Rushabh Madan Wagh

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Computer Science undergrad skilled in Python, C++, and JavaScript. Hands-on experience in machine learning model development, data preprocessing. Skilled in frontend web development with JavaScript, Node.js, Express.js, and MongoDB.

Education

Vellore Institute of Technology

VIT Bhopal

Bachelor of Technology - Computer Science and Engineering

Oct 2022 - Oct 2026

Technical Skills

Languages: Python, C++, JavaScript,

Web Development: HTML, CSS, Node.js, Express.js, MongoDB

Computer Vision: OpenCV, YOLOv5, YOLOv8-Pose

Machine Learning: Scikit-learn, XGBoost, KNN, Logistic Regression

Tools: Git, GitHub, VS Code, Jupyter, MongoDB Compass

Projects

BigO Learn

[MERN / Scroll-based UI / Code Analysis]

Jun 2025 - Ongoing

- Crafted and built a single-page MERN web app to teach and analyze time & space complexity of code snippets.
- Implemented a scroll-based React layout with interactive navigation sections: Home, Learn, and Analyze.
- Developed a clean UI with smooth scroll transitions, a sticky navbar, and modular content loading.

Blood Bank Locator [Github] Live

[Python / Flask / Pandas]

Mar 2025 – Apr 2025

- **Engineered** a real-time Blood Bank Locator web app using **Python**, **Flask**, **and Pandas**, cutting emergency search time by **80%** compared to manual methods.
- Deployed a RESTful API with 95% reliability, enabling <1 second filtering of 2,800+ verified blood banks across India.
 Supported 50+ concurrent users with CORS implementation and multi-threaded Flask server.

Real-Time Person, Gender & Pose Detection System [Github]

[Python / OpenCV / YOLOv5 / YOLOv8-Pose / Deep Learning]

Sep 2024 - Nov 2024

- Architected a real-time surveillance prototype during a college hackathon using YOLOv5, OpenCV DNN, and a custom-trained gender classification model.
- Extended the system with YOLOv8-pose to enable multi-person keypoint estimation at ~15 FPS, achieving >99% classification accuracy and >90% detection confidence, built as a prototype for smart campus/event safety use cases.

Diabetes Prediction Model [Github]

[Python / Scikit-learn / Medical Dataset]

Apr 2024 – May 2024

- Implemented a machine learning model to predict diabetes risk using patient metrics like glucose, BMI, and blood pressure.
- **Engineered** a data preprocessing pipeline featuring robust **missing value** imputation using KNN and **multivariate** feature analysis.
- Achieved up to 94% accuracy with KNN on Kaggle data; XGBoost reached 78.57% on Pima Indian dataset and 78% on a custom merged dataset.
- Applied hyperparameter tuning and cross-validation for improved performance in early diagnosis support.

Certifications

- Cloud Computing NPTEL (Elite + Silver)
- The Bits and Bytes of Computer Networking Coursera <u>Link</u>
- AWS Solutions Architecture Virtual Internship Forage Link

Extracurricular Achievements

- Achieved a LeetCode Global Rank of 682,255 and University Rank of 1661 on GeeksforGeeks.
- Won 1st place in a college-level Hackathon organized by GeeksforGeeks VIT Bhopal, competing among 50+ teams.