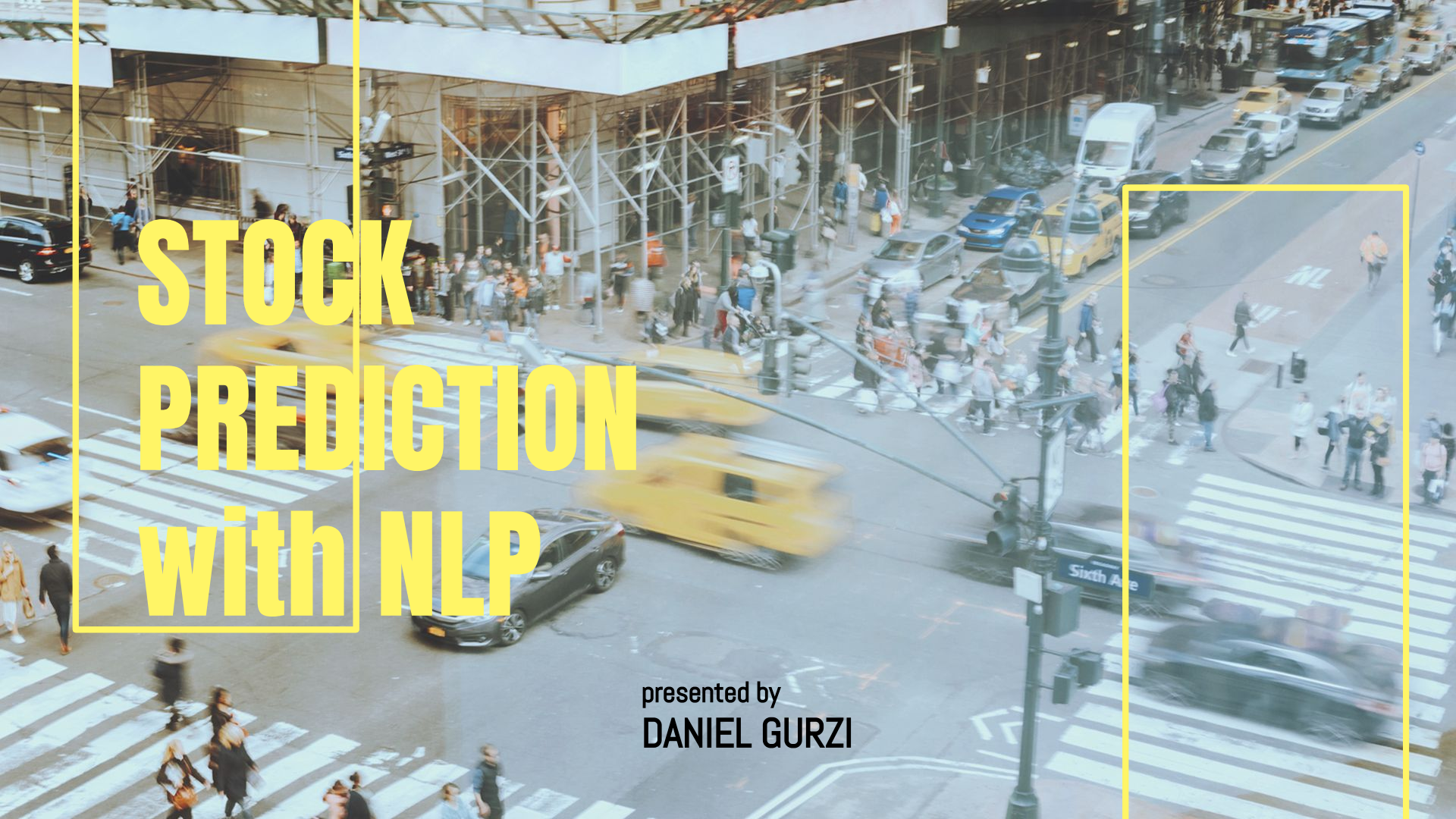


STOCK PREDICTION with NLP

presented by
DANIEL GURZI

OBJECTIVES

Establish a stream of News Articles to ingest by the program

Group articles together for context

Merge article context information with stock price info for a given date

Predict whether or not we should Buy a given Ticker Symbol today.

01 PROJECT INTRO
You Are Here

02 SELENIUM
Article Collection

03 EDA
Article Preparation and Vectorization

04 CLUSTER & MERGE
Grouping articles and merging with Stock Ticker Info

05 MODELING
Comparing model to baseline accuracy scores

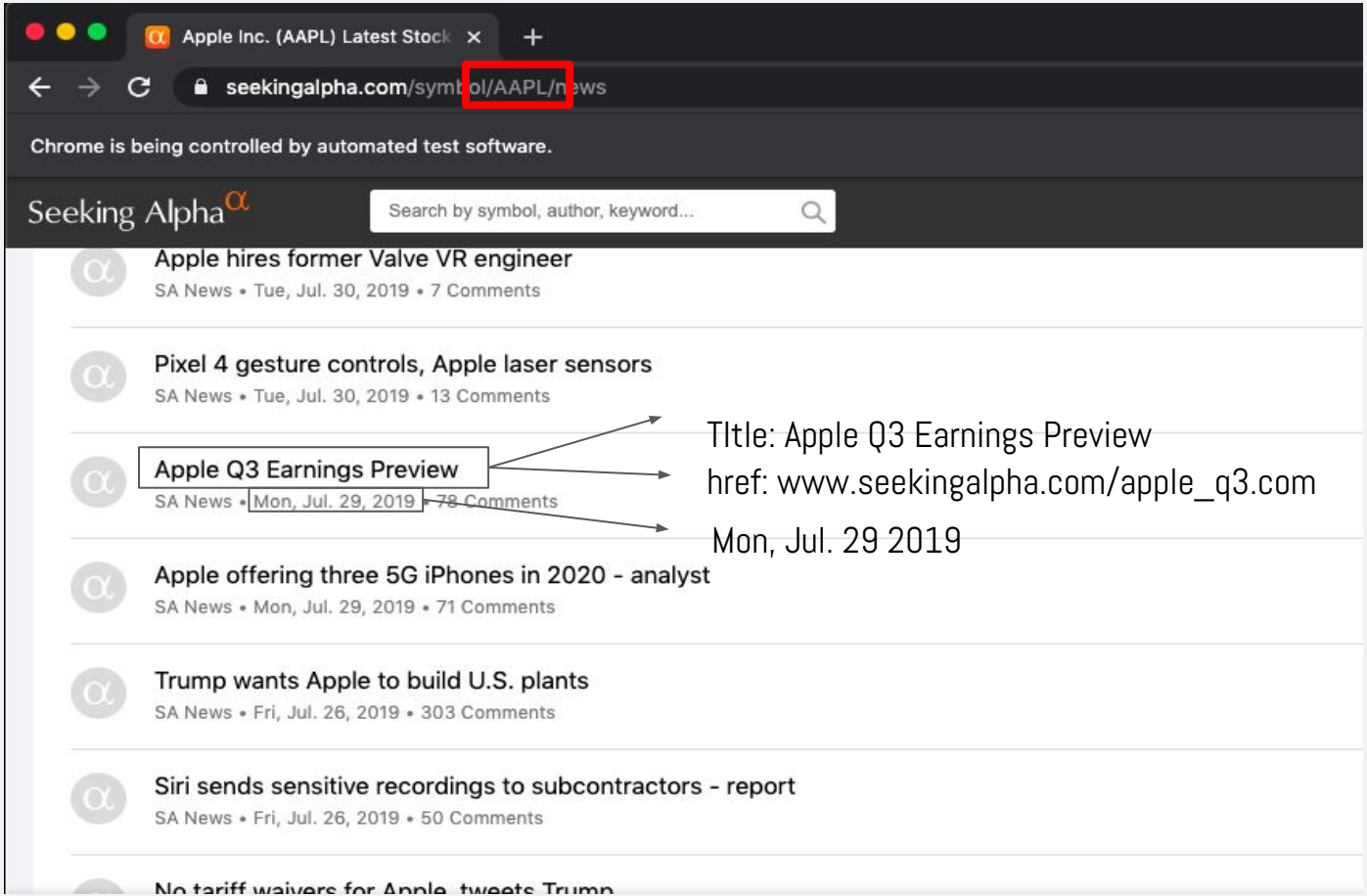
06 NEXT STEPS
What we can do next to improve the model

ABOUT THE PROJECT

Stock Brokers read all day and watch the news to stay aware of fluctuations in the market.

NLP allows us to teach a computer to read articles for us and pull out relevant information given historical context.

SELENIUM


Apple Inc. (AAPL) Latest Stock
seekingalpha.com/symbol/AAPL/news
Chrome is being controlled by automated test software.
Seeking Alpha
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href: www.seekingalpha.com/apple_q3.com
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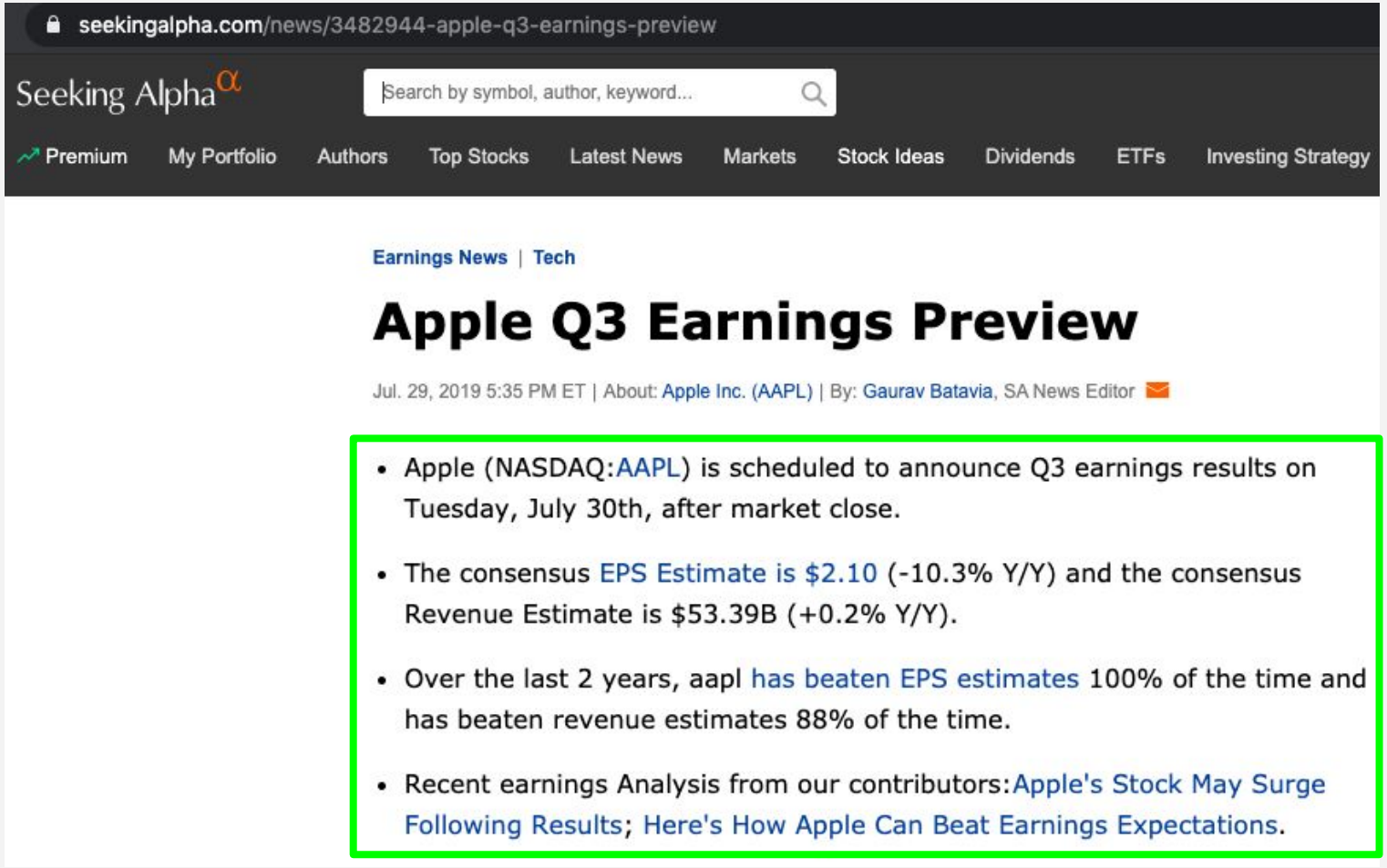
SELENIUM


seekingalpha.com/news/3482944-apple-q3-earnings-preview
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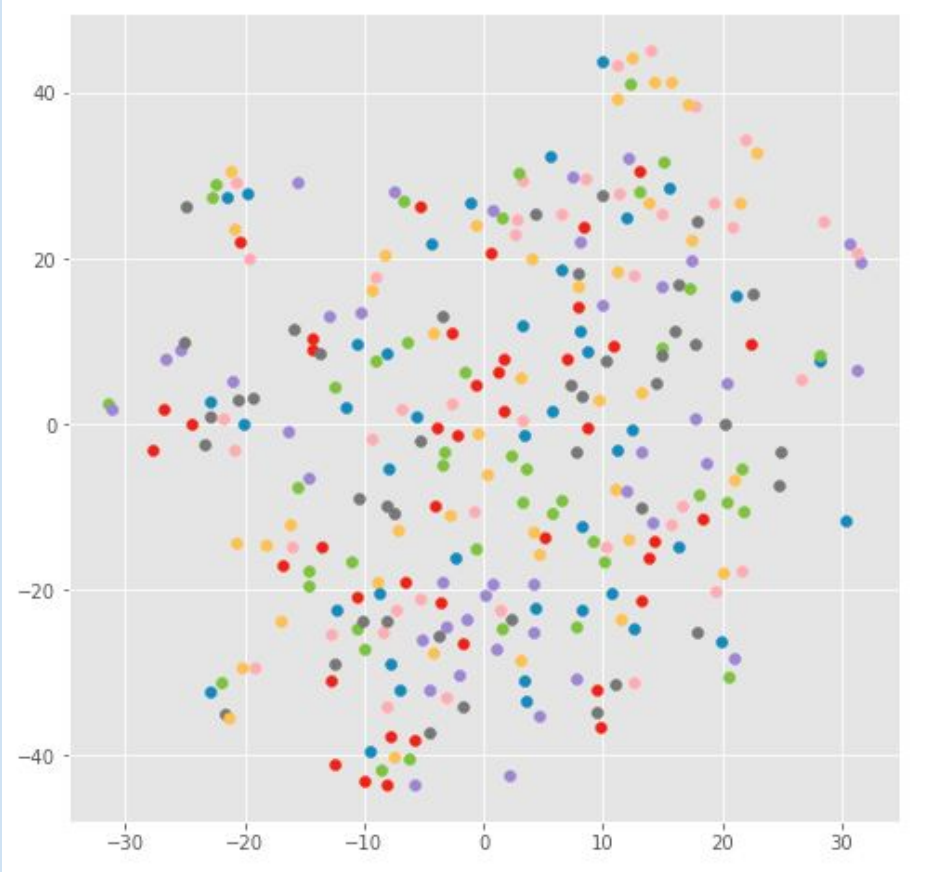
Dividends
ETFs
Investing Strategy
Earnings News | Tech
Apple Q3 Earnings Preview
Jul. 29, 2019 5:35 PM ET | About: Apple Inc. (AAPL) | By: Gaurav Batavia, SA News Editor
• Apple (NASDAQ:AAPL) is scheduled to announce Q3 earnings results on Tuesday, July 30th, after market close.
• The consensus EPS Estimate is $2.10 (-10.3% Y/Y) and the consensus Revenue Estimate is $53.39B (+0.2% Y/Y).
• Over the last 2 years, aapl has beaten EPS estimates 100% of the time and has beaten revenue estimates 88% of the time.
• Recent earnings Analysis from our contributors:Apple's Stock May Surge Following Results; Here's How Apple Can Beat Earnings Expectations.

CLUSTER & MERGE

- Word2Vec Google Library
- Article Vectors
- KMEANS Clustering
- get_dummies() by date
- Merge with stock info



Modeling

RNN - Recurrent Neural Network

Baseline: 52-58% Accuracy Score

TSLA accuracy --> 62%

```
Enter your ticker symbol:
 MSFT
Gathering Articles
Articles gathered...vectorizing
Vectorized...seting datetime index
Datetime Ready...Clustering...
Getting Ticker Info
Modeling Predictions
'Today we are predicting you should BUY MSFT stock'
```

NEXT STEPS

Doc2Vec

Looks at full article
Would need to build Quorum

ADDITIONAL TRAINING

Look at more companies beyond Tesla
Show model more good and bad days

ARTICLE ACCESS

Removes need for Selenium
Faster Outputs

Does anyone have any questions?

THANKS