Rushabh Madan Wagh

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Education

Vellore Institute of Technology, Bhopal   *Sept 2022 – Ongoing*
Bachelor of Technology – Computer Science and Engineering   ***CGPA: 8.61***

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 [Live]   **Jun 2025 – Aug 2025**
[MERN **/** Scroll-based UI / Code Analysis]

- **Developed** a single-page **MERN** web app that simplifies learning by **teaching** and **analyzing** the time & space complexity of code snippets in **real time.**
- **Developed** a clean, scroll-based React UI with interactive navigation sections, decreasing **bounce rate** by 8% through **improved** user experience and clear information architecture for single page application.
- **Developed** a clean UI with smooth scroll transitions, a sticky navbar, and modular content loading.

Blood Bank Locator [Github] Live   **Mar 2025 – Apr 2025**
[Python / Flask / Pandas]

- **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]   **Sep 2024 – Nov 2024**
[Python / OpenCV / YOLOv5 / YOLOv8-Pose / Deep Learning]

- **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]   **Apr 2024 – May 2024**
[Python **/** Scikit-learn / Medical Dataset]

- **Implemented** a machine learning **model** to **predict** diabetes risk using patient metrics like glucose, BMI**,** and blood pressure.
- Engineered a data preprocessing pipeline that featured robust **missing value** imputation using KNN, which enhanced data quality for early diagnosis support and **reduced** processing time by 15%.
- 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.

Certifications

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

Extracurricular Achievements

- Achieved a **LeetCode Global Rank of 682,255** and **University Rank of 528** on GeeksforGeeks.
- **Won 1st place** in a college-level Hackathon organized by GeeksforGeeks VIT Bhopal, competing among 50+ teams.