Fitbit Acquisition by Google

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Business Case

- On November 1st 2019, Fitbit confirmed that Google will be acquiring it for $2.1 billion

- Google has struggled to make much of a dent in the wearables market

- Fitbit pioneered and dominated the wrist-worn tracker space, but has struggled to maintain growth in recent years

- A major concern shrouding the acquisition is Google's access to Fitbit customers' health and wellness data

Project Objectives

As consultants hired by Fitbit, our objectives were to:

- Investigate if the topics being discussed with respect to Fitbit has changed

- Explore how the sentiment across the world shifted with the acquisition announcement

- Analyze if the association of Fitbit with competing brands has changed

How did we collect the data?

pushshift / api

taspinar / twitterscraper

tweepy / tweepy

SOURCES   PACKAGES

Preprocessing

MDS Plot

- Got all tweets which contains the keywords 'Wearables' or 'Wear OS' or 'Smartwatch'

- Using the text in the tweets, got the entities using the **'Named Entity Recognition'** tool in Spacy

Topic Modeling

- Tokenized, removed bad characters, numbers, stopwords, punctuations and lemmatized the text, and then applied LDA

Sentiment Analysis

- Scraped user location for tweets and translated location in foreign languages to English using **'Google Trans'** package

- Identified four key locations based on tweet counts - US, UK, Japan and Others - and performed sentiment analysis

Interesting Findings

Vatican launches $110 'click to pray' wearable rosary


```
doc = nlp('European authorities fined Google a record $5.1 billion on
Wednesday for abusing its power in the mobile phone market and
ordered the company to alter its practices')
pprint([(X.text, X.label_) for X in doc.ents])
```

```
[('European', 'NORP'),
 ('Google', 'ORG'),
 ('$5.1 billion', 'MONEY'),
 ('Wednesday', 'DATE')]
```

```
for i in loc_index:
    print(location_list[i],'-->',translator.translate(location_list[i],dest='en').text)
```

```
神奈川県川崎市 --> Kawasaki City, Kanagawa Prefecture
大阪 --> Osaka
 日ノ坂町 --> Hino Sakamachi
三重県 --> Mie Prefecture
愛知県名古屋市緑区清水山 --> Nagoya, Aichi Prefecture Midori Ward Shimizuyama
日本 --> Japan
最近は神戸。 --> Recently Kobe.
```
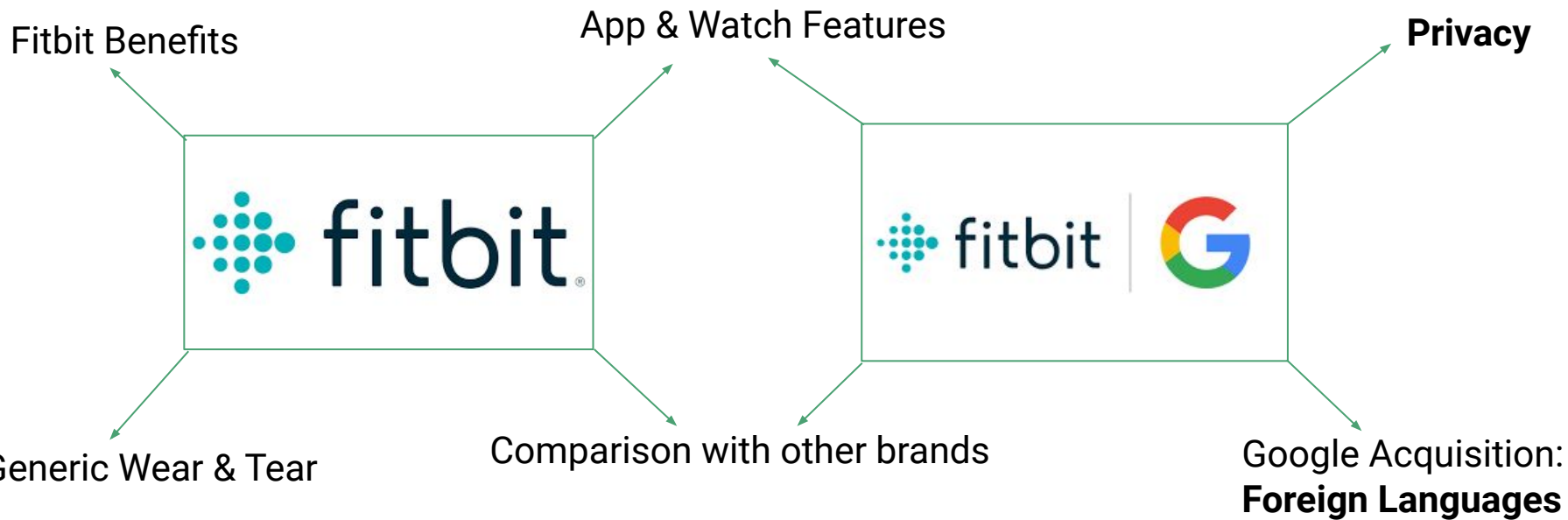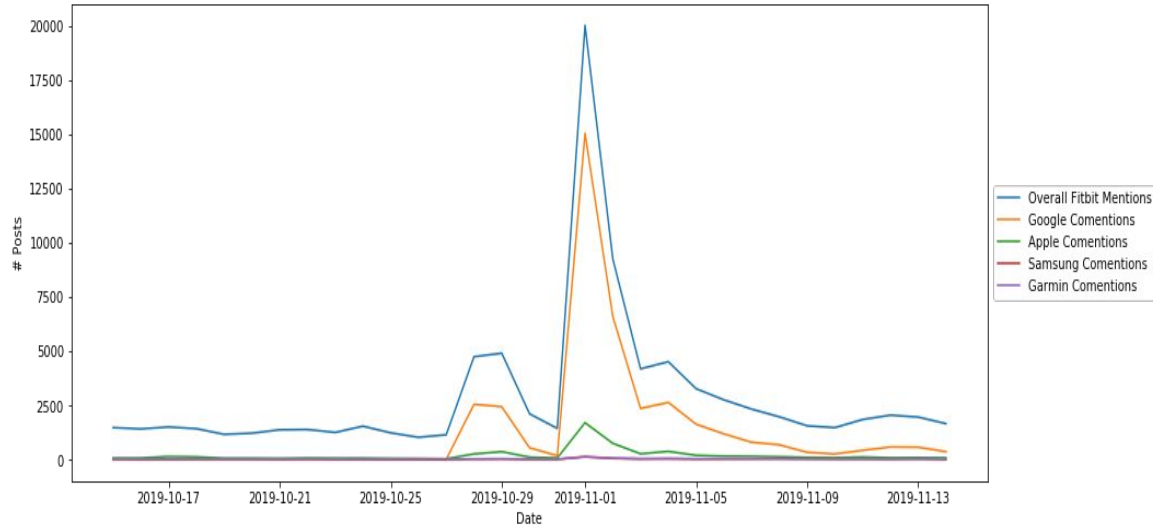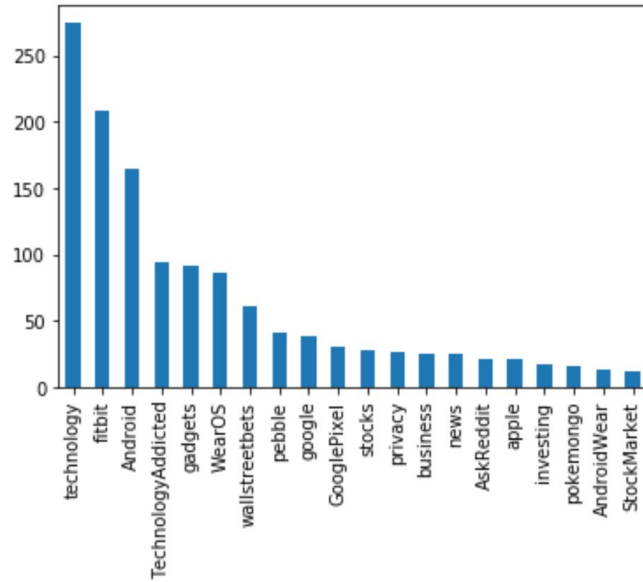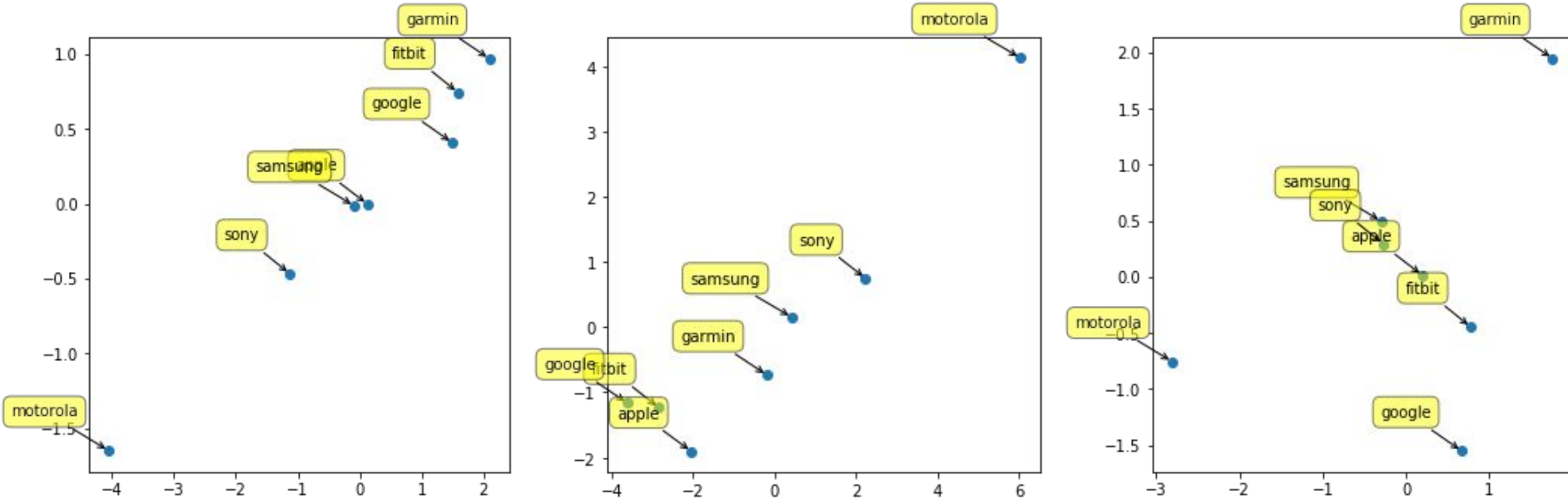
Topic Modeling

Fitbit Benefits

App & Watch Features

Privacy

Generic Wear & Tear

Comparison with other brands

Google Acquisition:
Foreign Languages

Sentiment Analysis of Acquisition

	Period	Overall Sentiment	Change in Sentiment
Japan	Before	0.06	0.00
Japan	After	0.06	
US	Before	0.00	0.17
US	After	0.17	
UK	Before	0.15	0.15
UK	After	0.30	
Others	Before	0.27	-0.02
Others	After	0.25	

What topics are associated with Google/Fitbit co-mentions?

Association of Fitbit with competing brands

BEFORE → DURING → AFTER

Actionable Insights

01	**Heightened competition between Apple and Fitbit**	• Target product improvements that gives Fitbit competitive edge over Apple (may consider customizability options)
02	**Negative sentiment associated with privacy concerns**	• Increase conversation that reassures customers that their private information will not be mishandled
03	**Overall increase in positive sentiment, but wide variance by country**	• Countries with overall increase in positive sentiment (UK/US) should be prioritized to leverage the Google brand name

Questions?