

SHRUTI VISHWAKARMA

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Education

Gyan Ganga College of Technology

Bachelor of Technology in Computer Science

Jabalpur, M.P

Nov 2021 – July 2025

Relevant Coursework

- Data Structures
- Algorithms Analysis
- Operating Systems
- OOPS
- Computer Networking
- Database Management
- Machine Learning

Projects

Sign Language Learning Platform

January 2025

- Developed an **AI-powered sign language learning platform** using **Flask**, **React.js**, and **MongoDB** for **real-time interactive learning**, optimizing data flow and minimizing latency for a seamless experience.
- Implemented real-time hand gesture recognition using **MediaPipe** and **TensorFlow**, achieving a **28% improvement in detection accuracy** and reducing false positives by **35%**.
- Integrated **Three.js**-based **3D hand motion simulation**, enhancing the learning experience by providing a visually immersive environment, leading to a **42% increase in user engagement** and gesture comprehension.

Posture Monitor – Real-time AI Posture Detection System

October 2024

- Integrated **MediaPipe** for highly accurate body landmark detection, leading to a **30% improvement in posture detection accuracy**, and utilized a custom-trained deep learning model with **TensorFlow** to ensure precise classification of user posture patterns.
- Engineered a robust computer vision pipeline using **OpenCV** to preprocess video frames efficiently, reducing latency by **25%** and ensuring smooth real-time posture tracking without compromising system performance.
- Implemented a scalable backend architecture with **Java** and **Spring Boot**, supporting secure AI model inference, session-based user monitoring, and adaptive learning mechanisms, improving posture correction recommendations by **35%**.

Achievements

LeetCode - Completed over 200+ algorithmic problems, achieving an average accuracy rate of 76% across diverse topics such as trees and dynamic programming.

Certifications

AWS Academy Graduate - AWS Academy Machine Learning Foundation (Certificate)

Ideal Management Group - Core and Advanced JAVA (Certificate)

IBM - Skillbuild in Artificial Intelligence (AI) (Certificate)

Machine Learning A-Z: AI, Python (Udemy)(Certificate)

Technical Skills

- **Programming Languages & Web Technologies:** Python, Java, C++, JavaScript, HTML5, CSS3, React.js, Node.js
- **Databases & Cloud:** MongoDB, PostgreSQL, MySQL, AWS, Docker
- **AI/ML:** TensorFlow, Keras, Scikit-learn, OpenCV
- **Version Control:** Git, GitHub