

# Iman Hussain

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Utrecht, Netherlands (Full Right to Work)



Senior Data & AI Engineer, experienced in bringing research and innovation to industry and delivering measurable impacts using cutting-edge methods. Seeking challenging roles to apply my experiences to in the Netherlands.

## Skills

- **AI & ML:** Agentic RAG, API's, Deep Learning, LLM Ops, PEFT/LoRA, Transformers, Vector DBs.
- **Data Science:** A/B Testing, Databricks, End-to-End Pipelines, Predictive Modelling, C, C#, Python, R, SQL, Snowflake, Statistical Analysis, Visualisation.
- **Engineering:** AWS, Azure, CI/CD, Containerisation, Git, Golang, Linux, React, Redis, Rust, Terraform, Testing (E2E, Unit).
- **Leadership:** Agile & Scrum Certified, Strategic Planning, Mentorship, Technical Road-mapping.
- **Languages:** English (Native), Arabic (Native), Dutch (A2 – Learning B1).

## Professional Experience

### Cranfield University | Senior AI/Data Engineer | England | Jul 2023 – Jul 2025

- Developed AI strategy roadmaps for industry partners such as BAE Systems and Santander, championing PEFT/LoRA fine-tuning and local AI systems to reduce compute overheads and enable viable scalability.
- Upskilled 100+ professionals via 20+ workshops on Agentic RAG strategies and LLM deployment (OpenAI, Hugging Face, Google AI) and ethical/sustainable AI usage leading to increased awareness and measurable productivity gains.
- Deployed automation workflows and pipelines for partners, including HM Government and Microsoft, streamlining critical business operations.

### Centre for Global Eco-Innovation | Lead Data & MLOps Engineer | England | Mar 2021 – June 2023

- Delivered 17% energy reduction in UK schools via predictive deep learning models, optimising HVAC systems to improve air quality whilst improving efficiency.
- Architected robust IoT/Docker/Linux pipeline processing 2M+ real-time smart-sensor data points using Python (NumPY, Sci-Kit Learn, Tensor) to turn data into actionable insights and intelligence.
- Translated model outputs into policy reports, strategic advice and recommendations for 20+ stakeholders, leveraging Matplotlib and Seaborn to create engaging and impactful data visualisations.

### Explore Learning | Platform Engineer | England | Nov 2017 – Mar 2021

- Standardised QA processes (PyTest, Selenium) and improved performance setting and reaching targeted goals and KPI's.
- Supported the VLE launch, assisted with developing and scaling infrastructure to support 40k concurrent users ensuring stability and positive user experience.
- Drove growth in the 11+ tutoring segment through continual product improvements, effective management and communication skills.

### Capgemini | Machine Learning Engineer | Netherlands | Jan 2020 – Jan 2021

- Engineered a TensorFlow/OpenCV ML model with 86% accuracy for automated data extraction from images and live video, integrated with Microsoft Teams, Zoom and Outlook.
- Designed a scalable data ingestion layer using AWS Textract to digitize unstructured handwritten data effectively, automatically tagging entries based on content and context.
- Secured Top 3 Finalist status (out of 40 teams) by successfully pitching the technical business case to senior executives.

## Personal Projects

### NethAddress | Sep 2025 – Nov 2025

Dynamic API aggregation website with AI-based contextual analysis to score and appraise property and land. Estimates potential profit and opportunity as well as adherence to ESG regulations.

- Grew to a base of ~10 users within our first month, validating the MVP and establishing a roadmap for premium data monetization.
- Engineered an aggregation engine unifying 35+ external APIs (Cadastral, Foundation, ESG) into a single consolidated investment score.
- Architected the Golang backend, Redis caching, and Terraform-based full DevOps ownership on a self-managed VPS to ensure maximum performance whilst maintaining the lowest operating costs.

### ApplicAI | May 2025 – Aug 2025

GenAI powered full-stack documentation automator including dynamic templating and retrieval-augmented generation, within the context of ATS system with full tracking, analysis and generation functions.

- Scaled to ~50 Daily Active Users with a 10% paid conversion rate via organic growth.
- Engineered a multi-LLM layer (LlamaIndex) routing between Groq and Gemini to balance price and quality of GenAI outputs.
- Built with FastAPI and Svelte architecture, deploying containerised infrastructure via self-managed VPS.

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## Education

### **Lancaster University** | PhD Computer Science | Jan 2021 – September 2025

- Dissertation: "Utilising Machine Learning and IoT Sensors to Create Healthier and More Efficient Indoor Spaces."
- Partners: National Air Quality Testing Services (NAQTS) and Centre for Global Eco-Innovation.

### **University of Wolverhampton** | MSc Computer Science | Sep 2019 – Jul 2020

- Dissertation: "Using AI and Machine Vision to Improve Accessibility in the Digital Workplace."
- Partners: Capgemini. Grade: Distinction Star.

### **University of Wolverhampton** | BSc Computer Science | Sep 2016 – Jul 2019

- Dissertation: "Exploring Novel Uses of the BlockChain in the Context of Digital Twins and Smart Cities."
- Partners: IBM. Grade: First Class Honours.

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## Selected Publications

- Hussain, I., Friday, A., & Booker, D. (2023). ["The Indoor Air Quality Trilemma: Improving Air Quality, Using Less Energy, and Meeting Stakeholder Requirements."](#) CHI EA '23 (ACM).
- Hussain, I., et al. (2021). ["Ensuring Food Supply and Security During Localised Lockdowns."](#) IGI Global.

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## Speaking Engagements

- **Presenter:** [ACM SIGCHI '23 \(Hamburg\)](#) – Presented peer-reviewed research on using smart IoT sensors and data modelling to balance indoor air quality, reduce energy usage and meet requirements.
- **Keynote & Panellist:** COP26 (Glasgow) – Keynote: "Emerging Technologies in the Green Transition" | Panel: "The Northwest Presents: Talking About Our Generation".
- **Keynote Speaker:** TEDx Ctrl+Alt+Delete (Wolverhampton) – Keynote: ["Unlocking the Lockdown"](#).
- **Keynote Speaker:** Sustainable Places 2022 (Nice/Monaco) – Keynote: "Demand Based HVAC & ML".

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## Volunteering

- [SustainableICT](#) | Conference Chair (2021–Present): Directed strategy and day-to-day operations, managed €20k+ budget and coordinated an international team of organisers and speakers.
- **The National Museum of Computing** | Group Leader (2020–2022): Co-designed award-winning CS curriculum for neuro-divergent students, recognised by Imperial College London.
- **Hacking Society (HAC\_SOC)** | Chairman (2016–2019): Launched ethical hacking society, grew to 30+ members, and raised over £1000 completing bug bounties for charity.

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## Awards

- [IBM: Call for Code 2020: World 2nd Place Finalist \(Team LUPE\)](#).
- **Capgemini:** TechChallenge 2021: Top 3 Finalist (Team Visionaries).
- [Richardsons: Entrepreneurship Bursary 2019: Winner](#).