Akshit Sharma

Final-Year B.Tech (AI & Data Science) | Backend & AI/ML Engineer | Cloud-Native Systems

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SKILLS

- **Programming Languages:** Python, Java, C/C++, JavaScript, SQL, React, Node.js, TypeScript, Flask, FastAPI
- **Databases & Tools:** Pandas, NumPy, Matplotlib, MongoDB, Postgre
- **ML/AI & Frameworks:** TensorFlow, PyTorch, NLP, Computer Vision, Transformers, RAG, LangChain
- **Cloud & DevOps:** AWS, Google Cloud Platform, OpenStack SDK, Docker, Kubernetes
- **Systems & Fundamentals:** Unix/Linux, TCP/IP Networking, Git, Data Structures & Algorithms, Computer Networks

EXPERIENCE

Research Intern | Directorate of Research, Government of Arunachal Pradesh

(August 2025 – Present)

- Developed a low-resource speech-to-speech translation pipeline using Wav2Vec 2.0 for ASR, MarianMT for NMT, and Tacotron 2 for TTS, focusing on endangered languages with context-dependent meanings.
- Optimised system architecture to reduce translation latency to under 2 seconds, enabling real time deployment for field use.

Deep Learning Intern | Akanila Technologies   https://github.com/akshit7093/Chatbot-for-websites

(July 2024 – December 2024)

- Built a universal chatbot platform by fine-tuning Llama3.1 using LoRA, integrating RAG with FAISS for better retrieval.
- Designed a flexible Python backend with modular components in FastAPI increasing code reusability to 65% .
- Implemented automated deployments on AWS EC2, leveraging Docker for containerization and Kubernetes for container orchestration.

Machine Learning Intern | CodSoft   https://github.com/akshit7093/CODSOFT

(August 2024 – September 2024)

- Developed a credit card fraud detection system using XGBoost, analyzing 1 million transaction records.
- Engineered 20+ features from behavioral and time-series data then trained an XGBoost model on SageMaker to drop false positives from 20% to 5% while keeping recall over 90%.
- Built an NLP model for SMS spam detection using Python and scikit-learn, achieving 95% accuracy on test data.

PROJECTS

OpenStack Cloud Management System with Natural Language Interface   https://github.com/akshit7093/VM_manager_AgenticAi
- Built a cloud management system interfacing with OpenStack infrastructure APIs.
- Enabled users to issue natural language prompts (e.g., "create a server" or "delete a volume"), which an AI agent created using LangChain and Google's Gemini-2.5 pro model translated into precise OpenStack API calls.
- Built an interactive CLI and a web app for remote management, featuring resource analytics and container monitoring per VM.
- Designed RESTful backend with Fastapi and containerized the application using Docker.
- **Technologies:** Python, OpenStack SDK, Gemini, Fastapi, Docker, LangChain

Multimodal Price Intelligence   https://github.com/akshit7093/ML_Challenge_2025_Smart_Product_Pricing_Solution
- Collaborated in a team of four to build an e-commerce price prediction system with dual-path pipelines: image features (ResNet50, local VLM), product text (NLP) and sophisticated ensembles (LightGBM, CatBoost, Temporal Fusion Transformer).
- Architected a Ray-based distributed cluster by connecting 40 workstations, achieving a unified memory pool of 2TB RAM optimized training and evaluation cycles, reducing runtimes from 13 hours to 4 hours for large-scale, multimodal experiments.
- Used Ray's orchestration for fault tolerance, parallel hyperparameter search, and rapid validation throughout the hackathon.
- **Technologies:** Python, Ray, ResNet50, Temporal Fusion Transformer (TFT), LightGBM, CatBoost, NLTK.

EDUCATION

Maharaja Agrasen Institute of Technology   (June 2022 - June 2026)

- B.Tech. in Computer Science with a specialization in Artificial Intelligence and Data Science
- **CGPA:8.96/10**
- **Relevant Coursework:** Machine Learning, Data Mining, Image Processing, Data Structures and Algorithms, Computer Networks

CERTIFICATIONS

- Data Science (Pwskills)
- Machine Learning and Deep Learning Specialization (Coursera)
- AWS Solutions Architect Virtual Experience Program (Forage)
- Introduction to Generative AI (Google)
- Develop GenAI Apps with Gemini and Streamlit (Google)
- Prompt Design in Vertex AI (Google)

ACHIEVEMENTS

- Winner – AceCloud X RTDS Hackathon '25