

Mayan Sharma

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EDUCATION

Vellore Institute of Technology

Bachelor of Technology in Computer Science, Specialization in ML/AI

2023 – 2027

CGPA: 8.65

TECHNICAL SKILLS

Languages: Python, C++, SQL

AI & Machine Learning: Machine Learning, Deep Learning, Computer Vision (YOLO), NLP, Large Language Models (LLMs), Retrieval-Augmented Generation (RAG), LLM Fine-tuning (SFT, RLHF, GRPO), Context Engineering, LLM Evaluation

MLOps & Infrastructure: AWS, Docker, Kubernetes, CI/CD (GitHub Actions, GitLab CI), MLflow, DVC, Prometheus, Grafana, Terraform, Apache Airflow

Frameworks: Scikit-learn, PyTorch, Hugging Face (Transformers, TRL, Datasets, Accelerate), LangGraph, LlamaIndex, smolagents, FAISS, ChromaDB

Data Science & Analytics: Statistical Analysis, Feature Engineering, Pandas, NumPy, Matplotlib

Developer Tools: Git, Linux, Jupyter, Langfuse, Weights & Biases (W&B)

EXPERIENCE

Applied Machine Learning Engineer (Intern)

May 2025 – July 2025

Defence Research and Development Organization (DRDO)

Agra, IND

- Built and deployed a real-time aircraft recognition system for automated ground-equipment selection, improving operational safety under field constraints
- Designed a two-stage YOLOv8 vision pipeline for detection and classification, optimized for low-latency inference
- Created a custom auto-annotation model to label 10,000+ images across multiple aircraft classes, substantially reducing dataset preparation time
- Passed DRDO lab evaluations and became the most reliable model deployed for this use case

Project under Non-Disclosure Agreement; details generalized.

Research Intern

May 2024 – July 2024

Centre for Nano Electronics & VLSI Design (VIT University)

Chennai, IND

- Built a Python automation system for digital filter design, cutting manual design time by 50%
- Implemented numerical optimization algorithms over 100+ parameters, improving output efficiency by 25%
- Automated an end-to-end code generation and configuration pipeline supporting 10+ design variants

PROJECTS

FlowConX-Context Aware Network Traffic Classifier | Python, PyTorch, Transformer, BiGRU, Contrastive Learning

- Built a packet-flow encoder for encrypted traffic classification without deep packet inspection, training on 112,000+ labeled flows across 6 service classes (5G Traffic, CESNET-QUIC22), with MAWI backbone traffic held out for unsupervised robustness testing
- Designed a dual-branch encoder (CNN+Transformer packet behavior, BiGRU network conditions) fused via cross-attention, trained with supervised contrastive, prototype alignment, and adversarial gradient-reversal losses to disentangle application identity from network conditions
- Built a streaming pipeline scanning 153M+ QUIC flow records and 229M+ backbone packets to reservoir-sample and engineer 120,000+ flow windows (packet sizes, inter-arrival times, jitter proxies, byte rates, directional signals)
- Achieved 90.44% SVM and 90.09% k-NN accuracy at 13.65ms mean inference latency per flow, clearing all 7 Samsung KPI targets including embedding intra-cosine 0.84 and inter-cosine 0.27

LAMDA-Supply Chain Risk Prediction System | Python, PyTorch Geometric, Graph Attention Networks, Flask

- Built a real-time supply chain risk intelligence system ingesting live news, weather and geopolitical signals via automated scrapers, fusing them into a unified risk score per global trade node
- Implemented a Graph Attention Network (PyTorch Geometric) risk-scoring engine over a global port/trade graph, combining 6 real-time indicators (GSCPI, news sentiment, political instability, trade volume, weather, source confidence)
- Built an orchestration layer and Flask API that continuously refresh risk scores and expose high-risk node alerts in near real time

CERTIFICATIONS & PUBLICATIONS

First Author, [Enhanced Hybrid Quantum-LSTM for Solar PV Forecasting](#) | IET, BICET 2025

June 2026

[AWS Certified Solutions Architect – Associate](#) | Amazon Web Services

June 2026

Winner, [CREONIX 2025 Hackathon](#) | Nokia

2025