Frey Lyons
1st BSc (Hons)
Economics with Data Science - University of Kent

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Data Engineer and Analyst specialising in building data integration layers, automations, and carrying out complex analysis to a high standard. Skilled in Python, R, SQL, Docker, and Linux systems administration, with a 1st-class honours degree in Economics with Data Science and experience of delivering quantitative research projects.

Work Experience

April-Present 2025 Ecommerce Executive, Motohaus Powersports

- **Act as the sole data and infrastructure engineer** in the company, owning data governance, analysis and insight generation within the company - consolidating fragmented data management into unified, automated processes.
- **Collaborate directly with non-technical stakeholders and end users** to capture requirements, improve adoption of automation, and ensure that solutions address real business needs. Liase with technical and non-technical representatives from external stakeholders on data collaboration.
- Developed, tested, and deployed a data integration layer featuring ETL processes, website listing control, and a PostgreSQL database for configuration, input validation, and reference data management. Administered with PGAdmin4 over a tailscale VPN for secure, user-friendly access. This **fully automated data entry** and **controls website listings for over ten thousand items** in a rapidly shifting ecommerce environment, acting as **critical infrastructure for websites and procurement**.
- Performed mass **exploratory data analysis, cleansing, and documentation of production systems**. Identified flaws in data entry processes, collated information from within and outside of the organisation, and **implemented standardised practices**.
- Lead on preparatory work for large-scale programmes to commission independent evaluation by designing an MLOps pipeline for a stock forecasting system, including cross-validation, training, and prediction services.
- Implement **modern development practices**, packaging and installing python code into independent Docker container environment in development, testing, and production, with pinned version control. Perform **unit and integration testing** to ensure product reliability and prevent regressions, ensuring a "known state".
- Promote **reusability and scalability** in software development with an **internal python library**, centralising testing and maintainance of common snippets and integration functions.
- Administrate **Docker compose development and production environments**, including a data integration layer and an SFTP server to provide stock level data to dealers. Implemented on a remote bare-metal server.

May-August 2023 Production Assistant, Thunderbird Skin

- Handled diverse roles at a skincare manufacturer, contributing to team problem-solving.

May-August 2021 Independent House Renovation

- Took initiative to renovate my dad's house, liaising with estate agents, planning and coordinating a schedule of work and delegating where necessary. Resulted in a rise of the property's valuation from £180,000 to £210,000.

Technical Skills

- **Python**: Functional programming, pytests, packaging, Pandas (data manipulation, highly proficient), NumPy (maths), regex (data validation and complex filtering), SQLalchemy (databases), matplotlib/seaborn (data visualisation).
- **R**: Tidyverse, ggplot2, RMarkdown for statistical analysis and reporting.
- **Databases**: Advanced DQL in Postgres and SQL Server. DDL, DML in Postgres.
- **Data Analysis**: Exploratory data analysis, data cleansing, quantitative and qualitative analysis.
- **Data Engineering**: Data modelling, measure design, functional pipelines, input validation, logging.
- **Data Science**: Statistical modelling (linear regression), non-parametric modelling (Ensemble methods, neural networks), Machine Learning Operations (MLOps): Cross-validation, training, and prediction architecture design.
- **DevOps Infrastructure**: Docker (Compose, Networking), Linux (Debian, Arch administration), Git, Shell Scripting.

Education

2021 – 2024   1st BSc (Hons), Economics with Data Science, University of Kent

- **Year 3:** Economics Dissertation, Financial Economics, Mathematical Economics, Game Theory for Economics and Business, Econometrics I: Cross-Sectional and Panel Data, Econometrics II: Time-Series, Behavioural Economics.
- **Year 2:** Microeconomics, Macroeconomics, Introduction to Econometrics, Introduction to Time-Series Econometrics, Computation and Modelling for Economists, Big Data and Machine Learning.
- **Year 1:** Principles of Economics, Mathematics for Economists, Statistics for Economics, Introduction to Object-Oriented Programming, Programming for Artificial Intelligence, Data Analysis for Economists, Strategy and Games.
- **Economics Dissertation:** Panel data research project into the negative externalities of Airbnb on the local Labour Market, undertaken at the ZIP code level with data from the USA. Made great application of Exploratory Data Analysis, Extract Transform Load processing and regression analysis using Python, R and SQLite.

2020 – 2021   BSc (Hons) Economics with a Foundation Year, University of Plymouth

- **Foundation Year (First):** An Introduction to Economics, Introduction to Academic Writing, Introduction to Business and Accounting, Research Skills, Supervised Research Project.

2016 – 2020   Secondary Education – Independent Candidate, Norwich School

- A Levels: Mathematics, History, Psychology
- IGCSEs: A*- B, including English & Maths, 7 Total

Professional Development

2021 - 2024 University of London Officers' Training Corps

- Completed part-time officer training with the Royal Military Academy Sandhurst University Officer Training Corps, earning a Chartered Management Institute leadership and management qualification.
- Developed leadership, teamwork, and decision-making skills under pressure by leading a section of 8 cadets in complex exercises, coordinating logistics, and ensuring safety in dynamic environments.
- Gained experience in planning, communication, and responsibility for team performance — skills I continue to apply in technical and collaborative work.

Personal Hobbies and Interests

- I love sci-fi - star wars, star trek, the expanse, etc. - and am also getting back into fantasy.
- Previously active in milsim communities and occasionally play airsoft.
- I have a hobby server which I like to play around with, and when I have the time I use it for my NixOS passion project.
- Active in LGBTQ+ community events including Pride and other queer events.
- Passionate about music, especially electronic genres such as techno and hardstyle, and enjoy attending live events and festivals.
- For wellbeing, I enjoy hiking and dancing. I'm also keen to explore historical european martial arts.