, Go, C, PHP, JavaScript
- Web & Backend Frameworks: Flask, Laravel, Hibernate, Jinja2
- Data Visualisation / Analytics: Dash, Plotly, Altair, Matplotlib
- Databases & ORMs: MySQL, SQLite, MongoDB (PyMongo)
- DevOps: Docker, Kubernetes, Azure VMs, Prometheus, Grafana

Achievements

- Completed the Data Innovation Bootcamp programme from the National Innovation Centre Data, Newcastle.