TIME SERIES WITH APPLE STOCK

By Ripton Rosen

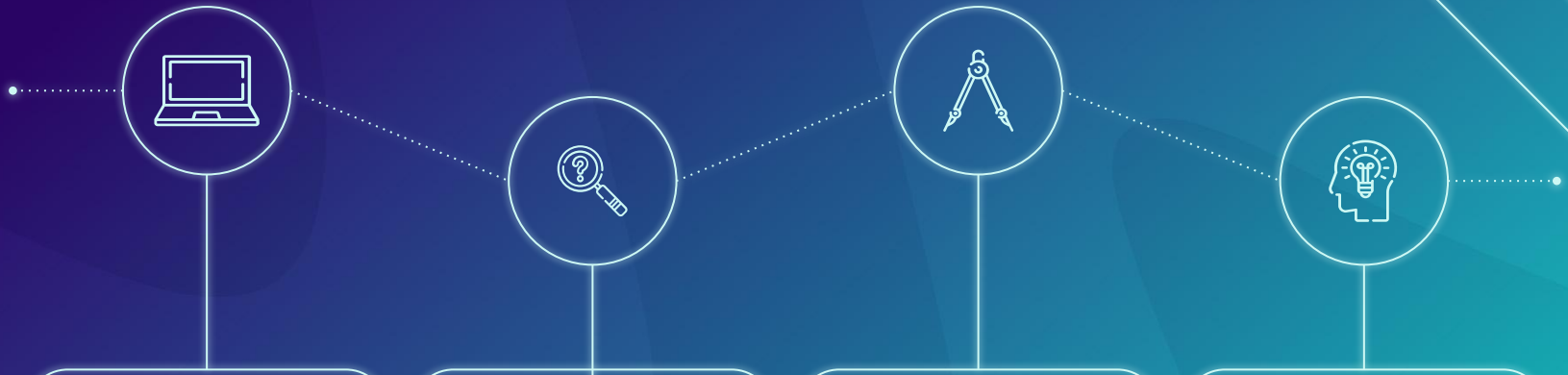
PROPHET

NYSE

Using data from the New York Stock Exchange of Apple’s closing price.

Creating a time-series model using Facebook Prophet

DATA PROCESS



SCRAPE DATA

Scrape data for Apple stock prices

EDA

Prepare data for modeling

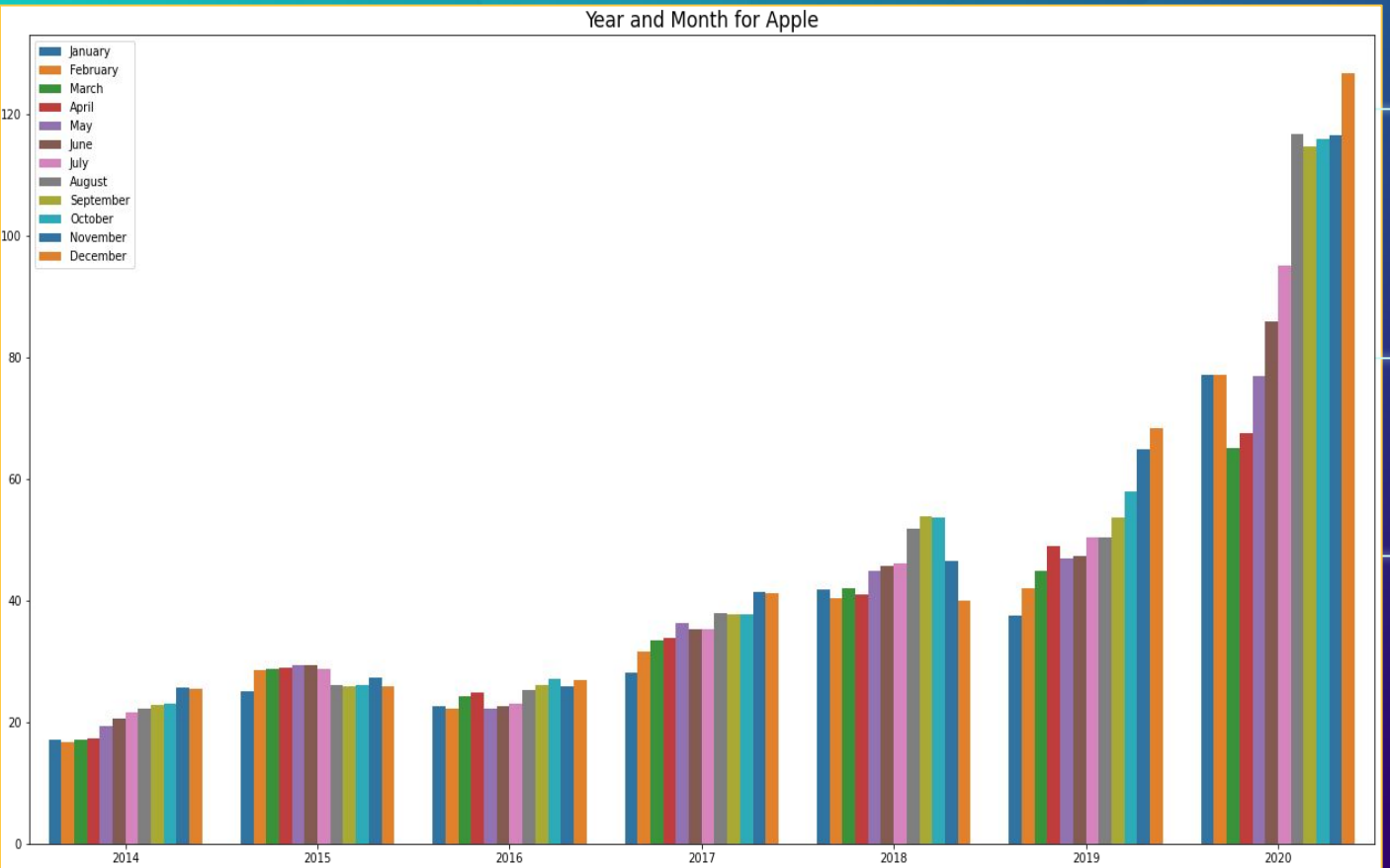
MODEL

Use SARIMA and Facebook Prophet to model

INTERPRET

Gather and understand findings

APPLE STOCK BY MONTH, 2014-2020



SEASONAL

September-December highest stock price

TREND

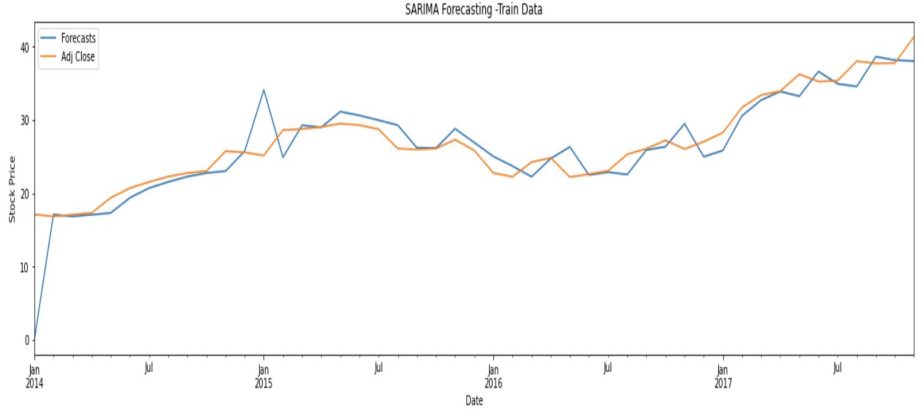
Upward growing trend

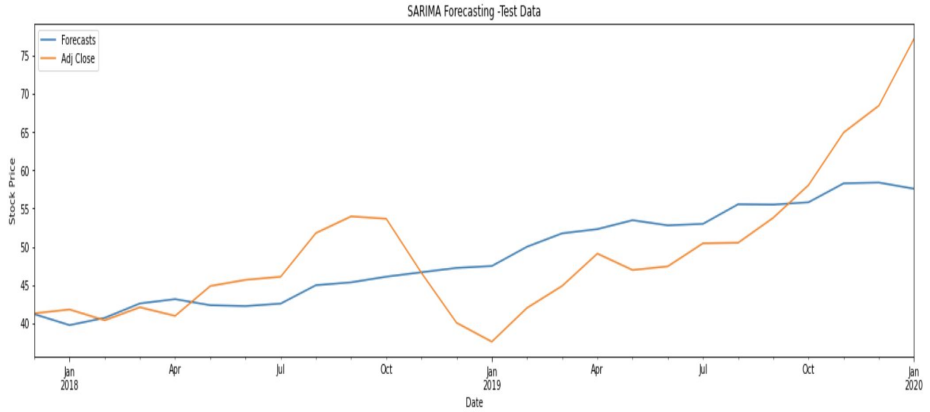
PANDEMIC

Unprecedented growth

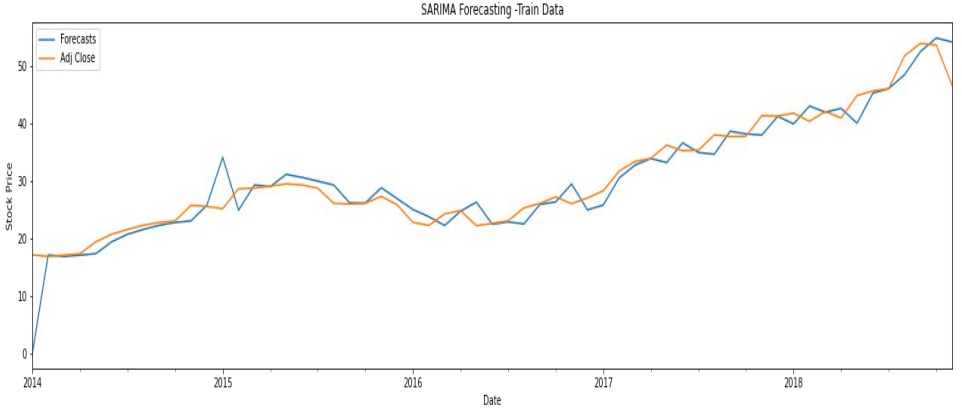
SARIMA FINDINGS

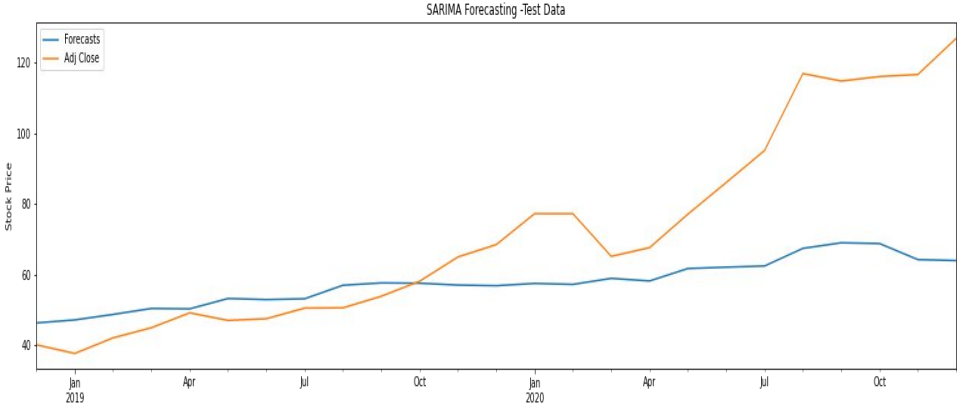
2020 EXCLUDED



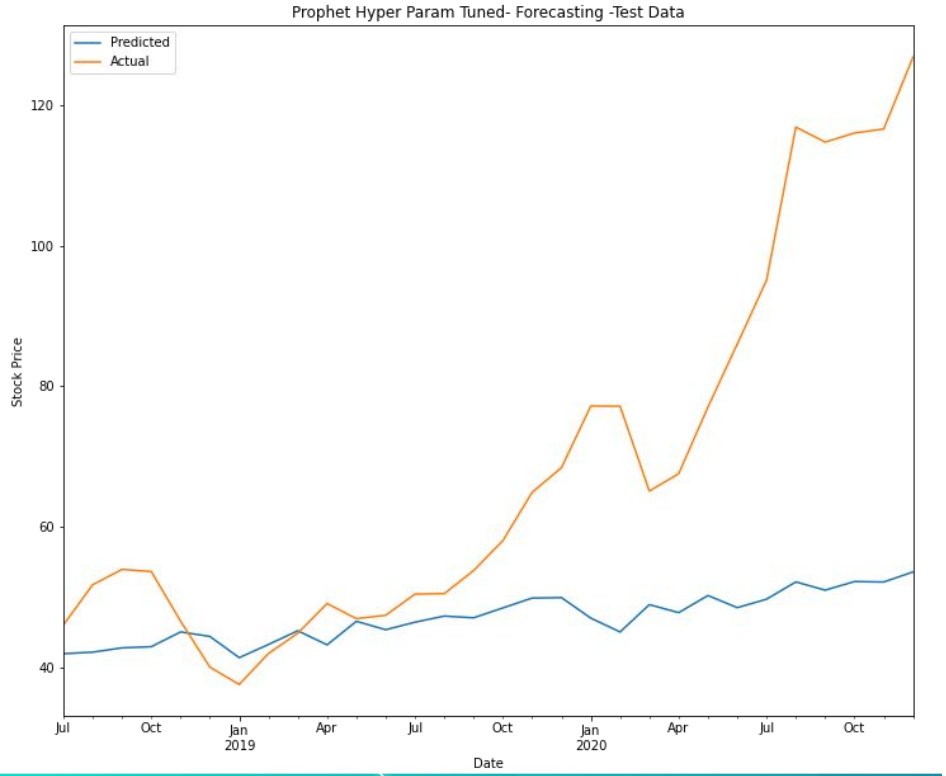


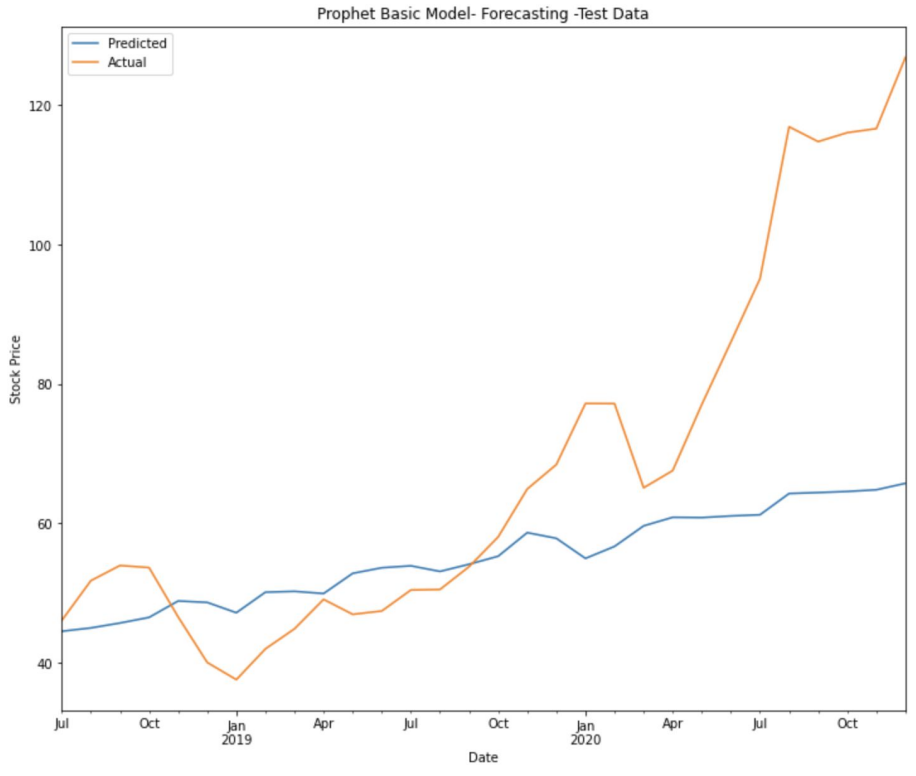
2020 INCLUDED





FACEBOOK PROPHET FINDINGS





FINDINGS WITH SARIMA AND FB PROPHET

	SARIMA (2020 EXCLUDED)	SARIMA (2020 INCLUDED)	FB PROPHET	HYPERTUNED FB PROPHET
RMSE	6.59	25.95	24.54	31.50
MAPE	83%	71%	81%	75%

FURTHER WORK

MORE DATA

Post COVID, when the market calms a bit, gathering more data

ANALYSIS

Test more SARIMA parameters and tune hyperparameters more in FB Prophet

MODELS

Try out different models, such as LSTM

THANKS!

Do you have any questions?

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