Swarom Firagannavar

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PROFESSIONAL SUMMARY

Final-year Computer Science Engineering student with demonstrated experience in machine learning, full-stack development, and API-driven systems. Proficient in Python, JavaScript, TensorFlow, and Java, with a strong foundation in Data Structures, OOP, and backend development. Passionate about building scalable, intelligent systems and seeking software engineering or machine learning internship opportunities to deliver meaningful impact within a dynamic engineering team.

SKILLS

Languages: Python, Java, JavaScript

Web: HTML, CSS

Frameworks/Libraries: FastAPI, TensorFlow, Keras

AI/ML: CNN, Transfer Learning (MobileNetV2), LLM Integration, Grad-CAM (Explainable AI)

Databases: MySQL, MongoDB, Firebase (Firestore)

Tools & Platforms: Git, GitHub, Postman, REST APIs

Core CS: Data Structures, OOP, DBMS fundamentals

PROJECTS

FOLIAGE CARE: AI PLANT PATHOLOGIST

- Technologies: JavaScript, Python, TensorFlow/Keras, FastAPI, Gemini API, Grad-CAM, Firebase
- Engineered **MobileNetV2** (2.4M params, 9.25MB) via transfer learning on **14,500+ images**, achieving **99.27% accuracy** across 38 disease categories (22 diseases, 6 crop types); reduced training time **60%** with early stopping in **16 epochs / <3% loss**
- Built FastAPI backend serving disease predictions with ~500ms inference time, integrating real-time weather data APIs for environmental context
- Designed multi-modal system combining CNN predictions with weather metrics to generate contextual treatment recommendations via LLM integration.
- Enhanced model transparency by integrating Grad-CAM segmentation to highlight infected regions directly on the user dashboard.

TERM-TRACK SYSTEM

- Technologies used: Java, SQL, HTML/CSS, JavaScript
- Built an interactive course catalog with real-time search and multi-filter support (category, difficulty, duration), allowing students to quickly find and save relevant courses via a personalized bookmark system.
- Built backend modules and optimized database operations to improve data processing, validation, and reliability.
- The system auto-generates Term Grant Slips for eligible students and updates their approval status.
- Registered Copyright (L-150404/2024) for Algorithm Design

CAB BOOKING SYSTEM

- Technologies used: HTML5, CSS, JavaScript.
- Developed a web-based cab booking interface with fare estimation based on distance, demand, and time-of-day.
- Implemented a basic login/register system with client-side validation and session handling.
- Designed interactive features including pickup/drop selection, ride history view, and simulated driver assignment based on proximity logic.

EDUCATION

MIT ADT University, Pune
B.Tech CSE (Pursuing) – 7.78 CGPA | 2026

The Lexicon International School, Pune
12th – First class | 2022

The Lexicon International School, Pune
10th – First class with distinction | 2020

CERTIFICATES

- Cisco Networking Basics
- HTML, CSS & JS for Web Developers (Coursera)
- Relational Database Design (Coursera)
- Fundamentals Of GIT(Coursera)
- AWS Academy Graduate - AWS Academy Cloud Foundations

LANGUAGES

- Hindi
- Marathi
- English
- Spanish- Beginner

HOBBIES

- Football
- Music