

Twitter Sentiment Analysis in the New York area

Uber
Eats



GRUBHUB™

Katie Cao

Outline

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2. System Design & System Implementation
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4. Evaluation
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6. References

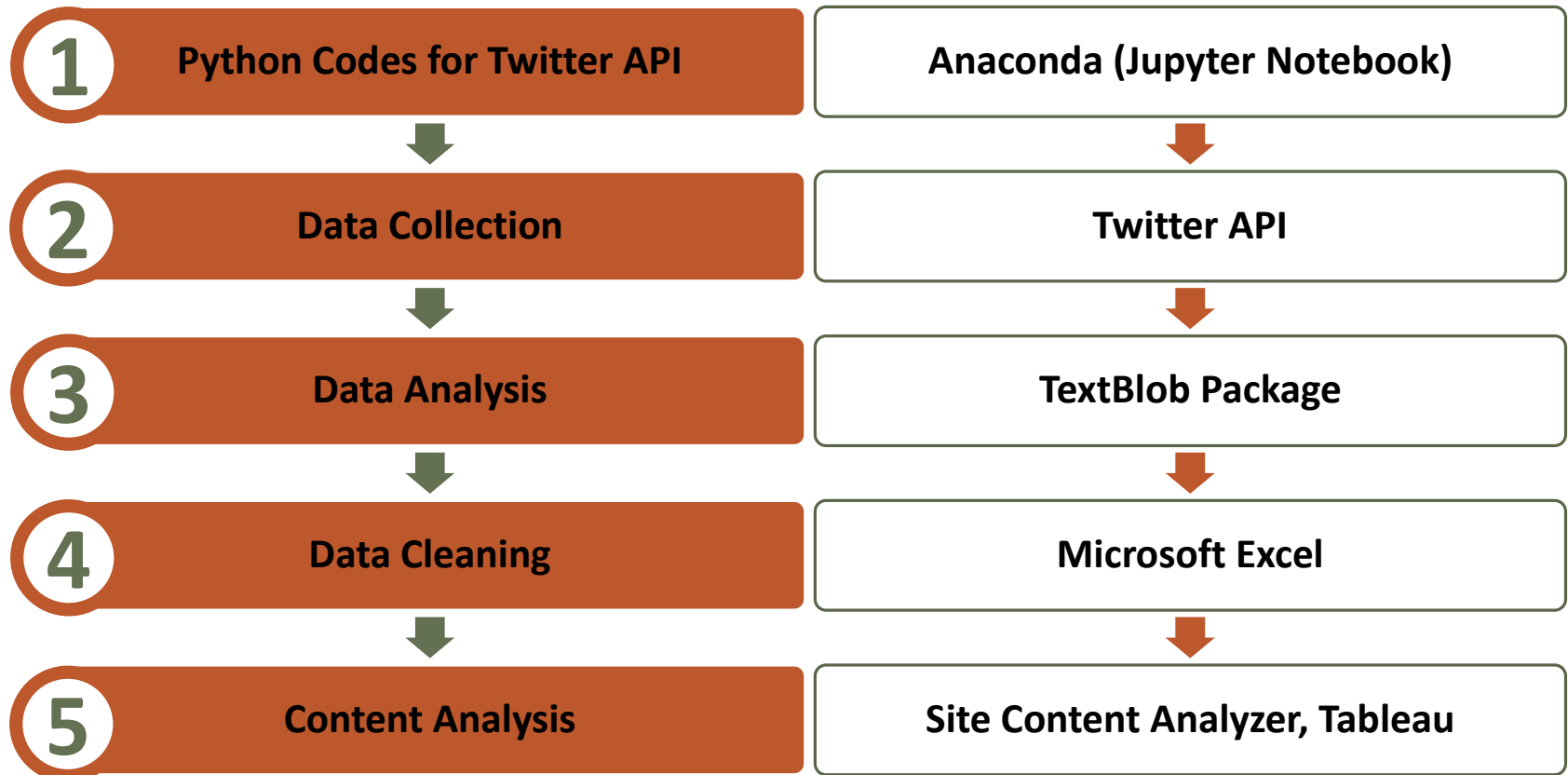


**Which food delivery service is
more well-received on
Twitter?**

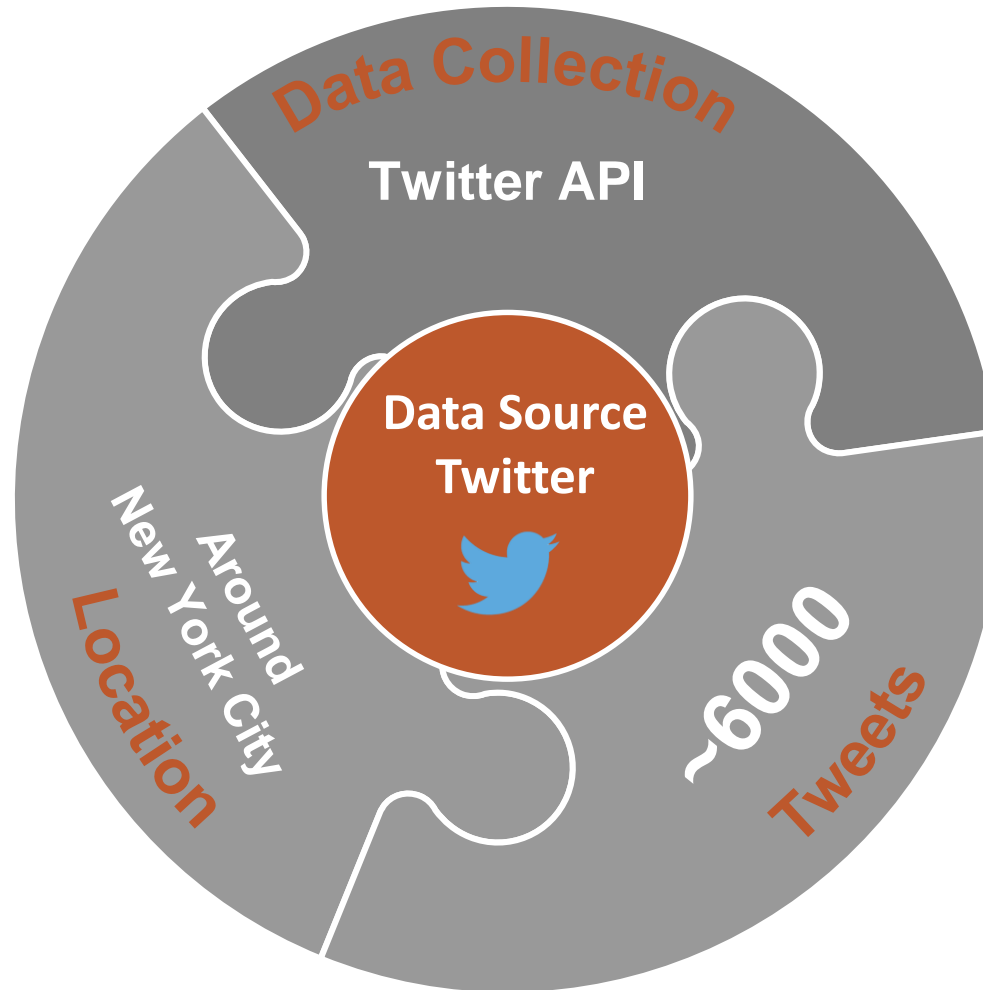


was on Grubhub 1.06E+18 New York 254 But at least you had Ramen lol 1.06E+18
ng for GrubHub to Deliver My Ribs will be t literally on the border 1.06E+18 "New Je
thimi trucks not on grubhub 1.06E+18 The UberEATS prom code eats cheavordue for
100 doing likkle grubhub in 5 hours lmao th it's funny that everyone uses ubereats as a
rojuicepembrokepines with get 1.06E+18 contacted me and compensated me
Care hi Coming over from A prompt told me Can't decide on dinner Not really feeling l
Philly Lovash Restaurant amp Bar Ongoing pro here try this link Sorry about that everyon
why do you dissapoint me the past two times it take you almost a FULL HOUR to tell me t
akeout 1.06E+18 "New Jersey, USA" 132 Ordering McDonald s on UberEats bad but if
if I d known it was likely a 2 hour wait 1.06E+18 k ubereats do it so SPIN THE WHEEL OF FAT
hen today against my better judgement I 1.06E+18 support Just contacted the UberEats phone n
why have I missed two meals in a row beca 1.06E+18 tting ready to figure out dinner for toni
tonight we are doing dinner for 8 here at my Support My ubereats order never arrived con
too cold to go out Order in on Grubhub from 1.06E+18 If a restaurant is looking to expand their

System Design & System Implementation



Dataset Description



Dataset Description

Fields Recorded:

- Screen Name
- Tweet
- User ID
- Location
- Follower Count
- Favorite Count
- Retweets Count
- Verified Account



Twitter API to Extract Tweets



Functions

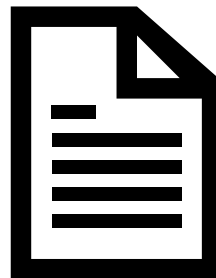
get_uber_tweets()

get_grubhub_tweets()

cleaning_tweet()

tweet_sentiment()

Data extracted is stored in a text file.



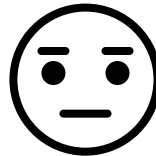
Data Analysis

Using **TextBlob** – a Python library for processing textual data, to perform sentiment analysis

Positive



Neutral



Negative



Data Cleaning

- Remove Duplicate Tweets (caused by bots)
- Remove Manual Retweets



Uber Eats

Content Analysis

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Word	Total	manhattan	know	Word	Total
ubereats	428 [4.32%]	31 [0.31%]	know	orders	16 [0.20%]
new	360 [3.63%]	hour	30 [0.30%]	customer	15 [0.19%]
york	289 [2.91%]	people	29 [0.29%]	code	15 [0.19%]
usa	202 [2.04%]	code	28 [0.28%]	day	15 [0.19%]
order	164 [1.65%]	money	28 [0.28%]	bell	15 [0.19%]
food	149 [1.50%]	need	27 [0.27%]	pizza	15 [0.19%]
philadelphia	114 [1.15%]	today	26 [0.26%]	working	15 [0.19%]
delivery	109 [1.10%]	connecticut	26 [0.26%]	make	15 [0.19%]
brooklyn	100 [1.01%]	really	26 [0.26%]	lunch	15 [0.19%]
support	100 [1.01%]	georgia	25 [0.25%]	guys	14 [0.18%]
nyc	81 [0.82%]	help	25 [0.25%]	big	14 [0.18%]
just	80 [0.81%]	waiting	24 [0.24%]	eat	14 [0.18%]
uber	80 [0.81%]	day	24 [0.24%]	connecticut	14 [0.18%]
jersey	75 [0.76%]	guys	23 [0.23%]	taco	14 [0.18%]
florida	63 [0.64%]	call	23 [0.23%]	take	13 [0.16%]
service	62 [0.63%]	ordering	22 [0.22%]	minutes	13 [0.16%]
ordered	59 [0.59%]	place	22 [0.22%]	street	13 [0.16%]
time	56 [0.56%]	tonight	22 [0.22%]	thanks	13 [0.16%]
city	53 [0.53%]	first	22 [0.22%]	thank	13 [0.16%]
app	53 [0.53%]	doordash	21 [0.21%]	using	13 [0.16%]
amp	52 [0.52%]	lol	21 [0.21%]	hours	13 [0.16%]
eats	50 [0.50%]	cold	20 [0.20%]	special	12 [0.15%]
driver	48 [0.48%]	drivers	20 [0.20%]	tried	12 [0.15%]
delivered	45 [0.45%]	take	19 [0.19%]	hello	12 [0.15%]
open	45 [0.45%]	philly	19 [0.19%]	staten	12 [0.15%]
deliver	43 [0.43%]	way	19 [0.19%]	last	12 [0.15%]
queens	39 [0.39%]	dinner	19 [0.19%]	available	12 [0.15%]
bronx	36 [0.36%]	til	18 [0.18%]	park	12 [0.15%]
what	35 [0.35%]	ave	18 [0.18%]	united	11 [0.14%]
missing	35 [0.35%]	long	18 [0.18%]	week	11 [0.14%]
restaurant	35 [0.35%]	stop	18 [0.18%]	grub	11 [0.14%]
customer	34 [0.34%]	account	18 [0.18%]	stales	11 [0.14%]
got	33 [0.33%]	getting	18 [0.18%]	shit	11 [0.14%]
use	32 [0.32%]	house	18 [0.18%]	online	11 [0.14%]
hungry	32 [0.32%]	fuck	17 [0.17%]	lovash	11 [0.14%]
want	31 [0.31%]	make	17 [0.17%]	hey	11 [0.14%]
grubhub	31 [0.31%]	know	17 [0.17%]	support	11 [0.14%]
got	25 [0.31%]			cheese	11 [0.14%]
queens	25 [0.31%]				
call	25 [0.31%]				
manhattan	24 [0.30%]				
want	24 [0.30%]				
night	24 [0.30%]				
open	23 [0.29%]				
good	23 [0.29%]				
bronx	22 [0.28%]				
friday	22 [0.28%]				
doordash	22 [0.28%]				
uber	22 [0.28%]				
hour	22 [0.28%]				
ordering	22 [0.28%]				
tonight	21 [0.26%]				
place	21 [0.26%]				
right	20 [0.25%]				
ave	20 [0.25%]				
cold	20 [0.25%]				
late	19 [0.24%]				
driver	19 [0.24%]				
island	19 [0.24%]				
delivered	19 [0.24%]				
help	19 [0.24%]				
service	18 [0.23%]				
dinner	18 [0.23%]				
bar	18 [0.23%]				
georgia	18 [0.23%]				
restaurants	18 [0.23%]				
people	17 [0.21%]				
know	17 [0.21%]				
really	17 [0.21%]				
sorry	16 [0.20%]				
eats	16 [0.20%]				
come	16 [0.20%]				
orders	16 [0.20%]				
customer	15 [0.19%]				

Content Analysis

- Brooklyn
- Queens
- NYC
- Bronx
- New Jersey

Major Serving Locations

seamless

DOORDASH

Major Competitors

**Uber
Eats**



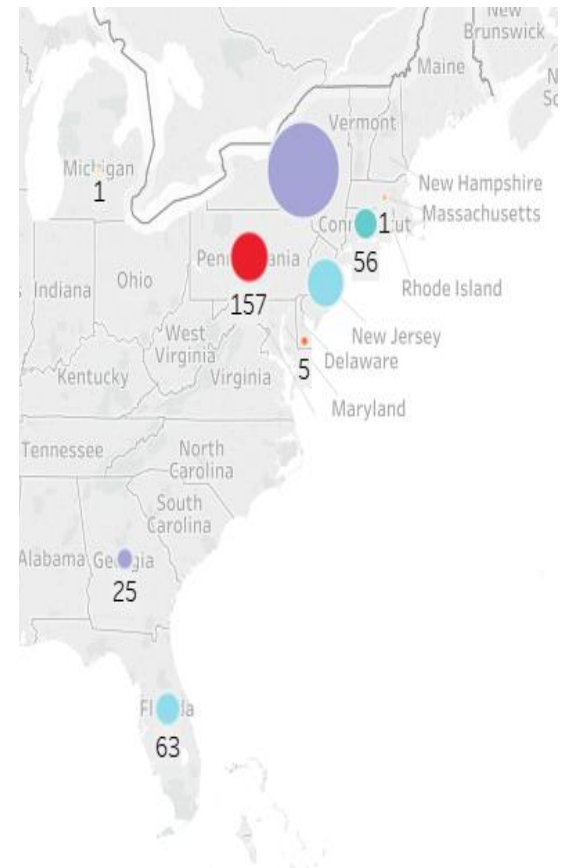
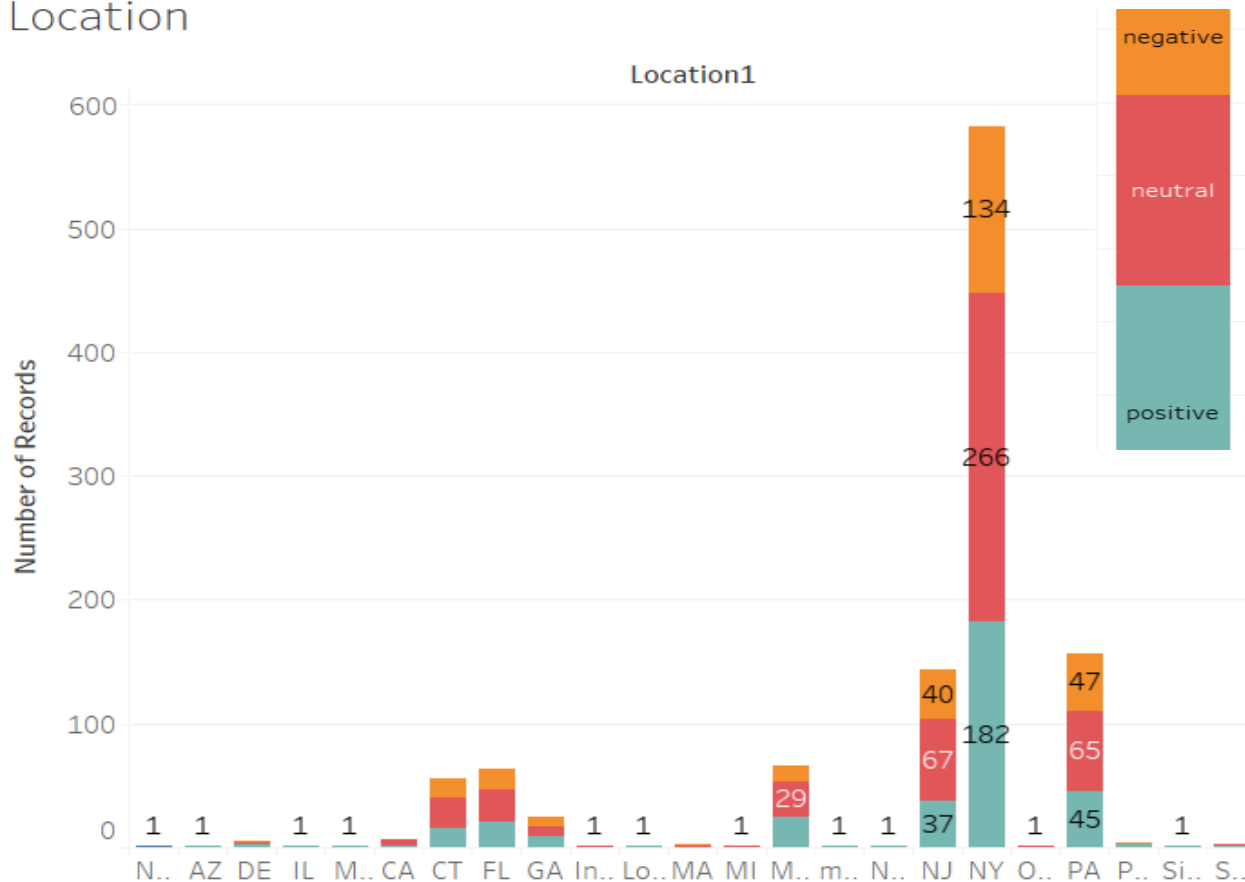
Most Popular Food

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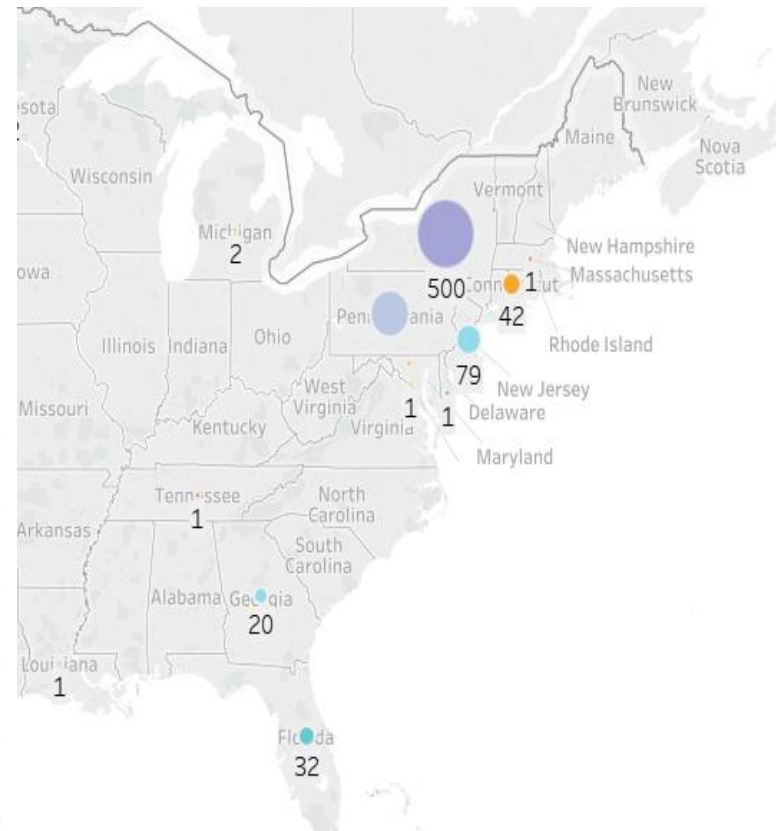
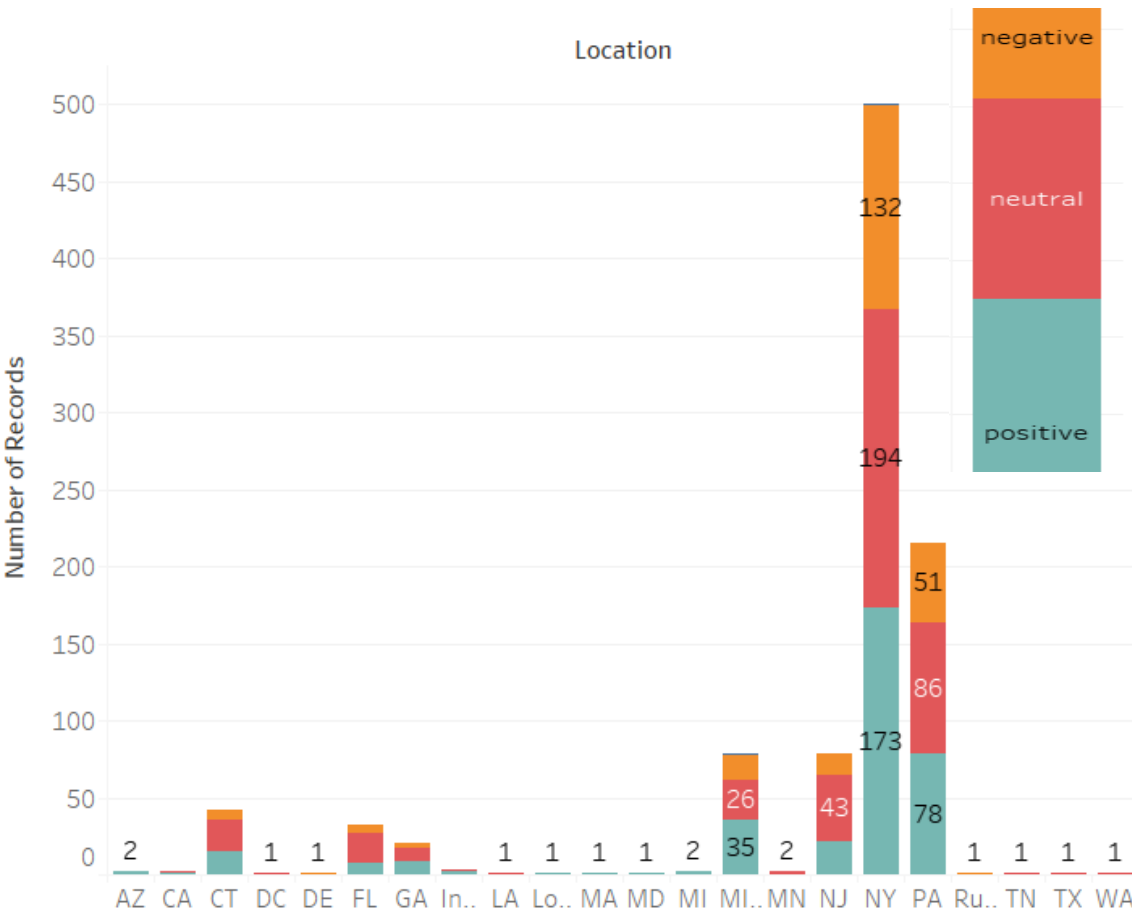
Location Analysis **Uber Eats**

Location



Location Analysis

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Influencer Analysis



Twitter Handle	Follower Count
YahooFinance	830102
FOX29philly	592611
yo	228375
EXPandAMP	97613
cryptodemedici	92907
SniperZeroXI	67237
KYWNNewsradio	53893
kmin	37896
NjTank99	31968
dberkowitz	31107



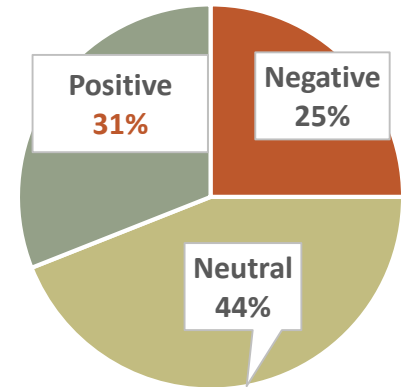
Twitter Handle	Follower Count
TinaB	506397
Cushbomb	292529
Sherlake	264180
Ketaminh	253385
SweetBake	223021
rosegoldmamii	220027
JJFan18	194681
dervogelfamber	165578
lifeisastory_	158290
106th	151468

Which one has better sentiment?

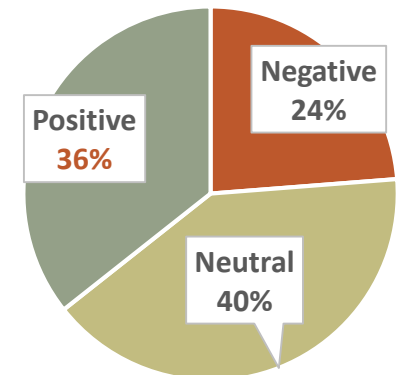
The Twitter sentiment analysis result indicates that **GrubHub is more well-received than Uber Eats in the tri-state area**, with a 36% of tweets with positive sentiment, compared to that of Uber Eats (31%).

While the overall percentage of the tweets with positive sentiment of Uber Eats isn't as high, the neutral sentiment takes 44% of all Twitter mentions.

Uber
Eats



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Key Takeaways

Digital platforms can **leverage the vast wealth of first, and third-party data** (i.e. social media, location tags, cookies) to create better user experiences, while driving operational efficiencies.

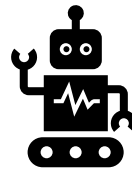
For instance, negative customer feedback relating to delivery times on Twitter, can drive decisions to **add optimal driver capacity in certain locales**, and/or hours of the day.

Similarly, Facebook's social graph data can be leveraged to **better-identify local tastes and demands**, informing companies on which **new restaurants to onboard**, in certain geographies.

Limitation



Limited Number of Tweets



Robot or Real User



Only Analyze Tweets in English



**Specific Search Words
'Grubhub', 'UberEats'**



Irrelevant Locations



**Scope: Public Twitter
Accounts Only**

References

- <https://www.geeksforgeeks.org/twitter-sentiment-analysis-using-python/>
- <https://labsblog.f-secure.com/2018/01/26/how-to-get-tweets-from-a-twitter-account-using-python-and-tweepy/>
- https://onlinehelp.tableau.com/current/pro/desktop/en-us/buildexamples_bar.htm
- <https://www.grubhub.com/>
- <https://www.ubereats.com/>
- <https://www.twitter.com/>