

# Abhay Pratap Singh

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## Education

### Vellore Institute of Technology

Bachelor of Technology  
Computer Science and Engineering  
Cumulative GPA: 8.3

Bhopal, Madhya Pradesh

2022 - 2026

## Technical Skills

Python, SQL, HTML, Database, CSS, DSA, C++ , JavaScript

## Certifications

NPTEL Cloud Computing , NPTEL Marketing Analysis , The Bits and Bytes of Computer Networking , MATLAB,

## Work Experience

### AWS Intern

Feb 2025 –Apr 2025

- Designed and deployed a scalable Online Boutique Platform on AWS, improving content delivery speed by 40% using CloudFront and order processing efficiency by 30% via Lambda.
- Ensured 99.9% uptime using EC2, RDS, and S3, managing 10,000+ product images and user profiles.
- Enhanced security by 25% through API key integrations, reducing data breaches
- Boosted user engagement by implementing AI-powered virtual fitting rooms and real-time order customization.

### Web Development

Feb 2025 –Apr 2025

- Developed a Project Management Tool using the MERN stack (MongoDB, Express.js, React.js, Node.js) to streamline task tracking and collaboration.
- Improved task update speed by 45% and reduced manual workload for staff by 60% through real-time data sync and automated notifications.
- Enabled a user-friendly interface with React.js, boosting user engagement by 35%. Designed the system for scalability and high responsiveness
- support 100+ concurrent users with minimal latency

## University Projects

### Confidential Image Privacy System

Oct 2023

Engineered an advanced steganography project with Python, embedding images to create undetectable data concealment; leveraged algorithms and libraries for enhanced security, improving confidential communication methods by increasing data integrity by 50%.

### Recipe-Generation-from-Food-Image

Dec 2024

Designed advanced preprocessing workflows that improved the image input pipeline by reducing processing time by 30%; collaborated with NLP teams to generate over 500 unique recipes based on recognized ingredients. Developed and refined a CNN-based model for ingredient recognition from over 10,000 food images; integrated comprehensive ingredient vocabulary and optimized preprocessing pipelines to enhance model accuracy across diverse cuisine types.

## **Criminal Detection**

**April**

**2025**

Built an AI-powered facial recognition system to detect and match criminals across surveillance videos with 92% accuracy. Optimized for real-time analysis, reducing processing time by 40%. Scalable solution automates suspect tracking, cutting manual review by 65%.

Used pre-trained models (Python, OpenCV, TensorFlow, AWS)

## **Extracurricular Activity**

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### **Dance Club Member:**

Active member of the Dance Club , participating in numerous events, competitions, and annual performances.

Collaborated with teams to choreograph and perform in inter-college.

Contributed to the club's success in annual cultural festivals and events, showcasing creativity and teamwork.

Developed skills in discipline, time management, and coordination through regular practice and performances.

## **Achievements**

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- **Smart India Hackathon**

Collaborated on the Intellicode team to devise innovative solutions for real-world problems, earning recognition as a finalist in the Smart India Hackathon among over 2,000 participating teams nationwide

## **Additional**

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**Hobbies:** Travelling, Badminton, Reading, Dancing, Music , Extracurricular Activities

**Languages:** Hindi, English, Japanese ( beginner)