STOCK MARKET DASHBOARD VISUALIZATION REPORT

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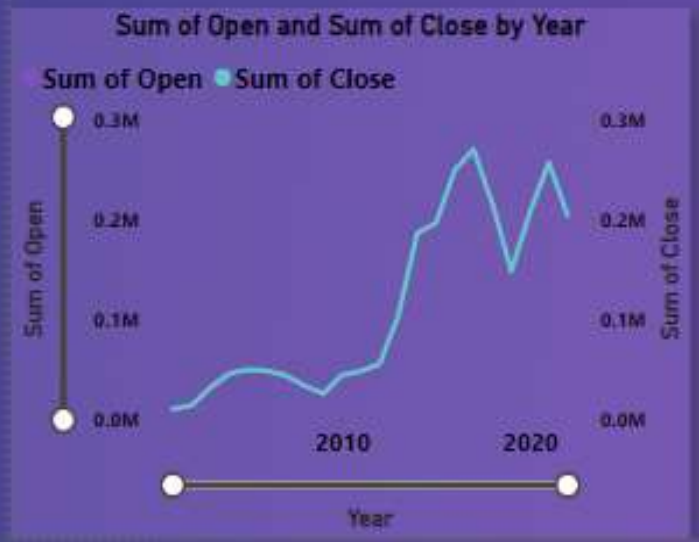
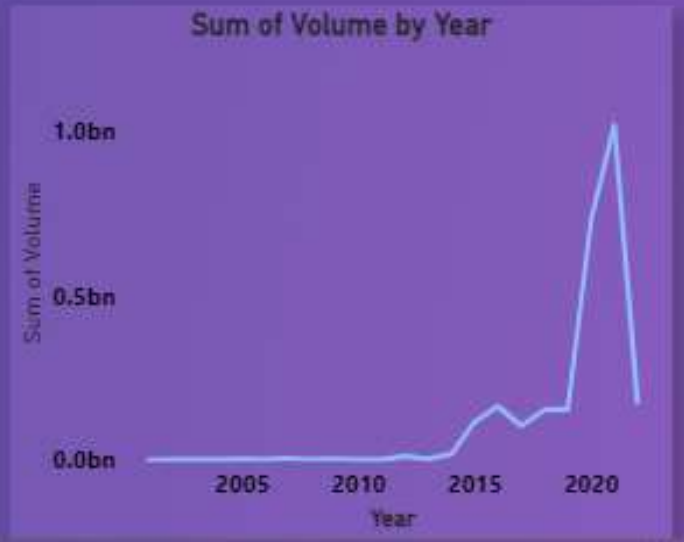
Company

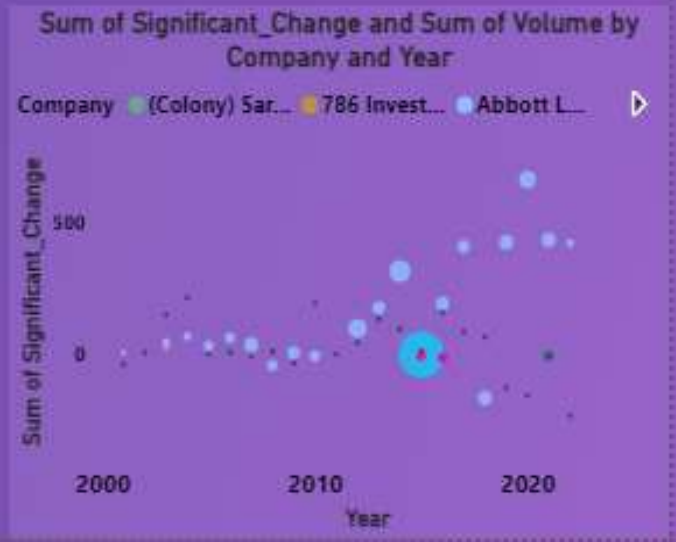
- [ ] Select all
- [x] (Colony) Sarhad Textile ...
- [x] 786 Investments Limited....
- [x] Abbott Laboratories (Paki...
- [ ] Abdullah Shah Ghazi Sug...
- [x] Abson Industries Limited....
- [ ] Adam Sugar Mills Limite...
- [ ] Adamjee Insurance Comp...
- [ ] Adamjee Life Assurance C...

Sum of Open	Sum of high	Sum of Volume
2.47M	2.50M	3bn

Sum of Close	Sum of Low	Count of Volume Millioin
2.47M	2.44M	11.32K

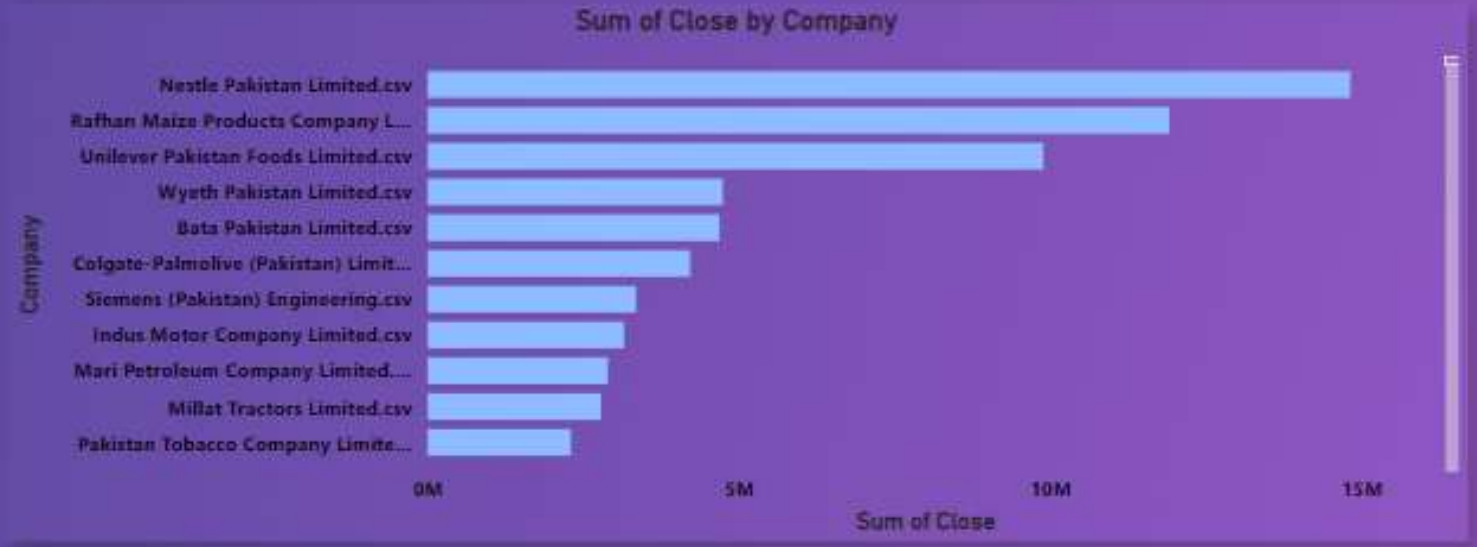






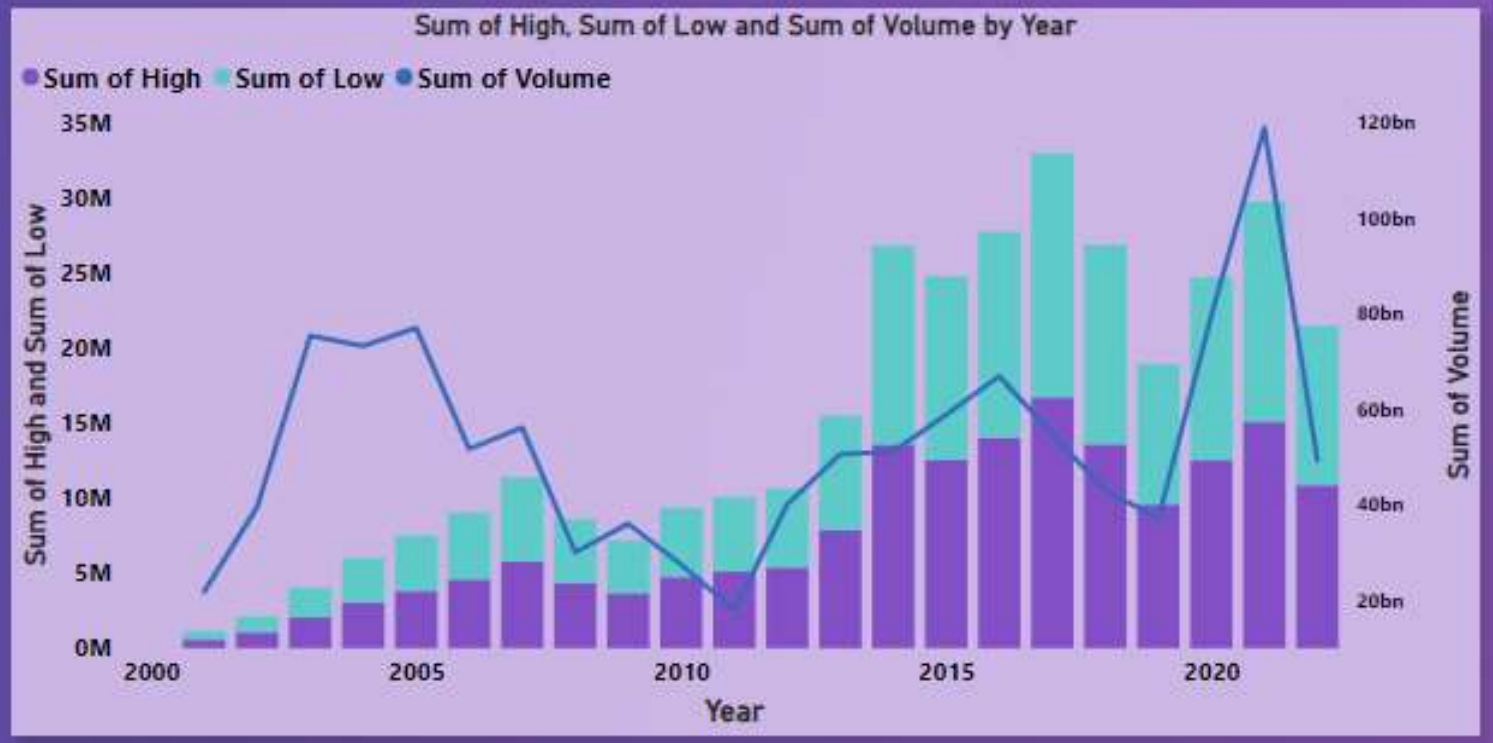
Company
Select all
(Colony) Sarhad Textile Mil...
786 Investments Limited.csv
Abbott Laboratories (Pakis...
Abdullah Shah Ghazi Sugar...
Abson Industries Limited.csv
Adam Sugar Mills Limited....
Adamjee Insurance Compa...
Adamjee Life Assurance Co...
Adil Textile Mills Limited.csv
Ados Pakistan Limited.csv
AEL Textile Limited.csv
Agha Steel Ind.Ltd.csv
AGP Limited.csv
Agriauto Industries Limite...
Agritech Limited.csv
Ahmad Hassan Textile Mill...
Air Link Communication Li...

Sum of Price_Change by Month
Sum of Price_Change
40K
20K
0K
January
February
March
April
May
June
July
August
Septem...
October
Novem...
December
Month


Sum of Close by Company
Company
Nestle Pakistan Limited.csv
Rafhan Maize Products Company L...
Unilever Pakistan Foods Limited.csv
Wyeth Pakistan Limited.csv
Bata Pakistan Limited.csv
Colgate-Palmolive (Pakistan) Limit...
Siemens (Pakistan) Engineering.csv
Indus Motor Company Limited.csv
Mari Petroleum Company Limited....
Millat Tractors Limited.csv
Pakistan Tobacco Company Limite...
0M
5M
10M
15M
Sum of Close

Company

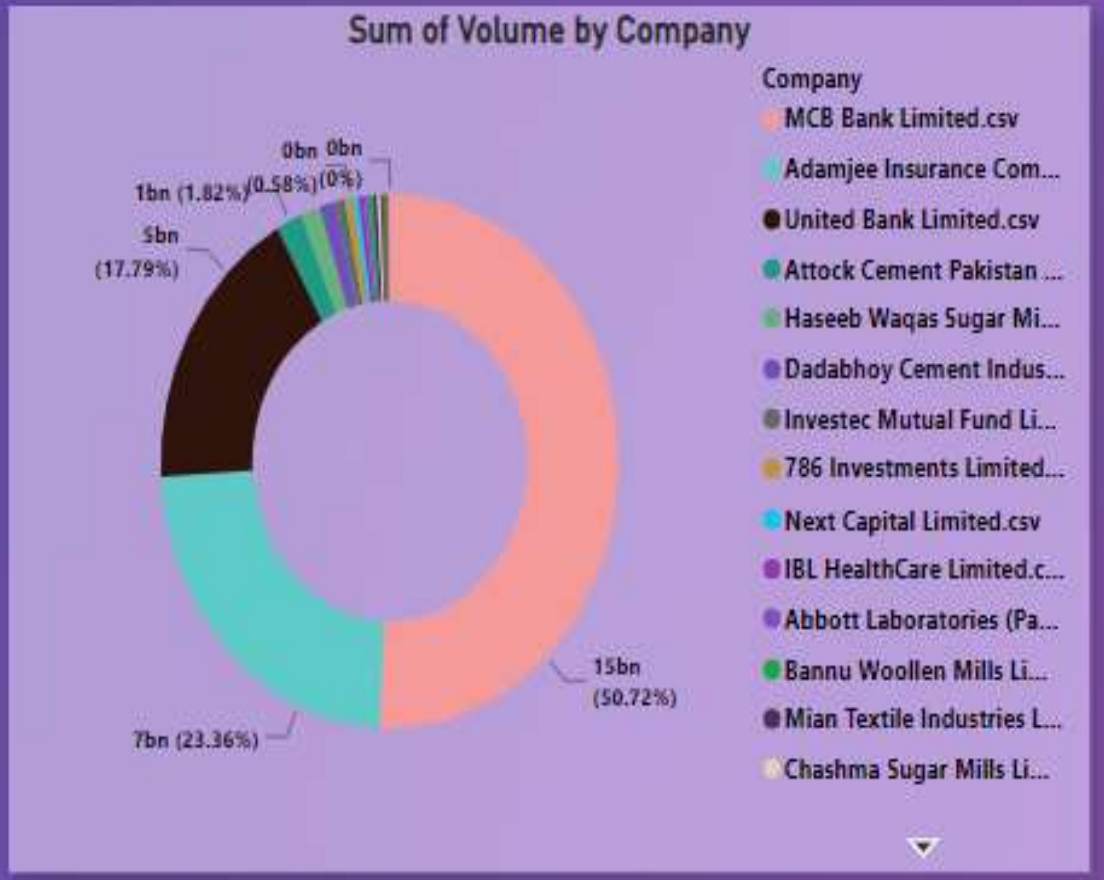
- Select all
- (Colony) Sarhad Textile Mills ...
- 786 Investments Limited.csv
- Abbott Laboratories (Pakista...
- Abdullah Shah Ghazi Sugar ...
- Abson Industries Limited.csv
- Adam Sugar Mills Limited.csv
- Adamjee Insurance Company...
- Adamjee Life Assurance Com...
- Adil Textile Mills Limited.csv
- Ados Pakistan Limited.csv
- AEL Textile Limited.csv
- Agha Steel Ind.Ltd.csv
- AGP Limited.csv
- Agriauto Industries Limited.csv
- Agritech Limited.csv
- Ahmad Hassan Textile Mills L...
- Air Link Communication Limi...
- Aisha Steel Mills Limited.csv
- AKD Capital Limited.csv



HighestPrice	LowestPrice	AvgPrice	Median
26.00K	0.01	110.02	21.89

Company

- [x] Select all
- [x] (Colony) Sarhad Textile Mills Li...
- [x] 786 Investments Limited.csv
- [x] Abbott Laboratories (Pakistan)...
- [ ] Abdullah Shah Ghazi Sugar Mil...
- [ ] Abson Industries Limited.csv
- [ ] Adam Sugar Mills Limited.csv
- [x] Adamjee Insurance Company L...
- [x] Adamjee Life Assurance Comp...
- [ ] Adil Textile Mills Limited.csv
- [ ] Ados Pakistan Limited.csv
- [ ] AEL Textile Limited.csv
- [ ] Agha Steel Ind.Ltd.csv
- [ ] AGP Limited.csv
- [ ] Agriauto Industries Limited.csv
- [ ] Agritech Limited.csv
- [ ] Ahmad Hassan Textile Mills Li...
- [ ] Air Link Communication Limite...
- [ ] Aisha Steel Mills Limited.csv



STOCK MARKET DASHBOARD VISUALIZATION REPORT

Agenda

- Overview
- Objective
- Data Overview
- Business Request
- Research Questions
- Implementation
- Insights and Recommendations
- Summary and Key Findings
- Conclusion

OVERVIEW

This project is to create an interactive dashboard to visualize the stock market data of companies listed on the Pakistan Stock Exchange (PSX) from 2001 to 2022. The dataset provided includes daily stock market data for 750 companies, covering key metrics such as opening price, closing price, trading volume, lowest price, and highest price. This dashboard aims to facilitate the analysis of time series data, comparative performance of different companies, identification of key trends, and more. The primary goal was to develop a tool that allows users to explore historical stock market data, identify trends, compare the performance of different companies, and gain insights into significant events that influenced stock prices.

OBJECTIVE

The primary objective is to create an interactive dashboard that allows users to explore, analyze, and visualize stock market data for 750 companies over a 22-year period. The dashboard will provide tools for time series analysis, comparative performance, trend identification, and data-driven insights to assist stakeholders in making informed decisions.

DATA OVERVIEW

- **The dataset comprises the following columns:**
- **Date:** The date on which the stock prices were recorded.
- **Open:** The price at which the stock opened on a particular day.
- **Close:** The price at which the stock closed on a particular day.
- **Volume:** The number of shares traded on that day.
- **Low:** The lowest price at which the stock traded on a particular day.
- **High**: The highest price at which the stock traded on a particular day.

BUSINESS REQUEST

The business request is to develop a user-friendly, interactive dashboard that enables stakeholders to:

- **Track the performance of specific companies over time.**
- **Compare multiple companies' stock performances.**
- **Identify and visualize significant market trends.**
- **Gain insights into historical market behavior and key events impacting stock prices.**

- **Visualization of time series data for stock prices and trading volumes.**
- **Identification of key trends, patterns, and anomalies in the stock market data.**
- **Interactive exploration with filtering options for companies and time periods.**

RESEARCH QUESTIONS

The project aims to address the following research questions:

- How have the opening and closing stock prices of individual companies evolved over the 22-year period?
- What are the trends in trading volume over time for different companies?
- Which companies show significant price changes, peaks, and troughs, and what might be the causes?
- How do the performances of different companies compare during the same period?
- What are the summary statistics for stock prices, such as average, median, highest, and lowest prices?
- What significant events or anomalies have affected the stock prices over the years?

IMPLEMENTATION

- **Time Series Visualization:**
  - Line charts will display the opening and closing prices of selected companies over time.
  - Volume traded will be visualized to understand market activity.
- **Comparative Analysis:**
  - Comparative line and bar charts will be used to assess the performance of multiple companies.
  - Filters will allow users to select up to three companies for comparison.
- **Highlight Key Trends:**
  - Trend lines, markers, and annotations will identify significant price changes, peaks, troughs, and anomalies.

- **Interactive Elements:**
  - Users will have access to interactive filters for selecting companies and time ranges, along with tooltips and hover effects for detailed data exploration.

- **Summary Statistics:**
- The dashboard displays summary statistics, including the sum of opening, closing, high, and low prices, as well as trading volumes.

- The dashboard also provides a breakdown of the sum of closing prices by company and the sum of volume by company.

- **Additional Insights:**
  - Annotations and tooltips will highlight significant events affecting stock prices, providing context and facilitating deeper analysis.

Insights and Recommendations

- **Insights:**
  - Certain companies exhibit strong growth trends, while others show significant volatility.
  - High trading volumes often coincide with significant price changes, suggesting market reactions to news or events.
  - Specific economic events, such as the global financial crisis, have had a noticeable impact on stock prices across the board.
- **Recommendations:**
  - Investors should consider historical trends and volatility when making investment decisions.
  - Companies with consistent growth trends and stable trading volumes may present lower-risk investment opportunities.
  - Anomalies in the data should be investigated further to understand the underlying causes and potential risks.

Summary and Key Findings

- The dashboard enables comprehensive analysis of the PSX data, providing a detailed view of stock market behavior over 22 years.
- Time series and comparative visualizations reveal key trends, including periods of growth, decline, and volatility.
- Summary statistics offer quick insights into the performance of individual companies, aiding in investment decisions.
- The interactive elements allow users to customize their analysis based on specific companies and time periods, making the dashboard a powerful tool for investors and analysts.

Conclusion

The Stock Market Dashboard developed for the Pakistan Stock Exchange data from 2001 to 2022 serves as a valuable tool for analyzing and visualizing long-term trends in the stock market. It allows users to explore detailed stock data, compare companies, and identify key trends and anomalies. The dashboard is designed to support data-driven decision-making for investors, analysts, and other stakeholders, providing a flexible and interactive way to analyze complex stock market data.

Thanks