

Stock Market Tracker Dashboard

Data Preparation and Analysis

1. Introduction

The Stock Market Tracker Dashboard offers a comprehensive view of key financial metrics, presenting a detailed analysis of market trends and performance. This document provides a step-by-step guide on the data preparation process, detailing the tasks performed to filter, sort, and enrich the dataset. Insights obtained from this process are then used to create a visually appealing and informative dashboard that helps users make informed investment decisions. In addition to outlining the data preparation tasks, this document includes explanations of each column in the dataset, offering a clear understanding of the variables involved. This comprehensive approach ensures users can fully grasp the context and significance of the data presented in the dashboard.

2. Column Explanations

Here is a brief explanation of each column:

1. **Stock:** The name of the stock or the company being analyzed. This is the primary identifier for the data.
2. **Market cap (in Rs Cr.):** The market capitalization of the company, representing the total market value of its outstanding shares. It is calculated as the share price multiplied by the number of shares outstanding.
3. **Current price:** The current trading price of the company's stock. This is a real-time value reflecting the latest transaction price.
4. **PE Ratio:** The price-to-earnings ratio, which measures the company's current share price relative to its per-share earnings. It is a key indicator of the valuation of a company.
5. **52 Week High:** The highest price at which the stock has traded over the last 52 weeks. This value is often used as a benchmark for the stock's performance.
6. **% Below 52 Week High:** The percentage decrease of the current stock price from its highest price in the last 52 weeks. This metric indicates how far the stock has fallen from its peak over the past year.
7. **52 Week Low:** The lowest price at which the stock has traded in the last 52 weeks.
8. **% Above 52 Week low:** The percentage increase from the 52 Week Low.
9. **Yesterday Closing Price:** The closing price of the stock from the previous trading day.
10. **% Change:** The percentage change in the stock price from the previous day's closing price.
11. **Industry:** The industry category of the company.
12. **NSE/BSE Code:** The stock's unique identification code in the NSE or BSE.
13. **Bear Mode 1:** Indicates "Yes" if % Below 52 week high is greater than 30%, otherwise "No".
14. **Bear Mode 2:** Indicates "Yes" if % Above 52 Week low is less than 30%, otherwise "No".
15. **Stock Status:** Categorizes the stock as "Good Stock" if specific conditions (e.g., PE Ratio < 65, Bear Mode 1 & 2 are "No") are met.

3. Data Preparation

Task 1: Filtering and Sorting Data

The first step involved creating a new sheet and filtering the "Data Set" sheet to include only rows where the PE Ratio is not blank and less than 100. The filtered data was then sorted by market capitalization in descending order to highlight the most significant companies first.

Formula used: **=QUERY("Data Set"!A:J, "SELECT * WHERE D IS NOT NULL AND D < 100 ORDER BY B DESC", 1)**

	A	B	C	D	E	F	G	H	I	J
1	Stock	Market cap (in R	Current price	PE Ratio	52 Week High	% Below 52 wee	52 Week Lov	% Above 52 Wei	Yesterday Closin	% Change
2	Reliance	1620922.44	2467.9	25.09	2856.15	13.59%	2180	13.21%	2471.6	-0.15%
3	TCS	1234544.52	3374.2	30.43	4045.5	16.59%	2926	15.32%	3334.6	1.19%
4	HUL	616301.33	2620.6	63.81	2741.6	4.41%	1901.55	37.81%	2590.05	1.18%
5	SBI Bank	535431.32	600.05	13	629.65	4.70%	425	41.19%	595	0.85%
6	HDFC	478914.70	2619.25	19.81	2933.8	10.72%	2026	29.28%	2612.8	0.25%
7	LIC	450686.76	712.7	23.63	920	22.53%	588	21.21%	705.55	1.01%
8	Airtel	441027.40	764.6	65.86	860.55	11.15%	628.75	21.61%	756.9	1.02%
9	Bajaj Finance	361172.64	5977	36.52	8045	25.71%	5220	14.50%	5898.4	1.33%
10	Kotak Bank	354002.54	1780.5	25.87	1997.55	10.87%	1631	9.17%	1779.5	0.06%
11	L&T	302617.17	2153.75	31.53	2210.5	2.57%	1456.8	47.84%	2160.2	-0.30%
12	Axis Bank	287213.29	933.9	15.67	970	3.72%	618.25	51.06%	935.55	-0.18%
13	Asian Paints	278960.10	2912	76.19	3582.9	18.73%	2560	13.75%	2915.95	-0.14%
14	Maruti Suzuki	255438.42	8454.2	42.1	9769	13.46%	6536.55	29.34%	8369.2	1.02%

Task 2: Adding Industry and NSE/BSE Code Columns

To enhance the dataset, two new columns, Industry and NSE/BSE Code, were added using the VLOOKUP function within an ARRAYFORMULA. This ensured that the formula was applied consistently across all relevant rows.

Formula used: **=ARRAYFORMULA(IF(A2:A<>"", VLOOKUP(A2:A, 'NSE/BSE Code'!A:C, 3, FALSE), ""))**

	A	B	C	D	E	F	G	H	I	J	K	L
1	Stock	Market cap (in R	Current price	PE Ratio	52 Week High	% Below 52 wee	52 Week Lov	% Above 52 Wei	Yesterday Closin	% Change	Industry	NSE/BSE Code
2	Reliance	1620922.44	2467.9	25.09	2856.15	13.59%	2180	13.21%	2471.6	-0.15%	Telecom and oil	RELIANCE
3	TCS	1234544.52	3374.2	30.43	4045.5	16.59%	2926	15.32%	3334.6	1.19%	IT	BOM:532540
4	HUL	616301.33	2620.6	63.81	2741.6	4.41%	1901.55	37.81%	2590.05	1.18%	FMCG	HINDUNILVR
5	SBI Bank	535431.32	600.05	13	629.65	4.70%	425	41.19%	595	0.85%	Bank	BOM:500112
6	HDFC	478914.70	2619.25	19.81	2933.8	10.72%	2026	29.28%	2612.8	0.25%	Financial Service	HDFC
7	LIC	450686.76	712.7	23.63	920	22.53%	588	21.21%	705.55	1.01%	Insurance	BOM:543526
8	Airtel	441027.40	764.6	65.86	860.55	11.15%	628.75	21.61%	756.9	1.02%	Telecom	BHARTIARTL
9	Bajaj Finance	361172.64	5977	36.52	8045	25.71%	5220	14.50%	5898.4	1.33%	NBFC	BAJFINANCE
10	Kotak Bank	354002.54	1780.5	25.87	1997.55	10.87%	1631	9.17%	1779.5	0.06%	Bank	KOTAKBANK
11	L&T	302617.17	2153.75	31.53	2210.5	2.57%	1456.8	47.84%	2160.2	-0.30%	Infrastructure	BOM:500510
12	Axis Bank	287213.29	933.9	15.67	970	3.72%	618.25	51.06%	935.55	-0.18%	Bank	AXISBANK
13	Asian Paints	278960.10	2912	76.19	3582.9	18.73%	2560	13.75%	2915.95	-0.14%	Paint	ASIANPAINT
14	Maruti Suzuki	255438.42	8454.2	42.1	9769	13.46%	6536.55	29.34%	8369.2	1.02%	Automobile	MARUTI

Task 3: Adding Bear Mode and Stock Status Columns

I introduced two new columns, Bear Mode 1 and Bear Mode 2, based on specific conditions:

- Bear Mode 1: Indicates "Yes" if % Change from 52 Week High is greater than 30%, otherwise "No".

- Bear Mode 2: Indicates "Yes" if % Change from 52 Week Low is less than 30%, otherwise "No".

Formulas used:

Bear Mode 1: `=ARRAYFORMULA(IF(F2:F <> "", IF(F2:F > 30%, "Yes", "No"), ""))`

Bear Mode 2: `=ARRAYFORMULA(IF(H2:H <> "", IF(H2:H < 30%, "Yes", "No"), ""))`

- Stock Status: Labels a stock as "Good Stock" if its PE Ratio is less than 65 and both Bear Mode 1 and Bear Mode 2 are "No".

Formula used: `=ARRAYFORMULA(IF((D2:D < 65) * (M2:M = "No") * (N2:N = "No"), "Good Stock", ""))`

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
	Stock	Market cap (in R)	Current price	PE Ratio	52 Week High	% Below 52 week	52 Week Low	% Above 52 Week	Yesterday's Close	% Change	Industry	NSE/BSE Code	Bear Mode 1	Bear Mode 2	Stock Status
1	Reliance	1620922.44	2467.9	25.09	2856.15	13.59%	2180	13.21%	2471.6	-0.15%	Telecom and oil	RELIANCE	No	Yes	
2	TCS	123454.52	3374.2	30.43	4045.5	16.59%	2926	15.32%	3334.6	1.19%	IT	BOM:532540	No	Yes	
3	HUL	616301.33	2620.6	63.81	2741.6	4.41%	1901.55	37.81%	2590.05	1.18%	FMCG	HINDUNILVR	No	No	Good Stock
4	SBI Bank	535431.32	600.05	13	629.65	4.70%	425	41.19%	595	0.85%	Bank	BOM:500112	No	No	Good Stock
5	HDFC	478914.70	2619.25	19.81	2933.8	10.72%	2026	29.28%	2612.8	0.25%	Financial Service	HDFC	No	Yes	
6	LIC	450686.76	712.7	23.63	920	22.53%	588	21.21%	705.55	1.01%	Insurance	BOM:543526	No	Yes	
7	Airtel	441027.40	764.6	65.86	860.55	11.15%	628.75	21.61%	756.9	1.02%	Telecom	BHARTIARTL	No	Yes	
8	Bajaj Finance	361172.64	5977	36.52	8045	25.71%	5220	14.50%	5898.4	1.33%	NBFC	BAJIFINANCE	No	Yes	
9	Kotak Bank	354002.54	1780.5	25.87	1997.55	10.87%	1631	9.17%	1779.5	0.06%	Bank	KOTAKBANK	No	Yes	
10	L&T	302617.17	2153.75	31.53	2210.5	2.57%	1456.8	47.84%	2160.2	-0.30%	Infrastructure	BOM:500510	No	No	Good Stock
11	Axis Bank	287213.29	933.9	15.67	970	3.72%	618.25	51.06%	935.55	-0.18%	Bank	AXISBANK	No	No	Good Stock
12	Asian Paints	278960.10	2912	76.19	3582.9	18.73%	2560	13.75%	2915.95	-0.14%	Paint	ASIANPAINT	No	Yes	
13	Maruti Suzuki	255438.42	8454.2	42.1	9769	13.46%	6536.55	29.34%	8369.2	1.02%	Automobile	MARUTI	No	Yes	

Task 4: Create a New Sheet for "Good Stock" Data

To filter and organize data for stocks classified as "Good Stock" based on specific conditions and present this data in a new sheet with proper formatting and conditional color scales.

Steps:

1. Filter Data:

- Create a new sheet named "Good Stock Data".
- Use the QUERY function to extract data from the "Filtered Data" sheet where the "Stock Status" is "Good Stock".

Formula used: `=QUERY('Filtered Data'!A:O, "SELECT * WHERE O = 'Good Stock'", 1)`

2. Apply Formatting:

- Ensure the new sheet matches the formatting style of the "Data Set" sheet for consistency.

3. Add Conditional Formatting:

- **% Change:** Apply a green color for positive values and red for negative values to quickly visualize stock performance. Positive changes indicate an increase in stock price, hence green for gains. Negative changes suggest a decrease, warranting red to signify a loss.
- **Current Price:** Use a blue color to highlight the real-time trading price, making it easily distinguishable from other numerical data.
- **52 Week High:** Use a green color to emphasize the maximum stock price over the last 52 weeks, indicating peak performance.
- **52 Week Low:** Use a red color to denote the lowest stock price over the last 52 weeks, highlighting the minimum performance.

- **Stock Status:** Apply a green color to "Good Stock" to clearly identify and differentiate stocks meeting the desired criteria, making them stand out for potential investment decisions.

	A	B	C	D	E	F	G	H	I	J	K	L	M	N	O
1															
2															
3															
4															
5		Stock	All ▾		Market cap (in Rs Cr.)	All ▾		Current price	All ▾		Industry	All ▾			
6	Stock	Market cap (in Rs Cr.)	Current price	PE Ratio	52 Week High	% Below 52 week high	52 Week Low	% Above 52 Week low	Yesterday Closing Price	% Change	Industry	NSE/BSE Code	Bear Mode 1	Bear Mode 2	Stock Status
6	HUL	616301.33	2620.6	63.81	2741.6	4.41%	1901.55	37.81%	2590.05	1.18%	FMCG	HINDUNILVR	No	No	Good Stock
7	SBI Bank	535431.32	600.05	13	629.65	4.70%	425	41.19%	595	0.85%	Bank	BOM:500112	No	No	Good Stock
8	L&T	302617.17	2153.75	31.53	2210.5	2.57%	1456.8	47.84%	2160.2	-0.30%	Infrastructure	BOM:500510	No	No	Good Stock
9	Axis Bank	287213.29	933.9	15.67	970	3.72%	618.25	51.06%	935.55	-0.18%	Bank	AXISBANK	No	No	Good Stock
10	Sun pharma	247191.65	1031.05	60.4	1070.95	3.73%	784.8	31.38%	1032.85	-0.17%	Pharma	SUNPHARMA	No	No	Good Stock
11	Ultratech Cement	208975.80	7244.95	31.35	7946	8.82%	5157.05	40.49%	7153.35	1.28%	Cement	ULTRACEMCO	No	No	Good Stock
12	M&M	158785.37	1327.55	16.12	1366.55	2.85%	871.15	97.80%	1319.9	0.58%	Automobile	M&M	No	No	Good Stock
13	Tata Steel	147293.60	120.45	5.13	138.63	13.11%	82.71	45.63%	118.05	2.03%	Infrastructure	BOM:500470	No	No	Good Stock
14	Ambuja Cement	102995.36	518.7	57.36	598.15	13.28%	274	89.31%	510.4	1.63%	Cement	BOM:500425	No	No	Good Stock

Task 5: Insert Graphs and Provide Insights for the Stock Market Tracker Dashboard

To visually represent key data metrics and trends through various graphs on the Stock Market Tracker Dashboard, providing actionable insights for users. The graphs aim to enhance understanding and facilitate informed decision-making.

Total Companies

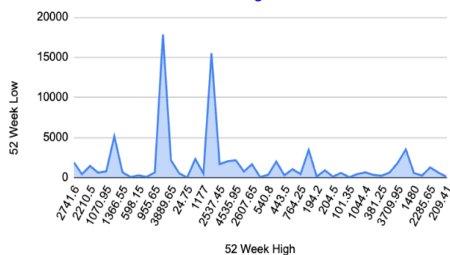
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Stock Market Tracker Dashboard

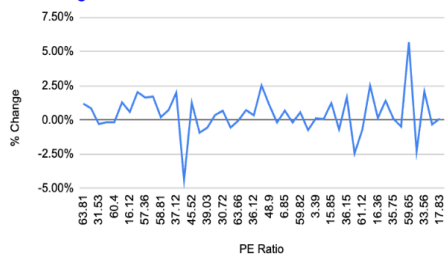
Industry All ▾

Stock All ▾

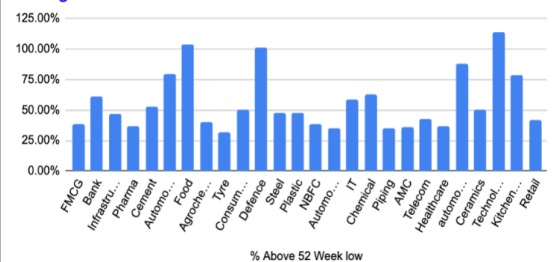
52 Week Low vs. 52 Week High



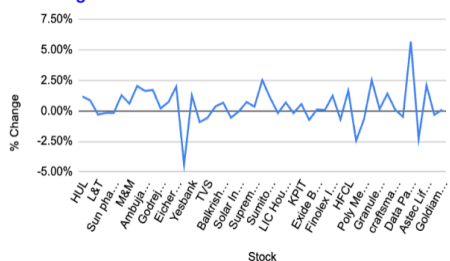
% Change vs. PE Ratio



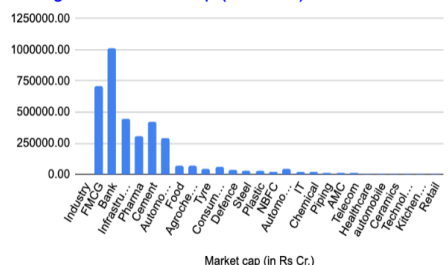
Histogram of % Above 52 Week low



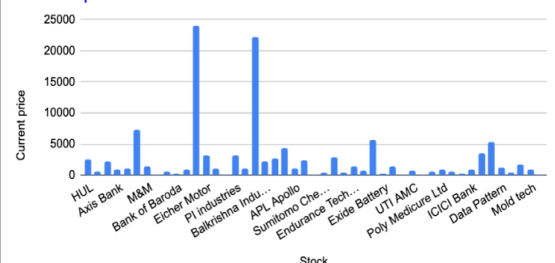
% Change vs. Stock



Histogram of Market cap (in Rs Cr.)



Current price vs. Stock



Detailed Explanation for Each Graph:

1. Graph 1: Sum of 52 Week Low by 52 Week High

- **Description:** This graph shows the ascending trend of the '52 Week High' when analyzed against the '52 Week Low'.
- **Crucial Insight:** The column '52 Week High' shows an ascending trend with a positive regression slope of 320.09, indicating a general increase in stock prices over time.
- **Title:** Trend Analysis of '52 Week High' and '52 Week Low'
- **Key Points:**
 - **Ascending Trend:** Indicates overall growth in stock prices.
 - **Average Slope:** A steady increase at an average slope of 320.09.
 - **Volatility:** High volatility with significant fluctuations.
 - **Peaks and Dips:** Indicates periods of high and low performance.
- **Predictions:** The current upward trend suggests potential future increases in stock prices, although confidence percentages are not provided.

2. Graph 2: % Change by PE Ratio

- **Description:** This graph highlights the relationship between the PE Ratio and % Change.
- **Crucial Insight:** A positive relationship with a regression slope of 0.01, indicating that as the PE Ratio increases, the % Change tends to increase.
- **Title:** Ascending Trend between PE Ratio and % Change
- **Key Points:**
 - **Positive Relationship:** Higher PE Ratios correlate with higher % Changes.
 - **Volatility:** Observes a volatility of 12.33.
 - **Inflection Points:** Shows changes in trend direction.
- **Predictions:** No specific predictions can be made, but analyzing other variables could provide deeper insights.

3. Graph 3: % Above 52 Week Low by Industry

- **Description:** This graph analyzes the performance of different industries based on their % above the 52-week low.
- **Crucial Insight:** The 'Technology' industry shows the highest performance with a maximum value of 113.41% above the 52-week low.
- **Title:** Analyzing Performance Across Industries
- **Key Points:**
 - **Mean Value:** 55.88% above the 52-week low, indicating high fluctuation.
 - **Downward Trend:** A significant overall decrease in performance.
 - **Predictions:** High fluctuation and downward trend suggest the need for further analysis.
- **Actions:**
 - Investigate high-performing industries like Technology.
 - Monitor low-performing industries for potential future investments.

4. Graph 4: % Change by Stock

- **Description:** This graph examines the % Change for different stocks.
- **Crucial Insight:** The 'Stock' column has a mean value of 0.43 with a confidence interval indicating fluctuations. The highest value is 5.67, and the lowest is -4.42, with no continuous peaks observed.
- **Title:** Insights on 'Stock' Column
- **Key Points:**
 - **Mean Value:** 0.43 with fluctuations.

- **High and Low Values:** Observes significant highs and lows.
 - **Downward Trend:** The overall trend is downward.
 - **Predictions:** No specific predictions can be made based on the provided data.
- 5. **Graph 5: Market Cap (in Rs Cr.) by Industry**
 - **Description:** This graph analyzes the market capitalization across different industries.
 - **Crucial Insight:** The 'Bank' industry stands out with the highest market capitalization.
 - **Title:** Market Capitalization Analysis by Industry
 - **Key Points:**
 - **Mean Market Cap:** 142905.82 Rs Cr.
 - **High and Low Values:** Observes a wide range of market capitalizations.
 - **Downward Trend:** Overall percentage change indicates a significant decline.
 - **Actions:**
 - Investigate high-performing industries like Banking.
 - Analyze companies with low market cap for potential improvement strategies.
- 6. **Graph 6: Sum of Current Price by Stock**
 - **Description:** This graph examines the current price of different stocks.
 - **Crucial Insight:** The 'Shree Cement' stock stands out with the highest performance.
 - **Title:** Current Price Analysis by Stock
 - **Key Points:**
 - **Mean Value:** 2471.13 with a wide confidence interval.
 - **High and Low Values:** Significant highs and lows observed.
 - **Downward Trend:** Overall trend shows a decline.
 - **Predictions:** Difficult to make specific predictions based on the provided data.