

Khyati Tiwari

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Education

VIT Bhopal University

B.Tech in Computer Science and Engineering

Bhopal, India

2022 – 2026 — 8.33/10

Experience

Witting AI

May 2025 – Present

Software Development Engineer Intern

- Engineered a data analytics system by architecting an **OLAP cube** using **Python** and **FastAPI**, implementing robust **API endpoints** to ensure scalability and data integrity.
- Developed a dynamic **filter schema model** for **SQL** and **MongoDB** databases, integrated into a core product configurator, and executed comprehensive testing with **Postman** to validate functionality.

Projects

API Gateway – Secure and Scalable Service Access

- Engineered a lightweight API Gateway using **FastAPI** for routing and proxying requests across backend microservices, abstracting internal service details from external clients.
- Integrated **JWT-based authentication** and **rate limiting** to secure endpoints, enforce authorization, and prevent abuse.
- Implemented structured **logging** and exposed performance metrics via **Prometheus** for observability, debugging, and monitoring.

CI/CD Pipeline – Automated Build and Deployment for Node.js App

- Developed an end-to-end **CI/CD pipeline** using **GitHub Actions** to automate testing, Docker image creation, and deployment of a Node.js application.
- Configured secure Docker image publishing to **Docker Hub** via repository secrets, enabling seamless integration between Continuous Integration and Deployment workflows.
- Implemented automated deployment to a local **Kubernetes (Minikube)** cluster, achieving rapid and reliable updates through declarative manifests.

DigitECG – Full-Stack ECG Analysis Web Application

- Developed a full-stack web application for ECG analysis, combining **Python** backend for signal preprocessing with **FastAPI**-based APIs and a **React** frontend for interactive visualization.
- Implemented an automated pipeline to digitize paper ECGs using **OpenCV** and extract key waveform features, enabling seamless integration between backend processing and frontend display.
- Designed end-to-end user experience for uploading ECGs, viewing digitized leads, and comparing clinical metrics.

Skills and Certifications

Languages: Java | Python | C++ | JavaScript

Frameworks & Technologies: Git | GitHub Actions | Docker | FastAPI | Node.js | React | MongoDB | Kubernetes | Linux

Relevant Coursework: Data Structures & Algorithms | OOP | DBMS | Operating System

Certifications: The Bits and Bytes of Computer Networking | MATLAB Onramp | Python Essentials

Extracurricular Activities

- Smart India Hackathon 2023 (Internal Finalist):** Contributed to the **backend** for a **movie recommendation system**, qualifying for the internal round at VIT Bhopal.
- Student Coordinator, Cisco Community - VIT Bhopal:** Led hackathons with over **50+ teams** and hosted multiple webinars to enhance developer engagement.
- LeetCode Coding Streaks:** Earned two **100 Days of Code** badges and one **50 Days of Code** badge on **LeetCode** for consistent coding practice and problem solving.