

Mayuri Phad

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Education

Vishwakarma Institute of Information Technology (VIIT) — B.Tech, IT; CGPA: 8.4 2023–2026

Government Residential Women's Polytechnic — Diploma, Computer Engineering; 87.77% 2020–2023

Experience

AI/ML Intern — Tata Consultancy Services (TCS) Mar 2026–Aug 2026

- Developed enterprise Generative AI solutions, including Retrieval-Augmented Generation (RAG) pipelines, LLM applications, and agentic AI workflows using LangChain and LangGraph.
- Built Python backend services and REST APIs with FastAPI to integrate machine-learning and LLM-powered capabilities into applications.
- Applied data preprocessing, feature engineering, model training, and evaluation workflows using TensorFlow and Scikit-learn.
- Designed and integrated multi-agent workflows for the AI-AXIX platform, leveraging LLMs and Python to automate tasks and enable intelligent tool execution.

Projects

SOP Recorder | Python, FastAPI, Gemini Vision + Text | GitHub 2026

- Built a multimodal AI workflow-capture platform that transforms recorded workflows into structured Standard Operating Procedures using Gemini Vision and Text models.
- Automated document generation and export to DOCX, PDF, HTML, and Markdown through a Python/FastAPI backend.

Agritech Hybrid AI | EfficientNetB3, TensorFlow, Generative AI | GitHub 2026

- Developed an AI-based plant disease classification system using EfficientNetB3 transfer learning, achieving **99.54% classification accuracy**.
- Integrated Generative AI with multilingual recommendations to provide farmer-friendly disease treatment and prevention guidance.

Driver Drowsiness Detection | MobileNetV2, TensorFlow, OpenCV | GitHub 2025

- Built a real-time computer vision system using MobileNetV2 and OpenCV to detect driver drowsiness from webcam video and trigger audio-visual alerts.
- Applied transfer learning and real-time inference for efficient and reliable fatigue detection.

Technical Skills

Generative AI: LLMs, RAG, Agentic AI, LangChain, LangGraph, Prompt Engineering, Vector Databases, Hugging Face

Machine Learning: Scikit-learn, TensorFlow, PyTorch, Keras, CNNs, Transfer Learning, Feature Engineering, Model Evaluation

Data Science: NumPy, Pandas, Matplotlib, Seaborn, Data Manipulation, Data Preprocessing, Exploratory Data Analysis (EDA)

Languages: Python, Java, SQL, JavaScript **Backend:** FastAPI, Flask, Node.js, Express.js, REST APIs

Databases & Tools: MongoDB, MySQL, Git, GitHub, Docker, AWS

Publications

- **Driver Drowsiness Detection Using MobileNetV2 and Deep Learning** — ICSCNA 2024, IEEE
- **Violence Detection in Surveillance Systems Using MobileNetV2** — PUNECON 2024, IEEE
- **Automatic Identification of Medicinal Plants with Transfer Learning** — INCIP 2025, IEEE

Certifications

- Complete Generative AI Course with LangChain and Hugging Face — Udemy, 2026
- Machine Learning & Deep Learning in Python & R — Udemy, 2024
- Meta Backend Developer Specialization — Coursera, 2025
- AWS Academy Graduate — AWS, 2025