

Aman Amitabh

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EDUCATION

Vellore Institute of Technology

Bachelor of Technology in Computer Science Engineering specializing in Internet of Things
CGPA: 9.07

Vellore, Tamil Nadu

Aug. 2023 – July 2027

Mayoor Private School

CBSE Class XII (Science Stream)
10th Percentage: 90.8% / 12th Percentage: 91.6%

Abu Dhabi, U.A.E

Apr. 2017 – May 2023

HONORS & AWARDS

- **Runner-Up, aiTopia Hackathon, Vellore Institute of Technology (Feb. 2025)**
Awarded for developing 'SpotFinder,' an AI-powered smart parking system, during a two-day hackathon
- **Runner-Up, Source Sprint at graVITas '23 International Festival, Vellore Institute of Technology (Sep. 2023)**
Excelled in a competitive event focused on resolving open-source repository issues.
- **Best Position Paper, Sonorous Youth Model United Nations (Sep. 2021)**
Awarded as the Delegate of Norway in the United Nations General Assembly - First Committee.

PROJECTS

SpotFinder | Python · YOLOv8 · IoT · MySQL

Runner-up, aiTopia - Hackathon (Feb. 2025)

- Led the development of an IoT-based smart parking system using Python and YOLOv8 for real-time detection of available parking spots
- Implemented an MQTT-based telemetry pipeline to stream occupancy and GPS data from simulated edge devices to a central server
- Developed a web dashboard with MySQL backend to visualize real-time occupancy and usage analytics

Query2Kart | Python Flask · SERP API · Azure AI Foundry (GPT-4o-mini)

(Jul. 2025 - Present)

- Engineered a multi-turn conversational product recommendation engine, leveraging GPT-4o-mini on Azure AI Foundry to interpret natural language and maintain context
- Implemented LLM parsing to convert user queries into structured JSON for intent classification, enabling efficient SerpAPI based product retrieval, and filtering while reducing redundant API calls
- Built a Flask-based web application to serve a dynamic interface for product search and recommendations, integrating LLM outputs into a user-friendly frontend.

PiHome | Python · OpenCV · Raspberry Pi · MediaPipe Hands · REST APIs · TensorFlow

(Apr. 2025)

- Developed an end-to-end gesture-based home automation system, integrating a Raspberry Pi client with a server-side deep learning model
- Implemented a lightweight TensorFlow Lite model on a Flask server for high-speed gesture classification
- Configured the Raspberry Pi to trigger hardware actuators from API responses, enabling seamless real time IoT automation

TECHNICAL SKILLS & CERTIFICATIONS

Core Competencies: Data Structures & Algorithms, Object Oriented Programming (OOP), Problem Solving

Languages: Java, Python, C/C++, HTML/CSS

Databases: MySQL, PostgreSQL

Frameworks: Flask

Data Science & Visualization: Pandas, NumPy, Matplotlib, Seaborn

Computer Vision & ML: Scikit-learn, OpenCV, TensorFlow

Developer Tools: Git, Docker, Microsoft Azure, VS Code, Jupyter Notebook, Postman, Linux Shell

Certifications: Microsoft Certified: Azure AI Engineer Associate