

Shazab Hassan

Data & AI Graduate | Python | SQL | Azure

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Portfolio: [portfolio website](#)

PROFILE

First-class AI and Data Science graduate with internship experience building Azure SQL data pipelines for an accountancy firm, plus applied machine-learning projects in medical imaging, logistics and mental-health support. Seeking graduate or junior roles in data analysis, data engineering and applied AI.

TECHNICAL SKILLS

Data & cloud: SQL, Azure SQL Database, Azure Logic Apps, Power Automate, SharePoint integration, data pipelines (ETL), Excel

Python & ML: Python, Pandas, NumPy, Matplotlib, PyTorch, explainable AI (Grad-CAM++), model evaluation, LLM APIs (Gemini, OpenAI)

Software: JavaScript, Node.js, Express, React (working knowledge), HTML/CSS, Git/GitHub

EXPERIENCE

Data Analyst Intern – Phipps Henson McAllister (PHM), Northampton 06/2024 – 11/2025

- Helped build data pipelines that consolidate customer data from several accountancy software systems into one centralised Azure SQL warehouse, with checks to keep records unique and transfers safe.
- Automated recurring data pulls from Azure SQL Databases with Azure Logic Apps and integrated the data with SharePoint for access and reporting.
- Contributed to a full-stack CRM prototype (Node.js, React) alongside a senior software engineer, learning both frameworks on the job.
- Resolved internal IT issues and coordinated external contractors to keep project work on deadline.

Warehouse Optimisation with AI – University of Northampton & GXO Logistics 05/2024 – 07/2024

- Selected for a university–GXO collaboration applying data analysis and machine learning to warehouse and delivery operations, with the aim of reducing route complexity, delivery time and the number of trucks used.
- Applied k-means clustering and decision trees to operational data to identify trends and support delivery aggregation.
- Contributed to a technical whitepaper evaluating and recommending AI approaches for logistics.

Research Assistant – AI-Assisted Learning (Urban project) – University of Northampton 11/2023 – 05/2024

- Developed a prototype AI chatbot to support independent learning and led stakeholder engagement for the project.

PROJECTS

Dissertation: Explainable AI for Pleural Effusion Detection – BSc final-year project 09/2025 – 05/2026

- Designed, trained and evaluated an end-to-end pipeline that detects pleural effusion in paired frontal and lateral chest X-rays (DenseNet-121, PyTorch): **87.24% accuracy and 94.11% AUC-ROC** on a held-out test set of 3,761 images (CheXpert).
- Added Grad-CAM++ explanations and a statistical-shape-model fix for lung segmentation, then mapped findings from both views onto a 3D lung model for medical education. Limitations (single dataset, no radiologist validation) are reported openly.

UniMind: Multi-Agent Mental-Health Support Chatbot – Team project 01/2025 – 05/2025

- Co-developed a multi-agent chatbot for university mental-health support, combining Gemini 2.0 Flash, the OpenAI Assistant API and a locally hosted 8B model with planning, resource-retrieval and safety components.
- Evaluated layered crisis-safety routing through external testing, expert input and 70+ survey responses (8.2/10 user satisfaction).

Data-analysis practice projects – GitHub: shazabhassan 02/2024

- SQL sales analysis (Walmart dataset) and Python/pandas sales-trend analysis with Matplotlib: data cleaning, querying and visualisation.

EDUCATION

B.Sc. (Hons) AI and Data Science – First-Class Honours – University of Northampton 09/2023 – 05/2026