

# Sangam Nirala

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## Summary

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Aspiring Machine Learning Engineer with hands-on experience in MLOps, deep learning, and cloud deployment. Built production-ready ML systems using TensorFlow, PyTorch, GCP, and Docker. Passionate about end-to-end pipeline automation and scalable model deployment.

## Experience

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### Zenbourg

July 2025 - August 2025

*Ai Automation Intern*

*Remote*

- Designed automated workflows using n8n and Make to integrate business tools and eliminate repetitive tasks.
- Integrated these workflows with websites by making fronted using javascript and react
- Created tools like email automation and whatsapp automation and calling agent and increased sales by 40%

### Sakura Biotech

May 2025 – July 2025

*Ai/ML intern*

*Mumbai, India*

- Developed and deployed a real-time algae monitoring system using an LSTM model trained on 1,400+ synthetic sinusoidal pH readings, achieving 92.4% accuracy (MAE: 0.12) for 30-step forecasting.
- Engineered a live pipeline streaming data every 10s, triggering predictions via Flask.
- Developed a full stack application and integrated with anomaly detection and multi-sensor expansion capability.

## Projects

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### Face Detection

*(OpenCV | SVM | Flask)*

- Built a real-time face recognition and gender classification system using computer vision techniques.
- Performed exploratory data analysis (EDA) and preprocessed images with face detection, grayscale conversion, normalization, and PCA for feature extraction.
- Trained and optimized an SVM classifier using GridSearchCV for accurate gender prediction.
- Deployed as a Flask web app enabling users to upload images and receive instant classification results.

### PDF Chatbot

*(RAG | Gemini AI | ChromaDB | LangChain)*

- Built a multilingual chatbot using RAG with Gemini AI to query scanned/digital PDFs via Streamlit.
- Extracted and chunked text using OCR, PyPDF2, and LangChain; stored embeddings in ChromaDB.
- Enabled hybrid retrieval with semantic search, keyword match, and re-ranking for accurate answers.
- Added chat memory for multi-turn conversations and grounded responses using LangChain BufferMemory.

## Education

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### Veermata Jijabai Technological Institute, Mumbai

2022-2026

*Bachelor of Technology in Electronics and Telecommunication*

- CGPA: 7.0/10

## Skills

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**Languages** Python, HTML/CSS, JavaScript, SQL

**ML Frameworks** TensorFlow, Keras, PyTorch, Scikit-learn, NLP, Computer Vision, MLOPS, Langchain

**MLOps Tools** MLflow, DVC, Docker, Jenkins, Git

**Cloud & Deployment** GCP, Cloud Run, Streamlit, Flask, FastAPI

## Honors

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**Winner (Rank 1), Case Presentation Competition – StemFusion (STEMExpedition)**

**Marketing Head – Technovanza**

- Led marketing strategy and outreach efforts for VJTI's flagship tech fest, increasing event visibility and sponsor engagement