

# Aditya Narayan

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## Education

### B.E. in Computer Science and Engineering

Jawaharlal Nehru Engineering College, Aurangabad,  
Maharashtra

## Skills

- **ML & Deep Learning:** Python, C++, PyTorch, TensorFlow, Transformers, fine-tuning techniques (LoRA, RAG), quantization, pruning.
- **NLP & Computer Vision:** Embeddings, LangChain, LangGraph, YOLOv8, OpenCV, object detection & segmentation, XGBoost.
- **MLOps & Deployment:** Docker, CI/CD pipelines, MLflow, AWS SageMaker, GCP Vertex AI.
- **Data Management:** Pandas, NumPy, SQL (PostgreSQL, MySQL), ETL and data preprocessing pipelines.
- **Core Competencies:** statistical analysis, model evaluation (accuracy, F1, ROUGE), hyperparameter optimization, version control with Git, API design (REST), ONNX, TensorRT.

## Work Experience

### Machine Learning Engineer

MulticoreWare, India April 2025 – Present

- Engineered low-latency NLP models (OpenELM + LoRA + quantization), reducing smart home response time by 30% and enhancing real-time user experience.
- Improved NLP accuracy (ROUGE-L: 64→91, Cosine Similarity: 80→96) through preprocessing and dataset curation on 10k+ commands, enabling reliable intent detection.
- Optimized inference pipelines with pruning, quantization, and REST APIs, boosting edge deployment speed by 20% for smart device integration.
- Built automated testing pipeline for 140+ category-action combinations, ensuring 99% production system reliability.

### Software Engineer

SETS, Chennai, India April 2023 - March 2025

- Co-developed ransomware early detection system using decoy monitoring, reducing false positives by 25% and improving enterprise data security.
- Fine-tuned Llama 3.2-1B with Pinecone embeddings, boosting decoy content realism by 27% for advanced cyber defense simulations.
- Designed RAG-based chatbot for threat analysis, cutting investigation time by 40% and accelerating incident response cycles.
- Led YOLOv8-based surveillance project, achieving 92% mAP on 10k+ images, strengthening residential and commercial security solutions.

## **Software Engineer Intern**

Tata Advanced Systems Ltd, Bangalore, India

January 2023 - March 2023

- Developed and tested electronic warfare system modules, found two critical bugs in production environment and fixed it.
- Diagnosed and resolved two critical bugs in production within electronic warfare modules, ensuring system reliability and mission readiness.

## **Projects**

- RAG Document Q&A System: Built end-to-end RAG pipeline using LangChain and Hugging Face models, deployed on GitHub, achieving 85% query accuracy on custom datasets.