

Viresh Mallikarjun Tarapur

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SUMMARY

Software Developer with hands-on experience in building backend APIs, data processing pipelines, and machine learning-based applications using Python and Flask. Experienced in SQL integration, scalable API development, and deploying Python-based solutions for real-world problems.

SKILLS

- **Programming Languages:** Python, SQL, Assembly
- **Backend Development:** Flask, REST APIs, MVC Architecture, Authentication Systems
- **Machine Learning:** TensorFlow, Scikit-learn, CNN, Model Training, Model Evaluation
- **Data Processing:** NumPy, Pandas, Data Cleaning, Data Preprocessing
- **Databases:** MySQL, Firebase
- **Tools:** GitHub, VS Code, Jupyter Notebook, Google Colab
- **Soft Skills:** Problem Solving, Team Collaboration, Time Management

EDUCATION

B.Tech in Electronics and Communication Engineering 2022 – 2026
Presidency University, Bengaluru

PROJECTS

File Encryption and Secure Storage System

- Developed a Python-based secure file storage system handling 100+ encrypted files with secure authentication workflow.
- Designed backend encryption and decryption logic ensuring data confidentiality and integrity.
- Implemented file handling APIs to upload, encrypt, decrypt, and retrieve documents securely.
- Improved data security by preventing unauthorized access through controlled authentication mechanisms.

LogicPro – AI Chrome Extension

- Built an AI-powered Chrome extension integrating Python backend APIs for screenshot analysis.
- Designed and deployed REST APIs using Flask to process images and generate structured logic explanations.
- Integrated AI models to deliver step-by-step reasoning with optimized response workflow.
- Implemented end-to-end system architecture from frontend UI to backend processing engine.

Smart Agriculture System

- Developed an IoT and machine learning-based system integrating real-time sensor data and a Convolutional Neural Network (CNN) for leaf disease detection.
- Built and trained the CNN model achieving 90%+ classification accuracy for crop disease identification.
- Designed data processing pipeline to analyze soil moisture, temperature, and environmental parameters.
- Built backend system to generate intelligent alerts and AI-based treatment recommendations for farmers.

ACHIEVEMENTS

SMVIT Hackathon – Developed Waste to Wonder AI, a Python-based machine learning solution to generate eco-friendly product ideas from waste datasets.

Innovex 3.0 – Built Elderly Person Monitoring System using machine learning and sensor data for abnormal condition detection.

Top 3 Project – Smart Road Divider .Designed and implemented an Arduino-based automated traffic divider system to dynamically control vehicle flow and reduce congestion, improving road safety and efficiency.

Top 4 Project – Waste Classification System using Raspberry Pi and Python .Developed a real-time waste segregation system integrating sensors and Python-based processing to classify waste categories efficiently.

CERTIFICATIONS

[Python 101 for Data Science – IBM](#)

[Introduction to Machine Learning – Microsoft](#)

[Train and Evaluate Deep Learning Models – Microsoft](#)