

# Mitul Patil

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## PROFILE

I am pursuing Computer Science and Engineering at Parul University. I enjoy working on full-stack projects, creating responsive and user-friendly web apps. Recently, I've been exploring AI by building AI agents and testing their use in solving everyday problems.

## EDUCATION

### Parul University

B. Tech - Computer Science and Engineering | CGPA: 8.36

Sept 2022 – May 2026

Vadodara, Gujarat

### Shree Maharaja Rajendrasinhji Vidhalaya

HSC | 72.80%

June 2021 – May 2022

Rajpipla, Gujarat

### Shree Maharaja Rajendrasinhji Vidhalaya

SSC | 79.33%

July 2019 – May 2020

Rajpipla, Gujarat

## INTERNSHIP

### Python Programing Intern | Ybi Foundation

Sept 2024 – Oct 2024

- Built a strong foundation in Python Programming and its applications in data science, machine learning.
- Work on Python libraries (Panda, NumPy, Matplotlib, Seaborn, Scikit-learn) for data analysis, Visualization and machine learning.
- Worked on real World Project: Movie Recommendation System, Milage Predication System.

## PROJECTS

### Real-Time Chat & Video Call Application | Node.js, Express.js, Socket.IO, WebRTC, EJS, Tailwind CSS

[link](#) | [Github](#)

- Built a web application enabling real-time text chat and 1-on-1 video calls for up to 10+ simultaneous active users.
- Implemented peer-to-peer video/audio streaming using WebRTC with Socket.IO as the signaling server, achieving latency under 200ms.
- Added features like incoming call notifications, hangup, and mic/camera toggle, improving usability by 30% in user testing.
- Ensured cross-browser compatibility (Chrome, Firefox, Edge) and handled 100% of disconnect/reconnect cases during testing.

### Animated Website | HTML, CSS, JavaScript, GSAP

[Github](#)

- Developed a fully functional animated website with 100% mobile responsiveness, tested on 15+ device sizes.
- Enhanced performance by reducing animation load time by ~30% through code optimization.
- Implemented DOM manipulation and CSS transitions for interactive effects.

### Movie Recommendation System | Pandas, NumPy, Matplotlib

[Github](#)

- Built a recommendation system trained on a dataset of 5,000+ movies using Pandas, NumPy, and Matplotlib.
- Suggested movies based on user preferences, genres, and ratings, achieving ~80% similarity accuracy with cosine similarity.
- Handled data preprocessing, feature extraction, and cleaning to improve model performance.

## TECHNICAL SKILLS

**Programming Languages:** Java, Python, JavaScript

**Frontend Technologies:** React.js, Redux, Tailwind CSS, Figma, UI/UX, HTML, CSS

**Backend Technologies:** Node.js, Express.js, Socket.io, Axios, REST APIs

**Developer Tool:** Postman · Git · GitHub

**Databases & Cloud:** MongoDB · MySQL

## COMPETITION

### Azadi ka Amrit Mahotsav Hackathon 2022(Runner-up)

ORGANISED BY SSIP

Project: IoT Smart Dustbin

- Designed and implemented a smart dustbin using Arduino Nano and ultrasonic sensors to monitor garbage levels in real-time.
- Developed a notification system to automatically alert municipal authorities when the dustbin is full.