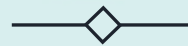




Analysis and linear regression on Microsoft stock Dataset

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.

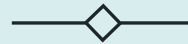
Low: Lowest price.

Close: Closing price.

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

Volume: Amount of stock.

Since 1/1/2005 To 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

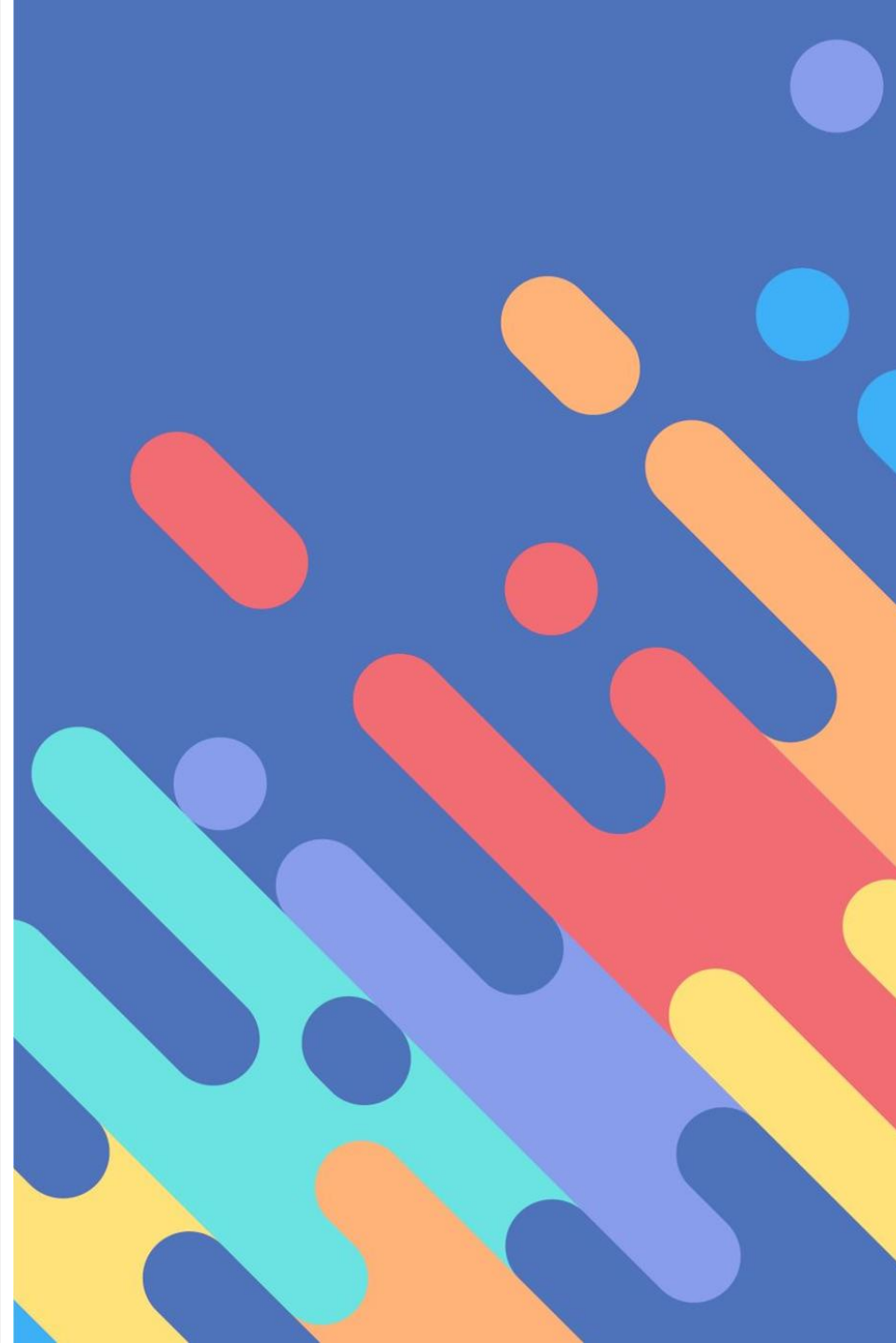
Calculation finding alpha and beta

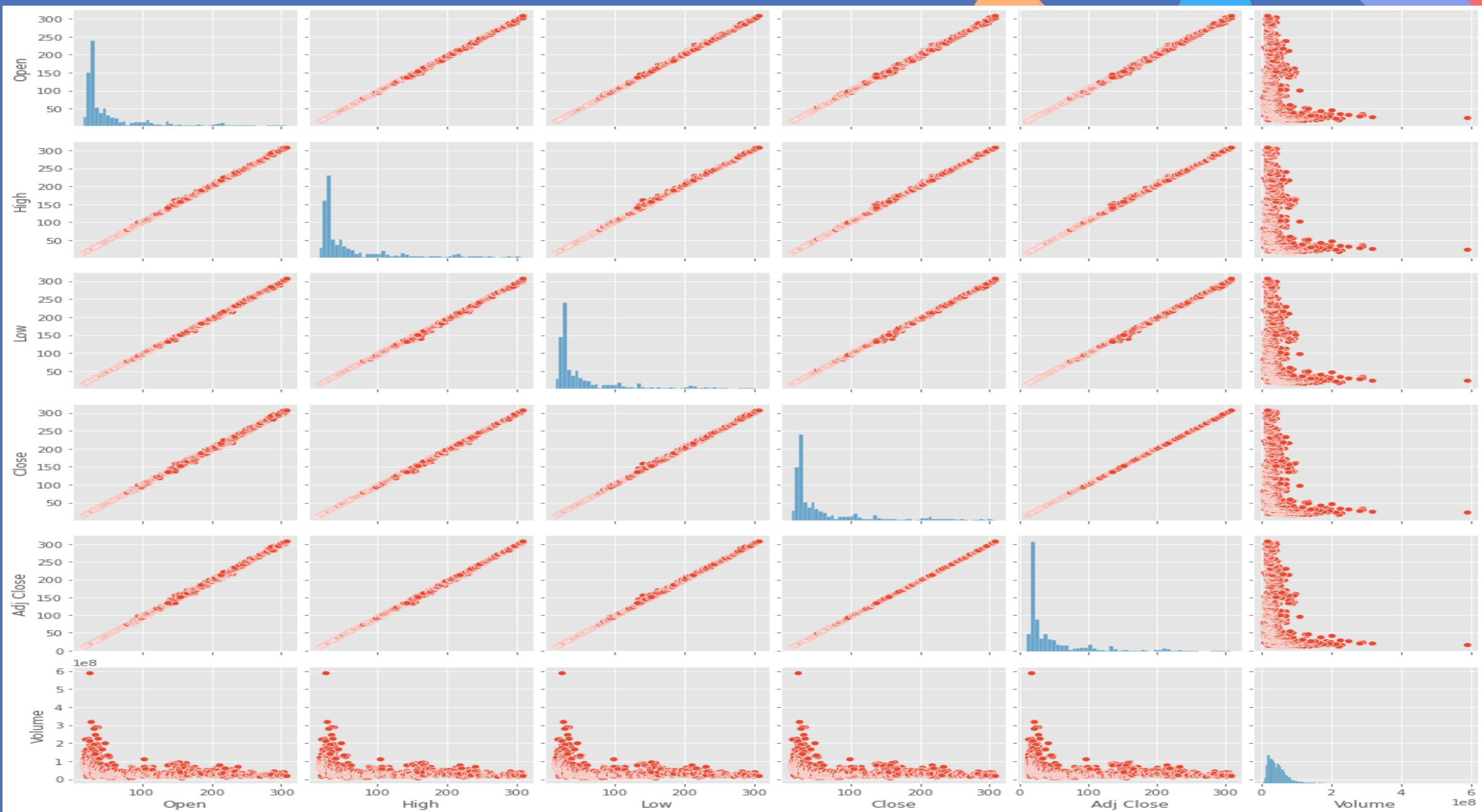
Data Preparation

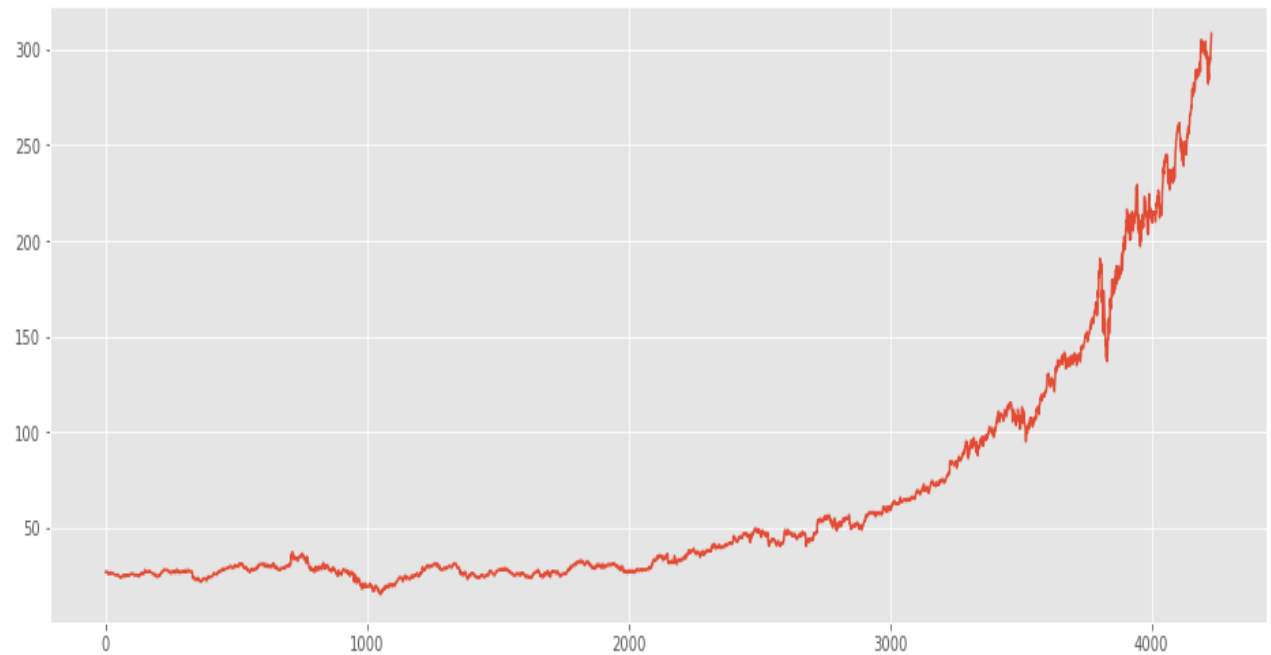
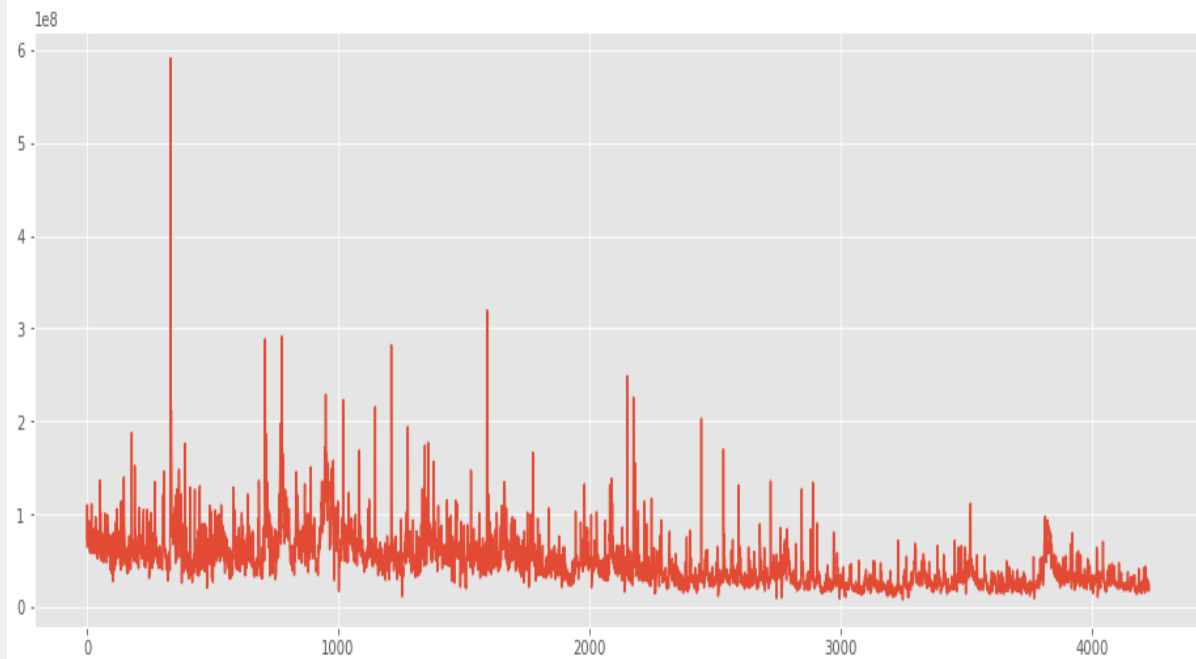
lasso model

StandardScaler

Visualize Data

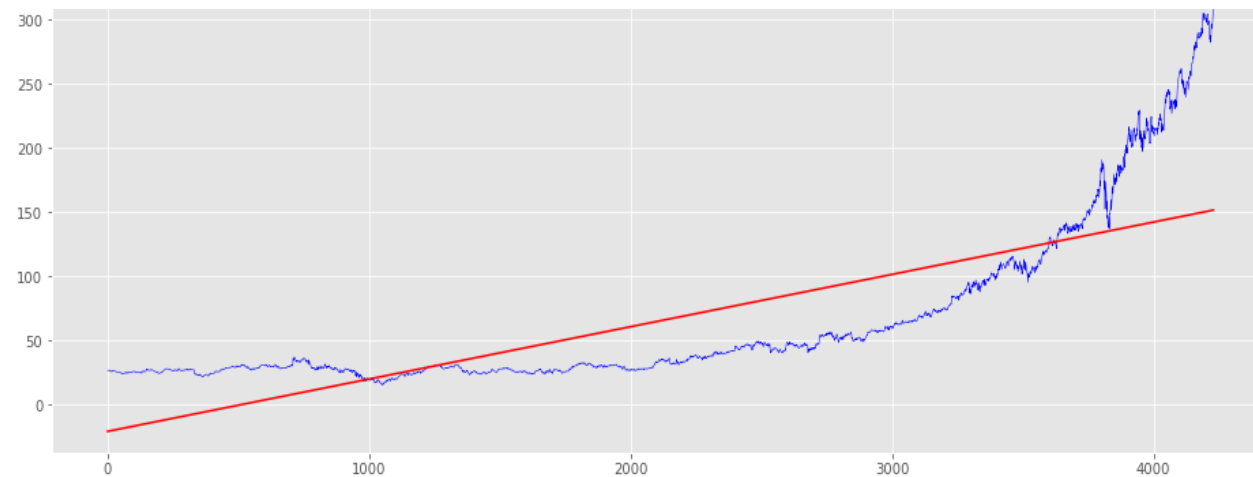




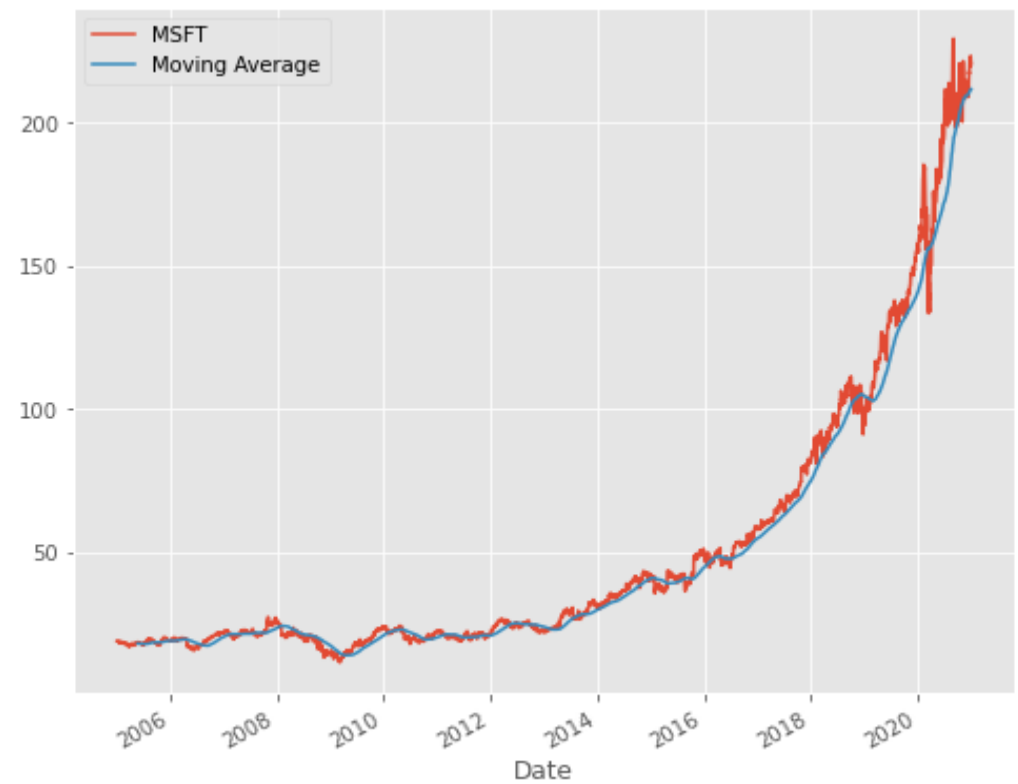


$$a = \bar{y} - b\bar{x}$$

$$b = \frac{n \sum x_i y_i - \sum x_i \sum y_i}{n \sum x_i^2 - (\sum x_i)^2}$$



MSFT MOVING AVERAGE



The background features a solid blue field overlaid with a pattern of diagonal stripes and circles. The stripes and circles are in various colors including red, orange, yellow, light blue, and teal. The stripes are of varying widths and lengths, creating a dynamic, abstract composition. The circles are also of different sizes and are scattered across the frame.

Thanks for listening