

# Sowmithri Sriram

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## Personal Profile

Analytical AI/ML Engineer and Postgraduate student at the University of Hertfordshire specializing in Artificial Intelligence and Robotics. Proven expertise in open-source development with 2,000+ commits to global repositories. Highly skilled in Computer Vision for human-robot interaction, RAG architectures, and Neural Networks. Seeking specialist opportunities (Full-Time/Part-Time) to apply advanced robotics and autonomous systems knowledge within the UK tech sector.

## Education

### University of Hertfordshire

*MSc Artificial Intelligence and Robotics*

**Hatfield, UK**

2026 – 2028

- Focused Research: Autonomous Systems, Human-Robot Interaction, and Robot Kinematics.
- Developing intelligent systems for real-time object manipulation and environmental perception.

### Sreyas Institute of Engineering and Technology

*B.Tech in Computer Science (AI & ML), GPA: 7.0/10*

**Hyderabad, India**

2021 – 2025

- Specialized in Deep Learning, Computer Vision, and Natural Language Processing.

## Technical Skills

**Robotics & CV:** ROS2, Gazebo, Mediapipe, OpenCV, SLAM, Path Planning, Kinematics, PyBullet.

**AI & NLP:** RAG (Retrieval-Augmented Generation), LangChain, OpenAI API, Neural Networks, PyTorch, TensorFlow, CNNs, Transformers.

**Languages:** Python (Expert), Java, C++, Dart, SQL, TypeScript.

**Development:** Linux (Ubuntu), Docker, Git, CI/CD, Streamlit, FastAPI, Vector Databases (Pinecone/Milvus).

## Professional Experience

### GitHub & Global Projects

*Open Source Contributor*

**Remote**

Jan 2021 – Present

- Contributed 2,000+ commits to SymPy, Tinygrad, and GPT-Researcher.
- Optimized backend logic and fixed complex performance bottlenecks in large-scale AI repositories.
- Collaborated with global maintainers to enhance automation scripts and documentation.

## Technical Projects

### Lead Developer

*Two-Hand Object Control via Computer Vision*

2024

- Developed a real-time gesture recognition system using OpenCV and Mediapipe for dual-hand object manipulation.
- Integrated custom kinematics logic to map hand coordinates to 3D virtual object scaling and rotation.

### Lead Developer

*AI PDF Chatbot (RAG System)*

2024

- Built an end-to-end RAG pipeline using **LangChain** and **Vector Databases** to query complex documents.
- Implemented semantic search and context-aware response generation using GPT-4 APIs.

### **Lead Developer**

*NeuroHabit – AI Habit Assistant*

2024

- Developed a personalized habit-tracking platform with AI-generated mood analysis and journaling prompts.
- Deployed via **Streamlit** for seamless user interaction and real-time data visualization.

### **Publications & Achievements**

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- Publication: Next Gen Secure Communication for Dynamic Visual Applications (2024).
- Publication: Real-Time Image Animation for Dynamic Visual Applications (2024).
- Woxsen Hackathon Winner (2024): Developed AI solutions in a high-pressure, 24-hour environment.
- Mentorship: Trained 150+ students in industry-standard Git and GitHub workflows.