

Manosakthi Thiyagarajan

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LinkedIn — GitHub — LeetCode — Portfolio

12/190 Sree Selva Ganapathi Nagar, Makkinampatti, Pollachi, 642003

Education

B.Tech in Artificial Intelligence & Data Science

P.A. College of Engineering and Technology, Pollachi

GPA: 8.8 — June 2022 - April 2026

Skills

Programming:	Python,C, Java, MySQL,MongoDb, HTML, CSS, React Js ,Javascript
Machine Learning:	TensorFlow, CNN, LSTM, NLP,Pytorch
Tools:	Data Visualization, API Integration, Flask, AR/VR ,Unity Engine
Soft Skills:	Leadership, Agile Development, Problem-Solving,Vibe Coding

Work Experience

Robotics and AI Intern – iHub School of Learning, Coimbatore April 2025 – May 2025

- Worked on integrating sensor data for robotic control systems using Python.
- Assisted in developing AI algorithms for object detection and obstacle avoidance.
- Simulated robotic movements and path planning using ROS (Robot Operating System).
- Contributed to training and testing deep learning models for robotic vision tasks.
- Worked as a freelancer, contributing to the organization and coordination of events, workshops, and seminars.

Data Science Intern – Neha Solutions, Pollachi

June 2024 – July 2024

- Developed Python-based data pipelines for data cleaning and analysis.
- Applied machine learning algorithms for predictive modeling.
- Created data visualizations using Matplotlib and Seaborn.
- Optimized SQL queries for improved database performance.

Machine Learning Intern – Live Stream Technologies, Coimbatore Oct 2024 – Nov 2024

- Developed and trained machine learning models for predictive analytics.
- Applied CNN and LSTM algorithms for image and time-series data processing.
- Improved model accuracy by fine-tuning hyperparameters and optimizing data pipelines.
- Implemented NLP-based solutions for text analysis.

Projects

- **Sign Language Detection using CNN** — Implemented a CNN-based real-time gesture recognition system for accurate sign language interpretation.
- **AI Learning App for Deaf and Mute** — Developed an AI-powered educational platform enabling sign-based learning and interaction.
- **Three-Stage Anti-Spoofing Detection System** — Developed a robust multi-stage pipeline for detecting spoofing attacks using image analysis, feature extraction, and classification techniques to enhance security.
- **Plant Disease Detection using EfficientNetV2-M and HSV** — Built an advanced plant disease detection model leveraging EfficientNetV2-M and HSV color space analysis for improved accuracy in identifying crop diseases.

- **Hybrid Encryption System using SHA-256, RSA, and Neural Networks** — Designed a secure encryption and decryption framework combining SHA-256 hashing, RSA cryptography, and neural network-based optimization for enhanced data security.
- **Retinoblastoma Detection using Deep Learning** — Applied 3-layer image preprocessing and trained an EfficientNet-based CNN for accurate retinal image classification.
- **AI MCQ Generator** — Built an automated MCQ generation system using Transformer-based NLP models.
- **Notes App for Free-Form Writing** — Developed a React Native and Flask-based notes app using Phi-3 via Ollama for local LLM inference and knowledge graph generation.
- **Expense App** — Built a mobile expense tracker using LLaMA-2 (Ollama) for SMS transaction extraction with analytics and manual data entry.
- **Bird Detection and Tracking** — Implemented YOLO-based bird detection and direction tracking with EfficientNet-based species classification.
- **Stock Prediction with LSTM** — Developed an LSTM-based time-series model for stock price forecasting.
- **3D Shirt Mockup & Template Designer** — Created an interactive 3D garment configurator with design customization and demand forecasting.
- **Certificate & Email Automation** — Automated bulk certificate generation and email distribution using Python.
- **Bulk WhatsApp Sender** — Developed an automation tool for sending bulk WhatsApp messages with media support.
- **HealthHubAI** — Built an AI-driven fitness platform providing workout and diet recommendations.
- **Flower Shop Manager** — Developed a Flask-based shop management system for inventory and order handling.
- **News Webpage** — Implemented a real-time news scraping and display system using Flask.
- **Expense Tracker Webpage** — Built a web-based expense analysis platform using Flask and MongoDB.
- **WhatsApp Auto Messenger** — Implemented a scheduled WhatsApp messaging automation tool using Python.
- **Stock Info Page** — Developed a live stock market dashboard using Flask APIs.

Leadership & Responsibilities

- Secretary, Association of Artificial Intelligence & Data Science (July 2024 – April 2026)
- Additional Secretary, Association of Science and Humanities(July 2022 - May 2023)
- Executive Member, Association of Computer Science & Engineering (June 2023 - May 2024)
- Executive Member, ISTE (August 2023)
- Executive Member, Entrepreneur Development Cell (June 2022)

Certifications

Feb 2025	Introduction to Data Science – Cisco Networking Academy
Apr 2023	Python (Basic) – HackerRank
Jan 2025	Winter Coding Challenge – GeeksForGeeks
Feb 2024	Workshop on Data Visualization with Python – LetsUpgrade
Oct 2023	Python – GUVI
Oct 2023	SQL and Relational Database – Cognitive Class.AI
Nov 2023	Basics of Python – Infosys Springboard
Dec 2024	Master MongoDB for Python – GUVI
June 2024	Master Data Management for Beginners – TCS iON
June 2024	Python Essentials – Cisco Networking Academy

Achievements & Awards

- 1st Prize in Paper Presentation, KPR Institute of Engineering (Nov 2022)
- Finalist in YESIST12, IEEE Tunisia Section (Sep 2024)
- Finalist in Hackathon Hackfest 2.0, CMR College of Engineering and Technology (Feb 2025)
- Finalist in Hackathon H! Hacks 2.0, Anna University (Feb 2025)
- Secured Top 16 in Hackathon Code Fusion 2.0, University Institute of Engineering, Chandigarh (Jan 2025)
- Secured Top 22 in Neural Nexus'24 - AI/ML Hackathon, Vijaybhoomi University (Dec 2024)
- Secured Top 20 in Convolve 3.0: A Pan IIT AI/ML Hackathon, IIT Guwahati (Dec 2024)
- 3rd Prize in Paper Presentation, Pollachi Institute of Engineering (April 2023)
- Finalist in Quiz Prometeo'25, IIT Jodhpur (Jan 2025)