

SANJAY K

GENERATIVE AI ENGINEER | AI SOFTWARE ENGINEER | FULL STACK DEVELOPER

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SUMMARY

I am a B.Sc. in Data Science graduate from The American College, Madurai with experience in machine learning, data analysis, full-stack web development, and AI integration. I have built end-to-end projects using Python, TypeScript, React, Expo React Native, Supabase, Firebase and SQLite, including machine learning solutions for PCB defect detection and EV forecasting. My interests include IoT, Local LLMs, and Linux.

TECHNICAL SKILLS

Language : Python, TypeScript, SQL

Framework : React, Expo React Native, Fast API

Tools : Git, LMStudio, Docker

PROJECTS

Electric Vehicle Forecast (Python, Streamlit)

- Developed a hybrid ARIMA + Random Forest model to forecast EV sales, shares, charging infrastructures.
- Created an interactive Streamlit dashboard to visualize trends, supporting data-driven decision-making.

Printed Circuit Board (PCB) Defect Detection System (Python)

- Developed a PCB defect detection system using computer vision and deep learning models, including YOLOv5 and Faster R-CNN, on 693 annotated PCB images, achieving over 90% mAP.
- Built a Tkinter-based desktop interface for running inference and visualizing detection results.

EDUCATION

Bachelor of Science in Data Science

The American College, Madurai

2023 - 2026

CGPA: 8.4 / 10

Higher Secondary School

Don Bosco Higher Secondary School, Madurai

2022 - 2023

Percentage: 70.83 %

CERTIFICATIONS AND LANGUAGES

Languages: English, Tamil

Certifications:

1. Python and SQL for Data Science – Scalar
2. Getting Started with Data Analytics on AWS - Coursera
3. Introduction to MongoDB for Students - MongoDB