Karan Panwar

Cambridge, UK karanpanwar8595@gmail.com +44 7823 706 438 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 Sep 2024 – Oct 2025 (Expected)
Anglia Ruskin University, Cambridge Modules: ML in Finance, ML for Imaging, Semantic Data Technologies, Advanced Web Solutions, Cybersecurity & AI

BSc Computer Applications - First Class Honours May 2021 – May 2024
St. Xavier's College, Ahmedabad, India Modules: Python for Big Data, Database Management Systems, Data Structures, OOP, Statistical Computing

CORE COMPETENCIES

Machine Learning & AI: TensorFlow, PyTorch, Keras, Scikit-learn, OpenCV, NLP, LSTM, CNN, LLM, 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
Database Technologies: MySQL, MongoDB, Data Warehousing
DevOps & Tools: Git, GitHub, Jupyter, Cloud Platforms (AWS)

PROFESSIONAL EXPERIENCE

Research Assistant - Advanced Machine Learning Jan 2025 – Apr 2025
Anglia Ruskin University 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

KAI Navigator: AI-Powered Health & Wellbeing Platform (2025)
Postgraduate Major Project (MSc Computer Science) | Next.js + TypeScript + Django + NLP + LLM

- Designed and developed a personalised AI-powered guidance platform for health and well-being
- Implemented hybrid recommendation engine combining NLP + LLM with explainable AI outputs
- Built interactive dashboard with goals, to-do lists, progress visualisation, and gamification features
- Integrated NHS resources and ensured GDPR-compliant data handling for user trust and privacy

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.

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

Project Management System (2024)
React + Django + SQL
- Delivered full-stack website platform increasing team productivity across multiple client organisations
- Implemented role-based authentication, real-time collaboration features, and optimised database queries

Stock Market Prediction (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

Image Description Tool (2024)
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) • Data Analytics (Quantium)
Additional Expertise: GDPR Compliance • Agile/Scrum Methodologies • Technical Documentation • Cross-functional Collaboration