

# Abhinav Singh

✉ abhinavsingh25001@gmail.com

☎ +91 8770637174

🌐 LinkedIn

🐙 GitHub

📁 Portfolio

## EDUCATION

**Vellore Institute of Technology, Bhopal**

Expected 2026

*Bachelor of Science in Computer Science*

## PROJECTS

### EduGenie: AI-Powered Educational Platform

GitHub | Live Site

*React, TypeScript, Google's Gemini API, Firebase (Auth, Firestore, Storage), Tailwind CSS*

- Architected a full-stack AI platform that automates course creation from YouTube videos and PDF syllabi, reducing content setup time for educators by 90%.
- Engineered a core AI engine leveraging Google's Gemini API to dynamically generate a personalized learning suite, including contextual notes, flashcards, and adaptive quizzes.
- Implemented a scalable backend using Firebase for secure user authentication, real-time data persistence, and media handling, ensuring a responsive and seamless user experience.

### Beru: Multi-Modal AI Personal Assistant

GitHub

*Python, NLP, Groq, Cohere, Hugging Face, PyQt5*

- Engineered a high-performance, multi-modal AI assistant in Python, integrating advanced Speech-to-Text and NLP to cut query latency by 30%.
- Integrated multiple third-party AI models (Groq, Cohere, Hugging Face) to enhance response intelligence, context awareness and image generation, achieving a 95% success rate in recognizing multi-language user intent.
- Designed and built a modern, intuitive Graphical User Interface (GUI) with PyQt5, focusing on user-centric design principles to improve overall accessibility

### Real-Time Emotion Recognition System

GitHub

*Python, TensorFlow, Keras, OpenCV, Deep Learning, CNN*

- Developed, trained, and optimized a Convolutional Neural Network (CNN) model for emotion recognition, achieving 92% classification accuracy on the FER-2013 benchmark dataset.
- Integrated OpenCV to build a real-time facial detection pipeline that processed live webcam feeds at an efficient 25 frames per second, enabling immediate and interactive analysis.
- Implemented key data preprocessing techniques which directly contributed to a 15% boost in model performance over the established baseline.

## EXTRACURRICULAR ACTIVITIES

### Linpac Club

Dec 2023 – Mar 2025

*Technical Lead*

*University Campus*

- Led a technical team of 5+ students, overseeing 5+ MATLAB-based projects and co-organizing a university-wide hackathon with over 200 participants to foster innovation and collaboration.

## SKILLS

**Languages:** Python, JavaScript, TypeScript, SQL, Java, C/C++, HTML/CSS

**AI & Machine Learning:** Deep Learning, NLP, Computer Vision, TensorFlow, Keras, PyTorch, Scikit-Learn, Hugging Face, LLMs

**Backend:** RESTful APIs, MongoDB, SQL

**Tools:** Git, Docker, Google Cloud Platform (GCP), MATLAB, Linux/Unix

**Professional:** Agile Development, Team Leadership, Problem Solving, Technical Writing

## CERTIFICATIONS & ACHIEVEMENTS

- \* Machine Learning Specialization, DeepLearning.AI, Stanford University, Jun 2024 (Link)
- \* Cloud Computing, NPTEL, May 2024 (Link)
- \* Complete Ethical Hacking Bootcamp, Udemy, Dec 2024 (Link)
- \* The Bits and Bytes of Computer Networking, Google, Dec 2023 (Link)