

# 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 Midstream AI	June 2024 - May 2026 <i>Houston, TX</i>
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- 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 LTIMindtree	August 2022 - May 2024 <i>Hyderabad, India</i>
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- 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.