

Build a BI Chatbot for Real-Time Business Insights

Create a chatbot that connects to a SQL database and gives real-time business insights. The chatbot should understand natural language questions, fetch data, and provide answers like sales, customer trends, seller performance, and delivery details. It should also allow follow-up questions and show insights using charts.

Key Deliverables:

1. Chatbot Implementation:

- A chatbot that takes user questions and gives clear answers based on data.
- Connects to the given SQL database.

2. Data Analysis:

- The chatbot should generate SQL queries based on user input and fetch data.
- Summarize the data into simple and clear insights.

3. Visual Outputs:

- Show data as charts like bar graphs, line graphs, or pie charts for better understanding.

4. Documentation:

- A simple document explaining how the chatbot works and how to use it.
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Dataset and Diagram:

- The provided dataset is named **E-commerce dataset.sqlite**, containing essential tables such as `orders`, `customers`, `products`, `sellers`, and more.
 - Use the **Entity-Relationship Diagram (ERD)** of the SQLite database to understand the relationships between tables. The ERD will help you map how data flows and is connected, which is crucial for writing accurate SQL queries and developing the chatbot.
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Example Questions to Test:

1. Basic Questions:

- "What is the total revenue this month?"
- "How many orders were delivered late?"

2. Comparison Questions:

- "Compare sales of electronics and clothing."
- "Which city has the most customers?"

3. Trends:

- "Show a trend of monthly sales."
- "What is the average delivery time over the last 6 months?"

4. Drill-Down Questions:

- "Who are the top 5 sellers in Bangalore?"
 - "What are the top 3 products sold in January?"
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