

Interactive QA Bot for Financial Data

Introduction

Welcome to the QA Bot for Financial Data! This interactive platform allows users to upload financial documents (such as Profit & Loss statements) in PDF format and ask specific financial questions. The bot processes the uploaded documents, extracts relevant data, and uses advanced AI models to generate accurate, contextually relevant responses.

Features

- **PDF Upload:** Upload financial documents for analysis.
- **Real-Time Querying:** Ask financial questions and get instant answers.
- **Relevant Data Display:** View table segments retrieved from the document alongside the generated answers.
- **User-Friendly Interface:** Built using Streamlit for ease of use.

How to Use the QA Bot

1. Uploading Financial Documents

1. Open the QA Bot interface.
2. Click on the **Upload your PDF file** button.
3. Select a PDF document containing P&L tables from your computer.
4. Specify the start and end pages for processing using the input fields below the upload button.
5. Click the **Process PDF** button to extract tables from the document.

Notes:

- Ensure the document contains clearly formatted tables for accurate extraction.
- The bot uses Camelot to extract table data, so tables should not be heavily stylized or contain merged cells.

2. Asking Financial Questions

1. After processing the PDF, a preview of the extracted table will be displayed.
2. Enter your financial question in the text input box labeled **Enter your financial question.**
3. Click the **Get Answer** button to retrieve the answer.

Example Queries:

- *What are the total expenses for Q2 2023?*
- *Show the operating margin for the past 6 months.*
- *What is the total revenue for the year?*

Query Output:

- The bot will display the generated answer in bold under the query input box.
- Relevant table data will be shown in an expandable section labeled **Relevant Table Data**.

Example Queries and Outputs

Query 1: Total Value of Non-Current Assets (March 31, 2024)

Query: *What is the total value of non-current assets as of March 31, 2024?*

Response:

- To calculate the total value of non-current assets as of March 31, 2024, sum the total non-current assets and other non-current assets for that particular date.
- **Total Non-Current Assets:**
 - \$48,382 (from .1)
 - \$54,935 (from .2)
- **Sum of Non-Current Assets:** $\$48,382 + \$54,935 = \$103,317$
- **Other Non-Current Assets:**
 - \$2,121 (from 2.9.1)
 - \$2,318 (from 2.9.2)
- **Sum of Other Non-Current Assets:** $\$2,121 + \$2,318 = \$4,439$
- **Total Value of Non-Current Assets:** $\$103,317 + \$4,439 = \$107,756$

Query 2: Non-Current Assets (March 31, 2023)

Query: *What are the non-current assets for March 31, 2023?*

Response:

- The non-current assets for March 31, 2023, are \$54,935 million.

Query 3: Difference in Non-Current Assets (March 31, 2023, vs. March 31, 2024)

Query: *What is the difference in total non-current assets between March 31, 2023, and March 31, 2024?*

Response:

- To calculate the difference in total non-current assets:
- **Total Non-Current Assets (March 31, 2024):** \$54,935
- **Total Non-Current Assets (March 31, 2023):** \$48,382
- **Difference:** $\$54,935 - \$48,382 = \$6,553$

Final Answer: The difference in total non-current assets between March 31, 2023, and March 31, 2024, is \$6,553.

Troubleshooting

Common Issues

- **No Tables Found:**
 - Ensure the specified page range contains structured tables.
 - Use PDFs with text-based tables rather than scanned images.
- **Inaccurate Data Extraction:**
 - Tables with merged or multi-row headers may cause issues.
 - Verify table formatting before uploading.
- **Query Errors:**
 - Use specific and clear financial terms in queries.
 - Ensure the uploaded document contains data relevant to the question.

Contact Support

For further assistance, contact our support team at shobhit20091995@gmail.com.

Technical Notes

- **Backend:** Uses OpenAI's GPT-3.5-Turbo for generating responses and Pinecone for vector database storage.
- **Table Extraction:** Camelot's stream flavor extracts tables from PDFs.
- **Embeddings:** Generated using OpenAI's *text-embedding-ada-002* model.

Thank you for using the QA Bot for Financial Data!