

# Day 76

## DIY

### Q1. Problem Statement: Clustering, Trend Lines, Reference Lines, and forecasting in tableau

Use the given dataset *Amazon stocks.xlsx*, load it into a tableau workbook, and solve asked questions. The following are the tasks to consider while solving the given problem.

1. Load the given datasets into a tableau workbook
2. Create a new calculated field as “Difference” based on a single day’s difference between high and low price
3. Create a new calculated field as “based on the average of opening and closing value (use this formula in the calculated field:  $(\text{open} + \text{close})/2$ )
4. In a new sheet, use a line graph and plot all stock values from start to endpoint year wise with the help of “avg price per day” and use the most fitted trend line and observe the trend
5. open a new sheet and print the overall average price of the stock and year-wise avg price of the stock with the help of a reference line
6. Forecast the avg price of the share for the upcoming five years
7. Based on “difference” do clustering and categories data into good, bad, and avg days for amazon stock
8. Store the above clustering process into the data pane and plot it against year, use an area chart, and observe each category’s occurrence time to determine when amazon had an excellent time stock market

### Dataset:

The data files contain data on amazon stock prices from 1997 to 2021.

- Each numeric column is in the dollar (\$)
- open, and close represent the price of a share when the market is about to open or close
- And low and high represent the highest and lowest values of a claim on a particular day

Date	Open	High	Low	Close	Adj Close	Volume
15-05-1997	2.4375	2.5	1.927083	1.958333	1.958333	72156000
16-05-1997	1.96875	1.979167	1.708333	1.729167	1.729167	14700000
19-05-1997	1.760417	1.770833	1.625	1.708333	1.708333	6106800
20-05-1997	1.729167	1.75	1.635417	1.635417	1.635417	5467200
21-05-1997	1.635417	1.645833	1.375	1.427083	1.427083	18853200
22-05-1997	1.4375	1.447917	1.3125	1.395833	1.395833	11776800
23-05-1997	1.40625	1.520833	1.333333	1.5	1.5	15937200
27-05-1997	1.510417	1.645833	1.458333	1.583333	1.583333	8697600
28-05-1997	1.625	1.635417	1.53125	1.53125	1.53125	4574400
29-05-1997	1.541667	1.541667	1.479167	1.505208	1.505208	3472800
30-05-1997	1.5	1.510417	1.479167	1.5	1.5	2594400
02-06-1997	1.510417	1.53125	1.5	1.510417	1.510417	591600
03-06-1997	1.53125	1.53125	1.479167	1.479167	1.479167	1183200
04-06-1997	1.479167	1.489583	1.395833	1.416667	1.416667	3080400
05-06-1997	1.416667	1.541667	1.375	1.541667	1.541667	5672400
06-06-1997	1.515625	1.708333	1.510417	1.65625	1.65625	7807200
09-06-1997	1.65625	1.708333	1.65625	1.6875	1.6875	2352000
10-06-1997	1.708333	1.708333	1.53125	1.583333	1.583333	5458800
11-06-1997	1.59375	1.604167	1.53125	1.541667	1.541667	1188000
12-06-1997	1.583333	1.645833	1.552083	1.604167	1.604167	1632000
13-06-1997	1.625	1.625	1.583333	1.583333	1.583333	693600
16-06-1997	1.604167	1.604167	1.5625	1.572917	1.572917	913200
17-06-1997	1.598958	1.598958	1.494792	1.505208	1.505208	4706400
18-06-1997	1.520833	1.536458	1.5	1.510417	1.510417	2464800
19-06-1997	1.510417	1.53125	1.5	1.510417	1.510417	1003200
20-06-1997	1.53125	1.552083	1.5	1.526042	1.526042	3387600