Kamal Raj M M

Senior Python Developer — Artificial Intelligence SME — AI Research — Data Analytics

Contact Information Available Upon Request

Overview

- Innovative and detail oriented Senior Python Consultant eager to implement the in-depth knowledge in Data Analysis with Python, NLP libraries like Pytorch, Transformers, LLM Frameworks like Langchain, DSPy along with Cloud Deployments in AWS & GCP.

Skills

- **Programming Language:** Python

- **Frameworks & Tools:** Pytorch, Transformers, Langchain, CrewAI, Django & Streamlit

- **Data Analysis:** Data cleaning & statistical analysis with Pandas, NumPy, SKlearn

- **Databases:** Postgres & SQLite3

- **Version Control:** Git

- **Generative AI:** Open Source & Paid LLMs (Llama3, OpenAI, Gemini, AWS Sagemaker)

- **AI-Techniques:** Fine-Tuning and Instruction tuning with Custom Data using Pytorch, Transformers, TRL

- **Cloud Platforms:** AWS EC2, Hugging Face Spaces, Streamlit

- **Operating System:** Ubuntu Linux, Windows

- **Technical Writing:** Asciidoctor and markdown format

Experience

- **Senior Python Developer — AI Engineer**   2022 - Present
  Self-employed   *2+ yrs*
  - Developed sophisticated AI agents using the CrewAI framework, implementing advanced autonomous systems for task automation and decision-making
  - Architected and implemented multi-agent systems demonstrating autonomous collaboration and task delegation
  - Provided actionable, detail-oriented consultation for real-world problems with Generative AI platforms
  - Developed AI-based solutions targeting business problems and automation challenges
  - Implemented RAG pipelines using Langchain, vector stores, and GenAI model API endpoints

Key Projects

- **GenAI Youtube Comment Automation**   Aug 2022 - Mar 2023
  Lead Developer   *Remote*
  - Developed Django Backend integrating Youtube API and OpenAI API for automated comment responses
  - Increased comment reply rate to 200 comments per hour using AI-powered responses
  - Tech Stack: Langchain, Django, OpenAI SDK, Ngrok

- **AI Agent Development with CrewAI**   Jan 2024 - Present
  Lead AI Engineer   *Remote*
  - Designed and implemented autonomous AI agents using CrewAI framework
  - Created multi-agent systems capable of complex task execution and collaboration
  - Integrated various AI models and APIs to enhance agent capabilities
  - Implemented robust error handling and monitoring systems

- **DSPy & Phoenix Server Integration**   July 2024 - Aug 2024
  AI Engineer   *Remote*
  - Developed F1 metric score on DSPy framework & integrated Phoenix Server for API call tracing
  - Optimized OpenAI API costs and reduced debugging time
  - Tech Stack: Ubuntu, DSPy, OpenAI SDK, Phoenix Server

RESPONSIBILITIES

- Translate business questions into structured automation processes

- Implement data pipelines and create stakeholder dashboards

- Develop Django Backend with RestAPI endpoints integrating various LLM APIs

- Research and integrate Gen AI models into Matrix server

- Implement Open Telemetry and Open Inference for Gen AI API endpoints

- Write technical documentation and solution proposals