

**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, Thermo Fisher Scientific, Dallas, TX

Dec 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), 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.

#### **Kaggle 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.