

# Report for Microsoft-Stock

## 1. Dataset Introduction

This is a reduced version of Microsoft's Stock from Yahoo Finance!

Date: Date of stock information.

Open: Opening price.

High: Highest price.

Low: Lowest price.

Close: Closing price.

Adj Close: Closing price after adjustments for all applicable splits and dividend distributions.

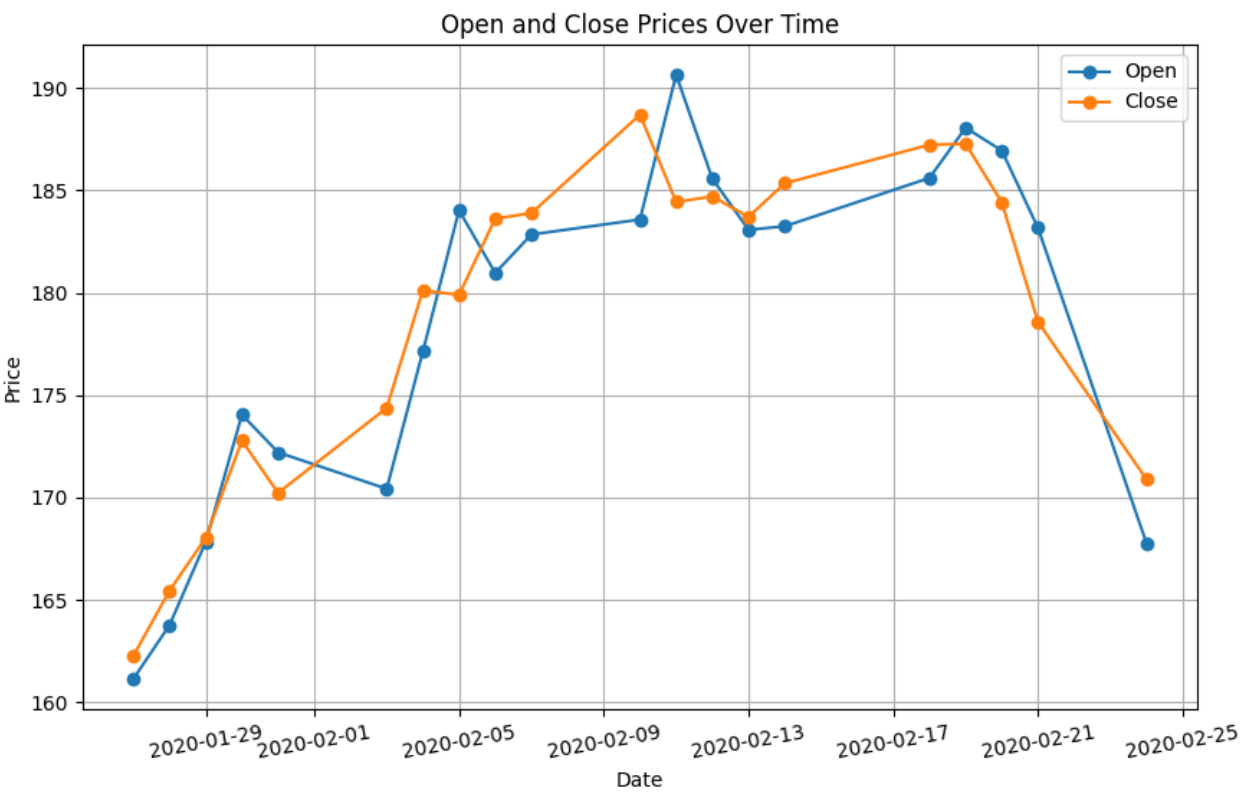
Volume: Amount of stock.

Data source: <https://www.kaggle.com/datasets/pauldavidjarvis/microsoft-stock>

## 2. Descriptive Statistics

	Open	High	Low	Close	Adj Close	Volume
count	20.000000	20.000000	20.000000	20.000000	20.000000	2.000000e+01
mean	178.607500	180.567000	176.232999	178.801500	178.412678	3.762850e+07
std	8.676754	8.279787	8.306955	8.003239	8.006061	1.109255e+07
min	161.149994	163.380005	160.199997	162.279999	161.837952	2.314950e+07
25%	171.765003	174.387501	170.194996	172.307499	171.954518	3.011120e+07
50%	182.965004	184.010002	179.235001	181.875000	181.379586	3.557005e+07
75%	184.417500	186.484997	182.704994	184.507503	184.260147	4.115545e+07
max	190.649994	190.699997	186.470001	188.699997	188.185989	6.831110e+07

### 3. Data Visualization



# 4. Data Preprocessing (Data Manipulation)

Create 2 new columns: Daily percentage change -- 'Pct\_Change'

and 5-day rolling average for volume -- '5-day Volume Avg'.

New Statistics:

	Open	High	Low	Close	Adj Close	\
count	20.000000	20.000000	20.000000	20.000000	20.000000	
mean	178.607500	180.567000	176.232999	178.801500	178.412678	
std	8.676754	8.279787	8.306955	8.003239	8.006061	
min	161.149994	163.380005	160.199997	162.279999	161.837952	
25%	171.765003	174.387501	170.194996	172.307499	171.954518	
50%	182.965004	184.010002	179.235001	181.875000	181.379586	
75%	184.417500	186.484997	182.704994	184.507503	184.260147	
max	190.649994	190.699997	186.470001	188.699997	188.185989	

	Volume	Pct_Change	5-day Volume Avg
count	2.000000e+01	19.000000	1.600000e+01
mean	3.762850e+07	0.293844	3.645059e+07
std	1.109255e+07	2.119648	3.250716e+06
min	2.314950e+07	-4.311550	3.061948e+07
25%	3.011120e+07	-1.008628	3.380188e+07
50%	3.557005e+07	0.146392	3.659330e+07
75%	4.115545e+07	2.016481	3.875196e+07
max	6.831110e+07	3.291656	4.230716e+07

New Visualization:

