

AKSHAY POPHALI

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Work Experience

AI/ML Forensic Research and Development Intern – Ministry of Home Affairs, GOI

Onsite – Delhi-NCR Sept 2024 – Feb 2025

[Successful Project Completion Certificate](#)
[Letter of Recommendation](#)

- Successfully completed Research and Development Internship under Ministry of Home Affairs culminating in **Project Completion Certificate** and **Letter of Recommendation** from the Project Head for outstanding contribution.
- Developed and implemented an advanced Forensic AI tool fine-tuning cutting-edge Audio Speech Recognition models improving Hindi audio transcription accuracy by 26%.
- Built a robust data processing pipeline as well as Post processing NLP Pipeline(Semantic Analysis, NER, content flagging) ensuring high-quality structured data handling for an ASR pipeline
- Designed a full-stack transcription platform (ReactJS + Django) handling 50+ concurrent users, enabling secure, real-time forensic audio analysis.

Technologies: Whisper-large-v2, Llama 3.1-8B, Nvidia-NeMo, Python, Django, ReactJS, Redis, ASR, Audio Data Processing

Machine Learning Intern – Encryptix

Remote June 2024 – Aug 2024

- Developed a Generative AI model simulating handwritten text, solving the problem of personalized text generation for digital applications.
- Enabled the model to learn and replicate patterns in handwritten text, generating new text with realistic handwriting styles.

Technologies: Python, TensorFlow, RNN, LSTM

Research Intern – IIITN

Jul 2023 – Dec 2023

- Designed a privacy-focused mental health prediction model using Federated Learning and Meta learning techniques, achieving 92% train and 84% test accuracy.

Technologies: Python, Scikit-learn, Matplotlib, Seaborn, Federated Learning, Meta Learning

Education

Bachelor of Technology(B.Tech. in ECE)

IIIT-Nagpur 2021 – 2025

Projects

FetchAI-Shopping Assistant Finetuned LLM

Jan 2024 – Feb 2024

- Developed an AI-powered shopping assistant that enables natural language product search, interactive chat-based recommendations, and real-time price/rating comparisons.
- Built a full-stack web app using FastAPI (Python), React, and external APIs (Together AI, SerpAPI) to deliver personalized, conversational shopping experiences.

Technologies: Django, Python, FastAPI

Deployed Project: [Link](#)

AI Playbot

Jun 2024

- Built an unbeatable AI playbot using Minimax with Alpha-Beta Pruning, solving the challenge of strategic AI gaming at all difficulty levels.

Technologies: Deep Learning, Neural Networks

Deployed Project: [Link](#)

Technical Skills

Languages: Python, C++, Java, SQL, HTML, CSS, JavaScript

Frameworks: Django, FastAPI, Flask, REST API, Streamlit, Gradio

ML/AI Libraries: Scikit-learn, TensorFlow, Keras, PyTorch, Hugging Face, OpenCV, NLTK, SpaCy, BERT

Data Analysis/Visualization: Pandas, Numpy, Matplotlib, Seaborn, Plotly

Data Engineering: SQL, SQLite, Docker

Tools/Platforms: VSCode, Jupyter Notebook, Google Colab, Git, Docker

Cloud Deployment: AWS, GCP, Heroku, Render

Achievements

Official Endorsements Sept 2024 - Apr 2025

- Successfully completed Forensic R&D Project and awarded with Letter of Recommendation and Certificate of Completion by the Project Head.

Hackathons Aug 2023 – Sept 2023

- AIR 95 in “Case Master” Business Case Study Hackathon, solving real-world business challenges.

Contest Achievements

- Global Rank 38, 121, 199 in CodeChef Long Challenges showcasing strong algorithmic problem-solving skills.