Large Purchases by the State of CA

Background:

As a part of our team's expansion in the realm of AI-driven solutions, we are seeking candidates proficient in AI and data management for the development of solutions for procurement professionals. The task involves utilizing a large procurement dataset from the State of California, available on Kaggle, and employing it to build a conversational interface that can provide insights into procurement data.

Objective:

Your task is to develop a prototype of a chatting assistant capable of answering queries related to procurement data. The assistant should be able to interact with users, retrieve information from the dataset, and provide relevant answers to their inquiries.

Dataset:

The dataset provided contains information on large purchases made by the State of California. You are required to use this dataset to train your model and build the chatting assistant. You can access the dataset here.

Task Description:

1. **Data Exploration:**
    • Load the dataset into MongoDB as a database management system. ●
Explore the dataset to understand its structure, features, and contents. **2. Model Development:**
    • Implement Natural Language Processing (NLP) techniques to enable conversational interactions.
    • Develop algorithms to parse user queries and extract relevant information. ● Train the model using the dataset to enable it to understand procurement-related queries.
3. **Chatting Assistant Features:**
    • Design a conversational interface allowing users to ask questions about procurement data.
    • Implement functionalities to handle various types of queries, such as:

Total number of orders created during a specific time period (e.g., month, quarter).
- Identification of the quarter with the highest spending.
- Analysis of frequently ordered line items.
- And other relevant procurement-related inquiries.

4. Evaluation:

- Test the chatting assistant with a variety of sample queries to ensure accuracy and efficiency.
- Evaluate the assistant's performance in providing correct and relevant responses.

Deliverables:

- The complete codebase of the developed chatting assistant submitted on GitHub
- Video recording documenting the final solution and a walkthrough over the code implementation.

Additional Notes:

- You are encouraged to utilize any libraries, frameworks, or tools that you deem appropriate for the task.
- Creativity and innovation in the design and implementation of the chatting assistant will be highly appreciated.
- The prototype should demonstrate the feasibility and effectiveness of the proposed solution in addressing the requirements of procurement professionals.