

Exercise: Mapping “AI-Driven Catastrophe Modeling” to the AI Tech Stack

Objective

Translate each major capability from the mind-map into the corresponding layer(s) of the AI Tech Stack. This helps you see how high-level agent workflows align with concrete architectural components.

1. Review the Materials

- **Mind-map:** “AI-Driven Catastrophe Modeling” (dynamic scenarios, stress-testing, multi-agent collaboration, etc.)
- **Tech Stack Table:** Layers from Business down to Infrastructure

2. Complete the Mapping Table

For each **Mind-map Capability**, assign 1–2 **Stack Layers** where it lives and note what that entails (tools, protocols, processes).



Mind-map Capability



Tech Stack Layer(s)



Notes on Implementation

Dynamic Scenario Generation
Adaptive Stress-Testing
Multi-Agent Collaboration
Explainable Risk Insights
Continuous Learning & Calibration
Hybrid Expert-AI Workflows
Governance & Model Risk Management

3. Group Discussion (10 min)

- Which capabilities span multiple layers? Where are the bottlenecks?
- What infrastructure or compliance gaps emerge?
- How would you prioritize investments across layers to support end-to-end catastrophe modeling?

Use this exercise to ensure every AI agent capability is backed by the right platform services, data pipelines, governance controls, and compute resources.

