

# Project Description: Goldman Sachs Stock Market Analysis (1999-2022) using SQL and Power BI

Repository Name: `gs_stock_market_analysis`

## Project Overview

This project aims to analyze the stock market performance of Goldman Sachs from 1999 to 2022 using data obtained from Kaggle. The analysis was conducted using SQL for data cleaning and preparation, and Power BI for visualization. The goal is to provide comprehensive insights into the stock's performance, volatility, and market trends, particularly around the 2008 financial crisis.

## Dataset

- **Source:** Kaggle
- **Period:** 1999-2022
- **Columns:** Date, Open, High, Low, Close, Adj Close, Volume

## Analysis Phases

1. **Data Collection and Cleaning:**
  - The dataset was collected from Kaggle and imported into PostgreSQL.
  - Data cleaning included removing null values and formatting the data for analysis.
2. **Data Upload and Visualization:**
  - Cleaned data was exported as `gs_1999-2022.csv` and uploaded to Power BI.
  - Visualization included line charts, bar charts, moving averages, and more to highlight key insights and trends.
3. **Categorized Analysis:**
  - The data was categorized into three periods: pre-crisis, during crisis, and post-crisis.
  - Key performance indicators (KPIs) were calculated for each period to understand the stock's behavior over time.

## Key Findings

1. **Pre-Crisis Period:**
  - **Total High:** 248.3k
  - **Total Low:** 241.6k
  - **Total Open:** 244.9k
  - **Total Volume:** 9.0 billion
  - **Quarterly Highlight:** Quarter 4 showed the highest percentage of close at 27.54%.

## 2. During Crisis Period:

- **Total High:** 39.5k
- **Total Low:** 37.5k
- **Total Open:** 38.5k
- **Total Close:** 38.5k
- **Quarterly Highlight:** Quarter 2 recorded the maximum close percentage at 29.91%.

## 3. Post-Crisis Period:

- **Total High:** 649.5k
- **Total Low:** 635.7k
- **Total Open:** 642.6k
- **Total Volume:** 17.1 billion
- **Quarterly Highlight:** Quarter 1 recorded the maximum close percentage at 26.07%.

## Conclusion

The analysis reveals the significant impact of the 2008 financial crisis on Goldman Sachs' stock performance. The post-crisis period shows substantial recovery and growth, with increased trading volumes and higher stock prices. Key insights from the data include:

- Long-term growth despite short-term volatility
- Increased trading activity and investor confidence post-crisis
- Quarterly performance variations highlighting market trends and opportunities