



## #MeToo Twitter Analysis

ECE 143 Group 19

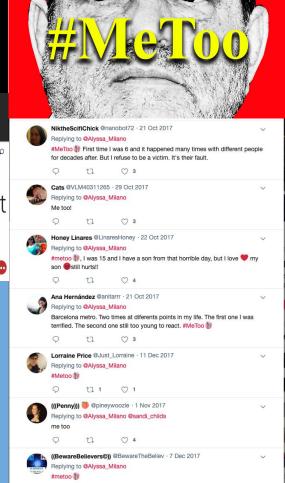
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# #MeToo

A movement, founded in 2006, to help survivors of sexual violence find pathways to healing



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# Objective

#### Shed light on the magnitude of the problem

- Part 1: How and why did this get so big?
- Part 2: How big did it actually get?
- Part 3: Do contents of the tweet correlate?



## Tools & Packages

Tweepy, matplotlib, pandas, nltk, plotly, string, wordcloud, collections, extract-old-tweets, bokeh





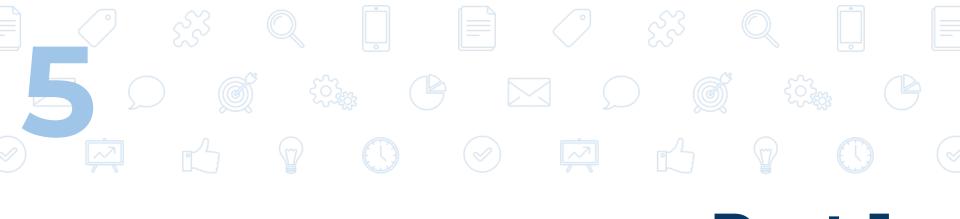
# Methodology

Data Mining

Data Cleaning Data Visualization

Mined around 43,920 unique tweets from Oct '17 to May '19 containing and/or related to #MeToo

Text: strip punctuation, URLs, emojis, stopwords, Porter stemming, Convert user location to GPS coordinates Line & bar graphs, time gifs, maps, word clouds



## Part 1: Investigating the Viral Movement

A bird's eye view of #MeToo on Twitter

#### **Part 1: Investigating the Mvmt**

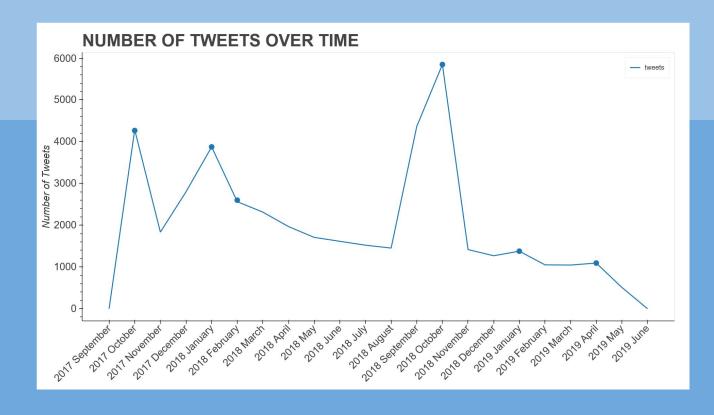
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#### **Guiding Questions**

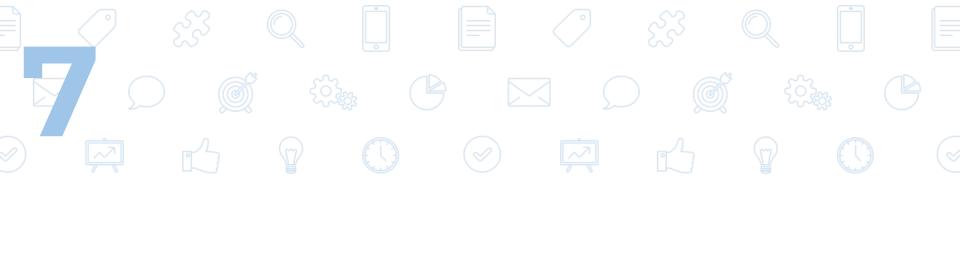
When did this begin?

What were the tipping points?

- Accusation against Kevin Spacey
- Accusation against Judge Kavanaugh



The #MeToo movement is event driven



# Part 2: Assessing the Social Impact

Measuring the geographical footprint of the movement

#### Part 2: Assessing the Impact

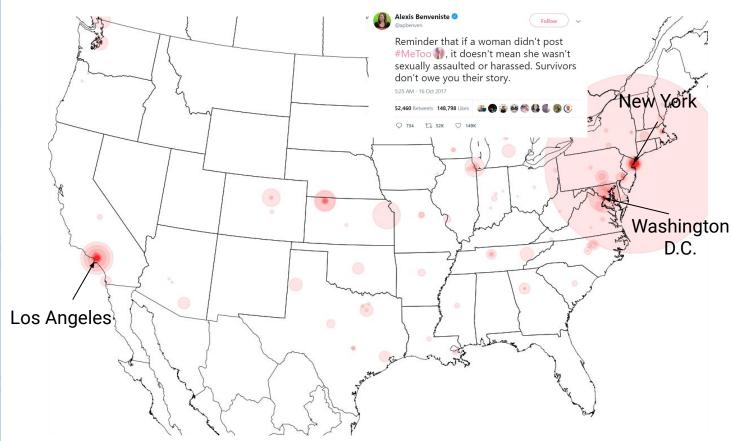


### **Guiding Questions**

How much impact did the movement have within the US?

- Los Angeles
- New York
- Washington D.C

### #MeToo Tweets in the United States by Retweet Count (2017-2019)



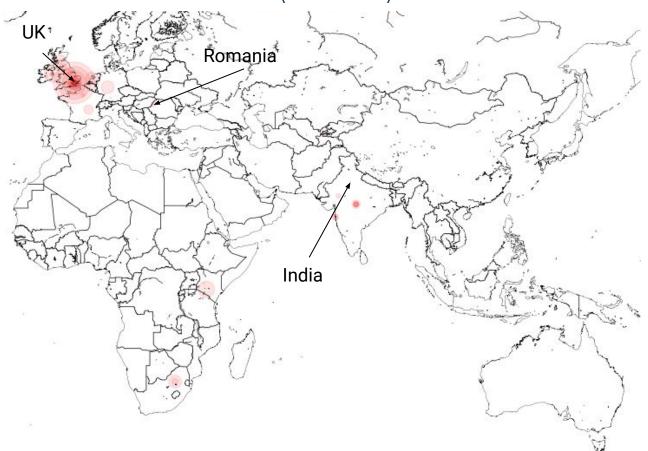
Part 2: Assessing the Impact



### **Guiding Questions**

How much impact did the movement have internationally?

### #MeToo Tweets Internationally by Retweet Count (2017-2019)

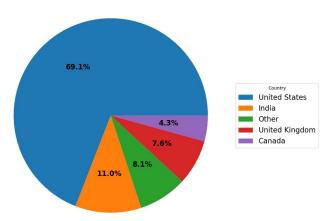


Part 2: Assessing the Impact

### **Guiding Questions**

Where was #metoo used the most?

#### Retweets by Country



#### Retweets by Country\*

Kyrgyzstan -

Australia -

Romania -

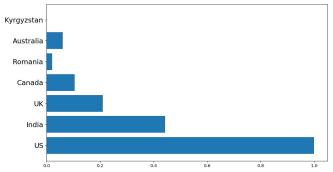
Canada

India -

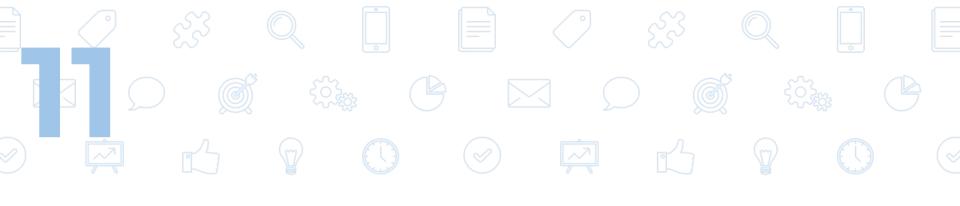
US -

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#### # of English Speakers by Country\*



\* Normalized to US



Specific names and general sentiment

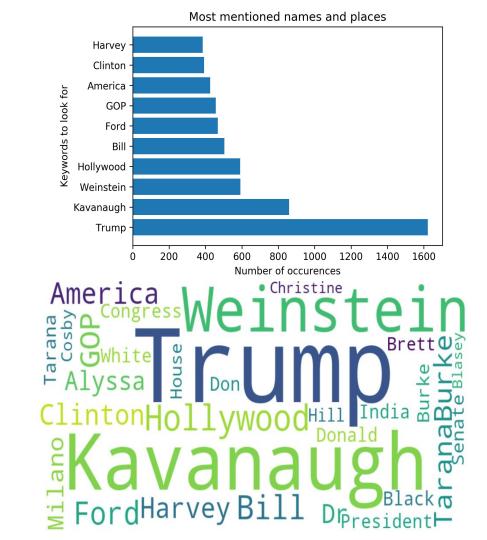
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### **Guiding Questions**

What does the content say about WHEN and WHERE?

2017-18

Notice size of India; all other words are American



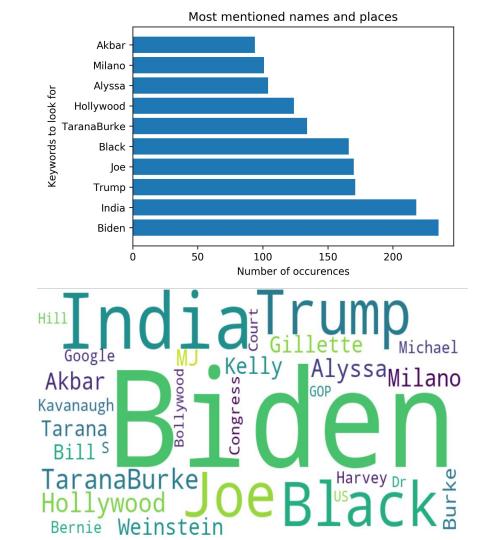
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#### Guiding Questions

What does the content say about WHEN and WHERE?

#### 2018-19

Notice size of India, MJ Akbar, Bollywood No America; US is tiny

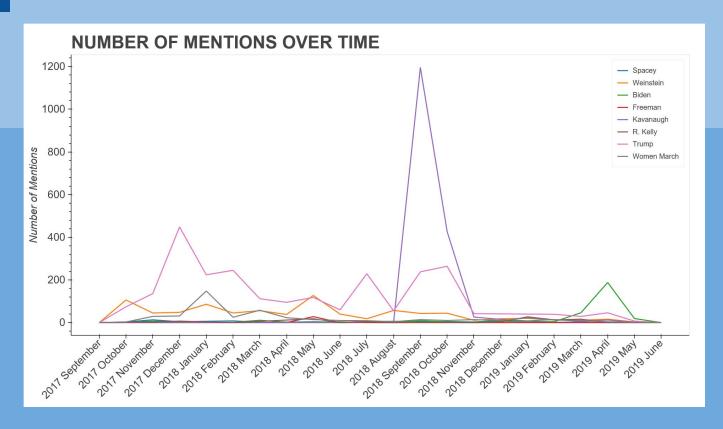


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### **Guiding Questions**

What people/events are mentioned?

How relevant are they?



Not all events have the same effect

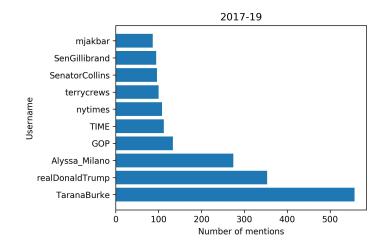
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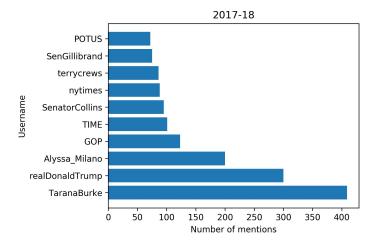
### **Guiding Questions**

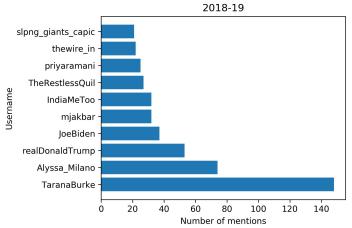
Who is getting "tagged" in the tweets?

#### **Answer**

Original tweets
Trump
The accused
Media houses







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**Guiding Questions** 

What is the content itself about?

2017-19

#### **Keywords - 2017-19**

"movement" over "allegation", "rape"

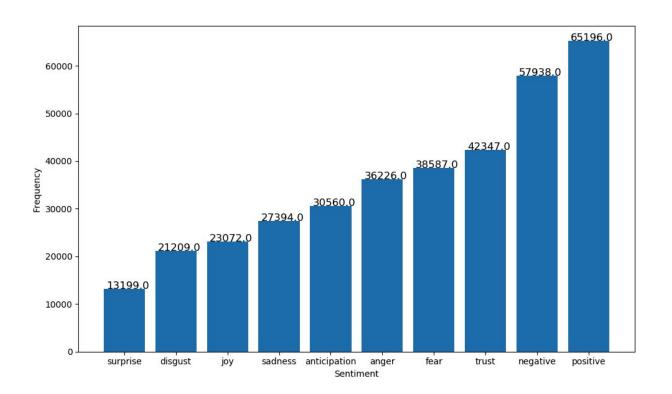
**Expected negative tweets but surprising prominence of "thank"** 



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### Guiding Questions

What are the general sentiments expressed?



Conclusion

Our main takeaways



The movement is largely event driven

Online movement not constrained by location

Details may change but sentiment is largely positive

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