

# ASHVIN MANOJ

## PG STUDENT

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### CAREER OBJECTIVES

A results-oriented AI/ML Engineer with a strong foundation in deep learning, NLP, and computer vision. Eager to leverage hands-on experience in developing and deploying scalable machine learning solutions to solve complex business problems and drive innovation.

### TECHNICAL SKILLS

**Languages & Databases:** Python, C++, C, SQL, R

**AI/ML Frameworks:** TensorFlow, PyTorch, Scikit-learn, Transformers, Pandas, NumPy

**Tools & Platforms:** ROS, Arduino, Git, Streamlit, Flask, MATLAB, Linux

### EDUCATION

**MTech in Computer Science and Engineering(AI/ML)** | Rajagiri School of Engineering and Technology  
CGPA - 9.49 (Aug 2024 - Present)

**BTech (Honours) in Robotics and Automation** | Adi Shankara Institute of Engineering and Technology  
CGPA - 9.54 (Oct 2020 - Jun 2024)

### PROFESSIONAL EXPERIENCE

**Data Science Intern, Mastermine Technologies**

**Aug 2025 - Present**

Engineering a full-stack desktop application for photographers using Java, React.js, and Electron.js to streamline album generation workflows. Designing a multi-agent LLM framework to automate data analysis and generate deep "what" and "why" insights from structured data.

**Hardware Systems Intern, Sunlux Technovations**

**Feb 2024 - April 2024**

Developed and debugged microprocessor programs in Assembly for industrial automation systems, contributing to a 15% improvement in process efficiency. Collaborated with a team of engineers to design and implement real-world embedded solutions for clients in the manufacturing sector.

### PROJECTS

**Multilingual News Audio Translator**

Developed a full-stack audio translation app using Wav2Vec 2.0 for speech recognition (92% accuracy) and an mBART model, fine-tuned with reinforcement learning for fluent translation.

**PDF Query Application**

Developed a scalable, voice-enabled PDF query system using NLP and Streamlit, transforming static documents into conversational hubs and reducing information retrieval time by over 89%.

**Automatic Weed Detection and Spraying Robot**

Revolutionizing precision agriculture with an AI-powered weed detection robot using ROS and a custom hybrid EfficientNetV2 - Transformer models (97% Accuracy) for an eco-friendly herbicide application.

### PUBLICATIONS

- S. Krishnan, M. Karuppasamypanthiyan, and A. Manoj, "A Hybrid Transformer Model Approach for Precision Weed Detection," in 2025 4th International Conference on Advances in Computing, Communication, Embedded and Secure Systems (ACCESS), Ernakulam, India, 2025, pp. 1-7, doi: 10.1109/ACCESS65134.2025.11135583.

### ADDITIONAL INFORMATION

- Certifications:** NPTEL (Python & DSA), Infosys (Prompt Engineering), Coursera (Google Data Analytics, Intro to GenAI, GenAI for UX Designers)
- Soft Skills:** Communication, Critical and Creative Thinking, Time Management
- Languages:** English, Malayalam, Tamil, Hindi.