

Heramb Vengurlekar

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Education

B.E. in Artificial Intelligence & Data Science — Thadomal Shahani Engineering College 2022 – 2026

- **Coursework:** Data Analytics and Visualization, Artificial Intelligence, Machine Learning, Deep Learning, Statistics

Internships

IT Systems Integration Intern, Brisk Technovision Ltd — Mumbai

- Deployed **Atera RMM platform** in a controlled enterprise environment, integrating remote monitoring, network device management, and ticketing automation.
- Configured automated alert workflows between **Atera, CRM, and ticketing systems** to pre-emptively notify engineers, reducing response delays and potential downtime.
- Performed feasibility analysis and documented onboarding guidelines, and system integration procedures to support organization-wide adoption.

Projects

Mental Health Chatbot

github

- Built an emotion-aware chatbot using a fine-tuned **RoBERTa model** (GoEmotions dataset) to detect user sentiment and generate empathetic responses via an LLM API.
- Developed hybrid architecture separating **emotion classification and response generation**, improving contextual relevance and emotional alignment.
- Implemented a **Flask API** hosted on Colab via **Ngrok**, integrated with a **Node.js/Express backend** and React frontend.

Hospital Patient Footfall Prediction Model

github

- Built a **Multiple Linear Regression model** to forecast hospital patient admission trends, supporting data-driven resource planning and operational preparedness.
- Performed extensive **data cleaning, preprocessing, and EDA** to identify seasonal patterns, admission frequency correlations, and anomaly trends.
- Implemented and evaluated model using **scikit-learn and TensorFlow**, optimizing performance using cross-validation and error analysis (MSE, R²).

AWS Sentiment Analysis System

github

- Built a cloud-based sentiment analysis system using **Amazon Comprehend** to classify text into Positive, Negative, Neutral, and Mixed categories.
- Designed an end-to-end pipeline using **AWS Lambda, API Gateway, and DynamoDB** to enable real-time sentiment prediction and data logging.
- Deployed scalable serverless architecture to process user input via REST API, eliminating the need for model hosting or manual infrastructure management.

Technical Skills & Tools

Programming Languages: C/C++ (DSA & OOP), Python, JavaScript, HTML/CSS

Frameworks & Libraries: React, Node.js, Flask, Tailwind CSS, Pandas, NumPy, Matplotlib, Seaborn

Cloud & DevOps: AWS (Lambda, API Gateway, DynamoDB, Comprehend), Virtual Machines, Ngrok, WSL, Linux CLI

System-Level Technologies: Windows API, Remote Monitoring, Ticketing Systems (Atera), CRM Integration

Tools & Platforms: Git, GitHub, Postman, Jupyter Notebook

Leadership & Involvement

Operations Team, Developers' Club, TSEC

Jul 2024 – May 2025

- Established application flow through UI/UX design collaboration and managing user data, while executing technical operations including data processing and member mentorship.

International Service Director, Rotaract Club of TSEC

Jul 2024 – May 2025

- Directed cross-domain strategy planning, managing resource allocation, logistics, and volunteer teams to execute high-impact public awareness campaigns.