Robert Erikson

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Profile

Dynamic Senior AI Engineer with over 6 years of experience in developing cutting-edge AI/ML models and solutions. Deep expertise in Large Language Models (LLMs), unsupervised learning, and natural language processing, driving significant improvements in AI-powered automation. Proven leadership in mentoring teams, integrating AI into enterprise systems, and leading projects to successful deployment within cloud environments.

Experience

SENIOR ML ENGINEER – AI AGENTS | BLUELABEL AI | 04/2024 - 01/2025

· Engineered a supervisor-orchestrated multi-agent system on Azure, leveraging LangGraph's capabilities to reduce data pipeline development time by 40%.
· Fused agent systems with Azure OpenAI Service's models, improving Jira issue translation into data pipeline code by 35%.
· Implemented multi-stage code validation in LangGraph, decreasing manual review overhead by 45% and increasing accuracy.
· Enhanced system contextual awareness with GraphRAG and Azure AI Search, resulting in a 20% improvement in code generation accuracy.
· Defined and codified reusable PDLs, enabling rapid industry-specific workflow creation, achieving a 30% productivity increase.
· **Technologies Used**: LangChain, LangGraph, LangFuse, Azure AI Services, Azure OpenAI Services, Microsoft GraphRAG, Databricks

TECHNOLOGY ARCHITECTURE LEAD – AGENTIC AI | ACCENTURE DIGITAL | 01/2021 - 04/2024

· Led the development of CrewAI-based multi-agent systems for customer service, enhancing first-call resolution by 20%.
· Developed robust communication protocols with gRPC and RabbitMQ, boosting system reliability and scalability.
· Integrated BDI architectures in AI systems, reducing response times and improving information accuracy.
· Managed the deployment of AI solutions on Azure with AKS, improving scalability and performance by 30%.
· Mentored a team of 9 engineers, fostering a deep understanding of agent-based models and AI systems.
· **Technologies Used**: CrewAI, LangChain, LangGraph, RabbitMQ, Python, Azure, Kubernetes, Salesforce API

PYTHON DEVELOPER | TWILIO INC. | 06/2018 - 01/2021

· Developed a robust backend system in Python, using the Flask framework, to automate the configuration and management of Twilio Flex contact center deployments, streamlining the setup process and reducing manual configuration efforts.

- Integrated the system with Twilio's Programmable Communications APIs (SMS, Voice, TaskRouter) via RESTful interfaces, enabling programmatic control over contact center features and workflows using Python's requests library.
- Implemented core automation logic using Python, leveraging libraries like requests for API interaction and SQLAlchemy for database interactions (if applicable), to manage and orchestrate Twilio configurations.
- Designed and implemented a message queue-based task management system using RabbitMQ and the pika Python library, enabling asynchronous processing of configuration tasks and improving system scalability and responsiveness.
- **Technologies Used**: Python • Flask • Twilio APIs (SMS, Voice, TaskRouter) • REST APIs • requests • RabbitMQ • pika • pytest • PostgresSQL

Education

B.S. IN COMPUTER SCIENCE | 2012-2016 | BOSTON COLLEGE, BOSTON, MA

Skills & Abilities

- **Programming Languages:** Python (Expert), C/C++ (Proficient), Java (Proficient), JavaScript (Expert)
- **AI/ML Frameworks:** LangChain, LangGraph, CrewAI, PyTorch, TensorFlow, Scikit-learn, Sentence Transformers, TRL, TensorRT
- **Cloud Platforms:** Azure (Expert), AWS (Proficient), Google Cloud (Expert), Databricks (Proficient)
- **Soft Skills:** Communication, Team Collaboration, Problem Solving, Leadership, Project Management

Activities and Interests

Theater, environmental conservation, art, hiking, skiing, travel