

KARAN PANWAR

Cambridge, UK

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Portfolio

GitHub

LinkedIn

PROFESSIONAL PROFILE

Results-driven **Data Scientist** and **AI Engineer** with proven expertise in machine learning, computer vision, and full-stack development. Demonstrated ability to deliver **commercial AI solutions** that drive business value and optimise operational efficiency. Currently completing **MSc Computer Science** with hands-on experience developing enterprise-grade AI systems. Seeking graduate or mid-level opportunities with UK-based technology companies to contribute to innovative digital transformation projects.

EDUCATION

MSc Computer Science

Anglia Ruskin University, Cambridge
Solutions, Cybersecurity & AI

Sep 2024 - Oct 2025 (Expected)
Modules: ML in Finance, ML for Imaging, Semantic Data Technologies, Advanced Web

BSc Computer Applications - First Class Honours

St. Xavier's College, Ahmedabad, India
Statistical Computing

May 2021 – May 2024
Modules: Python for Big Data, Database Management Systems, Data Structures, OOP,

CORE COMPETENCIES

Machine Learning & AI: TensorFlow, PyTorch, Keras, Scikit-learn, OpenCV, NLP, LSTM, CNN, GANs

Data Analytics: Pandas, NumPy, Matplotlib, Power BI, ETL Pipelines, Statistical Modelling, Data Visualisation

Full-Stack Development: Node.js, Python (Django, Flask), React.js, Next.js, TypeScript, REST APIs

Database Technologies: MySQL, MongoDB, Data Warehousing

DevOps & Tools: Docker, Git, GitHub, Jupyter, Cloud Platforms (AWS)

PROFESSIONAL EXPERIENCE

Research Assistant - Advanced Machine Learning

Anglia Ruskin University

Jan 2025 - April 2025

Cambridge, UK

- Leading research on Quantum Neural Networks for image recognition, achieving 15% improvement over traditional CNNs
- Developing advanced imaging models for strategic decision-making in financial services applications
- Automating insight extraction from large datasets using semantic processing algorithms, reducing analysis time by 60%

KEY PROJECTS & ACHIEVEMENTS

KpAgent: AI-Powered Career Assistant (2025)

Next.js + TypeScript + NLP + Tailwind CSS

- Developed comprehensive full-stack career services platform with AI-driven resume analysis and personalised job recommendations
- Engineered custom interview preparation tool generating role-specific questions based on user profiles and job descriptions
- Built modern responsive UI using ShadCN components, delivering polished user experience across all devices

Cambridge Culture Digital Platform (2025)

Full-Stack Development + Team Leadership

- Led team of 4 developers to deliver comprehensive cultural showcase website on schedule and within budget
- Implemented responsive design and accessibility standards.

AI-Powered Health & Wellbeing Assistant (2025)

TypeScript + Node.js + NLP + Cloud APIs

- Engineered personalised recommendation system serving 50+ concurrent users with 98% uptime
- Integrated NHS digital health standards and GDPR-compliant data processing workflows

Enterprise Project Management Solution (2024)

React + Django + PostgreSQL + WebSocket

- Delivered full-stack SaaS platform increasing team productivity across multiple client organisations
- Implemented role-based authentication, real-time collaboration features, and optimised database queries

Quantitative Trading Algorithm (2024)

LSTM + Python + Financial APIs

- Developed predictive model for FTSE stock movements.
- Built interactive Power BI dashboard for real-time market analysis and risk assessment

Accessibility-First Sign Language Platform (2024)

Deep Learning + Django + Computer Vision

- Created real-time BSL translation application supporting 95% accuracy for common phrases
- Collaborated with accessibility charities to ensure user-centred design and inclusive functionality

Computer Vision Music Recommendation Engine (2024)

CNN + Spotify API + Cloud Infrastructure

- Built emotion recognition system achieving 85% accuracy with integration to streaming platforms

- Scaled solution to handle concurrent users using containerised microservices architecture

Generative AI Image Processing Tool (2024)

GANs + OpenCV + Python

- Developed GAN-based model for artistic image transformation with real-time processing capabilities
- Optimised performance achieving 3x faster rendering compared to baseline implementations

CERTIFICATIONS & PROFESSIONAL DEVELOPMENT

Industry Certifications: Python for Data Science (IBM) • Data Analytics & Visualisation (Accenture) • Software Engineering Simulation (JPMorgan Chase) • Generative AI (BCG X) • AWS Cloud Practitioner • Generative AI (TATA Consultancy) • AI Fundamentals (Ford Motor Company) • Data Analytics (Quantium) • Cybersecurity Fundamentals (British Airways)

Additional Expertise: GDPR Compliance • Agile/Scrum Methodologies • Technical Documentation • Cross-functional Collaboration