Amitha Akepati

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SUMMARY

Forward Deployed Engineer / AI Engineer / Data Scientist with 4 years of experience designing, building, and deploying AI/ML solutions across cloud platforms. Skilled in LLM fine-tuning, generative AI, agentic AI, and prompt engineering, with hands-on experience delivering production-ready AI pipelines, automating data workflows, and collaborating with clients to solve real-world problems.

EDUCATION

UNIVERSITY OF TEXAS AT ARLINGTON   **Arlington, TX**
MASTER OF SCIENCE IN DATA SCIENCE   Jan 2023 - May 2024
Concepts: Machine Learning, Neural Networks, Deep Learning, Probability, Statistics, Data Visualization, Artificial Intelligence

ANNAMACHARYA UNIVERSITY   **Andhra Pradesh, IN**
BACHELOR OF TECHNOLOGY IN COMPUTER SCIENCE AND ENGINEERING   Jun 2017 - Jul 2021
Concepts: Python, Database Management, Big Data, Cloud Computing, Machine Learning, Web development, Data Science, Data Structures and Algorithms, Thesis: " Object Detection with Deep Learning, Computer Vision and dual stage Convolutional Neural Network"

WORK EXPERIENCE

Senior Data Scientist, SMD Technosol (Client: Thermo Fisher Scientific), Dallas, TX   **Aug 2024 - Present**
- Partnered with client teams to deploy AI/ML solutions in production, reducing manual workflow effort by 30% and improving processing efficiency by 40%.
- Built and deployed ML forecasting models achieving 96% accuracy, optimizing experimental planning and resource allocation.
- Developed autonomous AI agents and LLM-powered assistants using LangChain and Azure OpenAI, streamlining operational workflows.
- Designed anomaly detection and synthetic data generation pipelines, improving data quality by 33% and enabling reliable insights.

Data Research Intern, Tomorrow's Leaders Today, Frisco, TX   **Jan 2024 - May 2024**
- Applied machine learning to 10,000+ grant records, improving targeting accuracy by 40%.
- Developed NLP and LLM-based summarization pipelines, cutting manual effort by 45%.
- Created interactive dashboards in Power BI and Tableau to visualize key insights for stakeholders, improving reporting efficiency by 32%.
- Implemented automated data validation and quality checks for ML workflows, ensuring reliable model outputs.

Research Assistant, University of Texas at Arlington, Arlington, TX   **Oct 2023 - May 2024**
- Built CNN, LSTM, and GAN models for crop yield prediction, increasing accuracy by 25% and enabling actionable recommendations.
- Integrated sensor, soil, and weather data into multimodal AI pipelines for crop optimization using generative AI.
- Conducted feature engineering, statistical analysis, and optimization to make models production-ready.

Software Engineer, DXC Technology, Bangalore, IN   **Jun 2021 - Aug 2022**
- Automated and monitored secure file transfers, improving data accuracy and reducing incident response times.
- Migrated legacy workflows to scalable ETL pipelines and built SQL/Power BI dashboards, increasing processing efficiency by 25%.
- Implemented CI/CD pipelines for ETL workflows and automated alerts with AWS, reducing deployment errors and improving reliability.

KEY SKILLS

Programming: Python, SQL, PySpark
Machine Learning & AI: Supervised/Unsupervised Learning, Deep Learning (CNN, RNN, LSTM, Transformers), NLP, Computer Vision, Generative AI, Agentic AI, Multi-Agent Systems, RAG, Prompt Engineering, LLM Fine-Tuning (LoRA, QLoRA, PEFT)
Frameworks & Libraries: PyTorch, TensorFlow, Keras, Scikit-Learn, XGBoost, Hugging Face, LangChain, LangGraph, LlamaIndex, CrewAI, Pandas, NumPy, Matplotlib, Seaborn, OpenCV, MLflow, FastAPI
Data Engineering & Cloud: ETL/ELT Pipelines, Databricks, Airflow, Docker, Kubernetes, CI/CD, Spark, AWS, Azure, GCP, Vector Databases (FAISS, Chroma, Pinecone), Delta Lake
MLOps & Deployment: Experiment Tracking (MLflow, W&B), Model Monitoring, Cloud-Based Model Serving, REST APIs, Production-Ready ML Pipelines
Visualization & Tools: Power BI, Tableau, Excel, Jupyter, Git/GitHub, VS Code, Jira, Agile/Scrum, Cursor AI

RESEARCH PROJECTS & ACHIEVEMENTS

AI Log Error Explainer Agent
Built an AI agent that reads system logs and identifies errors automatically using LLMs and prompt Engineering, helping teams troubleshoot faster and make informed decisions.

Patient Readmission Predictor With AI Appeal Letter
Created a machine learning model to predict which patients might be readmitted and added an AI-powered appeal letter generator, making healthcare interventions smarter and more efficient.

Service Outage RCA Assistant

Developed an AI assistant that analyzes logs and detects anomalies to find the root cause of service outages, speeding up problem resolution and improving system reliability.

Kaggale Capstone: Intelligent Business Analytics Agent - Enterprise Agent
Built a multi-agent AI system to automate business analytics workflows, including data processing, trend detection, statistical analysis, visualization reporting, delivering faster, scalable, and actionable business insights.

Google's FooBar
Invited by Google to take part in their hidden Foobar challenge, where I completed all 5 levels. It was a great deep-dive into tough algorithmic problems and sharpened my skills in problem-solving, optimization, and creative thinking.