

Mahesh Patel

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Education

Thadomal Shahani Engineering College | Mumbai University

Aug 2023 – June 2027

B.E in Artificial Intelligence and Data Science

CGPA - 7.78

SVKM's Mithibai Junior College | Mumbai

Aug 2021 – March 2023

Higher Secondary Certificate

HSC Percentage - 88.5 %

Technologies

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

Libraries/Frameworks : FastAPI, Numpy, Pandas, Streamlit, Langchain, Pytorch, Tensorflow

Development Tools : Git, Github, PyCharm, VS Code, IntelliJ, Jupyter

Databases : Supabase/PostgreSQL, SQLAlchemy

Operating Systems : Linux (Ubuntu), Windows

Others : PowerBI, Tableau, Canva

Projects

AI-Powered Workforce Scheduler

- Deployed Multi-agent CrewAI to autonomously negotiate staff availability and generate optimized schedules, reducing planning time
- Engineered an AI-powered IVR system (Twilio + Gemini) enabling staff to check shifts and request leave via natural voice commands
- Developed custom database integration tools with PostgreSQL/Supabase using parsing techniques to handle real-time workforce data, staff availability, and leave requests across multiple shops.
- Tools Used: FastAPI, Multi-agent CrewAI, LangChain, Postgresql

College Admission Chatbot

- Developed an intelligent conversational AI system using Retrieval-Augmented Generation (RAG) architecture to provide personalized college admission guidance and information retrieval
- Tools Used: LangChain, Streamlit, Pydantic

Municipal Complaint Classifier

- A Streamlit-based web application that uses Deep Learning (CNN) to automatically categorize municipal complaints (e.g., "Pothole", "No Water", "Garbage") and assign them to the correct department with a priority level.
- Tools Used: Python, Tensorflow, Streamlit

Experience

Research Intern - Graph Neural Networks

Dec 2025 - Jan 2026

Advisor - Dr. Himani Deshpande

Investigating Hybrid Graph Neural Network Architectures for complex, Heterophilous datasets

Senior Committee Member - TSEC CodeTantra

March 2025 – present

Led the design team to establish the visual identity for the committee's flagship hackathon, creating a cohesive suite of assets including social media creatives, banners, T-shirts, certificates, and the event theme

Achievements

2nd Rank at IES MCRC Hackathon 2.0 in Round 1 and Round 2 Qualifier

March 2025