

# Garvit Budhiraja

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## EDUCATION

### VIT Bhopal University

Bachelor of Technology in Computer Science and Engineering

Nov 2022 – May 2026

CGPA: 8.63/10

## TECHNICAL SKILLS

C++, Python, React.js, Node.js, Express.js, Flask, FastAPI, MySQL, MongoDB, Docker, Postman, Git

## TECHNICAL PROJECTS

### Work Room | React, Node.js, Express.js, Docker

Feb 2025 - May 2025

- Architected a multi-user code editor, integrating the Monaco editor component, enabling syntax highlighting and support for over 100 languages within the collaborative environment.
- Engineered WebSocket-based real-time synchronization using Socket.IO, ensuring sub-100ms latency for seamless collaborative coding.
- Integrated Mistral AI via a secure backend proxy to provide AI-powered code generation and assistance.
- Implemented a real-time collaborative blackboard with drawing tools, facilitating visual system design discussions.
- Containerized React frontend and Node.js backend services using Docker, standardizing development environments and streamlining CI/CD pipelines.
- Developed a persistent chat system with message history, enabling real-time team discussions alongside collaborative coding sessions.

### Land Ledger | React, Solidity, Ethereum, Ethers.js, Supabase

Nov 2024 - Jan 2025

- Led a team of 8 to successfully develop and deploy a full-stack property registration DApp on the Ganache testnet.
- Engineered a responsive React frontend, integrated with Ethereum blockchain via ethers.js, and connected to Supabase for authentication and data management.
- Architected global state management using React Context and TanStack Query for efficient data fetching and caching.
- Designed a hybrid architecture storing sensitive data on-chain while maintaining performance with off-chain storage for documents.
- Built and deployed Solidity smart contracts featuring property registration, ownership transfer, mortgage functionality, and multi-signature verification using OpenZeppelin's security patterns.
- Implemented multi-tiered access control with distinct permissions for property owners, government officials, and validators.

### API Hub | FastAPI, Python

- Architected a modular suite of 30+ RESTful APIs using FastAPI for tasks ranging from data transformation to image placeholder generation.
- Designed the service for high maintainability and extensibility, successfully fostering an open-source environment for community contributions.
- Deployed the application on Vercel's serverless platform, leveraging its auto-scaling capabilities to ensure high availability and low latency while minimizing operational costs.
- Implemented a full CI/CD pipeline with GitHub Actions to automate testing and deployment, reducing manual errors and ensuring consistent, reliable releases.
- Authored comprehensive, user-friendly API documentation and established clear open-source guidelines, fostering a welcoming environment for contributors and simplifying integration for users.

## CERTIFICATIONS

### Java Development on Oracle Cloud — Oracle

Apr 2025

### Generative AI — IBM

Apr 2025

### Back End Development and APIs — freeCodeCamp

Jun 2025

## EXTRA-CURRICULAR

- Co-Lead, Tech Team, Bit By Bit Club: Directed and mentored a 15+ member team, orchestrating the successful execution of 10+ coding workshops and hackathons.
- Runner-Up, Hack-Exchange Hackathon: Spearheaded a 4-person team to develop a computer vision system that accurately detected object distance, size, and performed OCR, improving accessibility for the visually impaired.
- Volunteered on design teams for NTC and E-commerce Club at Advitya'24, creating and editing visual content (posters, photos, videos) for marketing that significantly boosted student participation.