

VIKAS R RATHOD

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PROFESSIONAL SUMMARY

Final-year B.E. Computer Science and Engineering student specialising in AI and Full Stack Development, passionate about building intelligent, scalable software and applying strong analytical and problem-solving skills to real-world challenges. Hands-on experience developing full-stack and machine learning projects, including an AI-powered stress-monitoring platform and a demand-forecasting framework built end-to-end. Eager to keep learning new technologies and contribute effectively to a team building real products.

PROJECTS

Web-based Blood Bank System — Mini Project

- Built a web application to manage donor, recipient and blood inventory records in a centralised MySQL database.
- Implemented secure record management and blood request tracking, improving data accessibility for staff.

Tech Stack: PHP, HTML/CSS, MySQL, XAMPP

Population-Driven Forecasting — Final Year Project (2026 – 2027)

- Developed a machine learning framework to forecast urban and rural water and energy demand from population data and compare consumption patterns.
- Trained and compared SVM, KNN and Logistic Regression models using Scikit-learn; performed data preprocessing and feature engineering with Pandas and NumPy.
- Visualised demand trends with Matplotlib and Seaborn and built a Tkinter interface to support resource planning through predictive analytics.

Tech Stack: Python, Scikit-learn, Pandas, NumPy, Matplotlib, Seaborn, Tkinter, SQLite/MySQL

Calm Mind – Mental Wellness & Stress Tracker

GitHub: github.com/vikas-rathod-16/mental-wellness-tracker

- Built a full-stack stress-monitoring platform with a Node.js/Express backend, a Python/FastAPI AI service and MongoDB Atlas for cloud storage.
- Implemented multimodal stress analysis across text, facial expression (OpenCV face and smile detection) and voice tone (Web Audio API) to generate real-time stress insights.
- Integrated the Groq LLM API to power a conversational support chatbot, with a keyword-based fallback when the API is unavailable.

Tech Stack: Node.js, Express, Python, FastAPI, MongoDB Atlas, OpenCV, Groq LLM API, HTML/CSS/JavaScript

TECHNICAL SKILLS

Programming Languages: Python, SQL, HTML, CSS

Frameworks & Libraries: Node.js, Express.js, FastAPI

Databases: MySQL, MongoDB

Tools & Platforms: Git, GitHub, VS Code

Core Subjects: Data Structures and Algorithms, DBMS, Operating Systems, Computer Networks

ACHIEVEMENTS

24-Hour Hackathon Participant — Xcelerate, NIKSHATRA E-Summit 2025

Participated in Xcelerate, a 24-hour hackathon at NIKSHATRA E-Summit 2025, Bangalore Institute of Technology (BIT), building teamwork and time-constrained problem-solving skills.

Gold Medalist — Group Dance

Participated in a group dance event and won gold against other schools in an inter-school competition.

EDUCATION

SJM Institute of Technology, Chitradurga — B.E. in Computer Science & Engineering, CGPA: 8.01 2023 – 2027

B.V.V.S Basaveshwar Arts, Science & Commerce PU College — 12th Grade, 79.83% 2022 – 2023

St Anne's Convent High School — 10th Grade, 89.44% 2020 – 2021

CERTIFICATIONS

- GenAI Powered Data Analytics Job Simulation — Tata (Forage)