**Project Proposal: Development of an AI-Driven Information Gathering Pipeline for Emergency Responders**

**1. Project Overview:**

This project seeks to develop a prototype pipeline that uses AI to automate the process of identifying and collecting relevant, high-quality data sources for emergency responders. Emergency situations require rapid decision-making based on accurate, reliable information, and the current data gathering process can be time-consuming. Our goal is to create a tool that streamlines the search and exploration phase by centralizing relevant data sources, enabling responders to quickly assess the most valuable information.

To achieve this, we propose developing an AI-based system that:

1. Identifies and collects relevant data from diverse sources based on the type of briefing required.
2. Organizes the collected data into a centralized location for easy access.
3. Constructs a knowledge graph to rank the value of the information in an interpretable manner for human decision-makers.
4. Integrates this information into existing briefing generation tools used by emergency teams.

Initially, the project will focus on a single problem area to validate the approach and work through the process manually. The final deliverable will include a detailed roadmap outlining areas of the process where AI automation can enhance efficiency and accuracy.

**2. Project Objectives:**

* **Data Identification and Sourcing:** Investigate and manually select high-quality data sources relevant to a predefined emergency scenario.
* **Knowledge Graph Development:** Build a knowledge graph to rank the value of information from each data source, enabling human operators to easily interpret the data.
* **Prototype Creation:** Develop a prototype pipeline that automates parts of the data collection and organization process, and integrates with existing briefing tools.
* **AI Automation Roadmap:** Analyze the manual process to identify stages where AI-driven automation can enhance the system, with the goal of improving speed, accuracy, and usability.

**3. Approach:**

**Phase 1 – Problem Scoping:**

* Define a specific emergency scenario and identify the key information needs for responders.
* Manually curate a set of reliable data sources for this scenario.

**Phase 2 – Data Collection and Centralization:**

* Build a process to identify and collect data from relevant sources in a centralized location.
* Evaluate data sources for quality, relevance, and timeliness.

**Phase 3 – Knowledge Graph Construction:**

* Develop a knowledge graph that ranks data sources based on their relevance and reliability.
* Ensure the ranking is easily interpretable by emergency responders.

**Phase 4 – Prototype Development:**

* Develop a simple prototype that allows responders to interact with the knowledge graph and quickly select the most relevant information.
* Test integration with existing briefing generation software used in emergency scenarios.

**Phase 5 – AI Automation Roadmap:**

* Identify key areas where AI tools could streamline or automate the data collection, organization, and ranking processes.
* Deliver a roadmap with recommendations for future automation efforts.

**4. Key Deliverables:**

* A curated set of data sources for a specific emergency scenario.
* A prototype knowledge graph that ranks the information value of these sources.
* A functional pipeline that centralizes data collection and integrates with briefing software.
* A roadmap identifying key areas for AI-driven automation in future iterations of the pipeline.

**5. Conclusion:**

This project will lay the groundwork for a highly efficient, AI-driven system that can assist emergency responders in rapidly gathering and analyzing crucial data. The focus on a single problem area will allow us to explore the manual process in depth, with the goal of identifying key points for future automation. By the end of this project, we aim to have a working prototype and a clear roadmap for developing a fully automated system.