# **RISHI MOHAN**

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#### **EDUCATION**

#### **UNIVERSITY OF SAN FRANCISCO**

San Francisco, CA

Master of Science in Data Science, concentration in Data Engineering

December 2024

Relevant Coursework: Machine Learning, GenAl, MLOps, Distributed Systems, Stream Processing

#### UNIVERSITY OF ILLINOIS AT URBANA-CHAMPAIGN

Champaign, IL

Bachelor of Science in Industrial Engineering, minor in Statistics

May 2023

### RELEVANT EXPERIENCE

## **MACHINE LEARNING ENGINEER**

San Francisco, CA

Metaphor Data

October 2023 - Present

- Designed and led development of LangGraph-based AI agent while owning core AI features across enterprise data catalog, serving hundreds of users monthly.
- Enhanced hybrid search fusion (vector embeddings + fuzzy text matching) to engage 1200+ users and accelerate new user adoption.
- Rolled out platform-wide LLMOps including prompt management & versioning, user feedback & scoring, and tracing of 10,000+ runs per month.
- Used Terraform (laaC) to manage single- and multi- tenant client environments for scalable AWS infra.
- Implemented production vector embedding & search pipelines (RAG) from external knowledge-bases to enrich vector database and enable documentation discovery.

#### **OPERATIONS MANAGEMENT INTERN**

Kearney, NE

Eaton Vehicle Group

May 2022 – August 2022

- Analyzed 9 years of hourly output data across 6 lines for 25+ parts, utilizing time-series modeling to track
  theoretical capacity and forecast production, enhancing accuracy in setting production goals by 30% through
  a multiple linear regression model.
- Streamlined database maintenance and report generation for process owners, saving 10 hours weekly.

## **SELECT PROJECTS**

# **AGENTIC SEARCH – METAPHOR DATA**

December 2024

- Built a multi-tool Al agentic search system designed to interact with the data catalog and aid technical and non-technical users in asset search & discovery, auto-documentation, and platform usage.
- Implemented advanced RAG methods via tools for keyword search, vector search, and proto-graph interactions for flexible data retrieval.
- Exposed via GraphQL APIs for responsive state updates and streaming to maximize smooth user interaction.
- Rolled out in private preview via feature flagging with 90% more positive feedback

#### STREAM PROCESSING - UNIVERSITY OF SAN FRANCISCO

November 2024

- Performed Kafka streaming cost-event throughput comparison between Lambda serverless functions and persistent consumers, tuning micro-batch size to maximize throughput.
- Simulated a large-scale (50,000+ events-per-second) e-commerce platform with multiple topics and producers to assess overall cluster performance and optimal implementation.
- Implemented packaging & deployment pipelines for Lambda & EC2 instances for rapid iteration and testing.
- Integrated with AWS Athena, S3, and Redshift to emulate production DB access latency and secondary application impacts of high-volume streams.

#### SIMILAR ASSETS - METAPHOR DATA

October 2024

- Developed a data discovery feature to allow users to identify highly similar assets across sources, platforms, and languages to identify redundant or pre-existing assets.
- Leveraged embedding models to create domain-specific vector representations of 100k+ data assets daily to take advantage of fast approximate vector search
- Deployed GraphQL APIs to enable frontend interaction, saving stakeholders 3h/week in asset discovery time.

# SKILLS / TOOLS

Python, TypeScript, PyTorch, scikit-learn, GenAl, LangChain, LangGraph, Spark, Airflow, Kafka, AWS, GCP, Terraform, Docker, Git, CI/CD, SQL, NoSQL