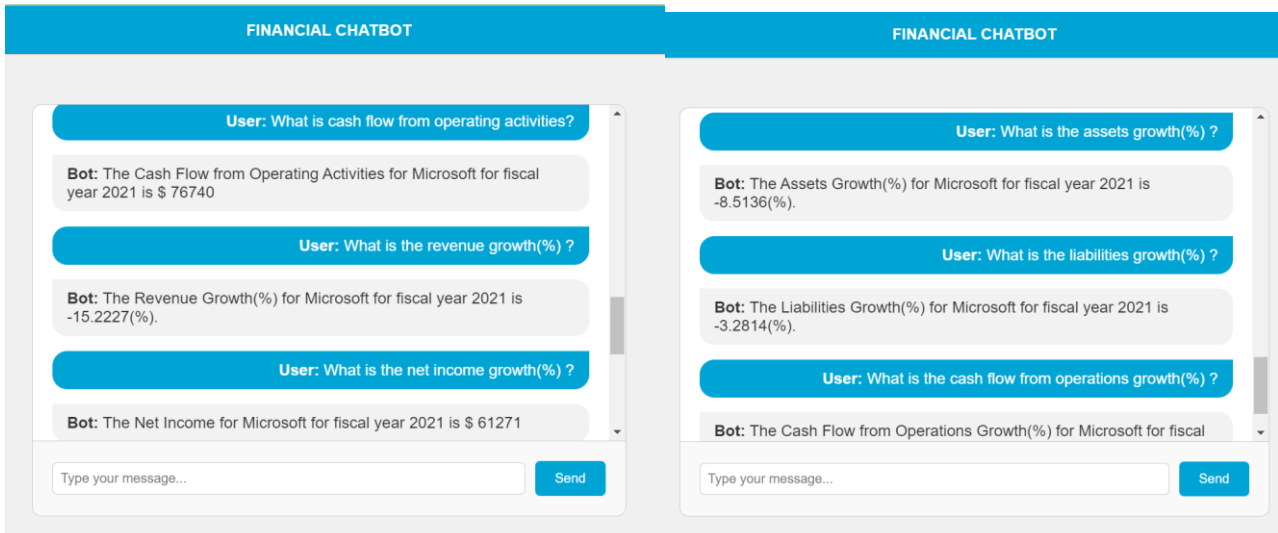
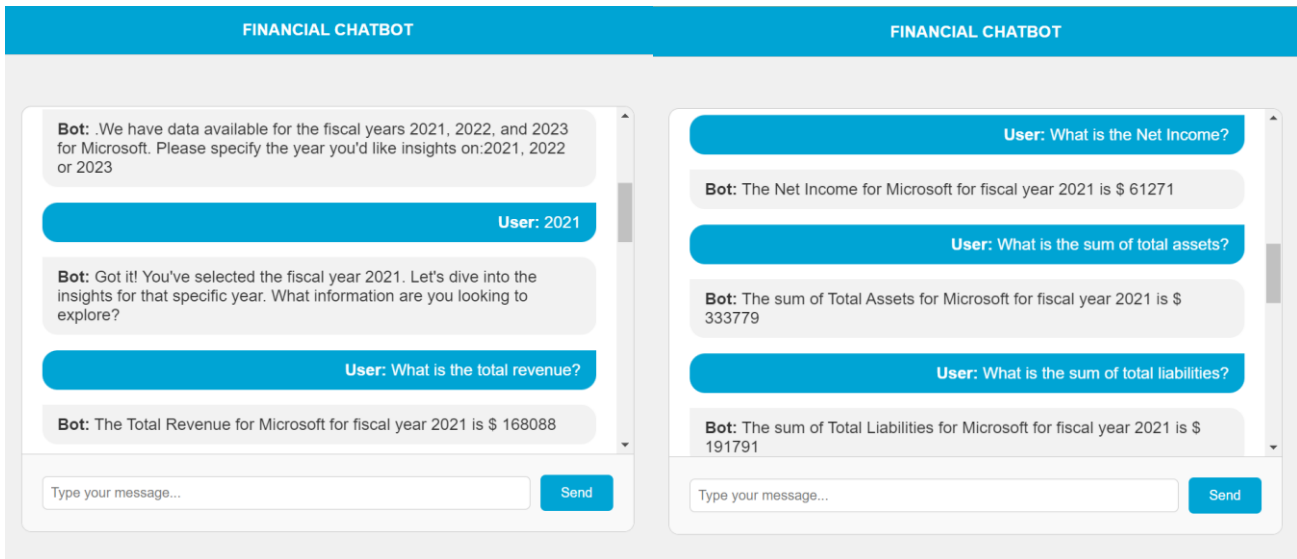
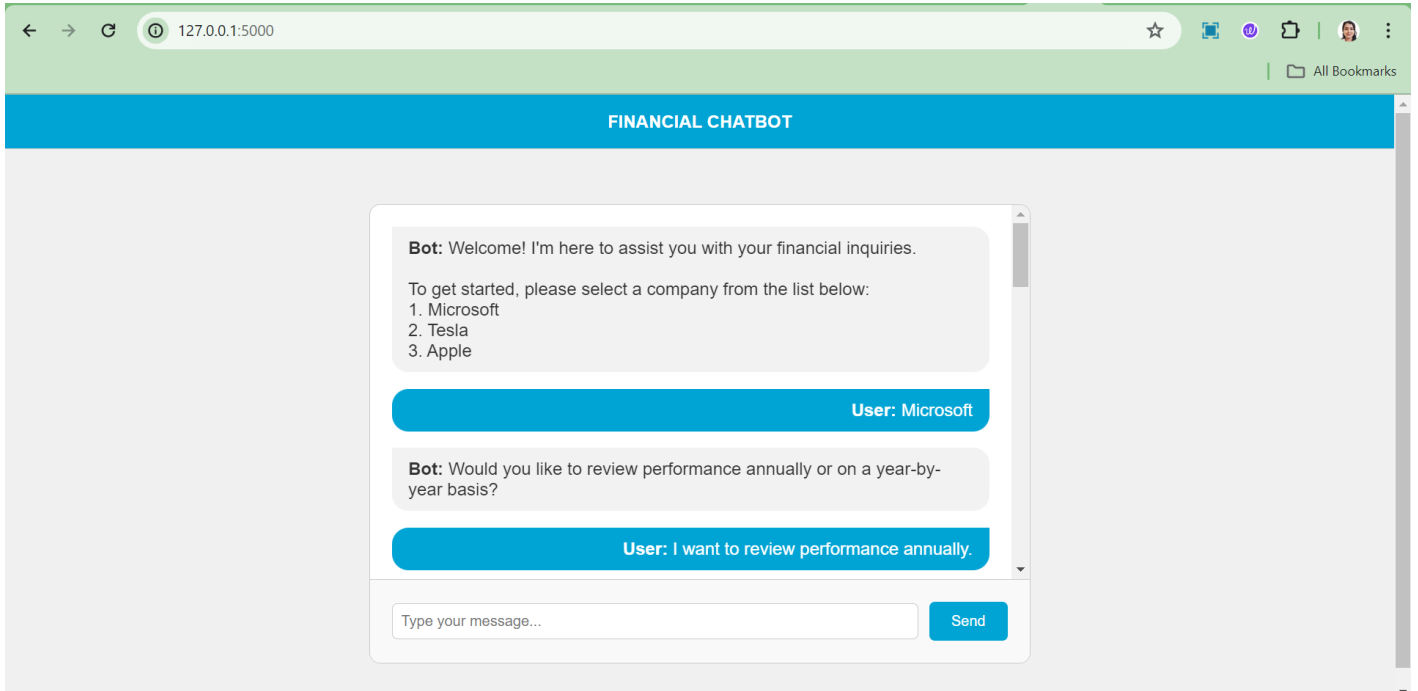


Task 2: Developing an AI-powered financial chatbot

By Sreekutty R(sreekutty1201@gmail.com)

EXPLANATION:



The chatbot project is designed to provide financial insights into companies, with Microsoft as an example. Users can select a company and then choose to review performance annually. The chatbot prompts the user to specify the fiscal year they are interested in and then asks what specific financial information they would like to explore.

Throughout the conversation, the chatbot retrieves and presents key financial metrics such as total revenue, net income, total assets, total liabilities, and cash flow from operating activities for the chosen fiscal year. Additionally, it calculates and provides growth percentages for revenue, net income, total assets, total liabilities, and cash flow from operating activities compared to the previous fiscal year.

The image displays three sequential screenshots of a web-based chatbot interface titled "FINANCIAL CHATBOT".

Screenshot 1 (Top Left): The chatbot greets the user: "Bot: Welcome! I'm here to assist you with your financial inquiries. To get started, please select a company from the list below: 1. Microsoft 2. Tesla 3. Apple". The user responds: "User: Microsoft". The chatbot then asks: "Bot: Would you like to review performance annually or on a year-by-year basis?". The user responds: "User: I want to review performance on a year-by-year basis."

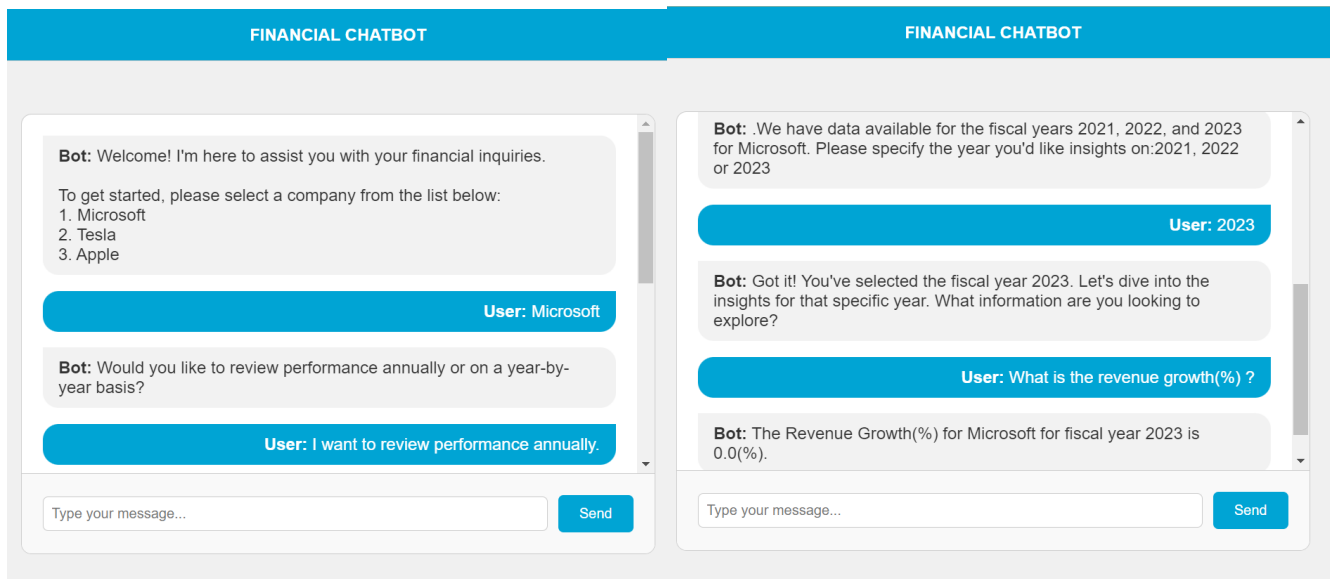
Screenshot 2 (Top Right): The chatbot asks: "Bot: What information are you looking to explore?". The user asks: "User: What is the year by year average revenue growth rate(%)?". The chatbot responds: "Bot: The Year By Year Average Revenue Growth Rate(%) from 2021 to 2023 for Microsoft is -7.2205(%)". The user then asks: "User: What is the year by year average net income growth rate(%)?". The chatbot responds: "Bot: The Year By Year Net Income Revenue Growth Rate(%) from 2021 to 2023 for Microsoft is -5.0813(%)". The user then asks: "User: What is the year by year average assets growth rate(%)?".

Screenshot 3 (Bottom): The chatbot responds to the user's question about assets: "Bot: The Year By Year Average Assets Growth Rate(%) from 2021 to 2023 for Microsoft is -6.6517(%)". The user then asks: "User: What is the year by year average liabilities growth rate(%)?". The chatbot responds: "Bot: The Year By Year Average Liabilities Growth Rate(%) from 2021 to 2023 for Microsoft is -2.3016(%)". The user then asks: "User: What is the year by year average cash flow from operations growth rate(%)?". The chatbot responds: "Bot: The Year By Year Average Cash Flow from Operations Growth Rate(%) from 2021 to 2023 for Microsoft is -4.0501(%)".

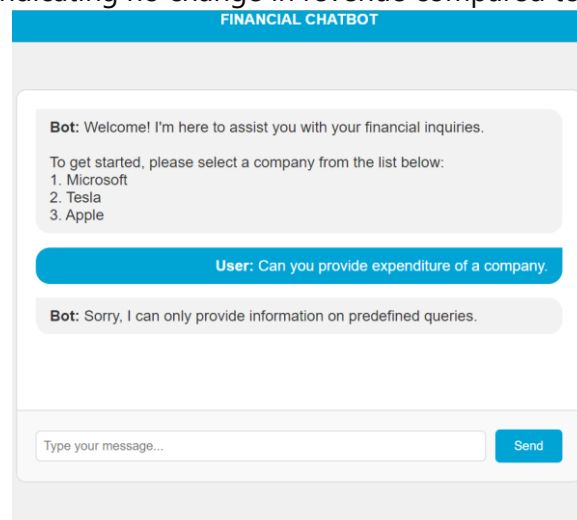
This chatbot project provides users with the ability to review the financial performance of selected companies, focusing on year-by-year analysis. In this conversation, the user selects Microsoft and opts to review performance on a year-by-year basis.

The chatbot retrieves and presents the year-by-year average growth rates for key financial metrics including revenue, net income, total assets, total liabilities, and cash flow from operations, spanning from 2021 to 2023 for Microsoft.

Overall, the chatbot offers a convenient way for users to analyze and understand the trend of key financial indicators for the chosen company over multiple years, aiding in financial decision-making and strategic planning.



In this interaction, the user selects Microsoft and opts to review performance annually. They specify the fiscal year 2023 and inquire about revenue growth. The bot responds that the revenue growth for Microsoft in 2023 is 0.0%, indicating no change in revenue compared to the previous year.



Later, the user asks a question about expenditure, which falls outside the predefined queries the bot is programmed to respond to, leading to a prompt stating that it can only provide information on predefined queries.

LIMITATION:

This chatbot project has several limitations:

- The bot can only respond to predefined queries related to financial information about specific companies and their performance. Users cannot ask open-ended questions or queries outside the predefined scope.
- Users can only select from a predefined list of companies (Microsoft, Tesla, Apple). There's no option to inquire about other companies not included in the list.
- The available financial data is limited to specific fiscal years (2021, 2022, 2023). Users cannot inquire about data from other years or periods.

- While the bot provides insights into key financial metrics like revenue, net income, assets, liabilities, and cash flow, it does not offer more in-depth analysis or interpretation of the data. Users may require additional context or analysis to make informed decisions.