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EXPERIENCES

Saptang Labs

Machine Learning Engineer

Jun 2025 – Present

Chennai (Onsite)

- Designing and building **multi-agent AI systems** with LLM orchestration, tool use, and dynamic reasoning pipelines.
- Fine-tuned and deployed **multimodal AI models** spanning **speech, vision, and language** domains for diverse production applications.

Xyloite Solutions

AI Intern

Oct 2024 – Dec 2024

Remote

- Created **zone maps and heatmaps** of player movements using **Python** for detailed sports analytics.
- Engineered backend inference architecture for **concurrent live video streams**, achieving **50+ fps** real-time player metric monitoring.

Codessia Trade Fair Complex – Intec and Agri-Intex 2024

Surveillance Technician

May2024 – Jul2024

Coimbatore (Onsite)

- Developed a **custom DeepStream SDK pipeline** for people counting, achieving **95% detection accuracy** and processing data for **5,000+ daily visitors**.
- Automated daily reporting with detailed insights via WhatsApp and a live dashboard; deployed across Intec 2024 and Agri-Intex 2024.

EDUCATION

BANNARI AMMAN INSTITUTE OF TECHNOLOGY

Bachelor of Technology in Artificial Intelligence and Data Science | CGPA: 8.64

Aug 2022 - Apr 2026

Erode, TamilNadu

- Trainer** — Python fundamentals (60 students) and ML deployment on Jetson Nano (3 batches, 90% success rate)

SKILLS

Languages & Technologies: Python, Machine Learning, Deep Learning, NLP, Generative AI, Computer Vision

Tools: PyTorch, LangChain, Llama-cpp, Whisper AI, DeepStream SDK, TensorRT, ChromaDB, Docker, Django

Applied Mathematics: Probability & Statistics, Matrix operations, Dimensionality reduction, Vector calculus

PROJECTS

LYRA AI - ENGLISH TUTOR | LLM, Django, LangChain |

[Github](#)

- Personalized English tutor built on a **Llama 3.1 + LangChain** backbone with sub-second ASR feedback and multi-user session management.

VIDHYAGPT - BILINGUAL LEARNING ASSISTANT | Llama-cpp, Whisper AI |

[Github](#)

- Real-time **EN-HI speech-to-speech** assistant; fine-tuned Whisper AI on code-mixed speech achieving **86% ASR accuracy**.

ETTA - THE MEDICAL ASSISTANT | NLP, RAG, ChromaDB |

[Github](#)

- ChromaDB RAG pipeline** for medical document analysis; **77% precision** and **40% reduction** in review time. Led team of three.

ACHIEVEMENTS

1. SMART INDIA HACKATHON 2023 - WINNERS

[Certificate](#)

- 1st of 52,000 entries** — personalized tinnitus therapy wearable using biometric ML model with **92% accuracy**.

2. BITHACKS 2023 - WINNERS

[Certificate](#)

- 1st of 680 teams** — Indian License Plate Recognition at 95% accuracy using TensorRT engines and live RTSP multi-feed streams.

CERTIFICATIONS

• **IBM:** [Getting Started with Artificial Intelligence](#)

Jan 2025

• **NVIDIA:** [Fundamentals of Deep Learning](#)

Nov 2023

• **NVIDIA:** [Building Video AI Applications at the Edge on Jetson Nano](#)

Jul 2023

• **NVIDIA:** [Getting Started with AI on Jetson Nano](#)

Jul 2023