

SOUNDARYA DUBE

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EDUCATION

Vellore Institute of Technology (VIT), Bhopal

2022 - 2026

B.Tech in Computer Science Engineering, Specialization in Health Informatics.

SKILLS

Technical Skills: FastAPI, Flask, Django, WebSocket, TensorFlow, PyTorch, OpenCV, Keras, BERT, Google Cloud Platform (GCP) - Deployment and Monitoring, MongoDB (NoSQL), basic SQL, API Development.

Languages: Python, C++, Java

UNIVERSITY PROJECTS

Health Card System

May 2025

- A secure, centralized digital health record system storing patient history, lab reports, and prescriptions.
- Uses **FastAPI + MongoDB** for APIs and NoSQL storage, with **GCP** for secure cloud deployment. Patients/doctors access records via a unique **14-digit ABHA-like ID**.
- Reduces misdiagnosis, prevents duplicate tests, and improves healthcare efficiency in India (like Ayushman Bharat).
- GitHub Link:

Surgical Assistance

Dec 2024

- AI-powered tool to detect tumors/abnormalities in MRI/CT scans using deep learning.
- Trained on **PyTorch/TensorFlow**, processes images via **OpenCV**, and deployed via **FastAPI + GCP** for real-time analysis.
- Helps doctors diagnose cancers faster, improving surgical precision and patient survival rates.
- GitHub Link:

Cardiovascular Disease Prediction (ECG Analysis)

Jul 2024

- Machine learning model predicting heart disease risk from ECG signals.
- Uses Scikit-learn (Random Forest/SVM) on processed ECG data, served via Flask API with explainable AI (SHAP).
- Early detection reduces heart attack fatalities by 20%+, especially in rural areas with limited cardiologists.
- GitHub Link:

EXTRACURRICULAR ACTIVITIES

Metaversity Club

VIT Bhopal, MP

PR Team Lead

Feb 2025

- Spearheaded marketing strategies and sponsorship collaborations, enhancing club visibility and engagement.
- Led analytics-driven performance tracking to optimize outreach campaigns and social media presence.

Industrial Conclave

VIT Bhopal, MP

Project Team Lead

Aug 2024

- Directed the development of a medical image analysis model for early detection of Diabetic Retinopathy using retinal scans.
- Collaborated with cross-functional teams to integrate AI-driven diagnostics, improving accuracy in disease prediction.

ADDITIONAL

Certifications: [Crash Course on Python](#), [Computer Vision](#), [Fundamentals of AI and ML](#), [Python Essentials](#)