

Mission Statement:

As a small coffee shop, we need to determine what coffee consumers are enjoying in the area to determine which products must be on our menu.

User Stories:

I, the coffee shop, want immediate feedback based on handle and hashtag inputs to gauge audience sentiment feedback about specific drinks to determine what to put on my own menu.

I, the coffee shop, want a percentage of the positive vs. negative sentiment in the text of the hashtag/handle searched to assess the reviews and fully understand the public's sentiment.

I, the coffee shop, need to quickly filter and search tweets from specific popular coffee shops in the area.

System Design:

Hashtags and Handles entered



Twitter API grabs twitter feed



Json file created with all posts corresponding to the handle/hashtag



Google API searches for keywords specified in the code to read through json file and analyze according to average sentiment per sentence per keyword

Functions created:

Handle-based

```
get_all_tweets_new("@Starbucks")
get_all_tweets_new("@DunkinDonuts")
get_all_tweets_new("@AllegroCoffee")
get_all_tweets_new("@pavementcoffee")
get_all_tweets_new("@limeredteahouse")
get_all_tweets_new("@CaffeNero_US")
get_all_tweets_new("@bluestatecoffee")
```

Hashtag-based:

```
get_all_hashtag_tweets("#PSL")
get_all_hashtag_tweets("#Frappuccino")
get_all_hashtag_tweets('#PumpkinSpice')
get_all_hashtag_tweets('#Latte')
get_all_hashtag_tweets('#Cappuccino')
get_all_hashtag_tweets('#ColdBrew')
get_all_hashtag_tweets('#Americano')
get_all_hashtag_tweets('#Frappe')
get_all_hashtag_tweets('#Espresso')
get_all_hashtag_tweets('#Peppermint')
get_all_hashtag_tweets('#Dunkin')
get_all_hashtag_tweets('#Starbucks')
get_all_hashtag_tweets('#AllegroCoffee')
get_all_hashtag_tweets('#pavementcoffee')
get_all_hashtag_tweets('#limeredteahouse')
get_all_hashtag_tweets('#CaffeNero')
get_all_hashtag_tweets('#bluestatecoffee')
```

Analyze:

```
sample_analyze_sentiment(example_text)
```

Output:

Our output looks like this but for 120 sentences from the feeds retrieved.

```

Document sentiment score: 0.10000000149011612
Document sentiment magnitude: 0.5
Sentence text: Mondays can be "ruff."
Sentence sentiment score: 0.0
Sentence sentiment magnitude: 0.0
Sentence text: Thankfully, there's coffee!
Sentence sentiment score: 0.10000000149011612
Sentence sentiment magnitude: 0.10000000149011612
Sentence text: ☺#localcoffeehouse #petsofbluestatecoffee #mondaymotivation #coffeetime https://t.co/7p0uu4xfkC
Sentence sentiment score: 0.4000000059604645
Sentence sentiment magnitude: 0.4000000059604645
Latte Magnitude: 0.10000000149011612 1
Cappuccino Magnitude: 0 0
Frappe Magnitude: 0 0
Pumpkin Magnitude: 0.4999999888241291 2
Coldbrew Magnitude: 0 0
Language of the text: en
8
Document sentiment score: 0.6000000238418579
Document sentiment magnitude: 1.2000000476837158
Sentence text: Love is a delicious latte.
Sentence sentiment score: 0.8999999761581421
Sentence sentiment magnitude: 0.8999999761581421
Sentence text: #localcoffeeshop #espresso #lattelove #latte #latteart https://t.co/2kuCZeFPtd
Sentence sentiment score: 0.30000001192092896
Sentence sentiment magnitude: 0.30000001192092896
Latte Magnitude: 0.6499999935428301 3
Cappuccino Magnitude: 0 0
Frappe Magnitude: 0 0
Pumpkin Magnitude: 0.4999999888241291 2
Coldbrew Magnitude: 0 0
Language of the text: en
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```

User story 1 is satisfied: We output sentiment analysis of coffee drink keywords based on the hashtag and handle specified.

User story 2 is satisfied: We output a percentage of the average magnitude for all sentences in the feed in which the keyword searched, appears.

User story 3 is satisfied: We quickly grab the feeds from numerous hashtags and handles from twitter at the same time and analyze them within a matter of seconds.

If we had more time...

There are keywords that show up for instance Ethiopian coffee appears to be popular but since we do not search for it, the small coffee shop will not get that feedback, so we would adjust it to suggest drinks based on sentences analyzed with the highest magnitude.

Connection times out when I try to analyze over 121 sentences, this is a google API issue, but if we had more time there might be a way around this.

In the future we will avoid cloud shell.

It was really cool learning API's, initially this project sounded out of reach but quickly came together as a real-life practical software. I liked the team aspect in terms of one person doing the twitter side and the other person doing the google side. Having to integrate two files not having written the other one is a real world example of how software is integrated in industry.