# Khyati Tiwari

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## Education

### VIT Bhopal University

Bhopal, India

B. Tech in Computer Science and Engineering

2022 - 2026

## 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**

## DigitECG – ECG Analysis Web Application

- Designed and implemented an automated pipeline for digitizing paper ECGs using **Python**, with **OpenCV** for image processing and **NumPy/Pandas** for signal preprocessing.
- Developed an API using **FastAPI** and designed algorithms to detect key waveform peaks and extract clinical metrics from voltage-time data, achieving **95% accuracy** on annotated test sets.
- Built a **React**-based web interface for seamless ECG upload and interactive visualization, enabling effective comparison of digitized leads.

#### Crop Watch

- Designed a CNN-based model in **Python**, **TensorFlow** for early plant disease detection, achieving 97% accuracy on 51,000+ images across 37 classes.
- Optimized training using Adam optimizer with data augmentation, improving efficiency by 15%.
- Evaluated generalization with a structured test set and Softmax for interpretable outputs.

#### Skills and Certifications

**Languages**: Java | Python | C++

Frameworks & Technologies: Git | Docker | FastAPI | Node.js | React | MongoDB | TensorFlow

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

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

## Extracurricular Activities

- Internal Hackathon Finalist Smart India Hackathon 2023: Contributed to the backend development of a movie recommendation system, qualifying for the internal round at VIT Bhopal University.
- Student Coordinator, Cisco Community VIT Bhopal: Orchestrated major events, including two hackathons with over 50 team registrations, and hosted several online hackathons and webinars to boost community engagement.
- Design and Content:
  - Creative Lead, Cisco Community: Led the creation of promotional materials including posters, social media posts, stories, and event banners, garnering over 100k+ engagements.
  - Design Team, Editorial Board, VIT Bhopal: Designed monthly newsletters for the Department of Student Welfare.