# Data Visualization and Analytics Lab

## Internal Exam Project

========================================================================

**Name of the Students and Roll No** : -
1) Vinni Fengade (67)
2) Varad Bhagalkar (60)

========================================================================

**Problem Statement-:** Creating a data visualization of a data set using Power BI or Tableau.

**Topic** : <u>Stock Market Analysis with Dashboard (Power BI)</u>

========================================================================
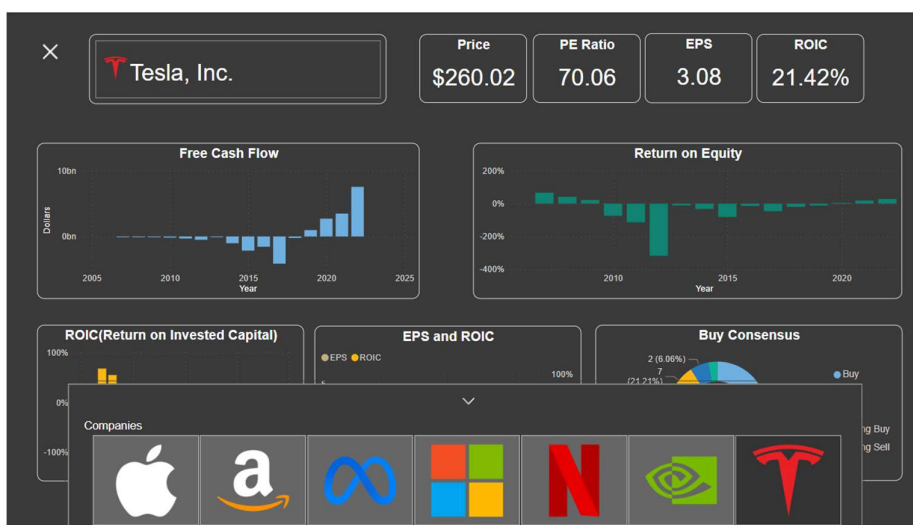
## Overview -:

The stock market plays an important role in the relationship between companies and investors. It provides a way for companies to raise capital and for investors to own a piece of companies that they believe have the potential to grow and succeed.
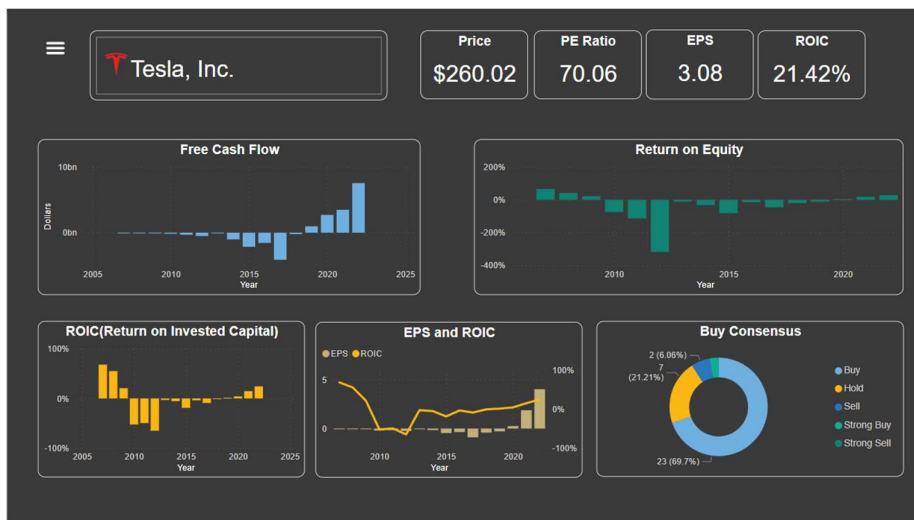
Thus, in this project we have presented the stock market analysis by analysing various attributes of companies, and NIFTY50 Index.

The project is divided into two parts. The first part deep and historical analysis of selected number of companies and the second part deals with a general Overview of an index and a group of companies with real time data.
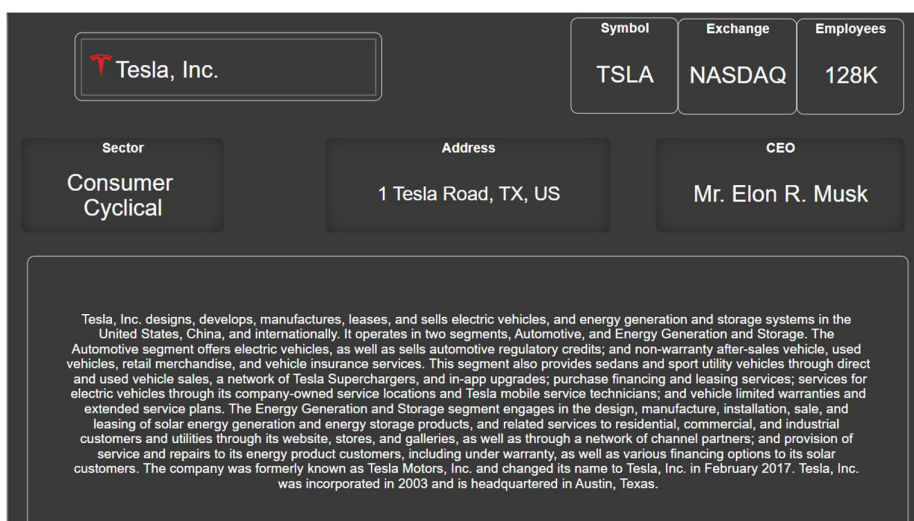
> This part of the project enables an individual to conduct a deeper analysis of a company that they are looking forward to invest in, it provides a financial analysis and some general information (CEO, location, etc.) about the company
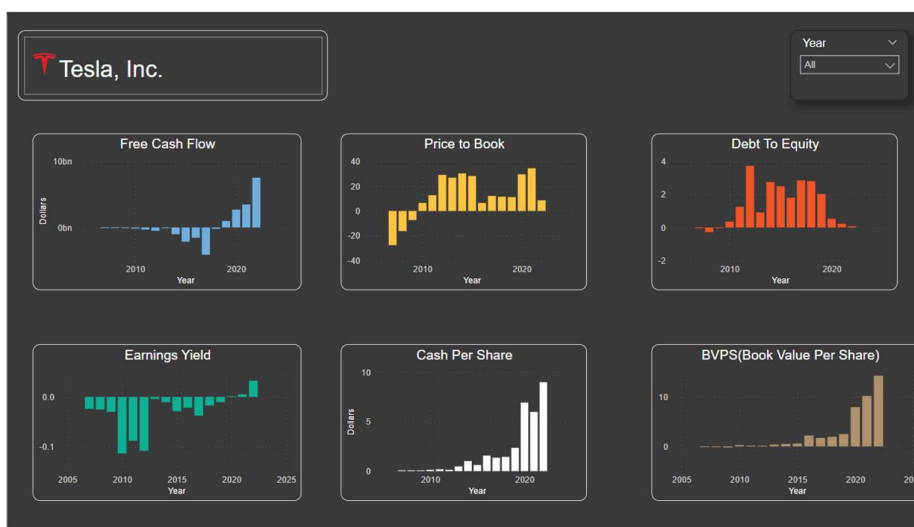


The first page of the dashboard enables one to choose a company that they want to analyse, it also gives an overview of a company's financial health.

**Tesla, Inc.**

| Price | PE Ratio | EPS | ROIC |
|---|---|---|---|
| $260.02 | 70.06 | 3.08 | 21.42% |

**Free Cash Flow**
Dollars
10bn
0bn
2005  2010  2015  2020  2025
Year

**Return on Equity**
200%
0%
-200%
-400%
2010  2015  2020
Year

**ROIC(Return on Invested Capital)**
100%
0%
-100%
2005  2010  2015  2020  2025
Year

**EPS and ROIC**
● EPS ● ROIC
5
0
100%
0%
-100%
2010  2015  2020
Year

**Buy Consensus**
2 (6.06%)
7 (21.21%)
23 (69.7%)
● Buy
● Hold
● Sell
● Strong Buy
● Strong Sell

This page showcases the current price of the stock, it's PE ratio, earnings per share. It also showcases year-wise breakdown of various financial metrics such as free cash flow, return on equity, return on invested capital, earnings per share and buy consensus

---

**Tesla, Inc.**

| Symbol | Exchange | Employees |
|---|---|---|
| TSLA | NASDAQ | 128K |

| Sector | Address | CEO |
|---|---|---|
| Consumer Cyclical | 1 Tesla Road, TX, US | Mr. Elon R. Musk |

Tesla, Inc. designs, develops, manufactures, leases, and sells electric vehicles, and energy generation and storage systems in the United States, China, and internationally. It operates in two segments, Automotive, and Energy Generation and Storage. The Automotive segment offers electric vehicles, as well as sells automotive regulatory credits; and non-warranty after-sales vehicle, used vehicles, retail merchandise, and vehicle insurance services. This segment also provides sedans and sport utility vehicles through direct and used vehicle sales, a network of Tesla Superchargers, and in-app upgrades; purchase financing and leasing services; services for electric vehicles through its company-owned service locations and Tesla mobile service technicians; and vehicle limited warranties and extended service plans. The Energy Generation and Storage segment engages in the design, manufacture, installation, sale, and leasing of solar energy generation and energy storage products, and related services to residential, commercial, and industrial customers and utilities through its website, stores, and galleries, as well as through a network of channel partners; and provision of service and repairs to its energy product customers, including under warranty, as well as various financing options to its solar customers. The company was formerly known as Tesla Motors, Inc. and changed its name to Tesla, Inc. in February 2017. Tesla, Inc. was incorporated in 2003 and is headquartered in Austin, Texas.

The second page of the dashboard gives us general information about the company selected on the first page,
It has company's symbol, the exchange it's listed on, employee count, sector, address, it's CEO and general description of the company.

---

**Tesla, Inc.**

Year
All

**Free Cash Flow**
Dollars
10bn
0bn
2010  2020
Year

**Price to Book**
40
20
0
-20
-40
2010  2020
Year

**Debt To Equity**
4
2
0
-2
2010  2020
Year

**Earnings Yield**
0.0
-0.1
2005  2010  2015  2020  2025
Year

**Cash Per Share**
Dollars
10
5
0
2010  2020
Year

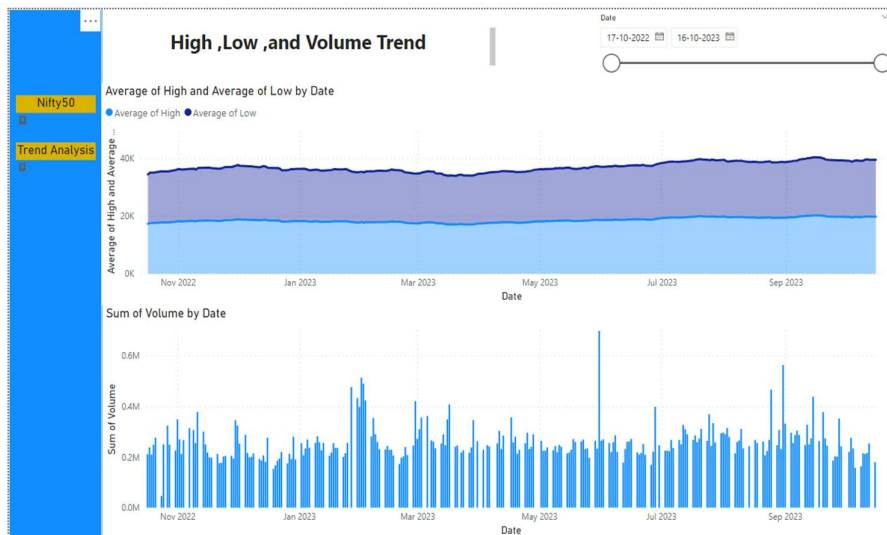**BVPS(Book Value Per Share)**
10
0
2005  2010  2015  2020  2025
Year

The third page of the dashboard gives us an in-depth analysis about the company selected on the first page,
It provides us with various financial metrics like free cash flow, price to book, debt to equity, earnings yield, cash per share, book value per share. It also provides a year wise breakdown of these metrics, it has a slider which enables us to view performance in selected years.
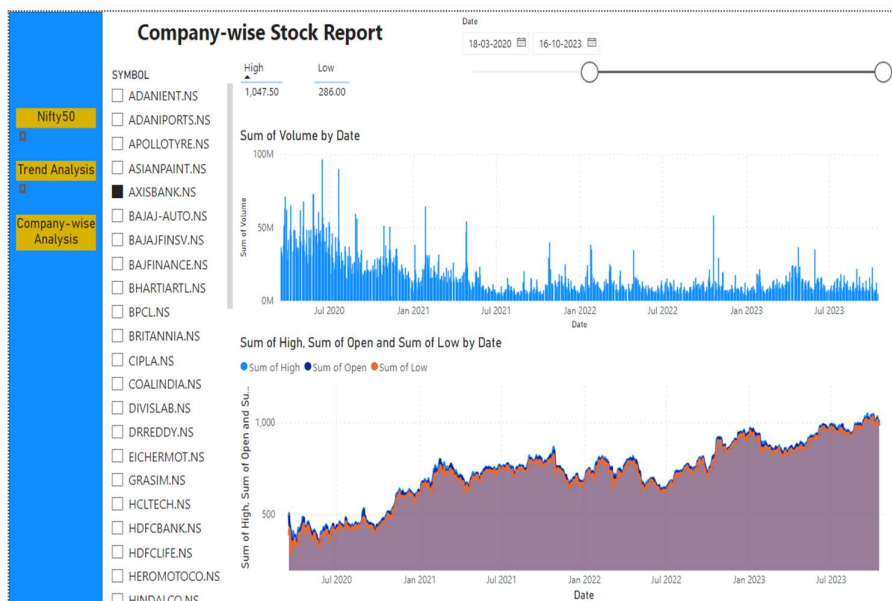
The below dashboard provides dynamic overview of Nifty50 companies with real-time data directly from web making it more usable.



Nifty50 Index plays a crucial role in Stock market analysis.
And, the best representation for stock analysis is using **candle-stick chart** which represents low,high , open close values for a moment at a time.



Here the high ,low and volume data is analyzed which helps in finding the trends in the market which would act as a factor while trading shares.



This shows the companies wise analysis representing condition of each companies.