VIJAYA KRISHNA

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PROFESSIONAL SUMMARY

QA Automation Engineer with hands-on experience in building and maintaining automation frameworks using Python, Selenium, and Robot Framework. Skilled in API testing with REST APIs and gRPC, workflow automation, and data validation. Experienced in QA processes including test planning, defect tracking, and Jira bug lifecycle management. Brings added value through AI-assisted testing experience, including NLP, RAG-based validation, and model-supported test workflows. Known for writing maintainable, CI-ready automation scripts and collaborating effectively to deliver reliable, high-quality software solutions.

SKILLS

Languages: Python
Technologies and tools: Python automation, Robot Framework, REST APIs, Fast APIs, gRPC, Jira, RAG, NLTK, Pytorch, Finetuning, Promptengineering, QGIS, labelbox, git, github, dagshub.

INDEPENDENT PROJECT EXPERIENCE

- Self-trained Python Automation Developer with hands-on experience in Python, Selenium, Robot Framework, REST APIs, gRPC, workflow automation, data validation, and test automation.
- Familiar with QA processes including Jira bug life cycle, bug reporting, and defect management.

WORK EXPERIENCE

Omdena(Remote)Volunteer Experience **November 2023 - August 2025**

- Built VisionVitals, an AI-powered vital signs monitoring system using camera-based biometrics; designed the UI/UX in Figma, developed the frontend using Flutter, and integrated it seamlessly with backend APIs. Completed the full build within one month.
- Led the AI Agents Inference Benchmarking Challenge, managing end-to-end project execution including team coordination, blocker resolution, and re-engagement of inactive contributors. Benchmarked agent frameworks including CrewAI, LangGraph, and AutoGen, with CrewAI demonstrating the best overall performance. Delivered final documentation and project presentation.
- Developed a PyTorch training pipeline for Urban Green Space Mapping using a Spatial Gated Unit (gMLP) architecture, implementing pixel-level satellite image preprocessing, dataset preparation, validation logic, and MLOps workflows; analyzed slow learning behavior that constrained continued model training.
- Supported the Mental Health Chatbot project by preprocessing text data using NLTK, producing improved cleaned CSV data for a RAG-based system, and contributing to project reporting.
- Worked on a Chatbot for Interview Preparation, performing text preprocessing with NLTK to enhance dataset quality for RAG workflows and assisting with project documentation.
- Tech: Flutter, Figma, Python, pytorch, NLTK, QGIS, CrewAI, LangGraph, AutoGen.

OptimumAI(Remote) Volunteer Experience **April 2024 - September 2024**

- Developed a Content Creation Chatbot, implementing a multi-agent architecture prototype using CrewAI and building a custom web-scraping pipeline with SeleniumBase and BeautifulSoup, enabling automated content generation along with relevant topic-specific images.
- Authored technical newsletters, including “LangChain Uprising” and “Gateway to Advanced LLMs,” focusing on emerging trends in LLMs and agentic workflows.
- Designed certificates for courses and internships, and created brochures highlighting the organization’s capabilities and value offerings.
- Volunteered as an instructor for the “Machine Learning & GenAI” course, teaching key concepts such as prompt engineering, RAG pipelines, fine-tuning, and the LlamaIndex framework.
- Tech: Python, Crewai

Sarasija Foods, Mangalore **March 2018 - March 2024**
Mechanical Engineer and Trainer

- Rebuilt a bread-packing machine prototype.
- Maintained and managed factory machinery.
- Trained staff on operating and adjusting new machinery for various products. Operated and optimized packaging machinery for production processes.

Tecprosoft, Mangalore **February 2017 - February 2018**
Hardware Engineer and Trainer

- Purchasing hardware and maintained stock inventory.
- Prepared hardware by connecting components such as wires and sensors.
- Conducted training sessions on Arduino basics and component integration.
- Uploaded and tested built-in Arduino codes tailored to student project requirements.
- Reverse-engineered Siemens Heliophos D display and control switch units using Arduino, logic gates, and encoders.
- Designed and built a dental vibrator using Arduino, including its structural body.

AWARDS

Participated in an Omdena Hackathon, winning second place among 11 teams.

EDUCATION

Master of Science in Electronics
- Graduated: June, 2015

Bachelor of Science (Physics, Mathematics, Electronics)
- Graduated: July, 2013
