



Project Title	stock-market
Tools	Tableau Desktop, SQL, Excel
Technologies	Business Analyst
Project Difficulties level	intermediate

Dataset : Dataset is available in the given link. You can download it at your convenience.

[Click here to download data set](#)

About Dataset

Given historical stock price data for Apple, Microsoft, Netflix and Google over the past three months, your task is to analyze and compare the performance of these companies in the stock market using various data science techniques.

Specifically, the goal is to identify trends and patterns in stock price movements, calculate moving averages and volatility for each company, and conduct correlation analysis to examine the relationships between different stock prices.

You can also download the latest data using the finance API instead of using the provided dataset.

Here's a detailed guide on how to carry out a Market Analysis project using Tableau:

Project Overview

Objective: To analyze market trends and their potential impact on a specific company or industry.

Steps to Follow:

1. Define the Scope and Objective:

- Identify the market or industry you want to analyze.
- Define the specific objectives of your analysis (e.g., identifying market trends, understanding competitive landscape, etc.).

2. Data Collection:

- Gather relevant data from various sources (e.g., financial reports, market research reports, government databases, etc.).
- Common data points include market size, market share, growth rates, consumer demographics, competitive analysis, etc.

3. Data Preparation:

- Clean the data to remove any inconsistencies or errors.
- Combine data from different sources into a single dataset.
- Use tools like Excel or SQL for data cleaning and preparation.

4. Load Data into Tableau:

- Open Tableau and connect to your data source.
- Load your prepared dataset into Tableau.

5. Create Initial Visualizations:

- Start by creating basic visualizations to understand the data.
- Use different chart types like bar charts, line charts, pie charts, and scatter plots to visualize various aspects of the data.

Tableau Code Example

Step-by-Step Tableau Dashboard Creation

1. Connect to Data:

Open Tableau and connect to your data source. For example, if you are using a CSV file:

mathematica

Copy code

Tableau > Connect > Text File > Select your CSV file

○

2. Create Basic Charts:

○ Market Size Over Time:

- Drag **Year** to Columns.
- Drag **Market Size** to Rows.
- Change the chart type to a Line Chart.

○ Market Share by Company:

- Drag **Company** to Columns.
- Drag **Market Share** to Rows.
- Use a Bar Chart to display the market share.

○ Market Growth Rate:

- Drag **Year** to Columns.
- Drag **Growth Rate** to Rows.
- Use a Line Chart to show the growth rate over time.

3. Create Advanced Visualizations:

○ Competitive Analysis:

- Drag **Company** to Rows.

- Drag **Revenue** and **Profit** to Columns.
- Use a Dual-Axis Chart to compare revenue and profit by company.
- **Consumer Demographics:**
 - Drag **Age Group** to Columns.
 - Drag **Market Size** to Rows.
 - Use a Stacked Bar Chart to show market size by age group.
- **Heat Map for Regional Analysis:**
 - Drag **Region** to Rows.
 - Drag **Market Size** to Columns.
 - Use a Heat Map to show market size across different regions.

4. Combine Visualizations into a Dashboard:

- Create a new Dashboard in Tableau.
- Drag and drop your visualizations onto the dashboard.
- Arrange the visualizations for a cohesive and intuitive layout.
- Add filters and interactivity to allow users to explore the data.

5. Add Insights and Annotations:

- Add text boxes to provide context and insights on key findings.
- Use annotations to highlight important trends or outliers in the data.

Tableau Code Example

Here's a detailed example using Tableau code for creating visualizations. Note that Tableau uses a visual interface, but you can follow these steps in Tableau's interface to create similar outputs:

-- Connecting to Data

1. Open Tableau
 2. Connect > Text File > Select your data file (e.g., market_data.csv)
- Creating Market Size Over Time Line Chart
1. Drag 'Year' to Columns
 2. Drag 'Market Size' to Rows
 3. Select 'Line' chart type
- Creating Market Share by Company Bar Chart
1. Drag 'Company' to Columns
 2. Drag 'Market Share' to Rows
 3. Select 'Bar' chart type
- Creating Market Growth Rate Line Chart
1. Drag 'Year' to Columns
 2. Drag 'Growth Rate' to Rows
 3. Select 'Line' chart type
- Creating Competitive Analysis Dual-Axis Chart
1. Drag 'Company' to Rows
 2. Drag 'Revenue' to Columns
 3. Drag 'Profit' to Columns (next to 'Revenue')
 4. Right-click on 'Profit' axis and select 'Dual Axis'
 5. Synchronize axes if necessary
- Creating Consumer Demographics Stacked Bar Chart
1. Drag 'Age Group' to Columns
 2. Drag 'Market Size' to Rows
 3. Select 'Stacked Bar' chart type
- Creating Heat Map for Regional Analysis
1. Drag 'Region' to Rows
 2. Drag 'Market Size' to Columns
 3. Select 'Heat Map' chart type
- Creating Dashboard
1. Click on 'New Dashboard'
 2. Drag and drop created visualizations onto the dashboard
 3. Arrange visualizations for a cohesive layout
 4. Add filters and interactivity
 5. Add text boxes and annotations for insights

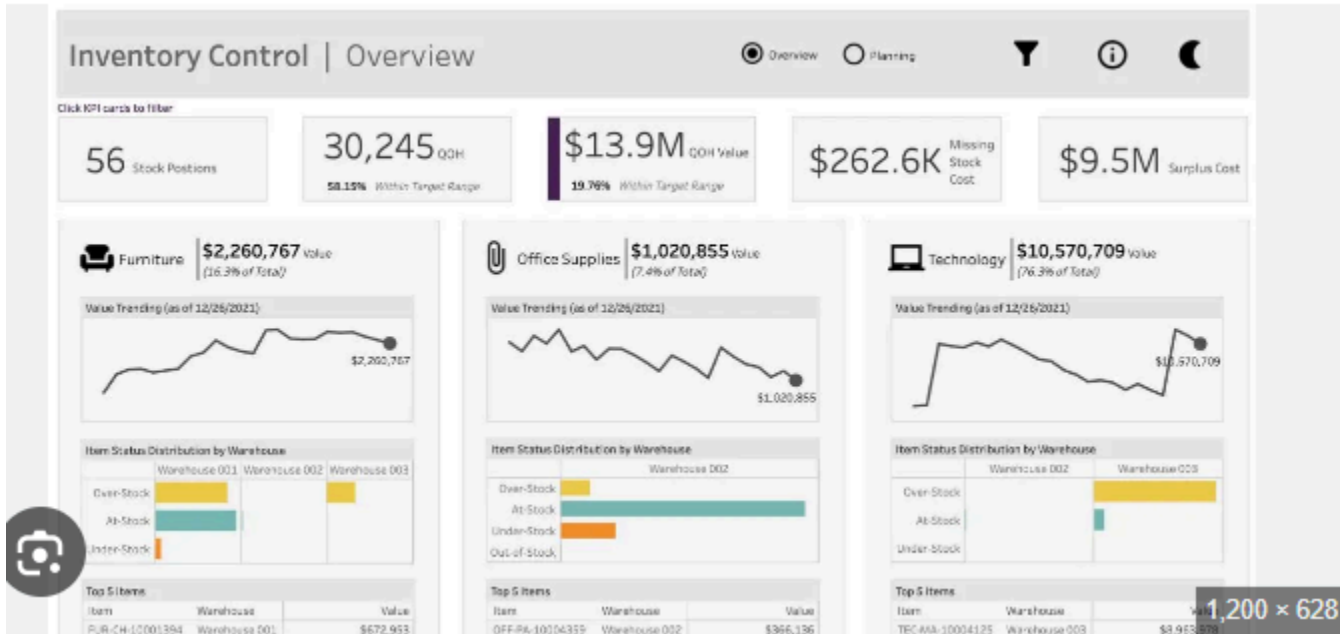
-- Save and Share Dashboard

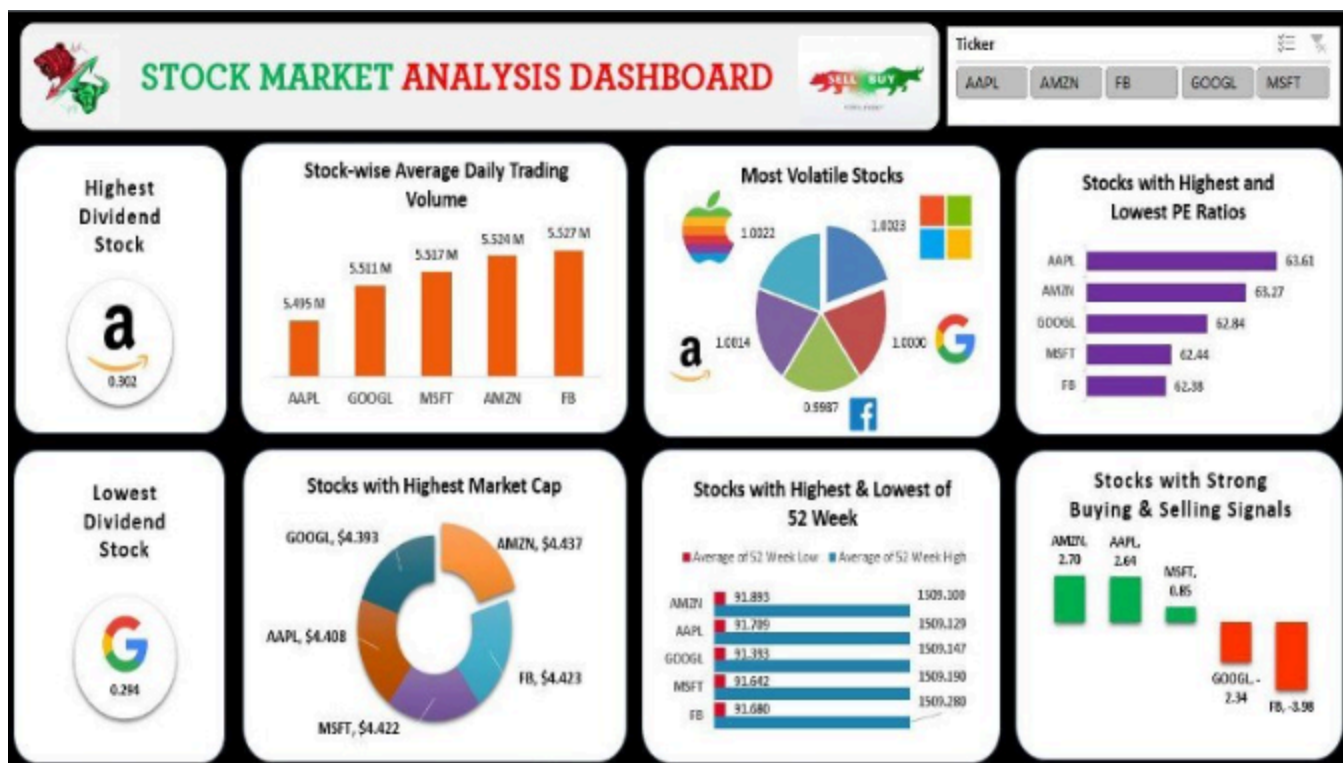
1. Click on 'File' > 'Save As' > Choose location and save your Tableau workbook
2. Publish to Tableau Online or Tableau Server if needed

Conclusion

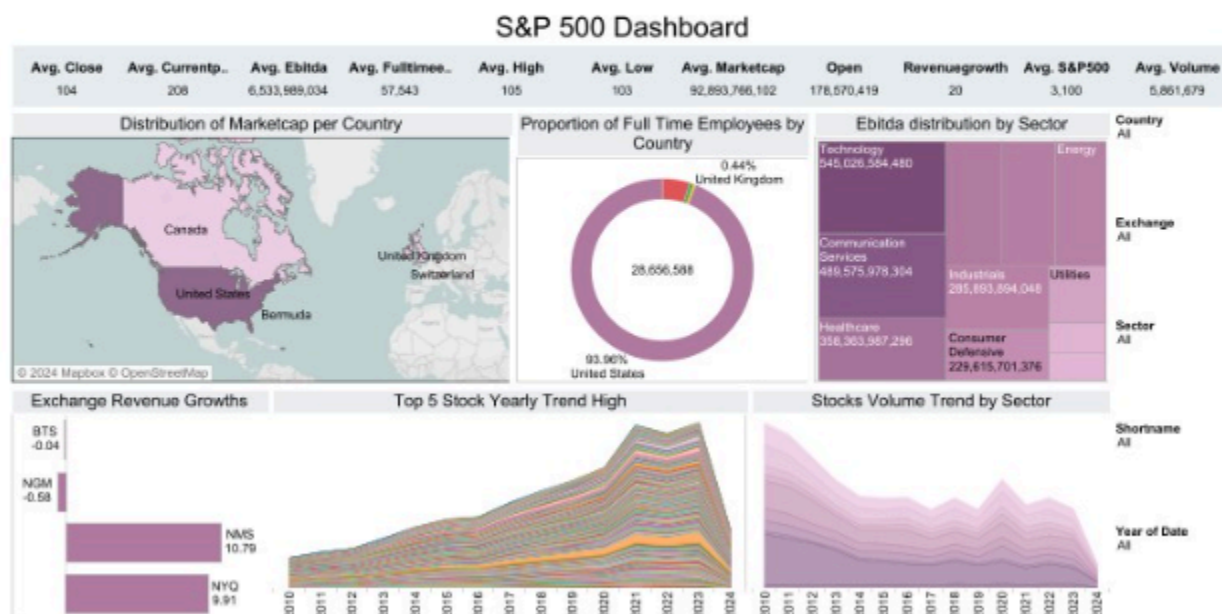
By following these steps, you can create a comprehensive market analysis using Tableau. This project will help you visualize market trends, identify key insights, and make data-driven decisions.

SAMPLE REPORT





Excited to unveil my latest Tableau dashboard, showcasing insightful analyses of the S&P 500 data sourced from Kaggle! 🇺🇸🚀 Delve into the dynamics of stock markets across countries and years, identifying trends in stock perform ...see more



[Reference link](#)