

MABITHA M

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PROFILE SUMMARY

AI& Machine Learning undergraduate with hands-on experience developing end-to-end AI solutions in Computer Vision, Retrieval-Augmented Generation (RAG), and Agentic AI. Skilled in Python, OpenCV, FastAPI, Docker, and AWS EC2, with experience deploying machine learning applications to the cloud. Passionate about building scalable AI systems and seeking opportunities as a Machine Learning Engineer or AI Engineer.

EDUCATION

Sri Shakthi Institute of Engineering and Technology 2023 - 2027

B.Tech, Artificial Intelligence and Machine Learning — CGPA: 8.29

Sri Vaiyapuri Vidyalaya Matric Higher Secondary School 2022 - 2023

Percentage: 83.8%

SKILLS

- Programming Languages: Python, SQL
- Machine Learning: Computer Vision, RAG, NLP, MLOps, LLMs, Agentic AI
- Frameworks: OpenCV, Keras, YOLO, PyTorch
- Tools & Platforms: GitHub, Docker, AWS EC2, FastAPI

AREAS OF INTEREST

Machine Learning

Software Development

PROJECTS

Worker Safety Prediction System

Tech Stack: Python, Pandas, PyTorch, NumPy, YOLOv8, OpenCV, Docker, AWS EC2

- Developed an AI-powered worker safety system that detects PPE compliance and safety violations in real time using computer vision.
- Trained and deployed a YOLOv8 object detection model, containerized with Docker, and hosted on AWS EC2 for scalable real-time inference.

YouTube Course Mentor

Tech Stack: FastAPI, ChromaDB, Sentence Transformers, Gemini API

- Designed and developed a RAG-based educational assistant that converts YouTube lectures into a searchable knowledge base.
- Delivered context-aware answers through semantic retrieval and LLM integration, exposed via a FastAPI backend.

Sign Language Based Virtual ATM Machine

Tech Stack: Python, OpenCV, Keras, MediaPipe

- Developed a sign language-based virtual ATM system using webcam input and a deep learning model for accurate hand gesture recognition.
- Enabled secure, contactless transaction handling for users through real-time gesture-to-command translation.

PUBLICATION

Sign Language Based Virtual ATM Machine

Published in International Journal of All Research Education and Scientific Methods (IJARESM), Volume 13, Issue 5, May 2025. ISSN: 2455-6211

CERTIFICATIONS

- Introduction to Machine Learning — LinkedIn Learning (Aug 2025) Data Analyst — LinkedIn Learning & Microsoft (Aug 2025)
- AI for Beginners — HP LIFE (Sep 2026)
- SQL (Basic & Intermediate) — HackerRank (Mar 2026)

ACHIEVEMENTS

- Secured Winner position in Code Debugging (Technical Event) at Synapse 2K26, conducted by SNS College of Engineering (Feb 2026).