

AI Financial ChatBot

Summary

The AI-driven Financial Chatbot is designed to provide financial information for selected companies over specific fiscal years. This chatbot can answer predefined financial queries about companies such as Apple, Microsoft, and Tesla for the fiscal years 2023, 2022, and 2021. By using this chatbot, users can quickly retrieve essential financial metrics and growth rates without needing to manually sift through financial reports.

How It Works

1. Initialization:

- The chatbot session begins when the user types "Hi".
- The user is then prompted to select a company from a predefined list (Apple, Microsoft, Tesla).

2. Year Selection:

- The user selects a fiscal year from the available options (2023, 2022, 2021).

3. Query Input:

- The user inputs a query regarding specific financial metrics or growth rates.
- The chatbot parses this input to match predefined queries.

4. Data Retrieval:

- Based on the company and year selected, the chatbot retrieves the relevant data from the predefined datasets.

Limitations (continued)

- **Predefined Queries:** The chatbot can only respond to specific predefined queries listed above. It cannot handle custom or unstructured queries.

- **Static Data:** The data used by the chatbot is static and does not update in real-time. Any changes in the financial metrics of the companies after the data was loaded will not be reflected.
- **Error Handling:** The chatbot expects exact input formats for company names and queries. Incorrect or misspelled inputs will result in prompts to restart or clarify the session.
- **Limited Scope:** The chatbot does not provide detailed analysis, trends, or explanations beyond the basic financial metrics and growth rates.

Usage Instructions

1. Starting the Chatbot:

- Run the script `AI_driven_Financial_ChatBot.py` in a Python environment.
- Enter 'Hi' when prompted to start the chatbot session.

2. Selecting a Company:

- Enter the name of the company (Apple, Microsoft, Tesla) as prompted.

3. Selecting a Year:

- Choose from the available years (2023, 2022, 2021) by entering the corresponding number.

4. Entering a Query:

- Type in your query using one of the predefined formats (e.g., "total revenue", "revenue growth,%").

5. Receiving Responses:

- The chatbot will fetch the relevant data and display the response.
- If you have more queries for the same company and year, you can continue entering them.
- To end the session, type 'exit'.

Example Session

Enter 'Hi' to start the chatbot session; type 'exit' to quit: Hi

Hello! Welcome to the AI-driven Financial Chatbot!!!

I can help you with your financial queries.

Please select the company

1. Apple,
2. Microsoft,
3. Tesla

Enter company name: Apple

The data for the fiscal years 2023, 2022, and 2021 is currently

Please select the year

1. 2023,
2. 2022,
3. 2021: 2023

Please enter your query (e.g.,

1. 'revenue growth,%',
2. 'net income growth,%',
3. 'assets growth,%',
4. 'liabilities growth,%',
5. 'cash flow from operations growth,%',
6. 'total revenue',
7. 'net income',
8. 'total assets',
9. 'total liabilities',
10. 'cash flow from operations'): total revenue

The total revenue for Apple in 2023 was \$365 million.

By following these steps and guidelines, users can effectively interact with the AI-driven Financial Chatbot to obtain quick and accurate financial information for

their specified queries.