Aviruddh Singhal

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Education

Vellore Institute of Technology **Bhopal, India**
B.Tech. in Computer Science Engineering – 9.04 CGPA **[2022 – 2026]**

Technical Skills

Programming Languages and Web Technologies: Python, C, C++, Java, HTML, CSS, Javascript, SQL
Tools and Platforms: Git, GitHub, AWS, MySQL, VS Code, Jupyter Notebook, Google Collab, Streamlit, Gradio,
AI & ML: LLM (OpenAI, Anthropic, LLaMA), RAG, Reinforcement Learning, OpenCV, Scikit-learn

Professional Experience

Intern at AikyamEdge Solutions Pvt Ltd **[Feb – Apr, 2025]**

Role- Full Stack Developer on Project GuavaTrips.com

- Tech Stack: Java (SpringBoot), Next.js, OpenAI GPT(LLM), REST APIs.
- Designed and integrated an LLM-based contextual messaging system that generated personalized and adaptive travel suggestions based on user past and current preferences.
- Enhanced user experience by replacing static hard-coded messages with adaptive, AI-driven responses, delivering personalized and context-aware guidance throughout the travel planning workflow.

Academic Projects

Harvest Hub - AI Driven Agricultural Insights (Python, Flask, React, AWS, ML) **[Jan-Apr,2025]**

- Engineered a user-friendly, full-stack web interface that enabled seamless user interaction with backend AI services for delivering actionable agricultural insights in real time.
- Architected and deployed a scalable platform integrating machine learning and computer vision models for intelligent crop recommendation, yield prediction, and plant disease detection.
- Leveraged 87,000+ high-quality leaf images and soil-weather attributes (NPK, pH, rainfall) to train and optimize models, achieving 92% accuracy in disease detection, 96% in crop recommendation, and 85% in yield prediction.

Facial Recognition Attendance System (Python, OpenCV, Tkinter, Haar Cascade, LBPH) **[Feb-May, 2024]**

- Designed and implemented a real-time desktop application for facial recognition-based student attendance, enhancing operational efficiency and accuracy in academic environments.
- Integrated CSV-based logging for seamless VTOP compatibility and streamlined attendance management.
- Achieved ~75% recognition accuracy using 400 image samples per student, significantly reducing manual effort and time consumption, particularly valuable in managing large classroom sizes.

ASL Translator (Python, TensorFlow, Keras, OpenCV, Teachable Machine) **[Aug- Sep, 2023]**

- Developed a real-time gesture recognition system using CNNs to translate static American Sign Language (ASL) signs captured via webcam into corresponding English alphabets on-screen.
- Built and annotated a 7,800 image dataset (300 per letter) to train a model on 26 ASL signs, boosting accuracy and robustness.
- Attained ~90% classification accuracy, delivering an accessible and impactful communication bridge for the Deaf and hard-of-hearing community through gesture-to-text conversion.

Achievements and Certifications

- **Amazon Machine Learning Summer School (2024):** Selected from 60K+ applicants (3,000 chosen) for a 4-week program on Supervised Learning, Deep Neural Networks, and Generative AI
- **Cloud Computing examination, NPTEL (2024):** Ranked in the top 1% among 23K+ students, demonstrating strong knowledge of cloud concepts including virtualization and service models.
- **AWS Certified Cloud Practitioner (CLF-C02)**: Demonstrated foundational proficiency in AWS cloud services.

Extracurriculars

- Volunteered as part of the Organizing Committee for Advitya ’24, the annual cultural fest at VIT Bhopal, contributing to event planning, coordination, and execution.
- Active member of Microsoft Technical Club and Nature & Trekking Club, engaged in technical and outdoor activities.