Aman Amitabh

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EDUCATION

Vellore Institute of Technology   **Vellore, Tamil Nadu, India**
Bachelor of Technology in Computer Science Engineering specializing in Internet of Things   *Aug 2023 – July 2027*
CGPA: 9.01

Mayoor Private School   **Abu Dhabi, U.A.E**
CBSE Class XII (Science Stream)   *Apr 2021 – May 2023*
10th Percentage: 90.8% | 12th Percentage: 91.6%

SUMMARY

Computer Science student with experience building end-to-end ML and cloud-backed systems integrating IoT devices and scalable backend infrastructure. Skilled in real-time data pipelines, system design, and deploying AI-driven applications. Demonstrated leadership through technical projects and hackathons. Outside academics, an aviation enthusiast interested in complex engineered systems and an active football player who values teamwork and competitive performance.

HONORS & AWARDS

- Achieved the Runner-Up position at SourceSprint, an open-source coding competition, recognized for technical excellence and problem solving.
- Won the Best Position Paper Award at Sonorous Youth Model United Nations conference as the Delegate of Norway in the UN General Assembly First Committee (DISEC) on the agenda Nuclear Non-Proliferation and Disarmament.
- Led a team to the Runner-Up position at aiTopia Hackathon, developing IoT and AI driven solutions aligned with the Sustainable Development Goals (SDGs).

EXPERIENCE

Advanced Developers Group VIT   **Vellore, Tamil Nadu, India**
Machine Learning Lead   *Jul 2024 – Present*
- Built an Indian Monument Image Classification model by fine-tuning EfficientNetV2 using transfer learning, achieving 99.69% accuracy.
- Organized a hackathon and delivered a hands-on technical workshop on transfer learning and API based inference.
- Acted as Lead Organizer and Technical Speaker for a Version Control (Git/GitHub) workshop and a GitHub bounty hunting event, managing event planning, task coordination and timelines while delivering the core technical sessions.

PROJECTS

SpotFinder | *Python, YOLOv8, IoT, AWS RDS (PostgreSQL)*   *Runner-Up, aiTopia Hackathon (Feb 2025)*
- Led the development of an IoT-based smart parking system using YOLOv8 to detect parking spot occupancy edge-captured images.
- Implemented an MQTT-based edge to cloud pipeline for centralized inference and real-time occupancy updates.
- Architected an AWS RDS (PostgreSQL) backend and developed a monitoring dashboard to store detection events and enable live occupancy tracking.

PiHome | *Python, OpenCV, IoT, MediaPipe Hands, TensorFlow*   *(Apr 2025)*
- Built a gesture-controlled home automation system with a Raspberry Pi client and a Flask-based backend to offload heavy image for centralized image processing.
- Designed an HTTP-based client-server pipeline to transmit frames for hand landmark extraction using MediaPipe Hands and gesture classification using a TensorFlow Lite model.
- Mapped gesture classification outputs to GPIO commands on Raspberry Pi for real-time touchless appliance control.

SKILLS

Programming Languages: Python, Java, C, C++, HTML, CSS
Developer Tools: Git, Docker, Jupyter Notebook, Postman, VS Code
Databases: MySQL, PostgreSQL
Cloud: Microsoft Azure, AWS
AI & Machine Learning: NumPy, Pandas, Scikit-learn, TensorFlow, YOLOv8, MediaPipe, Generative AI
Core Competencies: Data Structures and Algorithms, Object Oriented Programming

CERTIFICATIONS

Microsoft Certified: Azure AI Engineer Associate   *(Credential ID: A82948D68646835F)*