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Project Name: Historical Financial Data and Potential Trends

Link to GitHub repository: <https://github.com/rafasalonikios/sql-project>

Job description

- a. I selected the job as it involves analyzing a lot of financial data and projections, and making decisions based on that
- b. This could be relevant to my career goals as I desire to have a high position at a bank one day, in which I will be working with data like this and doing similar tasks
- c. The job interests me because I want to work with finance, and I really enjoy working with the numbers and making financial decisions based on them after analysis

Problem

- a. Identify trends in revenues and expenses, providing insights to financial planning and to the decision making process
- b. It is relevant to the job as it is very similar to a few of the responsibilities the analyst is going to have, based on what is outlined in the job description
- c. SQL will allow me to extract data from databases and different data sources, and then based on that, summarize and analyze, also being able to perform calculations and facilitating the process of identifying trends over time

Data sources

- a. Use financial data APIs that provide access to revenue and expenses relevant to LOB, possibly from internal systems offering historical financial data
- b. I will use python to best retrieve the relevant datasets. “requests”, “json” and “pandas” are important libraries I will probably have to use

- c. This is relevant as it will allow me access to historical financial data, which is crucial for data analysis, the main part of the job description

Solution

- a. Collect the data, APIs and scrapping; clean data, if necessary and transform it into data that is easier to analyze (aggregations, joins, filtering, etc.); analyze the data and provide insights using SQL queries (financial calculations – growth rates, ratios, profit margins, determine where they can improve more based on historical data, maybe perform sensitivity analysis, understanding the impact of several factors, facilitating forecasting and the decision making process)
- b. Use matplotlib in python to create data visualizations that present key findings and potential trends encountered