



Twitter analysis of Andrew Yang



By Andrew Wu

Project Workflow

01.

Tweet Collection

- Twitter API(tweepy)
- getOldTweets

03.

Sentiment Analysis

- TextBlob

02.

Text Preprocessing

- Tokenizing, n-grams, stop words
- TF-IDF

04.

Topic Modeling

- NMF
- Visualized with MDS



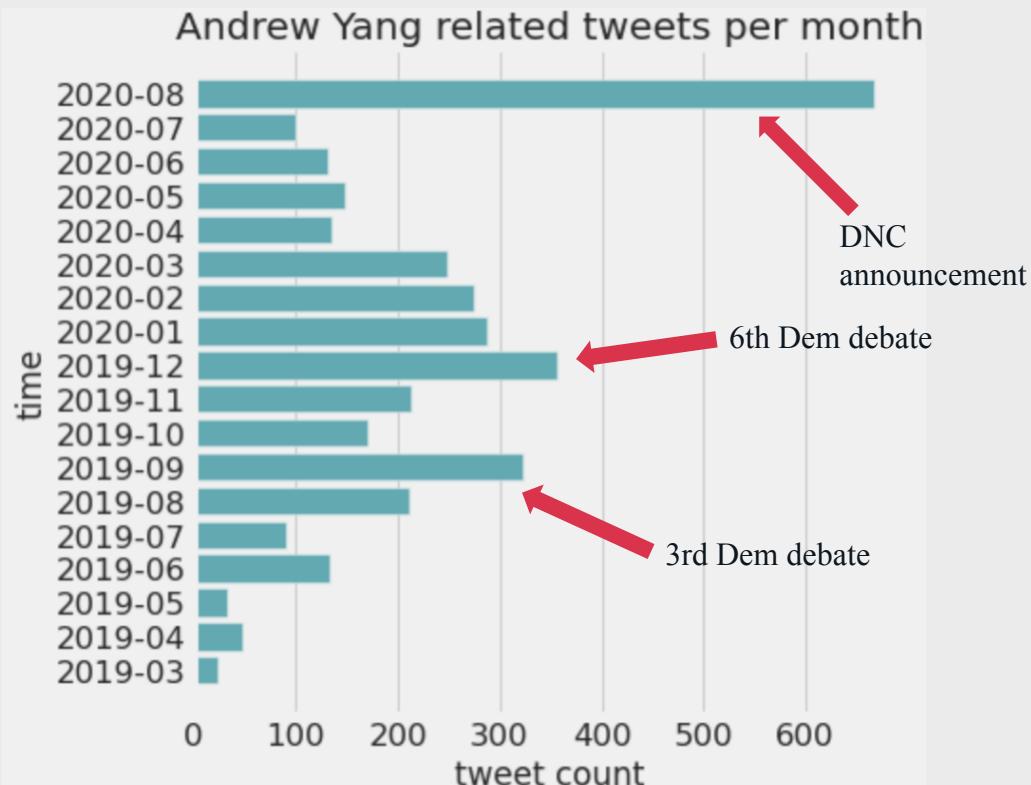


Tweets Collection



2

The data



- 3585 tweets after removing retweets and duplicates
- Spans over a year and a half(earliest record to most recent)





Data Pre- processing



Tweets are messy, extensive text cleaning is required

Clean

- Remove hyperlinks, punctuations.
- Remove emojis,hashtags, @

Tokenize

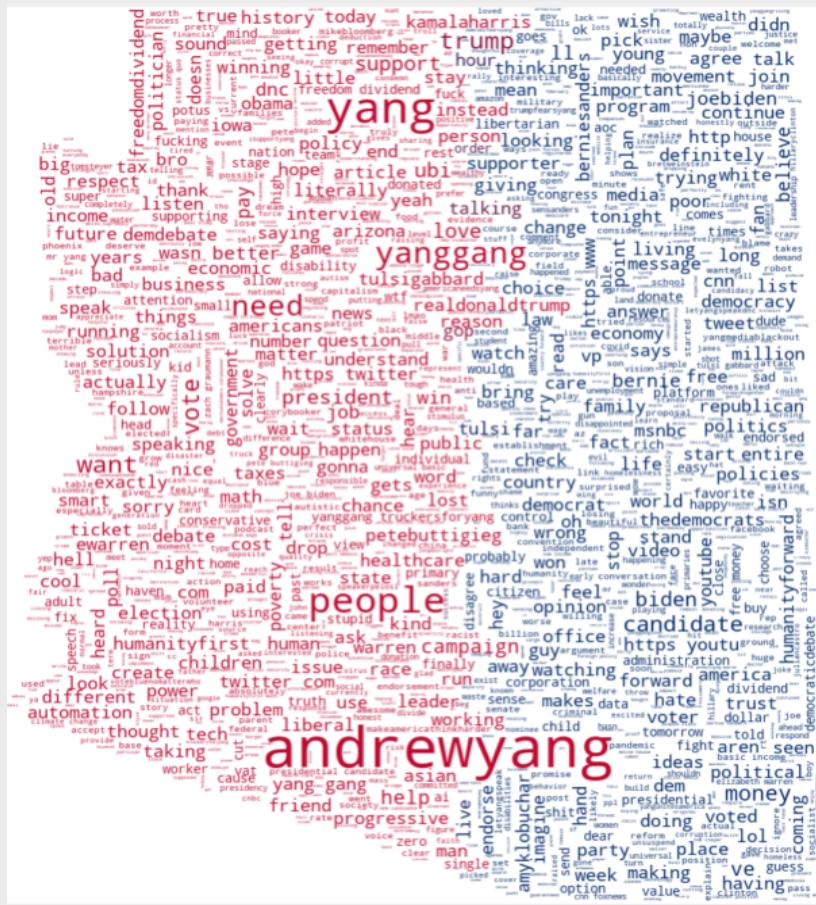
- Customized list
- Spell check

Vectorize&Lemmatize

- Uni & bi-grams



WordCloud

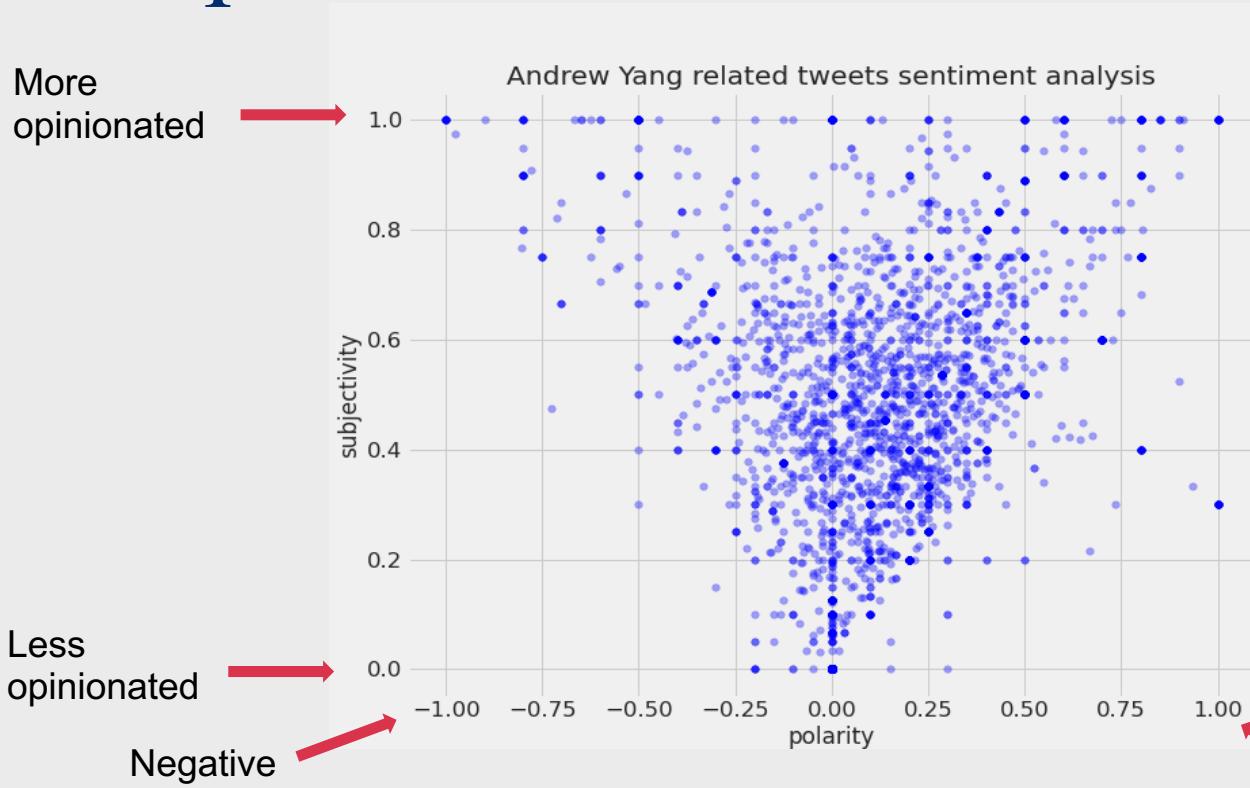




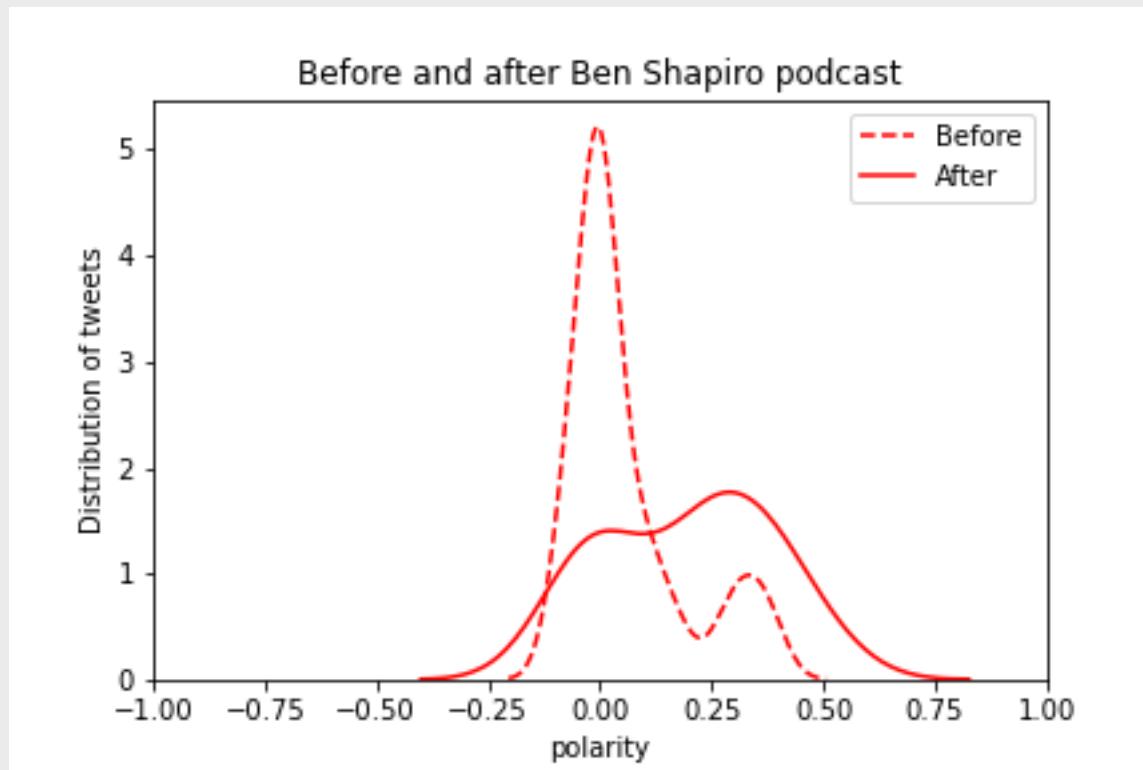
Sentiment Analysis



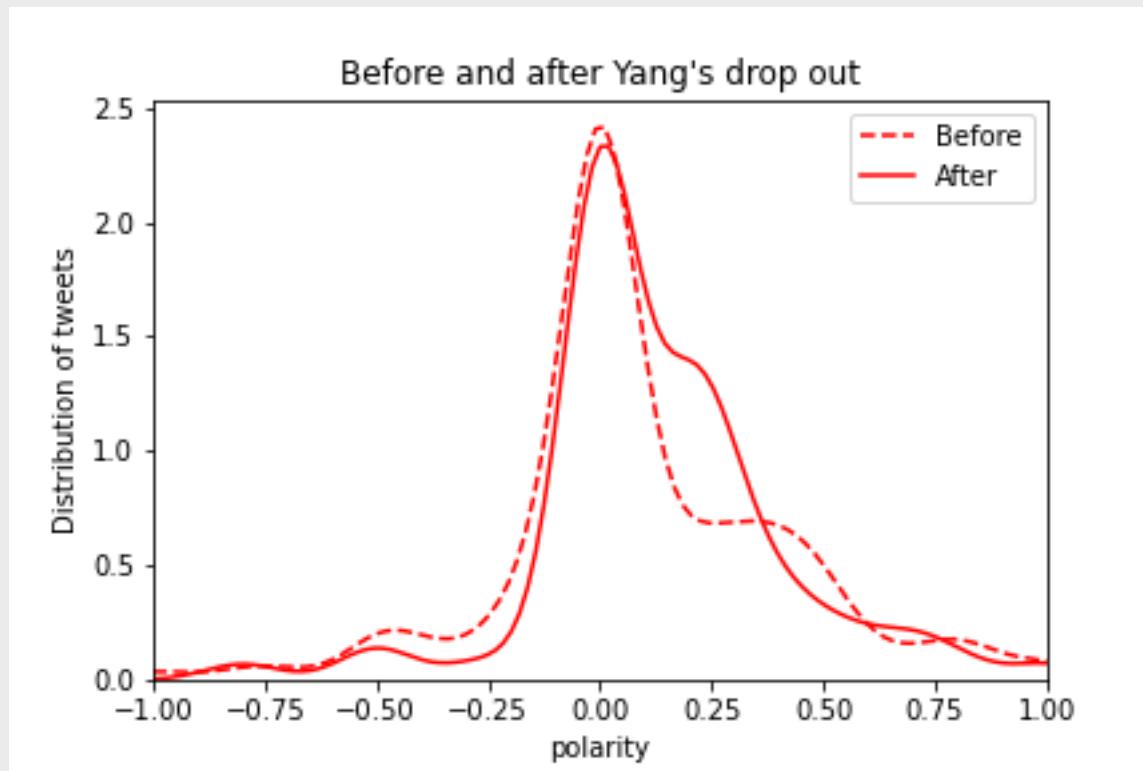
Overall: Arizonans have a positive view towards Yang



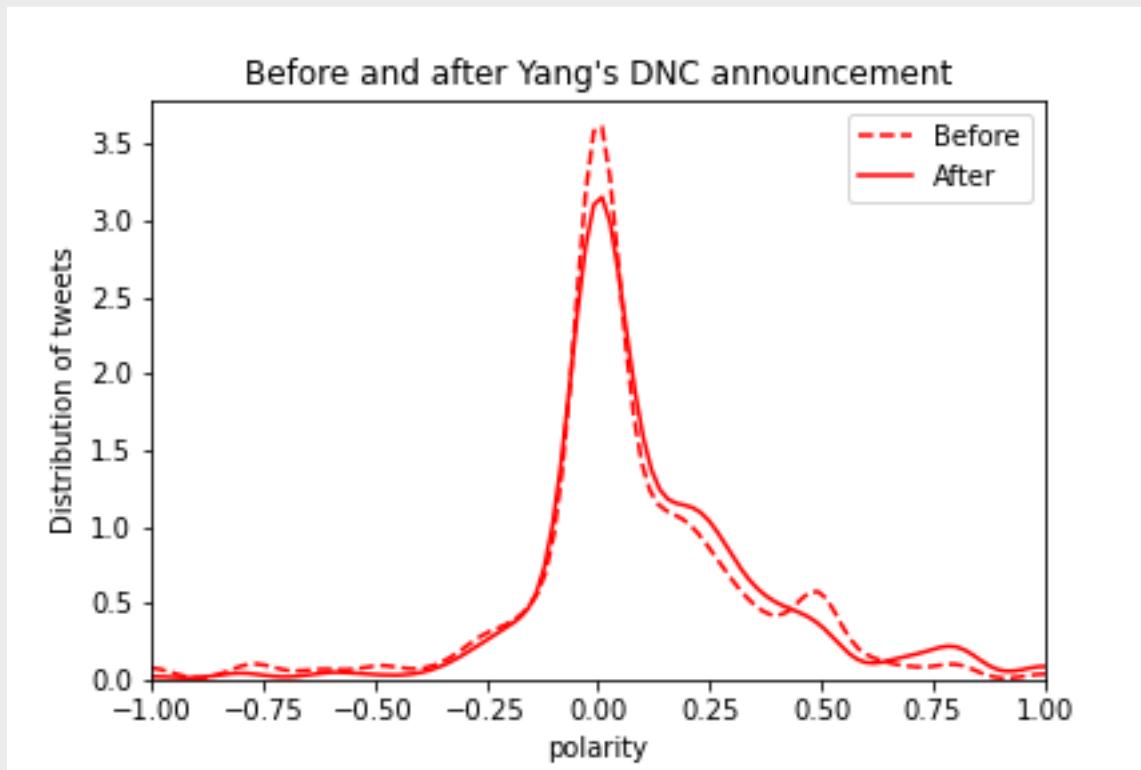
Arizonans respond more positively when Yang appears in right-wing related news

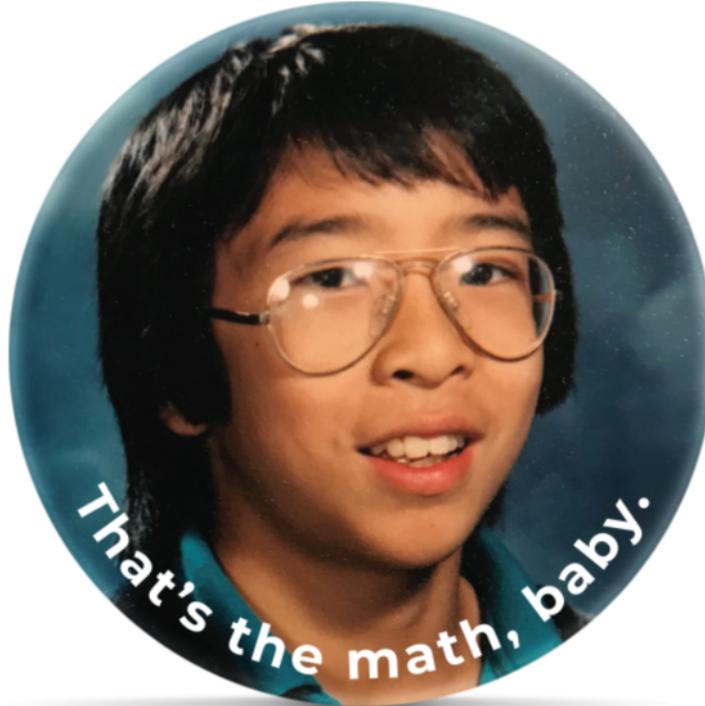


Arizonans respond more positively when Yang appears in right-wing related news



Arizonans respond more positively when Yang appears in right-wing related news

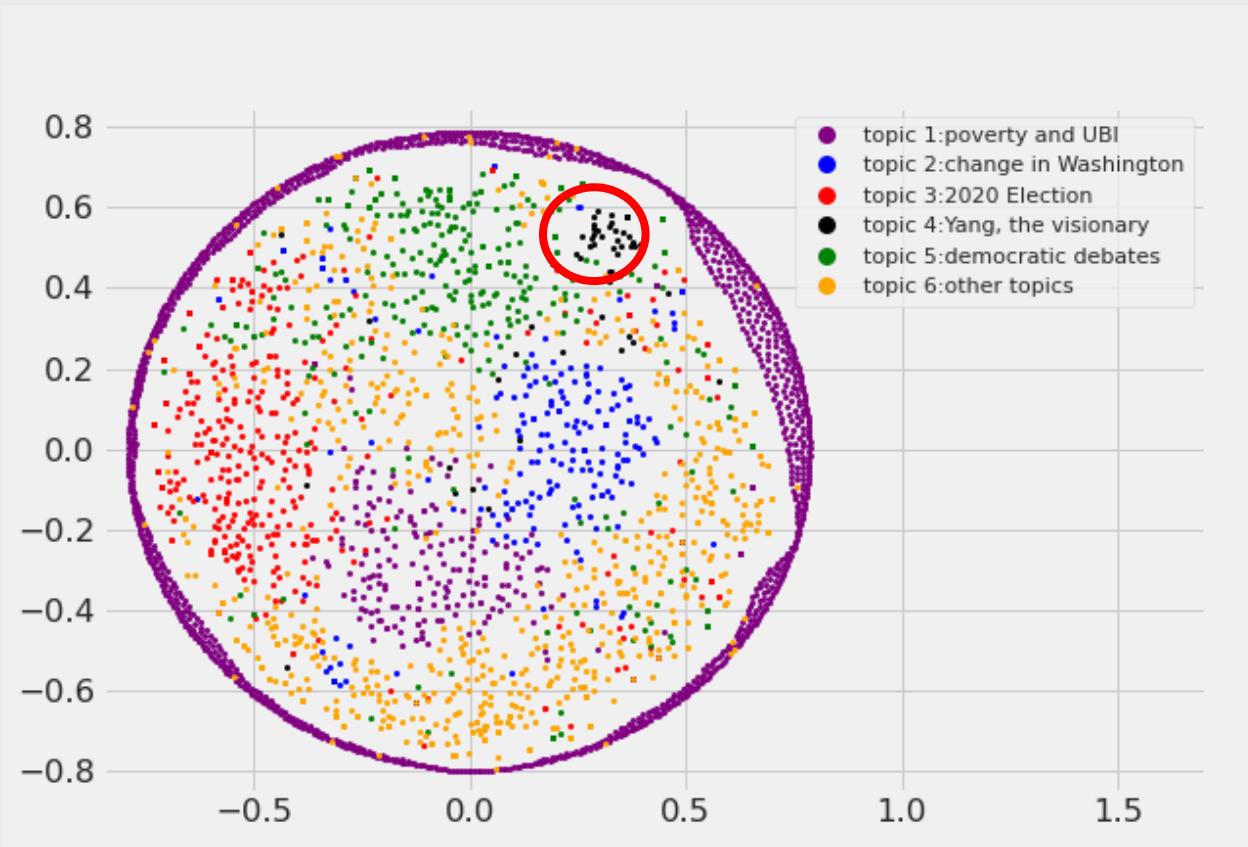




Topic Modeling



UBI is often associated with poverty



Most frequent:
Poverty and
UBI with
1500 tweets

Least frequent:
Yang, the
visionary with
100 tweets



Deeper look at the topics

Poverty and UBI:

Associated sub-topics: people, job, life, UBI, humanity, America, income, country

Yang, the visionary:

Associated sub-topics: love, election, forward, math, hope, America, humanity



Tweet tracing demonstration: Yang, the visionary

Associated sub-topics: love, election, forward,
math, hope, America, humanity



Brendon Carpenter 🎙️🇺🇸

@BrendonCarpent4

Replying to @CongressPassUBI @tunnelrat325 and 2 others

It's hard Anthony.... It's REALLY hard out there you know 😢

Always remember though that feeling of how beautiful true
hope for a better world can be. We can do it #YangGang, we
really can cancel the apocalypse 🌎🙏

We'll find that hope again



In the future... #Yang2024



Tweet tracing demonstration: Yang, the visionary

Associated sub-topics: love, election, forward,
math, hope, America, humanity

The card displays a profile picture of the account, which is a white circle containing a stylized outline of the state of Arizona with the letters 'HF' inside. The account name is 'Humanity Forward Arizona' and the handle is '@official_hfaz'. Below the account information, it says 'Replying to @felon_fred'. The tweet itself reads: 'I hope we still follow @AndrewYang after he goes mainstream #YangBeatsTrump'. At the bottom, it shows the timestamp '7:52 AM · Dec 13, 2019 from Tempe, AZ · Twitter for iPhone'.

Humanity Forward Arizona
@official_hfaz

Replying to [@felon_fred](#)

I hope we still follow [@AndrewYang](#) after he goes mainstream
[#YangBeatsTrump](#)

7:52 AM · Dec 13, 2019 from [Tempe, AZ](#) · Twitter for iPhone



Tweet tracing demonstration: Yang, the visionary

Associated sub-topics: love, election, forward,
math, hope, America, humanity



Michael Napolitano **#YangGang**
@mikejnap82

Replying to [@AndrewYang](#)

Love you bro

1:08 AM · Dec 20, 2019 from [Phoenix, AZ](#) · Twitter for Android



Future work

- Try new topic modeling techniques to try to get better topics
- Live twitter feed, real time analysis
- Obtain geo-location from twitter API and create city based, more specific sentiment analysis



Thank You! Any Questions?

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<https://www.linkedin.com/in/andrew-wu-939746171/>

Github:

<https://github.com/andywzz?tab=repositories>

APPENDIX

