VAIBHAV AGARWAL

B.TECH (CSE) STUDENT

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OBJECTIVE

A motivated Computer Science Engineering graduate with a strong foundation in software development, programming, and problem-solving, seeking an entry-level opportunity to design, develop, test, and maintain efficient and scalable software solutions while continuously learning and adapting to new technologies.

PROJECTS

- **AI-Powered Emergency Response & Fall Detection System**
  - Developed a real-time fall detection system using Computer Vision (MediaPipe) based on human pose analysis and trigger alerts based on vertical coordinate movement thresholds (Fall Detection).
  - Integrated voice-based emergency triggers using Speech Recognition for hands-free alerts.
  - Enabled parallel video and audio processing with Python multithreading for low-latency performance.
  - Automated SMS and voice call alerts via Twilio API to emergency contacts.
  - Built a Flask-based live video monitoring system exposed securely through Ngrok.
  - Implemented secure API credential management using environment variables.
  - Tech Stack: Python, OpenCV, MediaPipe, Speech Recognition, Twilio API, Flask, Ngrok, Threading.
- **AICareer Pro – Career Guidance Platform**
  - Built AI-powered career management platform with 8 integrated tools.
  - Implemented career prediction model achieving 92% accuracy.
  - Integrated a local LLM to auto-generate tailored resumes and cover letters with privacy-focused deployment.
  - Designed a voice-enabled mock interview system with real-time AI feedback using Speech-to-Text.
  - Fetched live job market data from 7+ countries via REST APIs.
  - Tech Stack: React, Python, Flask, Three.js, Scikit-learn, NLP, MongoDB
- **Desktop Assistant**
  - Built a Python-based voice-controlled desktop assistant for task automation .
  - Enabled functions: App launch, music playback, web browsing, time queries, Wikipedia search .
  - Used libraries: speech_recognition, pyttsx3, smtplib, web browser.
  - Designed with accessibility in mind, aiding users with physical impairments.
  - Tech Stack: Python, Speech Recognition, Text-to-Speech, Automation.
- **Weather Forecasting App**
  - Built a temperature prediction model using Python and Linear Regression.
  - Preprocessed features like humidity, wind speed, and precipitation for model accuracy.
  - Evaluated performance using R^2 score and visualized predictions with Matplotlib .
  - Developed an interactive front-end using Streamlit for real-time weather.
  - Tech Stack: Python, scikit-learn, Pandas, NumPy, Matplotlib, Streamlit, Jupyter Notebook.

TECHNICAL SKILLS

Python, Java, Basic Data Structures Algorithms, AI/ML, MongoDB, MySQL, Full Stack Development (Frontend, Backend, Database)

CERTIFICATIONS

- Accenture Software Engineering Job Simulation | Jun 25 |
- IBM SkillsBuild: Getting started with AI | Nov 2024 |
- Summer Intern – Python with Machine Learning , Softpro India | Jul–Aug 2025 | Grade: A+

EDUCATION

Shri Ram Murti Smarak College of Engg. & Technology — Bareilly
B.Tech (CSE); SGPA: 7.6 — 2022- Present

Vidya Bhavan Public School — Bareilly
Senior Secondary (Class XII); Percentage: 76.20% — 2021-22

Bishop Conrad Senior Sec. School — Bareilly
Secondary (Class X); Percentage: 71.40% — 2019-20

LANGUAGES

Hindi (Native Proficiency) **English** (Professional Working Proficiency)