

LALITH KOUSHIK VANAM

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OBJECTIVE

Software Engineer with 4+ years of experience in midstream pipeline operations, with hands-on expertise in .NET Core MVC and AI RAG-based applications, seeking full-time AI/ML roles.

EDUCATION

Master's in Computer Science, University Of Houston Expected May 2026

Bachelor's in Computer Science, Keshav Memorial Institute Of Technology 2020 - 2024

SKILLS

Technical Skills ASP .NET CORE MVC, RAG Systems, Pattern Recognition, React.js, CI/CD Pipeline.

Soft Skills Problem-Solving, Time Management, Communication Skills

EXPERIENCE

Full Stack and AI Software Engineer June 2024 - May 2026
Midstream AI *Houston, TX*

- Developed a pipeline leak detection data visualization application using ASP.NET Core MVC and Plotly API, enabling stakeholders to analyze operational insights through interactive dashboards.
- Designed and implemented reusable UI components, improving development efficiency and ensuring consistency across multiple enterprise applications.
- Implemented an AI chatbot using Ollama LLM within a standalone application, enabling stakeholders to query pipeline operations and structural data.

Full Stack Developer August 2022 - May 2024
LTIMindtree *Hyderabad, India*

- Gained hands-on exposure to seep detection and leak analysis systems used in real-world oil and gas pipeline monitoring applications.
- Analyzed the design and workflow of Seep Plot applications, including alarm analysis and trend-based visualizations using Excel macros and dataPARC.
- Studied the end-to-end lifecycle of industrial software applications, including configuration generation, real-time data plotting, shut-in evaluations, alarm validation, and delivery in a production environment.

PROJECTS

Agentic-AI Analytics Platform:

Designed and built a microservices-based RAG platform for industrial data analysis using FastAPI, PostgreSQL(TimescaleDB), and React/TypeScript. Implemented SQL-RAG and NetworkX-RAG agents with Ollama LLM integration for natural-language-to-SQL queries and graph analytics, with real-time streaming APIs and automated Plotly.js visualizations.

Pipeline Leak Detection Insights Application:

Developed a standalone ASP.NET Core MVC application for pipeline leak detection insights using interactive dashboards (tables and graphs) via the Plotly API. Implemented the repository pattern for data access, server-side controllers for aggregation logic, and client-side JavaScript for dynamic interactive analytics.