Bhushan Songire

CSE Student
VIT Chennai, India

 Bbs1412
 bhushan-songire
 +91-7057007421
 bhushanbsongire@gmail.com

I am passionate about exploring the vast world of technology and learning about the latest advancements in the field of Artificial Intelligence and Machine Learning. With a keen interest in coding and problem-solving, I strive to expand my knowledge and skills to create innovative solutions.

Education

- **Vellore Institute of Technology** *2022 – (2026)*
  Bachelor of Technology in Computer Science **CGPA: 8.85 / 10**
  Relevant Coursework: Data Structures and Algorithms, Python, DBMS, Artificial Intelligence, Machine Learning, AWS.

- **Loknete Dattaji Patil High School** *2021 – 2022*
  Higher Secondary School (12th, HSC) **Percentage: 88.33**

- **Loknete Dattaji Patil Secondary School** *2019 – 2020*
  Secondary School Certificate (10th, SSC) **Percentage: 94.80**

Technical Skills

Expertise: Data Science and Analysis, Data Visualization, Machine & Deep learning, Generative AI, ML for Healthcare, LLMs and Automation.
Languages: Python, C, C++, Java, SQL, HTML/CSS, JavaScript, ReactJS, R, Matlab, Bash.
Developer Tools: VS Code, Anaconda, GPT/LLM/Flask API integrations.
Cloud-Deployment: Google Cloud Platform, Amazon Web Services, Vertex AI Studio, Firebase.
Technologies: GitHub, Docker, Linux, Excel, Raspberry Pi, Arduino.
Frameworks: Pytorch, Numpy, Pandas, Matplotlib, Seaborn, Scikit-learn, Streamlit.
Softskills: Analytical & Problem solving, Management, Teamwork, Leadership, Communication, Creative thinking.

Projects

- **Generative-AI Powered Multilingual Quiz Generator** [Link]:
  ➢ Developed an AI-driven multilingual question generator to create quizzes from text/news articles in any language.
  ➢ Implemented language detection, translation to English using machine translation services.
  ➢ Implemented question generation engine using Gemini API and created Interactive UI using Streamlit.
  ➢ Added features for test scoring, displaying results, and showing answers to enhance user interaction.
  ➢ Demonstrated proficiency in Prompt Engineering, Python, Streamlit, and Generative AI with Gemini.

- **Autonomous Voice Assistant with ChatGPT and Smart Home Integration** [Link]:
  ➢ Created a fully functional voice assistant using python and integrated ChatGPT API for interactions.
  ➢ Deployed it on Raspberry Pi Zero 2 W, enabling it to operate as a standalone, independent voice assistant.
  ➢ Implemented voice input/output, natural language processing, and custom skills like weather forecasting and home automation (light and lock control).
  ➢ Demonstrated technical skills in hardware integration, software development, and AI utilization.

- **Smart Attendance System with Face Recognition** [Link]:
  ➢ Developed a Smart class attendance monitoring system by automating attendance tasks using Python.
  ➢ Trained models for accurate face detection and embedded them in project to achieve precise tracking.
  ➢ Implemented time-tracking features such that the system calculates and marks attendance when students are present for over 75% of the class duration.
  ➢ Further, class attendance sheet is prepared with attendance details and can be exported in any desired format.
  ➢ Demonstrated expertise in Python, leveraging libraries for various requirements, and preparing to deploy on AWS.

- **Comprehensive HVAC Monitoring Solution with Emergency Alerts** [Link]:
  ➢ Developed a comprehensive HVAC monitoring system for real-time and historical air quality data.
  ➢ Utilized various sensors for real time data collection and Raspberry Pi and data processing and local visualization.
  ➢ Implemented robust real time data storage with Firebase and a responsive web interface deployed on Vercel.
  ➢ Added features for low latency operations and emergency alerts.
  ➢ Demonstrated expertise in Python, HTML, CSS, JavaScript, APIs and cloud-to-fog-to-things (IoT) architecture.

Extracurricular

Enactus VIT-C: Contributed to social entrepreneurship projects and initiatives, fostering positive social impact.
Swarajya - Marathi Literary Association: Led the tech department, managing all technical aspects of events. Actively participated in event planning and management, celebrating Marathi culture and cultural events.

Research and Publications

Research Paper on Machine Learning for Ganges River Dolphin Conservation:
Investigated advanced machine learning techniques for predicting water quality to support the conservation of the endangered Ganges River Dolphin. Currently in the process of seeking publication in academic journals.

Certifications

Python | C | C++ | Vertex AI | GenAI | Multi-modal RAG | Google-Cloud-Platform | Enactus | GenAI with Vertex-AI |