

Karan Panwar

Cambridge, UK karanpanwar8595@gmail.com +44 7823 706 438 Portfolio GitHub LinkedIn

PROFESSIONAL SUMMARY

Applied AI engineer and researcher with production experience building LLM-powered systems, recommendation engines, and deep learning models. Currently leading AI development at Klip Global (London, remote), designing and shipping systems at the intersection of NLP, behavioural analytics, and NHS health data. Academic work spans quantum-classical hybrid neural networks and real-time computer vision, culminating in an MSc Computer Science (Distinction) from Anglia Ruskin University. Pursuing Data Science, ML Engineering, or Applied AI Research roles where rigorous machine learning meets product impact at scale.

EDUCATION

MSc Computer Science (Distinction) Sep 2024 – Oct 2025
Anglia Ruskin University, Cambridge, UK
Key Modules: Machine Learning in Finance, AI for Imaging, Semantic Web Technologies, Advanced Web Solutions, Cybersecurity and AI

BSc Computer Applications (First Class) May 2021 – May 2024
St. Xavier's College, Ahmedabad, India
Key Modules: Data Structures, Big Data Analytics, Database Management, Python Programming, Statistical Modelling

CORE TECHNICAL SKILLS

ML & AI:	PyTorch, TensorFlow, Hugging Face Transformers, LangChain, Scikit-learn, XGBoost, LSTM, CNN, Generative AI, RAG, Prompt Engineering, Qiskit (QML)
Data & Analytics:	Pandas, NumPy, SQL, Feature Engineering, Statistical Modelling, Power BI, Tableau, Matplotlib, Seaborn
Deployment & MLOps:	FastAPI, Django, Flask, Docker, CI/CD Pipelines, AWS (Cloud Practitioner), Git, Streamlit
Web & Frontend:	Next.js, React.js, TypeScript, RESTful APIs
Databases:	MySQL, MongoDB, SQLite, Data Warehousing
Languages:	Python (primary), TypeScript, SQL, Java

PROFESSIONAL EXPERIENCE

Research Assistant (Generative AI) – Klip Global September 2025 – June 2026
London, UK (Remote from Cambridge)

- Architected **Klip Agent**, an LLM-powered digital wellbeing platform integrating a hybrid recommendation engine, behavioural analytics, and NHS health data to deliver personalised, evidence-based guidance at scale.
- Designed a hybrid recommendation engine combining Transformer-based NLP and clustering over an NHS-integrated dataset, improving guidance relevance over a baseline collaborative filter.
- Deployed a **LangChain + Hugging Face** conversational agent that improved user engagement and response quality scores in structured user testing sessions.
- Engineered a scalable Django backend integrated with a Next.js frontend, reducing API response latency and enabling production-ready deployment.
- Collaborated across product, data, and research teams to iterate on model performance, incorporating user feedback into weekly release cycles.

Research Assistant – Quantum Neural Networks Jan 2025 – Apr 2025
Anglia Ruskin University, Cambridge, UK

- Designed Qiskit quantum circuits as drop-in replacements for classical CNN layers, achieving a 15% accuracy improvement over CNN baselines on image classification benchmarks.
- Benchmarked quantum-classical hybrid models across multiple datasets, producing the strongest accuracy result in the study cohort.
- Co-authored a university research publication on *Quantum Machine Learning for Imaging Applications*, contributing all experimental design, benchmarking, and technical documentation.

SELECTED PROJECTS

KpAgent: AI-Powered Career Assistant

(Next.js, TypeScript, NLP, Tailwind CSS)

Built a full-stack career services platform with AI-driven resume analysis and personalised job recommendations. Engineered a custom interview preparation tool generating role-specific questions from user profiles and job descriptions. Delivered a responsive UI across all devices with sub-second interaction response times.

SmartStock: AI Financial Forecast Dashboard

(Python, LSTM, FastAPI)

Built a stock prediction dashboard using LSTM-based time-series models with real-time market API integration and financial sentiment analysis. Achieved forecasting accuracy competitive with published LSTM baselines on standard equity datasets.

EmotionSense: Real-Time Emotion Recognition

(OpenCV, TensorFlow, Flask)

Trained a CNN + MFCC model detecting facial and vocal emotions across 7 emotion classes, recommending personalised media content via an adaptive algorithm. Achieved over 88% classification accuracy on held-out test data.

Cambridge Culture Portal

(Django, HTML, CSS, SQLite)

Led a 4-member team building an interactive cultural platform showcasing Cambridge events and local community listings, delivering on time within a 6-week sprint.

CERTIFICATIONS

AWS Certified Cloud Practitioner • IBM Data Science Professional Certificate • AI & ML using Python – IIT Madras via SWAYAM (Proctored, Score: 86%) • **Quantum Computing Fundamentals** – IBM Qiskit • **Advanced Deep Learning** – Coursera

ACHIEVEMENTS & LEADERSHIP

- Graduated in the **top 10%** of MSc cohort with Distinction; awarded for academic excellence by faculty.
- Selected by **Klip Global** to lead industrial AI research integrating LLMs with NHS health data analytics.
- Published and presented university research on Quantum AI for imaging applications.
- Served as **Team Lead** across four cross-functional AI and web development projects at Anglia Ruskin University.