

Dr. Megan Courtman - Data Scientist

About

Data scientist with experience applying machine learning, statistical modelling and Python to complex health data. Experienced in taking analyses from data preparation through modelling, evaluation and reporting, using reproducible workflows and clear communication to technical and non-technical stakeholders.

Technical skills

Programming

Python, R, Jupyter Notebooks, Git, Linux, Bash, clean and maintainable code.

Machine learning

Deep learning, natural language processing, large language models, computer vision, explainability methods, statistical modelling, model development and evaluation.

Data handling

Cleaning, linkage, SQL, visualisation, reproducible analysis.

Delivery

Version control, documentation, stakeholder communication, supervision.

Governance

Ethical approval, Health Research Authority/Confidentiality Advisory Group (HRA/CAG) approval, data sharing agreements, sensitive data handling.

Employment

Research Fellow *University of Plymouth*

2024 – 2026

- ★ Conducted independent and collaborative health data science research using machine learning and AI methods.
- ★ Designed research questions, prepared complex datasets, and developed and evaluated predictive models.
- ★ Applied Python and reproducible workflows to deliver robust, well-documented analysis.
- ★ Collaborated with NHS and university stakeholders to interpret results and identify practical applications.
- ★ Managed ethical approval, HRA/CAG applications and data sharing agreements for sensitive health data.
- ★ Produced research outputs including conference presentations, posters and peer-reviewed publications. Presented to both academic and non-academic stakeholders.
- ★ Proposed methods and analytical approaches for projects, turning open-ended research questions into structured analysis plans.
- ★ Wrote READMEs and documentation to support transparent, maintainable and reusable analysis code.

PhD Student *University of Plymouth*

2020 – 2024

- ★ Conducted doctoral research in health data science on explainable deep learning for medical imaging classification.
- ★ Applied statistical and machine learning methods to clinical datasets and evaluated model performance critically for healthcare use.
- ★ Developed technical skills in Python, R, SQL, Linux, and reproducible workflows.
- ★ Worked within ethical approval and HRA/CAG governance frameworks.
- ★ Collaborated with supervisors, clinicians and researchers and presented findings to academic and wider audiences.
- ★ Kept up with machine learning, natural language processing and large language model (LLM) developments, and used LLMs to support text completion and labelling tasks.
- ★ Produced peer-reviewed research outputs and presented findings through posters, talks, and academic dissemination.

	Film Viewer & Data Inputter <i>Devon & Cornwall Police</i> 2018 – 2020 * Reviewed speed camera evidence to identify traffic offences and support enforcement action. * Issued Notices of Intended Prosecution and Fixed Penalty Offers within required timeframes. * Responded to helpline enquiries and prepared witness statements. * Provided evidence in court when required. * Worked with sensitive operational information in a high-accountability environment.
	Indexer with Action Management <i>Hertfordshire Constabulary</i> 2016 – 2017 * Processed documentation for Major Crime cases and maintained accurate digital evidence records on the HOLMES system. * Prepared court evidence and managed actions for officers. * Ensured information was complete, accurate, and handled securely. * Supported case progression through careful record keeping and attention to detail.
	Communications Operator <i>Hertfordshire Constabulary</i> 2015 – 2016 * Answered 999 and 101 calls and prioritised incidents for police dispatch. * Liaised with police colleagues and other emergency services to support operational response. * Recorded crimes and incidents accurately and promptly. * Worked under pressure while maintaining clear communication and reliable record keeping.
	Care Worker <i>Bluebird Care Teignbridge</i> 2014 – 2015 * Provided domiciliary care to elderly and disabled clients. * Supported medication administration and recording. * Assisted with cooking, household tasks, and day-to-day living needs. * Worked collaboratively with other care workers to provide consistent care.
Education	PhD Health Data Science <i>University of Plymouth</i> 2024 MSc Data Science & Business Analytics <i>University of Plymouth</i> - Distinction 2020 BA History <i>University of York</i> - 2:1 2014 A-level History, Politics, English Lit; AS-level Maths, Physics - A*, A*, A; A, A 2011 GCSEs - 10 A*s and 2 As 2009
Additional roles	Churchwarden <i>St. Petroc's, Harford</i> 2021 – present Responsible for the regular running of the church, including practical oversight, committee liaison, and supporting day-to-day operational decisions. Involvement Steering Group member <i>Parkinson's UK</i> 2021 – present Contributing to the patient and public involvement programme, and supporting discussion on priorities from a researcher perspective. Soprano Representative / Publicity Officer <i>Brent Singers</i> 2022 – present Representing voice section on choir committee, publicising events, and contributing to operational decisions. Special Constable <i>Devon & Cornwall Police, Hertfordshire Constabulary</i> 2015 – 2016 Supported frontline policing, evidence handling and community reassurance in a voluntary policing role.
Awards	Poster prize winner <i>Health and Care Research Conference</i> Three Minute Thesis winner <i>University of Plymouth</i> Charles Symonds prize for top poster <i>Association of British Neurologists</i>