Anubhav Verma

Data Scientist • AI/ML Engineer • GenAI & LLM Specialist • Quantum ML Researcher
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Professional Summary

M.Sc. Data Science candidate specializing in **LLMs, deep learning, and production-ready AI systems**. Delivered 5+ end-to-end ML/DL pipelines spanning NLP, computer vision, RAG architectures, and **Quantum Machine Learning**. Recipient of the **DST INSPIRE Scholarship (Top 1% nationwide)**. Targeting Data Scientist, ML Engineer, AI Research, and Quantum ML roles.

Technical Skills

- **Languages & Databases:** Python, SQL, R, C, MongoDB, Hadoop
- **AI / ML / Deep Learning:** TensorFlow, PyTorch, Scikit-learn, Hugging Face Transformers, CNNs, RNNs, Attention Mechanisms, Transfer Learning
- **NLP & GenAI:** BERT, SciBERT, BART, Sentence-BERT, LLMs, RAG Pipelines, FAISS Vector Search, Prompt Engineering, Fine-Tuning, OCR
- **Quantum ML:** PennyLane, Variational Quantum Circuits (VQC), ZZFeatureMap, RealAmplitudes, Hybrid Quantum-Classical Models, Qiskit
- **MLOps & Deployment:** Flask, Streamlit, Gradio, Vercel, Render, REST APIs, Git/GitHub, Docker (basic), CI/CD Pipelines
- **Explainability & Analytics:** SHAP (XAI), Grad-CAM, Pandas, NumPy, Matplotlib, Seaborn, Power BI, Tableau, Excel

Projects

Hybrid Quantum-Classical Brain Tumor Diagnostic System | *DenseNet121, PennyLane, VQC, Grad-CAM, SHAP* *Jan 2026*

- Architected a **hybrid quantum-classical pipeline** combining DenseNet121 feature extraction with a **Variational Quantum Circuit (ZZFeatureMap + RealAmplitudes)** via PennyLane, achieving **88.30% MRI classification accuracy** on a 3-class tumor dataset (Glioma, Meningioma, Pituitary).
- Implemented **Grad-CAM and SHAP explainability** to generate clinically interpretable heatmaps — enabling transparent, audit-ready diagnostic support for radiologists.

Real-Time Misinformation Detection Intelligence Platform | *BERT, Flask, JavaScript, Deep Learning* *Sep 2025*

- **Fine-tuned a BERT transformer** on 50k+ multi-source news articles, achieving **96% classification accuracy** across politically and topically diverse datasets.
- **Engineered a full-stack MLOps pipeline** — Python/Flask REST backend + JavaScript browser extension — enabling live article parsing and sub-second inference directly within the browser.

MediSimplify: RAG-Powered Clinical Report Simplification Engine | *RAG, FAISS, BART, Sentence-BERT, OCR* *Jul 2025*

- **Architected a RAG pipeline** using Sentence-BERT embeddings + FAISS vector indexing with BART abstractive summarization and OCR-based PDF ingestion to translate complex medical reports into plain-English.
- **Deployed a dual-view Streamlit interface** with real-time side-by-side technical/simplified rendering — production-ready for telehealth platforms and hospital patient portals.

AI-Powered Research Grant Evaluation & Monitoring System | *SciBERT, XGBoost, SHAP, Streamlit* *Nov 2025*

- **Engineered a hybrid NLP + gradient boosting pipeline** — SciBERT embeddings + XGBoost — achieving **76.8% accuracy across 9,200+ grant records** with SHAP for funding-decision explainability.
- **Deployed a real-time monitoring dashboard** tracking project milestones, detecting fund misuse anomalies, and visualizing multi-dimensional allocation metrics for program administrators.

Education

M.Sc. Data Science *2024 – Present*
Vellore Institute of Technology, Chennai, Tamil Nadu *CGPA: 8.56*
Coursework: Machine Learning, Deep Learning, NLP, Statistical Modelling, Big Data Analytics

B.Sc. Physics, Chemistry & Mathematics (PCM) *2021 – 2024*
Dr. Rammanohar Lohia Avadh University, Ayodhya, UP *CGPA: 8.1*
Coursework: Linear Algebra, Probability & Statistics, Calculus, Classical Mechanics, Quantum Physics, Analytical Chemistry

Achievements & Certifications

- **DST INSPIRE Scholarship** — Government of India *2021 – Present*
  Awarded full merit scholarship for Top 1% nationwide academic performance in STEM; sustained 3+ years.
- **NPTEL Elite Certification: Introduction to LLMs** — IIT Madras *Oct 2025*
  Completed 12-week MoE-funded advanced LLM course; achieved **Elite distinction (72%)**.
- **Generative AI Certification** — Intel Unnati Programme *Aug 2025*
  Industry-sponsored GenAI certification covering foundation models, prompt engineering, and deployment pipelines.
- **Basics of Quantum Information** — IBM Quantum *Mar 2026*
  Issued by IBM; covers quantum states, circuits, and information-theoretic foundations — directly applied in QML project.

Soft Skills & Languages

Soft Skills: Strong Analytical Thinking, Clear Communication of Complex Ideas, Fast Learner, Comfortable Working with Ambiguous Problems, Collaborative Team Player, Attention to Detail

Languages: Hindi (Native), English (Professional)