

TOBY LOWE

Data Analyst, E.ON Next · MSc Data Science (2026) · Python · R · SQL · Machine Learning · Tableau

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E.ON Next analyst since 2021, currently averaging a Distinction on an MSc in Data Science at the University of Manchester (thesis outstanding, September 2026). Four years building the operational data infrastructure the business runs on, backed by two consecutive 'Outstanding' performance ratings, now paired with postgraduate training in machine learning, statistical modelling and simulation. Looking to bring the two together at E.ON Next.

EXPERIENCE

E.ON Next · Aspinall House / Trinity

Aug 2021 – Present

■ Data Analyst

Nov 2024 – Present

- Built, tested and reported on custom AI agents on Google's Gemini AI Platform, automating repeatable tasks across customer operations.
- Partner with the Chief of Staff team on AI deployment across operations; leading the Summer '26 AI Roadshow, delivering the first event to **230 colleagues in person** at Bolton, with scheduled Nottingham and Leicester events expected to take total reach past **700** across three sites.
- Led the internal AI Working Group, identifying and progressing AI business cases with senior operational leadership.

■ Business Readiness Lead

Feb 2024 – Nov 2024

- Expanded a cross-site task distribution and BI reporting system across Bolton, Leicester and Nottingham: automated pipelines on Amazon Athena, Google Cloud APIs, Apps Script and Tableau, used by **the full Bolton Operational Leadership Team** for FTE allocation, cost estimation and seasonality planning.
- Built the PAYG component of Manual Final Billing, now supporting **£2.7M in recovered revenue**, billing vulnerable PAYG/PPM customers to penny-level accuracy across years of price, meter and tariff changes under Ofgem requirements.
- Delivered the PAYG Demand Handover System after identifying a compliance gap, routing ringfenced vulnerable-customer cases to a specialist team with automated allocation, volume and handling-time reporting.

■ PAYG Analyst

Nov 2022 – Feb 2024

- Built Tableau dashboards, alerting and statistical reporting across billing, PAYG and PPM operations, replacing manual reporting with SQL/Athena-driven workflows.
- Led root-cause exploratory analysis for the Better Billing programme: defined the methodology, treated outliers and quantified the intervention's impact on billing-health star ratings, directly informing the decision to continue the work.

■ Energy Specialist

Aug 2021 – Nov 2022

- Supported vulnerable customers through the national energy crisis; led a repeat-demand analysis project that contributed directly to promotion into an analyst role.

EDUCATION

MSc Data Science with Business & Management · The University of Manchester

2025 – 2026

- **Current average: Distinction** — only the thesis remains to be graded.
- **Thesis (in progress):** "Quantifying Household Responsiveness to Dynamic Electricity Tariffs", an event-study and randomisation-inference analysis of the Low Carbon London smart-meter trial, including fairness analysis across customer segments. Supervised by Dr Fanlin Meng.
- Modules: Statistics & Machine Learning I-II, Applied Data Science, Simulation & Risk Analysis, Topological Data Analysis, Understanding Data, Understanding Databases (SQL).

BSc (Hons) Data Science, First Class · Nottingham Trent University

2022 – 2025

- **Dissertation:** real-time driver-drowsiness detection using a custom CNN at **~98% test accuracy**, with a fine-tuned ResNet-18 comparison and a road-tested live alert dashboard; **1st place**, NTU Mathematics Degree Showcase 2025, judged by external employers.

SELECTED DATA SCIENCE PROJECTS

- **Energy market volatility regimes:** applied topological data analysis (persistence norms) alongside GARCH-family models to detect regime shifts in European (TTF) gas prices across two geopolitical crises.
- **Demand forecasting (Rossmann):** engineered temporal and promotional features and benchmarked linear regression, a neural network and XGBoost on chain-wide daily sales; champion XGBoost cut RMSPE from **0.438 to 0.187**.
- **Operational simulation (NHS):** built and validated a discrete-event simulation of a hospital Clinical Pharmacy Unit (distribution fitting, queueing analysis, white/black-box validation) to evaluate staffing scenarios.

TECHNICAL SKILLS

Programming: Python (pandas, NumPy, scikit-learn, XGBoost, deep learning/CNNs, matplotlib, seaborn) · R (statistical computing, Monte Carlo simulation) · SQL (Amazon Athena, SQLite)

Data & BI: Tableau, Power BI, Looker · Google Cloud & Apps Script · Kraken billing data · Workday data · Gemini AI Platform

Methods: Statistical hypothesis testing · event-study & randomisation inference · time-series and volatility modelling · discrete-event simulation (Simul8)

Delivery: Agile project management (Scrum) · Member, Association for Project Management (APM) · BPMN process mapping