Harsh Rathod

Email: harshrathod2652@gmail.com
Portfolio: h-rathod.github.io

LinkedIn: linkedin.com/in/rathodharsh
GitHub: github.com/h-rathod

Education

Savitribai Phule Pune University (P.E.S. Modern College of Engineering) — Pune, Maharashtra
Bachelors of Engineering in Electronics and Computer, Honors in Data Science | CGPA: 7.5 — Jul 2025

M.S.B.T.E (Bharati Vidyapeeth's Jawaharlal Nehru Institute of Technology) — Pune, Maharashtra
Diploma in Computer Technology | Percentage: 83.3% — Jul 2021

Experience

TechR Business Solutions — Pune, Maharashtra
Data Science and Machine Learning Intern — Jan 2024 – Apr 2024

- Collaborated on machine learning projects, developing models for predictive maintenance, stock price prediction, and fake face detection.
- Utilized tools like TensorFlow and Python for model building and data analysis.
- Worked on text-based video generation and voice cloning projects, improving model accuracy and performance.

Projects

AI based Predictive Maintenance System for Industrial Machines — May 2025

- This Final Year Project involves developing an IoT-driven predictive maintenance system, using an ESP32 for real-time sensor data acquisition to proactively identify machine failures before they occur, minimizing operational downtime & adding transparency between the user and the system using a Chatbot.
- Engineered a multi-model machine learning pipeline for comprehensive diagnostics, utilizing an autoencoder for anomaly detection, Random Forest models for failure probability and health scoring, and a neural network to pinpoint specific component-level risks.
- Built a cross-platform mobile app with React Native, featuring a dashboard for real-time data and health monitoring and an AI-powered chatbot (using OpenAI's LLM) for intuitive querying of live and historical machine data.

NutriFind: A personalized Nutrient Tracker | nutrifind.streamlit.app — May 2024

- Addressed the complexity of obtaining accurate nutritional insights for individuals without technical expertise or specialized tools.
- Developed a user-centric web application using Python, Streamlit, Google's Gemini API, and MongoDB to enable real-time meal analysis based on uploaded food images and user profiles.
- Delivered actionable dietary recommendations, empowering users to make informed nutrition decisions.

Achievements

- UG Final Year Project AI-based Predictive Maintenance System for Industrial Machines accepted into the OpenAI Researcher Access Program, granting $2000 worth of credits.
- Secured 1st Rank in the department-level project exhibition Tantrapradarshini, organized by the ENTC Department in association with IEEE Student Branch and Institutions Innovation Council.

Skill Section

Languages: Java, Python, C++, SQL, JavaScript, HTML, CSS
Frameworks: Node.js, Streamlit, Express.js
Databases: MongoDB, PostgreSQL, MySQL, Firebase
Development Tools: Git, Github
Libraries: Pandas, NumPy, Matplotlib, Tensorflow
Soft Skills: Communication, Problem-solving, Teamwork, Adaptability

Certifications

Python for Data Science | Issued by IIT Madras, NPTEL | Certificate: bit.ly/h-nptel-py — Feb 2024

IBM Data Science Certification | Issued by Coursera | Certificate: bit.ly/h-ibm-ds-cert — May 2023