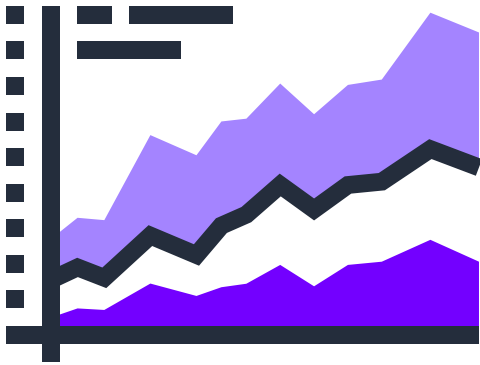


# ANALYSING HISTORICAL STOCK MARKET DATA

An introduction!



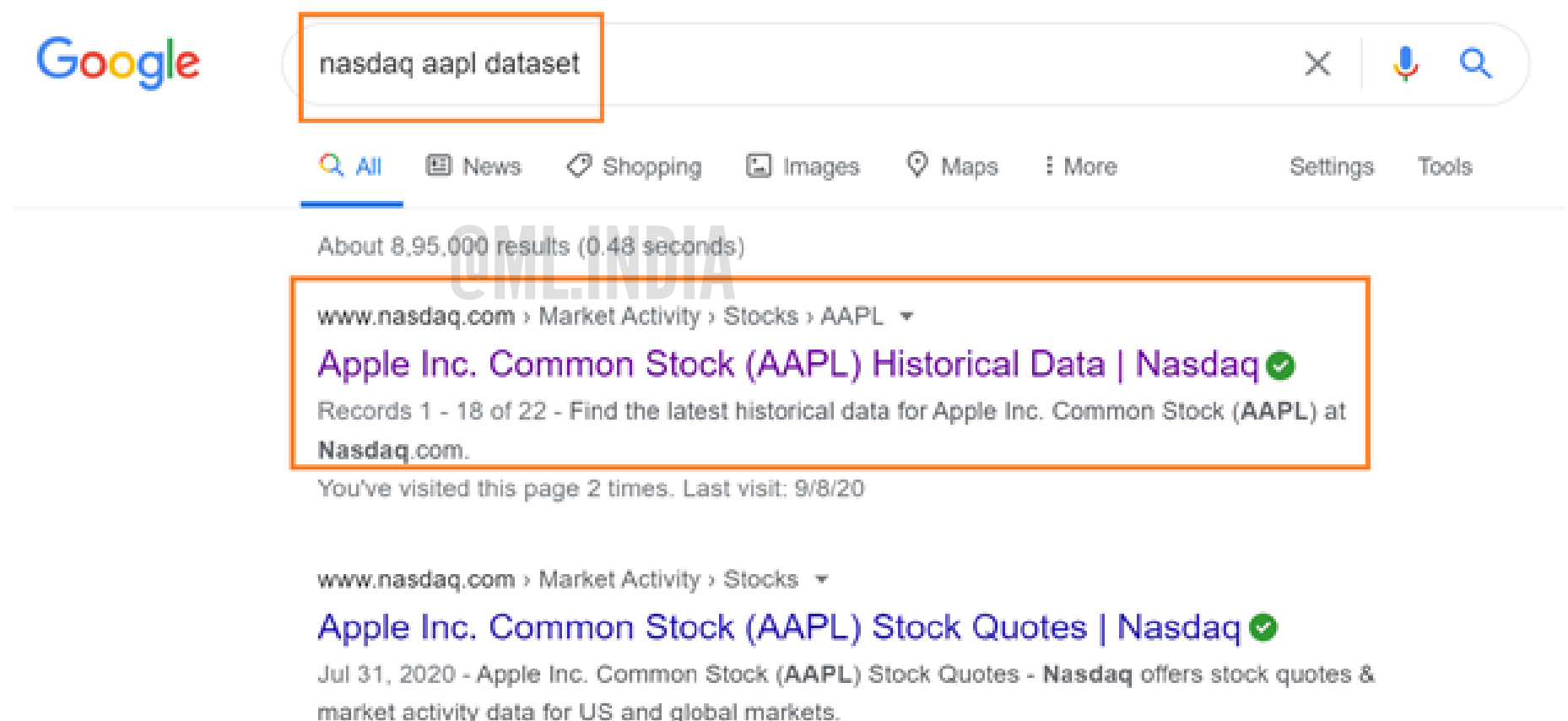


## Stock market data:

Stock market data is information relating to the historical, real time, and predictive values of equities. It's mostly used by investors e.g. in evaluating current stock prices and investment decisions. For this micro-tutorial, we'll be looking at **accessing** and performing elementary analysis over the data provided by **NASDAQ's** official website.

## Accessing **datasets**:

- Go to [www.google.com](http://www.google.com).
- Type 'NASDAQ <company symbol> dataset'.
- We've chosen **AAPL** (Apple Inc).
- Find companies and their symbols on slide 7.
- Tap on the **first result**, as shown the image below.



# Downloading the dataset:

On tapping on the first relevant result on google.com, you'll be redirected to this page, where you'll see the options to see and download the historical stock data for a month, six months, year to date, one year, etc.

Nasdaq

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TradeStation  
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FIND A SYMBOL

HISTORICAL QUOTES: AAPL History

Apple Inc. Common Stock (AAPL)

+ ADD TO WATCHLIST + ADD TO PORTFOLIO

\$450.91  
+6.46 (+1.45%)  
DATA AS OF AUG 10, 2020  
Nasdaq Listed Nasdaq 100

QUOTES  
Summary  
Real-Time  
After-Hours  
Pre-Market  
Charts

NEWS & ANALYSIS  
News  
Press Releases  
Analyst Research

Dividend History  
Historical Quotes  
Historical NOCP

AAPL > AAPL HISTORICAL DATA

## AAPL Historical Data

1M 6M YTD 1Y 5Y MAX

DOWNLOAD DATA

DATE	CLOSE/LAST	VOLUME	OPEN	HIGH	LOW
08/10/2020	\$450.91	53,100,860	\$450.4	\$455.1	\$440

Here's how it looks like:

	A	B	C	D	E	F
1	Date	Close/Las	Volume	Open	High	Low
2	04/30/202	\$293.8	45765970	\$289.96	\$294.53	\$288.35
3	04/29/202	\$287.73	34320200	\$284.73	\$289.67	\$283.89
4	04/28/202	\$278.58	28001190	\$285.08	\$285.83	\$278.2
5	04/27/202	\$283.17	29271890	\$281.8	\$284.54	\$279.95
6	04/24/202	\$282.97	31627180	\$277.2	\$283.01	\$277
7	04/23/202	\$275.03	31203580	\$275.87	\$281.75	\$274.87
8	04/22/202	\$276.1	29264340	\$273.61	\$277.9	\$272.2
9	04/21/202	\$268.37	45247890	\$276.28	\$277.25	\$265.43
10	04/20/202	\$276.93	32503750	\$277.95	\$281.68	\$276.85
11	04/17/202	\$282.8	53812480	\$284.69	\$286.945	\$276.86
12	04/16/202	\$286.69	39281290	\$287.38	\$288.1975	\$282.3502
13	04/15/202	\$284.43	32788640	\$282.4	\$286.33	\$280.63
14	04/14/202	\$287.05	48748670	\$280	\$288.25	\$278.05
15	04/13/202	\$273.25	32755730	\$268.31	\$273.7	\$265.83
16	#####	\$267.99	40529120	\$268.7	\$270.07	\$264.7
17	#####	\$266.07	42223820	\$262.74	\$267.37	\$261.23
18	#####	\$259.43	50721830	\$270.8	\$271.7	\$259
19	#####	\$262.47	50455070	\$250.9	\$263.11	\$249.38
20	#####	\$241.41	32470020	\$242.8	\$245.7	\$238.9741
21	#####	\$244.93	41483490	\$240.34	\$245.15	\$236.9
22	#####	\$240.91	44054640	\$246.5	\$248.72	\$239.13
23	03/31/202	\$254.29	49250500	\$255.6	\$262.49	\$252
24	03/30/202	\$254.81	41994110	\$250.74	\$255.52	\$249.4
25	03/27/202	\$247.74	51054150	\$252.75	\$255.87	\$247.05
26	03/26/202	\$258.44	63140170	\$246.52	\$258.68	\$246.36
27	03/25/202	\$245.52	75900510	\$250.75	\$258.25	\$244.3
28	03/24/202	\$246.88	71882770	\$236.36	\$247.69	\$234.3
nasdaq_aapl_6months						

## Basic processing + visualization:

You'll need Python, numpy, pandas and matplotlib libraries installed to run the script mentioned below.

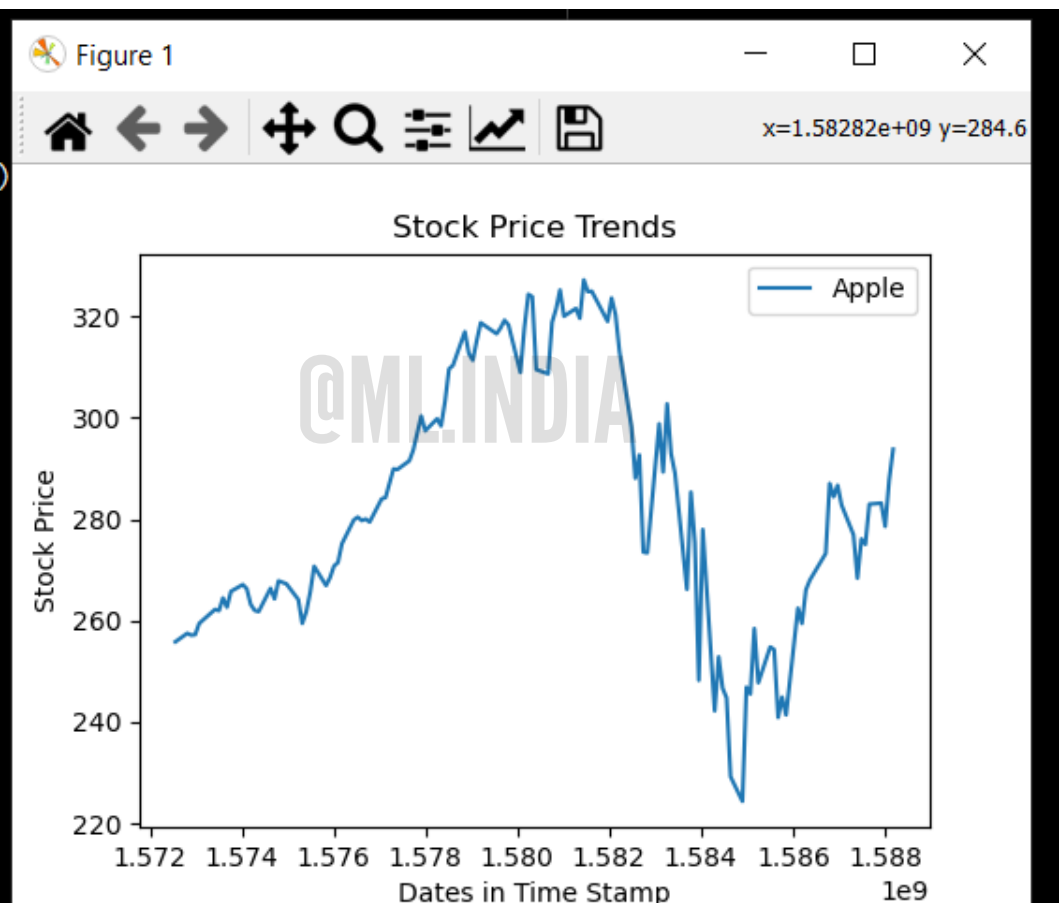
Here we first **type-cast** data , then perform **time-stamp** conversion and finally **visualize** the resultant data.

```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt

df_appl=pd.read_csv('nasdaq_aapl_6months.csv')
x_train=df_appl['Date']
y_train=df_appl['Close/Last']
price=[]
#will store
for i in y_train:
    #print(i)
    i=i.replace('$','')
    price.append(float(i))
print(price)
#type(price[2])
max_price=max(price)
min_price=min(price)
dev=(max_price-min_price)/124
#print(dev)

dates=[]
import datetime
import time
for i in x_train:
    val=time.mktime(datetime.datetime.strptime(i, '%m/%d/%Y').timetuple())
    dates.append(val)
#print(dates)

plt.plot(dates,price,label='Apple')
plt.xlabel('Dates in Time Stamp')
plt.ylabel('Stock Price')
plt.title('Stock Price Trends')
plt.legend()
plt.show()
```

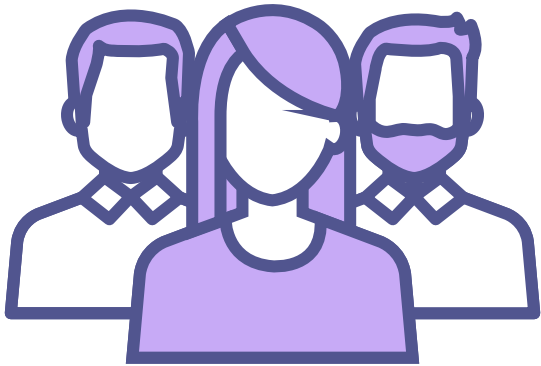


## Other available datasets:

NASDAQ provides up to 10 years of daily historical stock prices and volumes for each of the listed stocks.

- ✓ (Symbol) SBUX - (Company) Starbucks Inc.
- ✓ MSFT - Microsoft Inc.
- ✓ CSCO - Cisco Systems Inc.
- ✓ QCOM - Qualcomm Inc.
- ✓ FB - Facebook Inc.
- ✓ AMZN - Amazon Inc.
- ✓ TSLA - Tesla Inc.
- ✓ AMD - Advanced Micro Devices Inc.
- ✓ ZNGA - Zynga Inc.





## Welcoming a team member!

This post has been made possible by the valuable contribution of **Bhavishya Pandit**, who has been selected to intern with Machine Learning India.

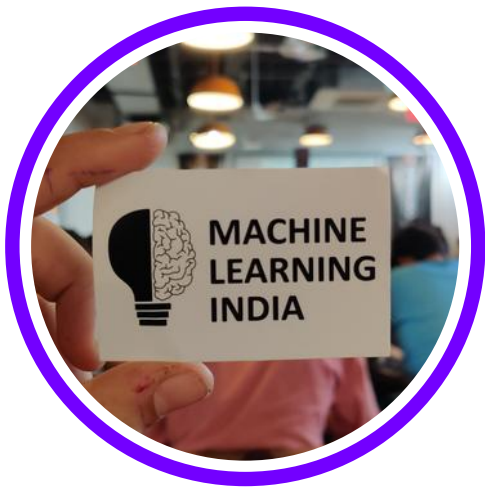
Reach out on IG: @bhavishya\_\_pandit

or - [linkedin.com/in/bhavishya-pandit-68a4a018a/](https://www.linkedin.com/in/bhavishya-pandit-68a4a018a/)

## Important note:

The links to these resources will be put up on our Telegram. Channel ID: @machinelearning24x7.





Ever worked with **stock** data?

Let us know in the comments! If you like our content and find it **valuable**, do give us a **follow**! Your **love** and **support** inspires us to keep delivering the best we can! ❤️

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