**Smart Maintenance System for Industrial IoT**

**Project Statement**

Develop a multi-agent AI system that predicts equipment failures, retrieves historical maintenance logs, and triggers alerts using Azure AI and IoT services.

**Pre-Requisites**

Azure subscription, Azure AI Agent Service, Azure AI Foundry, Azure AI Search, Blob Storage, IoT Hub, Azure Monitor

**Requirements**

* Create stateful agents that retain machine history and diagnostics
* Use Foundry to coordinate agents for prediction, retrieval, and alerting
* Implement RAG to fetch relevant maintenance documents from Blob
* Use Semantic Kernel to plan repair workflows dynamically
* Optional: Simulate telemetry via IoT Hub and monitor anomalies with Azure Monitor
* Apply Responsible AI principles to ensure fair decision-making and traceability

**Deliverables**

* Public GitHub repo with agent logic, telemetry simulation, and monitoring setup
* PPT with architecture, workflows, and compliance dashboards
* Screenshots of working assistant and alert system