VIJAYA KRISHNA

DYNAMIC PROFESSIONAL INNOVATING AT THE INTERSECTION OF ENGINEERING AND AI

CONTACT

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SKILLS

- **AI & Data Skills:** AI agents, Retrieval-Augmented Generation (RAG), sentiment analysis, data preprocessing (NLTK), machine learning algorithms (linear regression, polynomial regression, XGBoost, Random Forest), Finetuning, Promptengineering.
- **Frameworks:** Crewai, langgarph, autogen, llamaindex.
- **Programming & Tools:** Python, Google Earth Engine, QGIS, labelbox, git, github, dagshub.
- **Soft Skills:** Team collaboration, problem-solving, training and mentorship, and project reporting.
- **Design & Creativity:** Certificate and brochure design using Canva, creating visually appealing and professional materials.
- **Technical Skills:** Arduino programming, logic gates, encoders, machinery maintenance, and hardware troubleshooting.

ACHIEVEMENTS

- Built and tested functional hardware solutions like a dental vibrator and reverse-engineered Siemens control units.
- Recognized in an Omdena Hackathon with a second-place win among global participants.
- Successfully developed prototypes for AI-based chatbots and tools.

OBJECTIVE

Detail-oriented and versatile professional with extensive experience in hardware engineering, software development, and AI-based projects. Skilled in system design, machine learning, and cross-functional collaboration. Seeking to leverage technical expertise and volunteer contributions in a dynamic role focused on innovation and impact.

HOBBIES

Photography: Passionate about capturing the world through the lens.

WORK EXPERIENCE

Data Scientist

Omdena(Remote)Volunteer Experience   November 2023 - Present

- **Chatbot for Interview Preparation – Omdena Hyderabad Chapter** Contributed to a Retrieval-Augmented Generation (RAG) chatbot by performing web scraping using SeleniumBase, preprocessing text data with NLTK, and assisting with project documentation.
- **Mental Health Chatbot – Omdena Hyderabad Chapter** Participated in building a mental health RAG-based chatbot by scraping data with SeleniumBase, preprocessing it using NLTK, exploring sentiment analysis techniques, and contributing to project reporting.
- **Mapping Seagrass Meadows – Omdena Trieste, Italy Chapter** Reviewed research articles and remote sensing techniques, acquired Sentinel-2 satellite imagery via Google Earth Engine, and experimented with segmentation models including UNet, UNet++, and UNet 3+.
- **Urban Green Space Mapping – Omdena Frankfurt, Germany Chapter** Contributed to the development of a Spatial Gated MLP model and manually segmented satellite imagery using QGIS.
- **AI Agents Inference Benchmarking Challenge (Finalizing)** Led the entire project, including coordinating meetings, resolving team blockers, and re-engaging inactive participants. Worked hands-on with agent frameworks such as CrewAI, LangGraph, and AutoGen to evaluate performance across various inference scenarios. Responsible for documentation, preparing the final presentation, and delivering it during the project's closing session.
- **Street-Level Imagery Analysis – Omdena & Humanitarian OpenStreetMap (ongoing)** Annotated street-level images using Labelbox, performed exploratory data analysis to understand dataset quality, and fine-tuned a MobileNet model (TensorFlow/Keras) for image classification.
- Participated in an Omdena Hackathon, winning second place among 11 teams.

Course Instructor & AI Researcher

OptimumAI(Remote) Volunteer Experience April 2024 - September 2024

- **AI Financial Planner & Chatbot Development** - Conducted market research on AI applications and volunteered in understanding AI agents.
- **Chatbot for Content Creation** - Developed a multi-agent architecture prototype using CrewAI and built a web scraping tool with SeleniumBase and BeautifulSoup.

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EDUCATION

Master of Science in Electronics
Mangalore University
2013-2015 - 63.36%

Bachelor of Science in Physics, Mathematics, Electronics
Vivekananda College, Puttur, Mangalore University
2010-2013 - 64.74%

Pre-University College (PUC)
Vivekananda PU College, Puttur, Karnataka PU Board
2008-2010 - 53.5%

Secondary School Leaving Certificate (SSLC)
Vishwamangala High School, Konaje, Karnataka State Board
2008 - 72.96%

LANGUAGES

English

Kannada

Hindi

- **Authored newsletters:** "Langchain Uprising" and "Gateway to Advance LLMs."
- Designed certificates for courses and internships and created brochures showcasing the company's strengths.
- Volunteered as an instructor for the "Machine Learning & GenAI" course, covering topics like prompt engineering, RAG, fine-tuning, and LlamaIndex framework.

Mechanical Engineer and Trainer

Sarasija Foods, Mangalore   March 2018 - March 2024

- 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.

Hardware Engineer and Trainer

Tecprosoft (Kakunje Software)   February 2017 - February 2018

- 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.