

# LALITH KOUSHIK VANAM

+1(281) 202-4868 ♦ Houston, TX

[lalithvanam04@gmail.com](mailto:lalithvanam04@gmail.com) ♦ <https://www.linkedin.com/in/lalithvanam-dev/> ♦ <https://lalithkoushik.netlify.app/>

## 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.