MICHIGAN STATE UNIVERSITY

Alpha Presentation

Fraud Transaction Monitoring Dashboard

The Capstone Experience

Team Ally

Hussein Ahmad
Danial Alahmad
Andrew Alstead
Quintin Gutowski
Andre Sasser
Glen Scully

Department of Computer Science and Engineering
Michigan State University

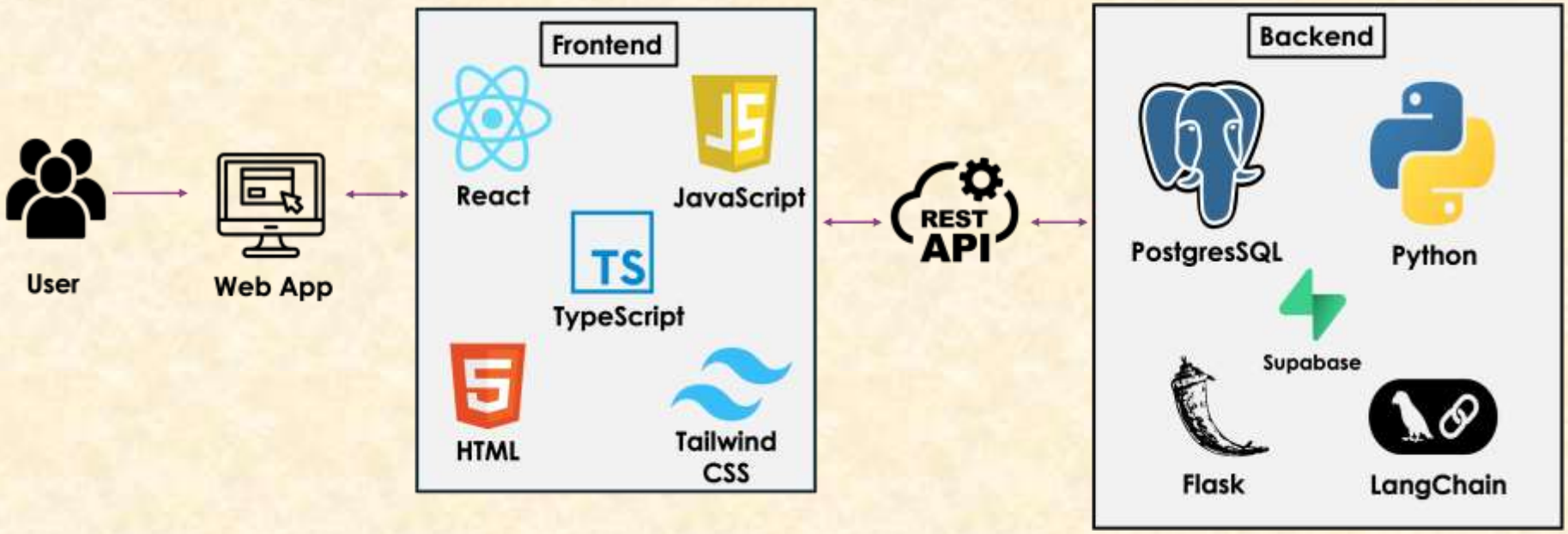
Spring 2026

From Students…
…to Professionals

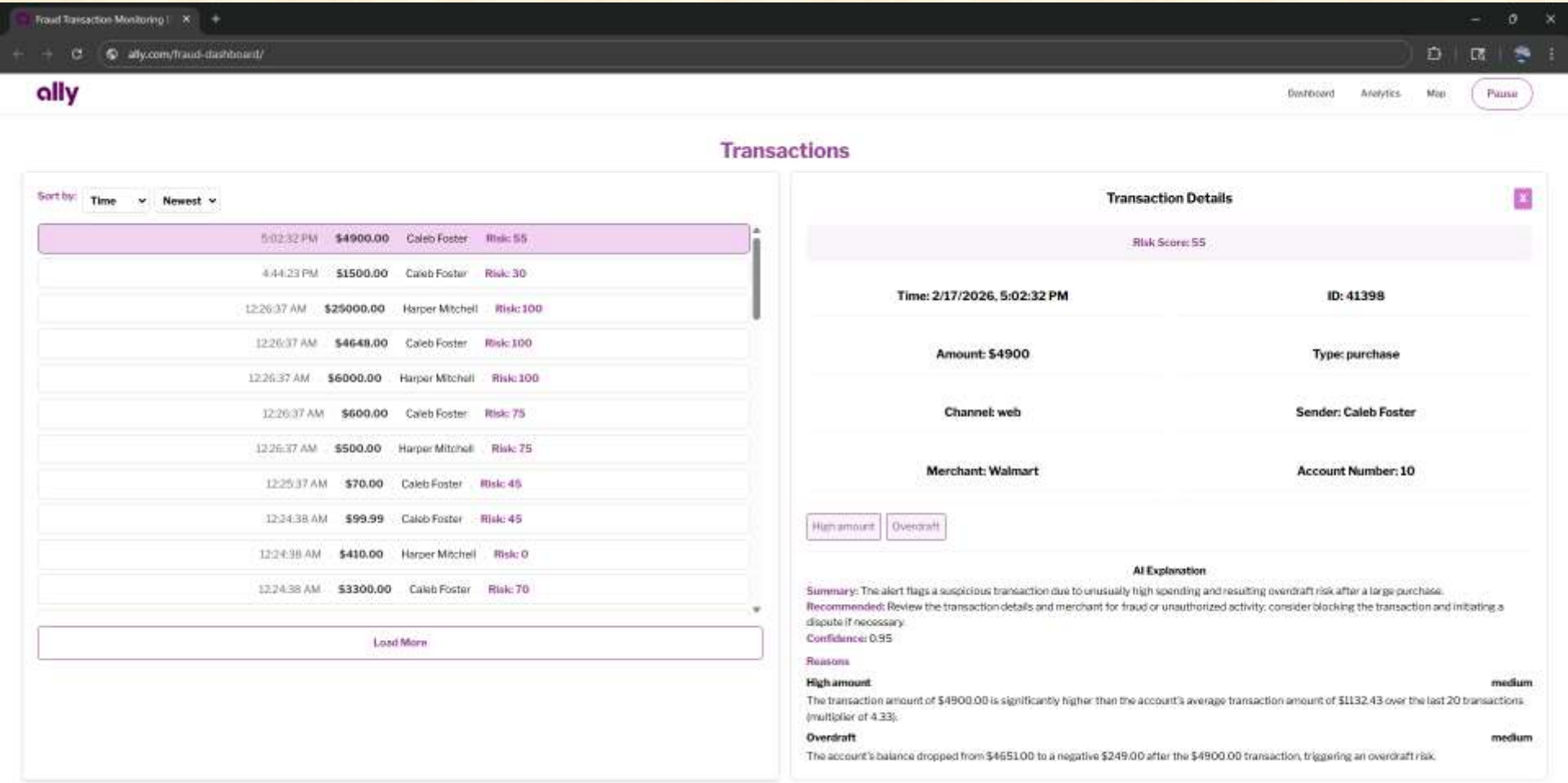
Project Overview

- Real-time monitoring dashboard that flags potentially fraudulent transactions
- Scores and prioritizes alerts so analysts can focus on the highest-risk activity first
- One place to review key context and document decisions
- Accelerates investigations and supports consistent, auditable workflows.

System Architecture



Screenshot: Dashboard



Screenshot: AI Summary

AI Explanation

Summary: High-value purchase from a merchant with a suspicious MCC code (7995) flagged as risky.

Recommended: Review merchant details, verify transaction legitimacy, and consider blocking if suspicious.

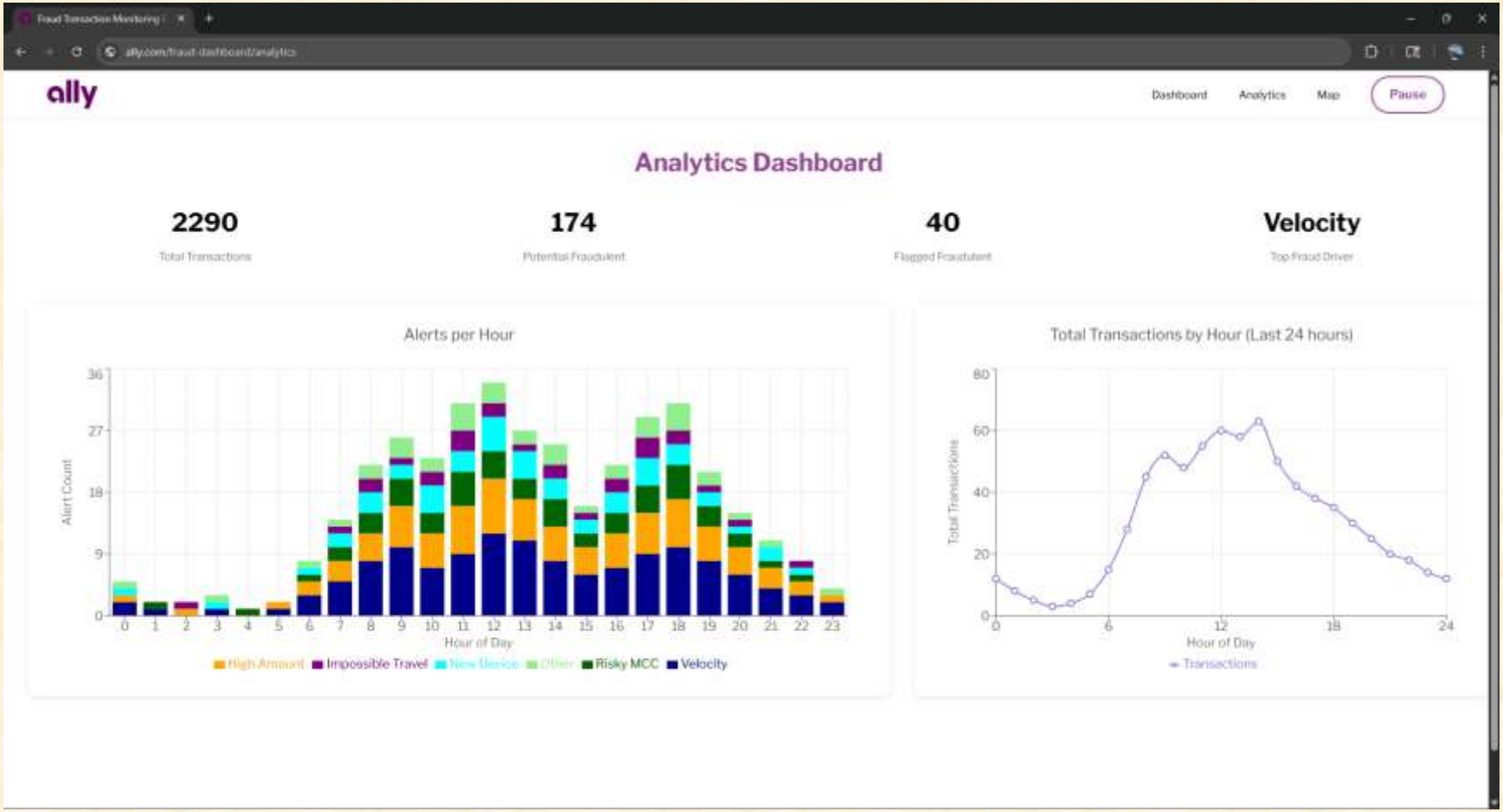
Confidence: 1

Reasons

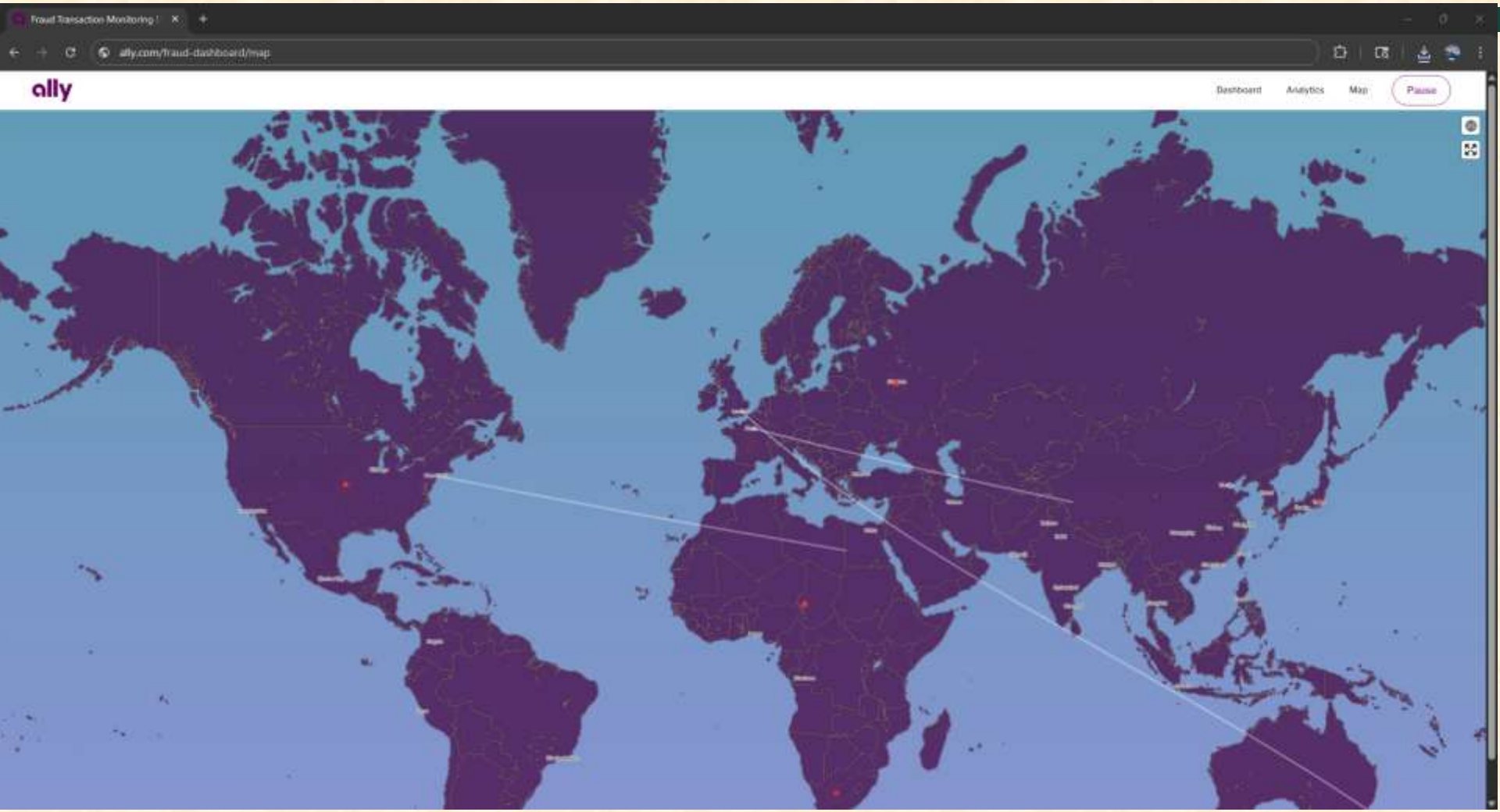
Risky MCC **high**

The transaction was processed at a merchant classified under MCC 7995 (e.g., pawn shops, late-night businesses), which is commonly associated with higher fraud risk due to potential identity theft or unauthorized activity.

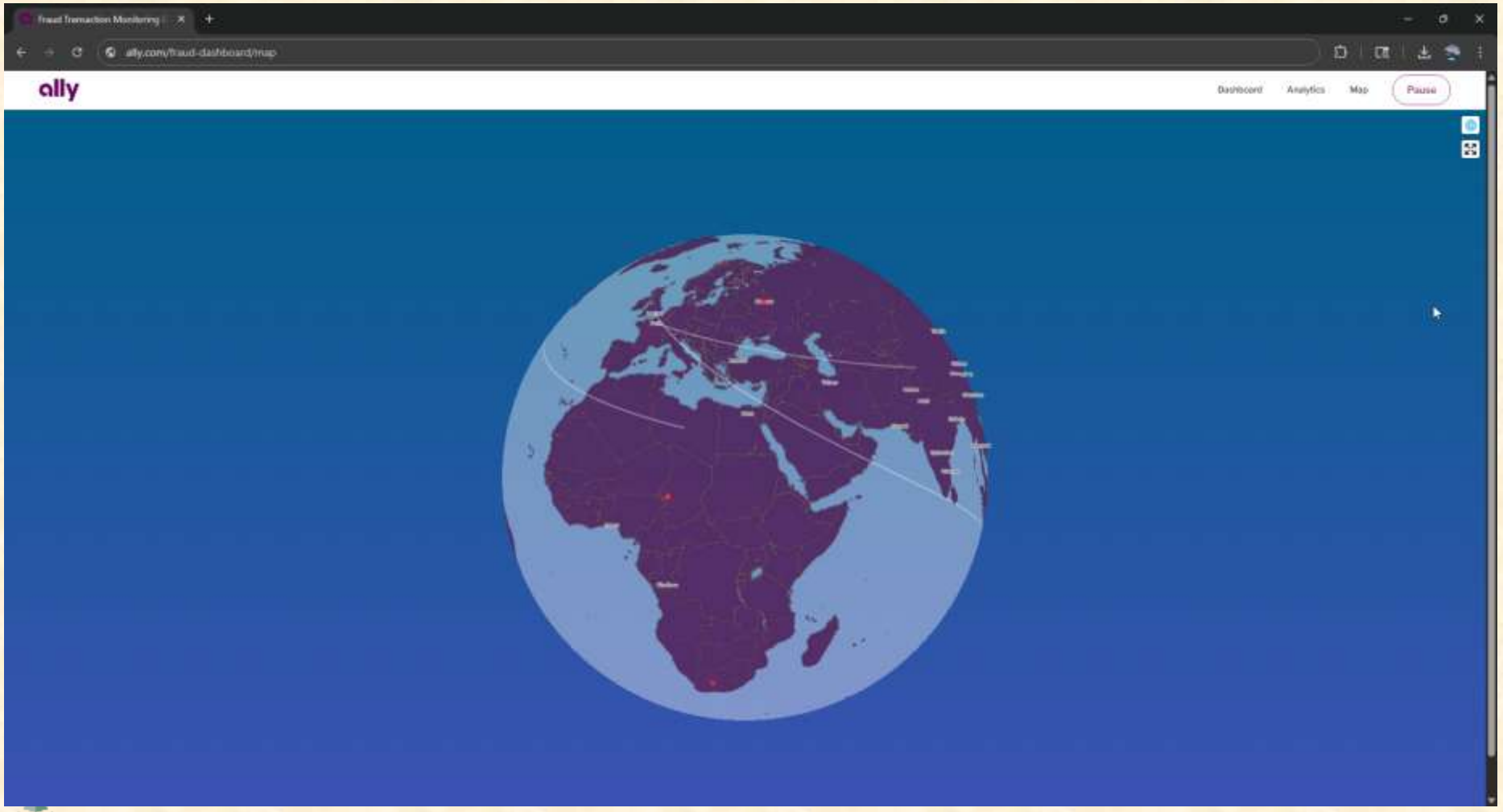
Screenshot: Analytics



Screenshot: Map



Screenshot: Globe



What’s left to do?

- Connect map to the backend
- Update map click display
- Add dashboard features
- Optimize backend performance
- Improve Ollama performance

Questions?

