



SURAJ KIRAN AIRI

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EDUCATION

Chandigarh University

Mohali, India

Bachelor of Engineering in Computer Science and Engineering, CGPA: 8.64

Aug. 2022 – July 2026

- Relevant Coursework: Machine Learning, Deep Learning, Generative AI, AI, DSA

PROJECTS

Roxy AI Assistant | *Python, LangChain, LangGraph, Groq LLM, MCP, Faster-Whisper, Kokoro TTS* Oct 2025

- Developed a **real-time voice assistant** enabling full-duplex conversations with on-device VAD, STT, and fast TTS response.
- Integrated **LangChain + LangGraph** agent using **MCP tools (FastMCP)** for contextual reasoning and dynamic tool use.
- Implemented a **Kokoro TTS pipeline** with optional **echo cancellation (AEC)** for natural low-latency speech output.
- Built a **modular system** allowing easy swaps of VAD, STT, TTS, or LLM components for flexible configuration.

Story Stream Automation | *Python, OpenCV, NumPy, AI APIs, Custom Video Engine, TTS, LLM* July 2025

- Engineered a **complete AI-powered video automation pipeline** transforming text stories into polished video content using **custom video editor**, reducing production time from hours to **under 2 minutes**.
- Architected **modular video processing engine** with **15+ text animations** (typewriter, glitch, bounce) and smart media effects, delivering **15x faster rendering** than MoviePy.
- Integrated **AI-driven TTS, image generation**, and precise audio transcription with timestamp synchronization, enabling **fully automated** script-to-video workflow with multi-resolution support.

Orate Me | *Node.js, Express, MongoDB, LangChain, Whisper, GPT-4, Deepgram* Sept. 2024

- Developed a **full-stack generative AI platform** for personalized speech evaluation, helping users improve interviews, presentations, and fluency through **AI-driven feedback and performance tracking**.
- Engineered real-time evaluation pipeline analyzing **1,000+ speeches** using **Whisper and GPT-4** for tone, structure, and vocabulary assessment with **25%+ better feedback accuracy**.
- Integrated **LangChain and OpenAI** to deliver contextual feedback, response enhancement suggestions, and mind maps — enabling **contextual learning and better retention**.
- Designed scalable backend infrastructure with **Node.js, MongoDB, and JWT** authentication, **handling 50+ concurrent users** and seamless multimedia processing.

EXPERIENCE

Flutter Developer Intern

Jul. 2023 – Sept. 2024

YoursThatSenior & SN Silos

Remote & Hybrid

- Completed two paid internships focusing on cross-platform mobile applications and data-driven API integrations.
- Gained experience in backend enhancements and performance optimization for improved system reliability.

TECHNICAL SKILLS

Languages: Python, C/C++, SQL

ML/DL Frameworks: TensorFlow, PyTorch, Scikit-Learn, XGBoost, CatBoost, Optuna

Generative AI: Langchain, Langgraph, OpenAi, Huggingface, transformers

Technologies: FastAPI, MLflow, MongoDB, Whisper

Tools: Git, Jupyter, VS Code, Postman, Docker, Linux

ACHIEVEMENTS

Hackathons: Winner of **Smart India Hackathon (SIH) 2024**, Software Edition.

Competitions: Top 12% in Kaggle ML competition (443/3800+ teams); Won Work Force 2023, IEEE CIS CUSB.

Technical: Attended and taught 10+ ML sessions at university; Multiple ML certifications.

Internships: Secured two paid Flutter internships at SN Silos and YoursThatSenior.