Intelli-Tier Fabric: AI-Powered Data Management

NetApp x AI Club Hackathon Submission
Team : HotCoffee

The Problem : Data Isn't Intelligent.

Managing data across hybrid clouds (on-prem, hot, cold) is expensive and complex. Data is "dumb"—it doesn't know where it should be based on cost, latency, or access frequency.

Our Solution: The Intelli-Tier Fabric

We built an AI-powered "brain" for your data.

LIVE KAFKA STREAM: Simulates real-time user access.

GEMINI AI AGENT: Analyzes this data and makes intelligent decisions.

REAL GCS INTEGRATION: Automatically moves "cold" files to Google Cloud Storage.

LIVE DASHBOARD: A unified Streamlit UI visualizes the entire system.

Architecture:

- ○ **Docker Compose:** Runs Kafka, Zookeeper, and our Python services (Producer, Consumer, UI).
- ○ **AI Agent (Host):** Runs on the host to access the Gemini CLI and GCS credentials.
- ○ **Data Flow:** Producer -> Kafka -> Consumer -> SQLite DB -> AI Agent -> GCS

Future Roadmap

Integrate with AWS S3 for a true multi-cloud "hot" tier.

Add real-time cost-saving metrics to the dashboard.

Integrate directly with NetApp's ONTAP REST API to manage real hardware.