

RUCHIKA SHIRSATH

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Education

Veermata Jijabai Technological Institute

B.Tech in Information Technology

CGPA - 9.205

2021 – 2025

Mumbai, India

Bhavani Shankar Junior College

HSC: 93.6% , MHTCET: 99.7989 percentile

2019 – 2021

Mumbai, India

Relevant Coursework

- | | | | |
|----------------------|------------------|------------------------|--------|
| • Data Structures | • Computer | • Database Management | • Java |
| • Algorithm Analysis | Organization and | • Linear Algebra | • C++ |
| • Operating Systems | Architecture | • Discrete Mathematics | |

Projects

Intelligent Navigesture [↗](#) | OpenCV , HTML ,CSS , JS , React , DOM

Oct 22 – Feb 23

- Utilizing OpenCV's computer vision algorithms to accurately interpret user gestures, enabling actions like clicking, scrolling, tapping, and drawing.
- Incorporating modern UI/UX paradigms with HTML, CSS, JS, and React, creating an adaptive and immersive gesture-based browsing experience.
- Iteratively refining gesture recognition models and optimizing frontend performance to deliver a user-friendly, hands-free web interface.

QR-Face Attendance System [↗](#) | OpenCV,DBMS,HTML,CSS,JS,Flask

Dec 2022 – Feb 2023

- Spearheaded the development of a sophisticated web-based attendance system incorporating multi-factor authentication via QR code scanning and face detection mechanisms.
- Leveraged OpenCV for implementing cutting-edge face detection algorithms, while employing HTML, CSS, JS, and Flask for seamless front-end design and back-end functionality.
- Orchestrated the integration of a robust Database Management system to securely store attendance records, enabling efficient data retrieval and analysis.
- Demonstrated a keen focus on accuracy, efficiency, and user experience, crafting an intuitive interface that ensures precise attendance tracking while upholding stringent security standards through the two-step verification process.

The Assist Bot [↗](#) | Python , Tkinter , Speech to text , Text to speech recognition

Dec 2022 – Jan 2023

- Developed an interactive Python bot using Tkinter, Speech-to-Text, and Text-to-Speech for seamless user interactions. Performs basic tasks based on voice commands, enhancing user experience through multi-modal interaction.
- Implemented Python-based bot with STT and TTS integration, enabling natural language conversations and audible responses.
- The Assist Bot's Tkinter-based GUI provides a user-friendly interface, while voice input and output capabilities optimize user interactions and task execution.

Research Experience

Software Plagiarism Detection Tool

C,C++,Python,Gumtree,CSmith,MOSS

May 2023 – Ongoing

IIT Bombay

- This project is under the guidance of **Dr. Uday Khedker**, It involves developing a software plagiarism detection tool using Python, featuring Abstract Syntax Trees (AST) for precise structural similarity analysis. Integrated Gumtree for visualizing AST changes, and streamlining plagiarism assessment.
- This tool employs AST-based algorithms for comparing software programs in C++ and provides visual insights into code similarities through Gumtree integration.

Achievements

VJTI Centenary TechHackathon

Dec 2022 – Feb 2023

Secured **Rank 2** in the Infrastructure domain in the hacakathon

- *Developed an advanced attendance system, integrating QR code and Face detection technologies, impressing during college evaluation, and showcasing its potential for real-world deployment within the college ecosystem*

Technical Skills

Courses Taken: Front End Web Development by **Angela Yu**, Machine Learning : Regression and Classification by **Andrew Ng** by **DeepLearning.AI** and **Stanford University** , Neural Networks and Deep Learning by **Andrew Ng**

Languages: Python, Java, C, C++, MySQL

Web Developer Tools: HTML, CSS, Javascript,Bootstrap

Technologies/Frameworks: Linux, GitHub

Domains Explored: Machine Learning ,Deep Learning,Web Development

Mentorship Roles

- ★ **COC TechTrek Domain Expedition:** Conducted Introductory Workshop for 150+ juniors for domain exploration and getting them started with specific domain of their choice with me handling **Web Development** section
- ★ **COC C++ Workshop :** Mentored 100+ juniors in C++ programming, delivering comprehensive introductory sessions to initiate their journey in software development.

Co-Curricular Activities

- ★ Among the **Top 5%** students in **Information Technology** Department at VJTI with an academic **CGPA** of **9.205/10**.
- ★ Secured Rank **134** (out of 152k) and Rank **11** among girls and got **99.7989** percentile in MHT-CET examination- an engineering entrance exam conducted throughout Maharashtra.

Positions of Responsibility

- ★ Class Representative of the IT Branch for FY, SY,TY 2022 , 2023 and 2024.
- ★ Department Head Of I.T. in Technovanza VJTI.
- ★ Execution and Digital Sector Representative at Pratibimb VJTI.
- ★ Front End Web Developer at Enactus VJTI.
- ★ Member of the Community of Coders,VJTI.
- ★ Part of Web Development team for developing the VJTI Website
- ★ Member of Multi Organ Harvesting Aid Network(MOHAN) foundation for raising awareness about organ donation and contributing into social cause