

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)

- Developed a universal chatbot platform by fine-tuning Llama3.1 LLM using LoRA and integrating RAG with FAISS for domain-specific retrieval, boosting query accuracy to 90 % and improving response relevance by 25 %.
- 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.

PROJECT

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

SignEase -Video calling platform for individuals with disabilities

<https://github.com/akshit7093/Sign-language-translator.git>

- Created a video chat application using React and Node.js to enable video communication with ASL translation.
- Implemented American Sign Language (ASL) detection using MediaPipe for landmarks and an LSTM network in TensorFlow, reaching 89% accuracy on a small dataset of 20 videos.
- Reduced latency from 500ms to 180ms using model quantization (TensorFlow Lite) and frame-rate optimization.
- **Technologies:** Python, TensorFlow, WebRTC, React, Node.js, MediaPipe.

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**