**AI-Powered Financial Chatbot**

**Dataset:**

The dataset was created using 10K documents from Microsoft, Apple, and Tesla. Collected three fiscal years' data (i.e., Total Revenue, Net Income, Total Assets, Total Liabilities, and Cash Flow from operating Activities)

**How the chatbot works:**

The Chatbot is designed to answer financial queries.

**Mechanism of Chatbot:**

1. Checks if the query contains specific keywords in financial metrics.
2. Identifies and matches the keywords to the columns of the dataset.
3. Recognizes the companies and years in query.
4. Query Execution:

* If the query involves a financial metric without a company mentioned, it sums the values across all companies.
* If a company is mentioned, it retrieves the corresponding financial metric for the latest year or the specified year.
* If the query asks for a comparison, it calculates the difference between the values of the last two years.
* If the query seeks the highest or lowest values, it determines the company with the maximum or minimum value for that metric in the given or latest available year.

**What are the predefined queries it can respond to?**

1. **Total values for financial metrics:**

* What is the total net income?
* Total revenue in 2024?

1. **Company-specific financial data:**

* What is the total net income for Microsoft in 2024?
* What is the total revenue for Apple in 2023?

1. **Comparative financial analysis:**

* How has net income changed over the last year?
* How has revenue for Tesla changed over the last year?

1. **Finding the highest and lowest values:**

* Which company has the highest total revenue?
* Which company has the lowest net income?

**Limitations:**

1. This chatbot can only answer one question at a time and does not support follow-up questions.
2. This chatbot answers the questions with a pre-defined structured format, but it fails to answer according to the user question format.
3. If there is any spelling mistake in the company name, the chatbot fails to answer.