Jayadeep Gowda

AI & ML Developer | Robotics | Full-Stack Engineer

📞 +91 8310491224 | ✉ jayadeepgowda24@gmail.com | 🔗 LinkedIn | GitHub | 🌐 Website

Education

Bangalore Institute of Technology   Bangalore, Karnataka
Bachelor of Engineering in Robotics and Artificial Intelligence   *2023 – 2027*
- CGPA: **8.8 / 10** (Current)

Technical Skills

- **Languages & Core Tools:** Python, C++, JavaScript, TypeScript, SQL, Git, Docker
- **AI / ML Systems:** LLMs, RAG pipelines, embeddings, vector search (FAISS), NLP, real-time computer vision, model quantization, on-device inference
- **Software & Backend Engineering:** Data Structures & Algorithms, FastAPI, REST APIs, event-driven architectures, asynchronous systems, low-latency pipeline design
- **Robotics & Edge AI:** Embedded systems, sensor integration, hardware–software co-design, inverse kinematics, gait control, real-time control loops
- **Frameworks & Platforms:** LangChain, Ollama, ONNX Runtime, TensorFlow Lite

Experience

Sirena AI Systems Pvt Ltd   Bangalore, India
R&D Intern – Edge AI Systems & Robotics   *Jan 2026 – Feb 2026*
- Architected **MEMO**, a commercialization-intent AI Robot system running **6+ concurrent perception, LLM pipelines** on ARM hardware using an asynchronous execution engine.
- Maintained **20–25 FPS inference** at ~600ms latency; achieved **2–3× acceleration** via INT8 quantization and workload-aware scheduling, validated through **12-hour stress testing (98%+ uptime)**.
- Worked on **Nino humanoid** and **Twist quadruped**, implementing inverse kinematics, gait state machines, and simulation-based balance analysis.

Frillory Design House   Bangalore, India
Digital Content Creator Intern   *Jun 2025 – Aug 2025*
- Optimized technical workflows, improving publishing consistency by **30%**.
- Reduced manual processing overhead by **25%** through tooling and layout automation.

Projects

MEMO – Commercial-Intent Multimodal Edge AI Robot   GitHub Link
- Built a unified real-time framework integrating YOLOv8n INT8, pose tracking, FaceNet, MediaPipe gesture/gaze, MiDaS depth, wake-word detection, streaming ASR, and LLM reasoning.
- Designed asynchronous perception–cognition–actuation pipelines with hardware isolation for multimodal execution.
- Implemented persistent conversational memory (SQLite + RAG) enabling long-running interaction on edge hardware.

Cognis | *FastAPI, LLM Systems, FAISS, Vector Search*   GitHub Link
- Architected a memory-augmented LLM system to detect recurring reasoning failures across sessions.
- Designed a temporal pattern-scoring algorithm, driving a **40–60% reduction** in unproductive queries.
- Deployed a local-first service achieving **sub-200ms retrieval latency** using local LLMs.

YOLO Mart | *Robotics, Embedded AI, ESP32-CAM*   GitHub Link
- Designed an ESP32-based autonomous smart cart with on-device computer vision for real-time tracking.
- Achieved **20 FPS real-time inference** using optimized lightweight vision models.
- Integrated hardware with a full-stack retail platform for seamless user interaction.

Achievements & Leadership

- **Runner-Up** — GlitchVerse 2k25 Project Expo (AI & Robotics focus)
- **National Finalist** — Anveshana (National-Level Project & Research Competition)
- **Core Organizer** — Ideathon 2025; led planning and execution for a large-scale technical event