Analysis and linear regression on Microsoft stock Dataset

Ghadeer Nasser & Zahra Sameer

web scraping

Website:Yahoo Finance
Take a data set for Microsoft stock
Such as :
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 adjustments.
Volume: Amount of stock.

Since 1/1/2005To the year / 10/20/2021

Clean data

1- Drop Duplicates

2-describe()

3-Check nulls

4-Converting Categorical Features to Numerical

Correlation Heatmap

Feature Selection

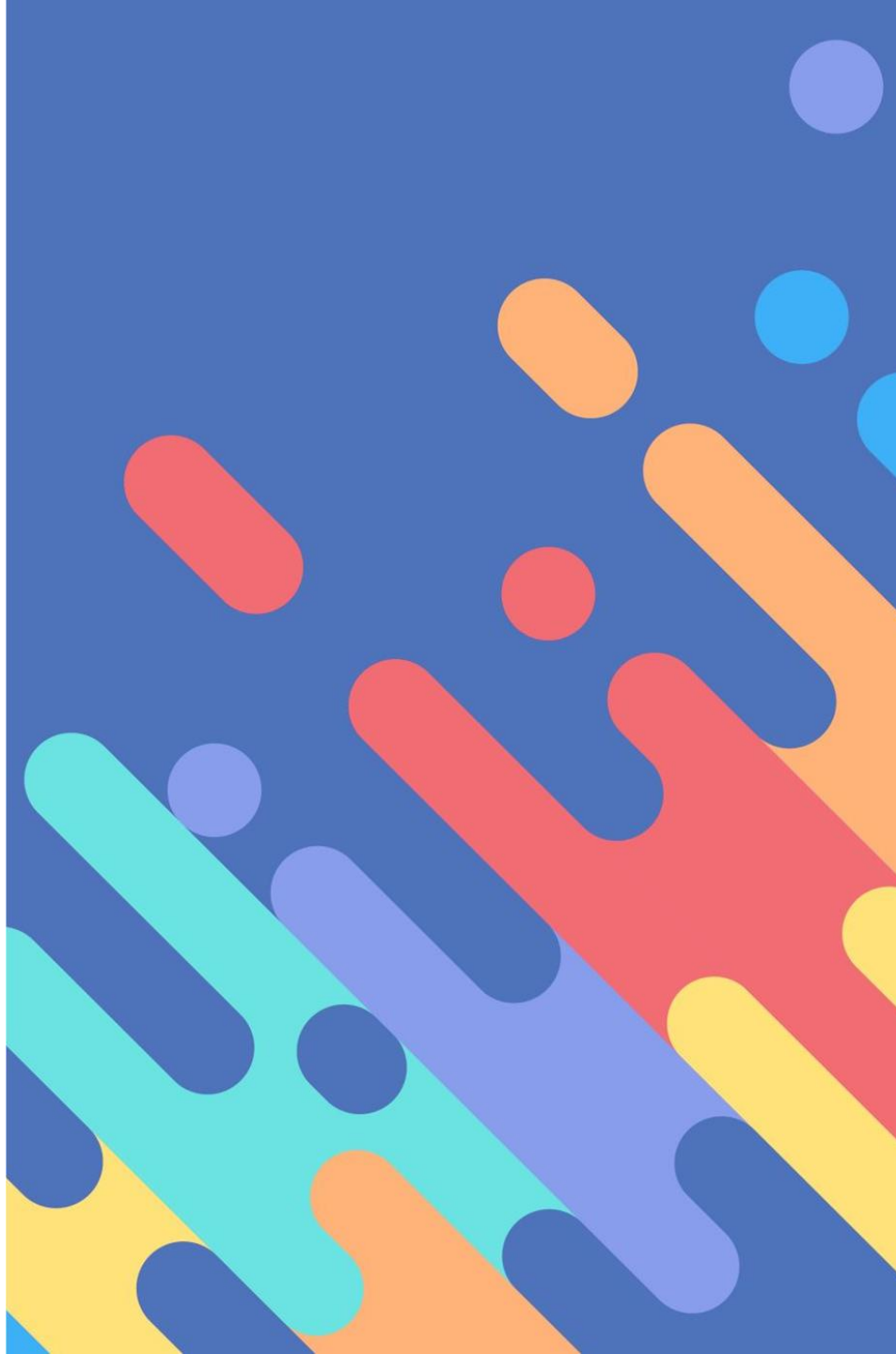
Calculation finding alpha and beta

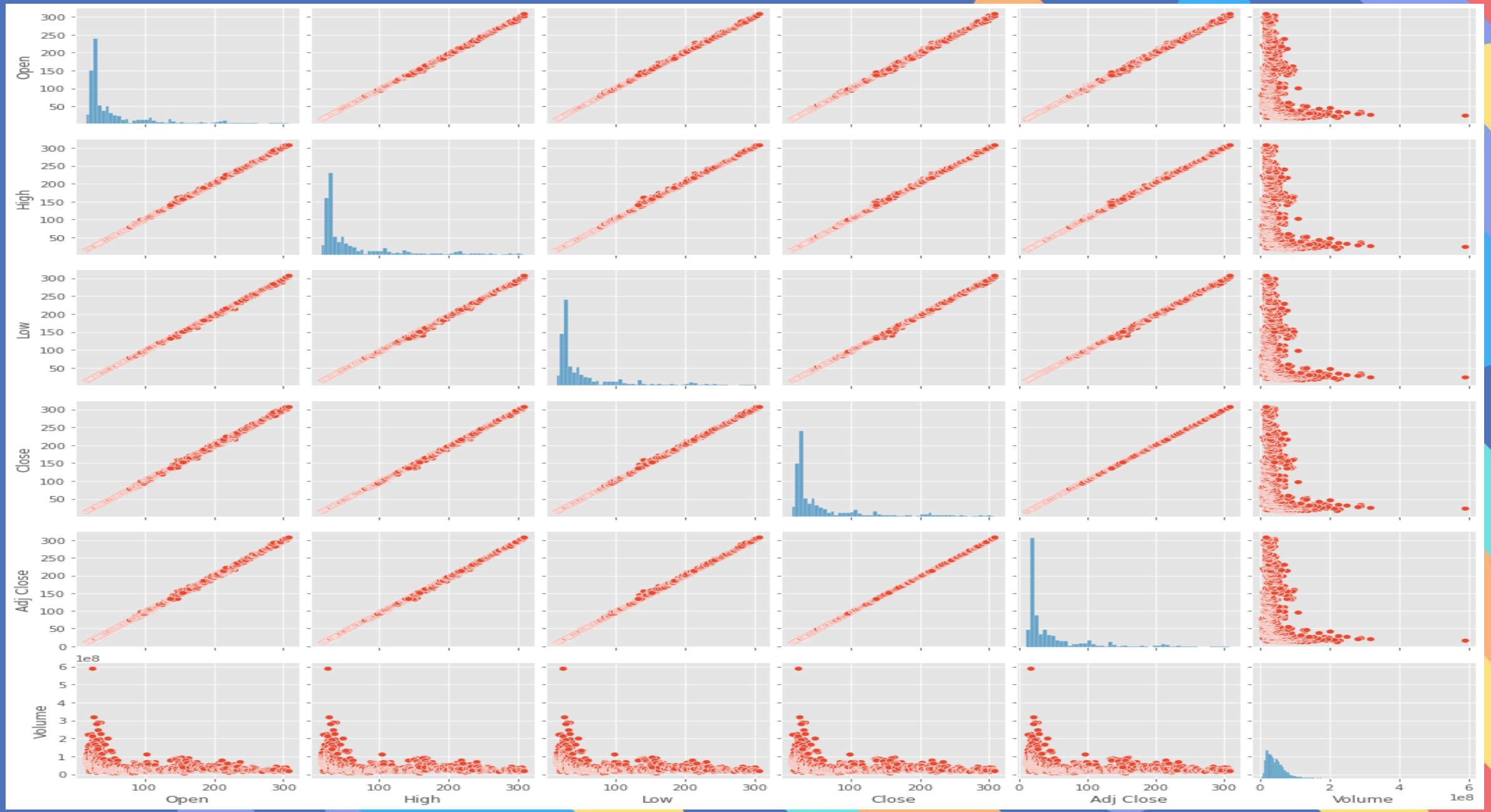
Data Preparation

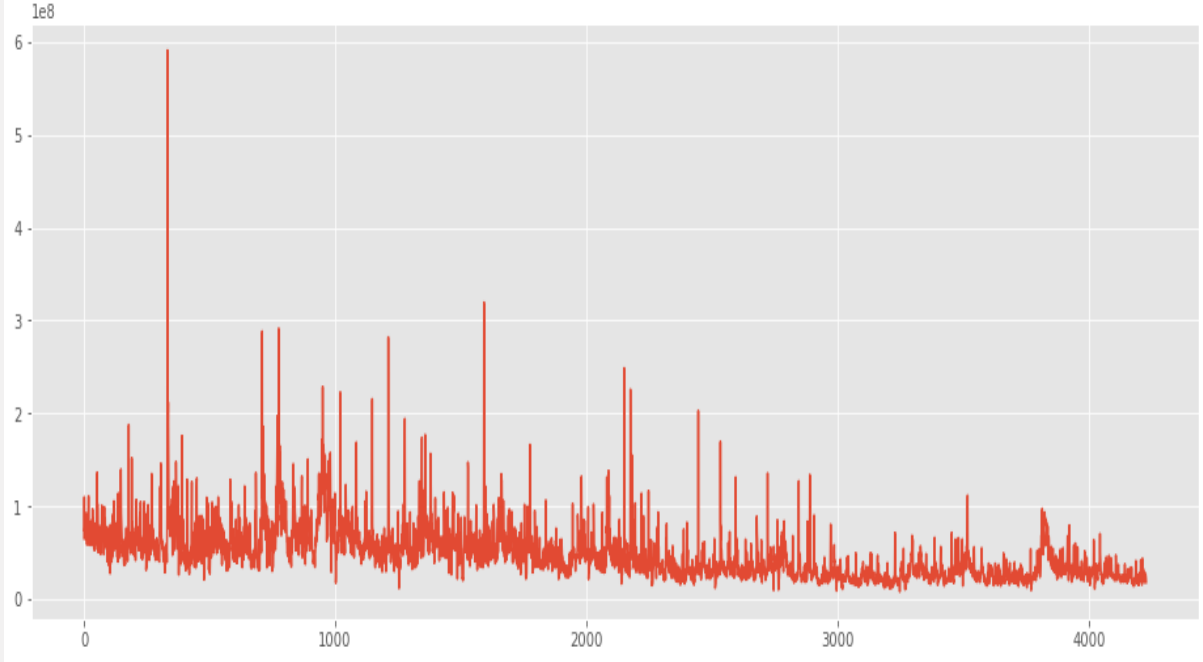
lasso model

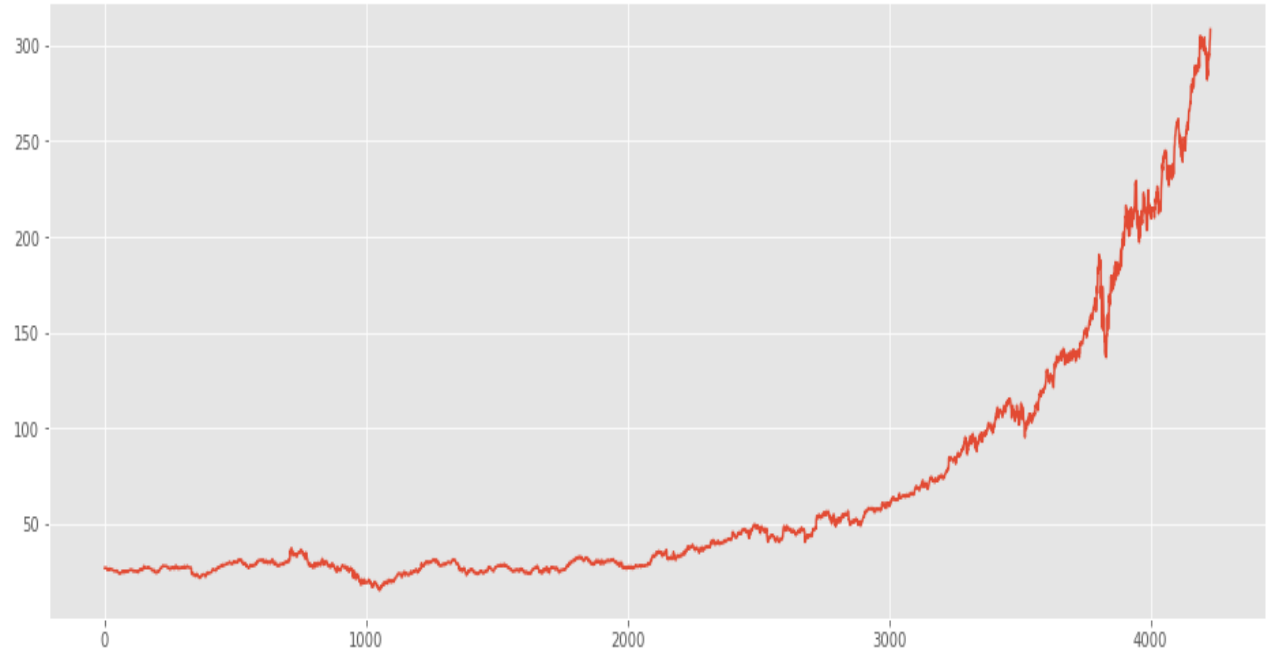
StandardScaler

Visualize Data

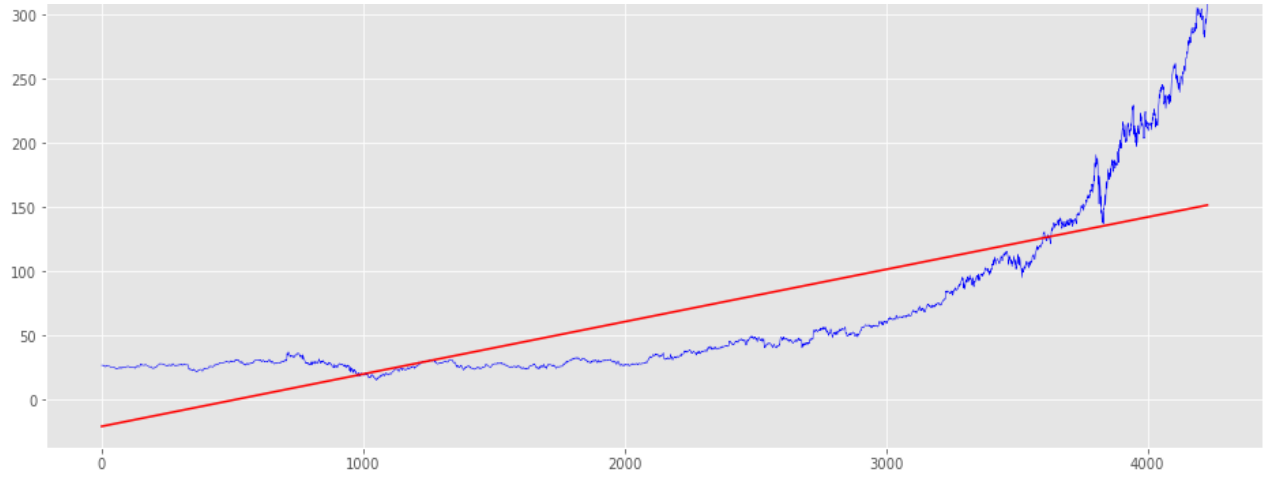



Open
High
Low
Close
Adj Close
Volume
1e8
Open
High
Low
Close
Adj Close
Volume
1e8

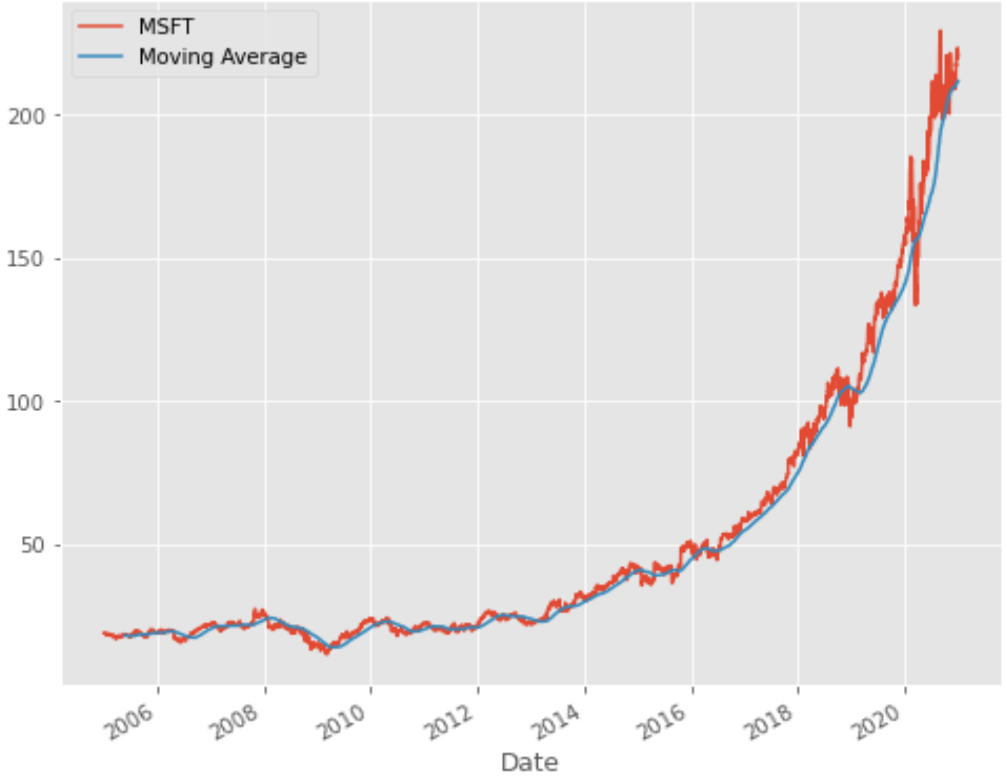




$$a = \overline{y} - b\overline{x} \qquad b = \frac{n\sum x_i y_i - \sum x_i \sum y_i}{n\sum x_i^2 - (\sum x_i)^2}$$



MSFT MOVING AVERAGE



Thanks for listening