Maneesh V

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EDUCATION

St. Joseph's College of Engineering, Chennai
B.Tech – Artificial Intelligence and Machine Learning

May 2022 – Current
CGPA: 8.40

WORK EXPERIENCE

Computer Vision Engineer (Intern) – MacV AI
Stipend-based Internship

June 2025 – Present

- Developed and deployed scalable **real-time computer vision services** for safety analytics and event detection using **Mediamtx**, **RTSP**, **DeepStream** and **FastAPI**.
- Designed and integrated a custom **Model Context Protocol (MCP)** backend enabling cross-application model access through a unified API layer.
- Containerized and deployed pipelines on **Azure Container Registry (ACR)** and **Azure Function Apps**, supporting automatic scaling and resilience.
- Built and managed **CI/CD pipelines** using GitHub Actions and Azure DevOps for continuous deployment of AI models and APIs.
- Optimized inference latency through **model quantization, ONNX conversion**, and **edge deployment strategies** for analytics.
- Assigned in system migration to **AWS** infrastructure, ensuring data consistency, efficient storage, and minimal downtime for Future Upscaling.
- Collaborated with the backend and AI teams to design **modular microservices** for incident tracking, escalation, and video analytics management.

Research Intern – IIITDM Chennai
VLSI Principles and Chip Design

May 2024 – July 2024

- Tested and analyzed **chip layouts and circuit designs**, evaluating their physical and performance characteristics.
- Developed **machine learning models** to predict chip performance outcomes from design parameters.
- Enhanced design automation workflows to improve accuracy and optimization in **VLSI architectures**.
- Collaborated with faculty and research teams to integrate predictive analytics into chip testing.

PROJECTS

The EYE
GitHub

- Developed a modular **AIoT-based drone–camera system** enabling multipurpose deployment and swarm collaboration.
- Integrated **Linux-based embedded systems** with AI pipelines for real-time inference and analytics(with 87% accuracy).
- Implemented **YOLO-based deep learning models** for accurate person detection and situational awareness.
- **Impact:** Enhances disaster rescue, environmental monitoring, and public safety through rapid situational response.

Haveloc Automation Bot (Open Source)
GitHub-On Going

- Building an **agentic automation system** that autonomously applies for internships and jobs using **Selenium**, **RAG**, and **Generative AI**.
- Implementing a **Retrieval-Augmented Generation (RAG)** pipeline indexing resumes, transcripts, and project data to generate consistent and tailored form responses.
- Employing **self-healing Selenium locators**, reflection-based retries, and visual fallbacks for robust web automation that is **resiliant to CAPTCHA**.
- Incorporating **compliance guardrails** (rate limits, audit logs, consent prompts) ensuring responsible and transparent automation.
- **Impact:** Automates repetitive job application workflows for students, so they **never miss another Job Posting** ever.

TECHNICAL SKILLS

Programming: Python, Java, C

Frameworks & Libraries: TensorFlow, PyTorch, Keras, scikit-learn, OpenCV, Pandas, NumPy, Matplotlib, Seaborn, FastAPI, NLTK, SpaCy, Hugging Face

Tools & Platforms: Git, GitHub, Docker, Anaconda, Linux, Azure, MCP's, RAG's

Cloud & DevOps: CI/CD Pipelines, Azure DevOps, Azure Function Apps, Azure Container Instances, Azure App Services, GitHub Actions

Databases: MySQL, PostgreSQL, Firebase, Vector Databases, **Alembic Migrations**

Specialized Areas: Edge AI, Computer Vision, NLP, Model Deployment, AIoT, MLOps, Web Services