Agentic AI Hackathon: Building Intelligent Agents with IBM Granite and Lang Flow

Problem Statement 14: AI-Based Climate Risk Assessment for Agriculture

The Challenge

Climate variability significantly affects agricultural productivity through extreme weather events, shifting seasons, and unpredictable rainfall. Farmers and planners often lack tools to interpret climate data in an actionable manner. There is a need for an intelligent assistive system that can analyze climate trends and assess agricultural risk at a local level.

Climate & Crop Data Analysis Agent

An agent that processes historical climate data, seasonal forecasts, and crop calendars.

Climate Risk Detection Agent

An agent that identifies potential climate-related risks such as drought stress, heat waves, or excessive rainfall using trend analysis.

Advisory & Planning Assistant

An agent that provides climate-risk insights and adaptive planning suggestions
(assistive only).

Outcome

Enhances climate resilience planning and supports informed agricultural decision-making.

Mandatory Tech Stack

Lang Flow using IBM Granite Model
(Using RAG on climate-smart agriculture guidelines and agricultural policy documents).