

PROBLEM STATEMENT : Develop an intelligent chatbot tailored for spend analysis and historical interactions, capable of personalizing responses to user queries. The primary focus is on achieving rapid response times with pinpoint accuracy. The chatbot aims to replace traditional dashboards by presenting results in text and table formats, eliminating the need for filter-based data extraction.

Key Objectives:

1. **Personalized Responses:** Create a chatbot that can tailor responses based on user queries and historical interactions, enhancing user engagement and satisfaction.
2. **Data Utilization:** Leverage the dataset creatively to frame questions and handle complex queries, such as comparative analysis of commodity prices and other spend-related metrics.
3. **Analysis:** Enable the chatbot to generate key spend analyses based on various parameters, including commodities, vendors, materials, etc.
4. **Routine Queries:** Ensure the chatbot can efficiently handle routine queries while maintaining a smooth conversational flow.

Your task is to design and implement an advanced chatbot that not only extracts insights from data but also fosters a seamless and dynamic interaction with users. This chatbot should empower users to make data-driven decisions by presenting data in a clear and actionable format, thereby reducing dependency on traditional dashboards and offering a more engaging and efficient way to perform spend analysis.

An example would be:

1. Comparison of the commodity prices on the websites ([WEB SCRAP](#)) and using the provided dataset for the calculation of commodity prices like (Aug vs Aug comparison)
2. Generate the key analysis from the dataset on the spend depending on the commodity, vendor, material etc

Generate the chatbot using Gen AI, python libraries, NLP and key ML concepts.
HAPPY LEARNING!