Chetan Kamatagi

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SUMMARY

B.E. graduate in Automation & Robotics with 1.5 years of industry experience at Tata Electronics. Passionate about Generative AI and software development, with practical expertise in Python, LangChain, and API integration. Proficient in building RAG pipelines, deploying AI models on edge devices, and developing automation scripts. Seeking a role as a Software or AI Engineer to apply technical expertise and industrial discipline to build innovative solutions.

SKILLS

Core RAG, LLM, Computer Vision, Deep Learning, Edge AI, NLP
Languages & Tools Python, SQL, Git, AWS, Vector DB, Raspberry Pi
Frameworks LangChain, TensorFlow, Transformer, YOLO, FastAPI, NumPy, Pandas

PROJECTS

Madmax AI (RAG) Link
- Developed a high-speed conversational AI chatbot using **Groq's LPU** engine for ultra-low latency inference.
- Built and deployed a responsive web interface using **Streamlit**, hosting the application on Streamlit Community Cloud for public access.
- Implemented a **RAG pipeline** to enable context-aware responses, integrating vector search for efficient document retrieval.

6 DOF Articulated Robotic Arm
- Engineered a 6-axis robotic arm, implementing **Forward and Inverse Kinematics** algorithms in Python for precise end-effector positioning.
- Developed a desktop GUI and a web interface, using **HTTP POST requests** for real-time remote operation.
- Integrated software control loops with actuators to ensure stability and accuracy for a 500g payload capacity.

Decentralized Traffic Control System
- Developed a computer vision system using **YOLOv5** to classify vehicles (LMV/HMV) and dynamically adjust signal timers based on real-time traffic density.
- Engineered a decentralized architecture integrating **AWS Cloud** for data analysis and microcontrollers for signal actuation, significantly optimizing junction throughput.

EXPERIENCE

Engineer 2 Jul '24 — Nov '25
Tata Electronics System Solutions Bengaluru, India
Developed **Python automation scripts** that reduced manual data entry and reporting time by **40%**, significantly enhancing data accuracy for performance tracking. Analyzed production line data (SFCS) to identify process bottlenecks, driving a **4% improvement in yield** and leading multiple cost-saving initiatives

Automation Engineer Intern Jan '24 — Jun '24
Tata Electronics pvt. Ltd. Bengaluru, India
Gained hands-on experience with manufacturing data systems and industrial automation integration. Developed Python automation tools to track and analyze machine downtime, leading to a 10% reduction in idle time and measurable process improvements.

EDUCATION

Bachelor of Engineering in Automation & Robotics, KLE Technological University (GPA: 9.2) Dec '20 — Jul '24
Hubballi, India

AWARDS

Winner of Smart India Hackathon Aug '22
SIH - India
Secured 1st place nationally by developing a IoT-based automation solution addressing a real-world industry challenge.

Certificate of Appreciation Jul '23
National Conference on Robotics
Awarded Certificate of Appreciation for presenting the 6-DOF Robotic Arm project, demonstrating advanced kinematics.

CERTIFICATIONS

MLOps, KrishAI Technologies Pvt Ltd May '25
Machine Learning with Python, IBM Apr '23
Data Science, Rinex Jul '22