Atharva Bapat

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SUMMARY

Data Scientist with experience in rapidly building LLM-driven applications using Python, AWS Bedrock, and Hugging Face. Skilled in prompt engineering, autonomous workflows, and cross-stack development from designing user interactions to deploying models in production. Passionate about exploring cutting-edge AI tools and shipping real-world applications that bring ideas to life.

SKILLS & INTERESTS

Skills: Python, Prompt Engineering, AWS Bedrock, Hugging Face Transformers, Few-Shot Learning, LangChain, PyTorch, REST APIs, AWS Lambda, Streamlit, FastAPI, Git, Cloud Run, JavaScript/TypeScript. LangGraph, AI Tool Prototyping.

EDUCATION

University of North Carolina at Charlotte   **Charlotte, NC**
Master's Degree in Computer Science   *Graduation Date: May 2024*

WORK EXPERIENCE

Theoremlabs Partners LLC   **Charlotte, NC**
Programmer Analyst   *Sep 2024 - Present*
- Designed and deployed serverless architectures using AWS Lambda, Step Functions, API Gateway, S3, SQS, and SNS, improving scalability and reducing operational costs.
- Automated CI/CD pipelines with Git, Jenkins, and CloudFormation, streamlining deployments and decreasing release failures.
- Developed a Microsoft Copilot bot that leverages the company's advisory data to intelligently answer financial advisors' questions, streamlining information access and improving decision-making speed by 60%.
- Leading the design and implementation of SQL views to provide stakeholders with tailored, actionable insights, facilitating more informed business strategy development.

Persistent Systems   **Pune, India**
Software Developer   *Jan 2022 - Jun 2022*
- Built intuitive React + TypeScript dashboards integrated with AWS APIs to enable dynamic data retrieval and visualization, supporting infrastructure observability and decision-making.
- Implemented AWS API Gateway over AWS Lambda API to securely fetch data based on user-selected time ranges, ensuring privacy and enabling flexible, dynamic data retrieval tailored to specific needs.

PROJECT EXPERIENCE

Datagaze
- Developed a state-of-the-art NLP chatbot using AWS Bedrock foundation models, enabling users to perform natural language based CRUD operations on a PostgreSQL database.
- Enhanced user autonomy and reduced dependency on technical teams, significantly improving data accessibility and decision making efficiency.
- Improve the model's performance on custom database schema by applying few-shot learning and prompt engineering techniques to tailor model responses based on stored schema knowledge and query context.

Anomaly Detection using Machine Learning
- Designed real-time anomaly detection system using Isolation Forest and DBSCAN to identify API failures, latency spikes, and anomalous user behaviors within streaming event data.
- Implemented rolling statistical analyses and ensemble ML models for enhanced detection accuracy, applicable in fraud detection and IT security monitoring.
- Applicable in healthcare, fintech, e-commerce, IT security, and telecom to proactively detect anomalies and prevent potential issues.

Interactive AI Chatbot for Music & Podcast Discove
- Developed a conversational AI chatbot using a pre-trained LLM to help users discover music and podcasts based on natural language queries and preferences.
- Implemented prompt engineering techniques to refine responses, ensuring recommendations were relevant and engaging.
- Built a simple web interface using Streamlit and Python to demonstrate real-time user interaction with the chatbot and showcase AI-powered music recommendations.