Twitter and Emotion

How do airline passengers feel?

Outline

- Reviewed twitter sentiment data to better understand customer behaviors
- Compared airline performance
- Scanned for common topics of complaint

Goals

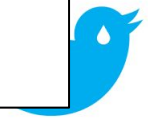
- Original Goal: Compare data sentiment across sectors
  - Use Twitter API to pull data from various sectors
  - Problem: Had problems with limit of API and with code.
  - Want to do this as a future project
- Revised Goal: Compare data sentiment in airlines
  - Used cleaned data on Kaggle
  - Removed irrelevant columns
  - Analyzed and compared

Format of data

- Data fields are shown on the right side of the screen
- Main focus of analysis is on content of tweet and sentiment of tweet

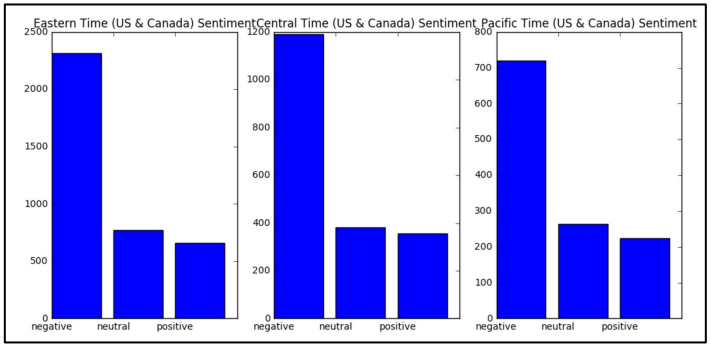
```
twee = pd.read_csv('Tweets.csv')
list(twee.columns.values)
```

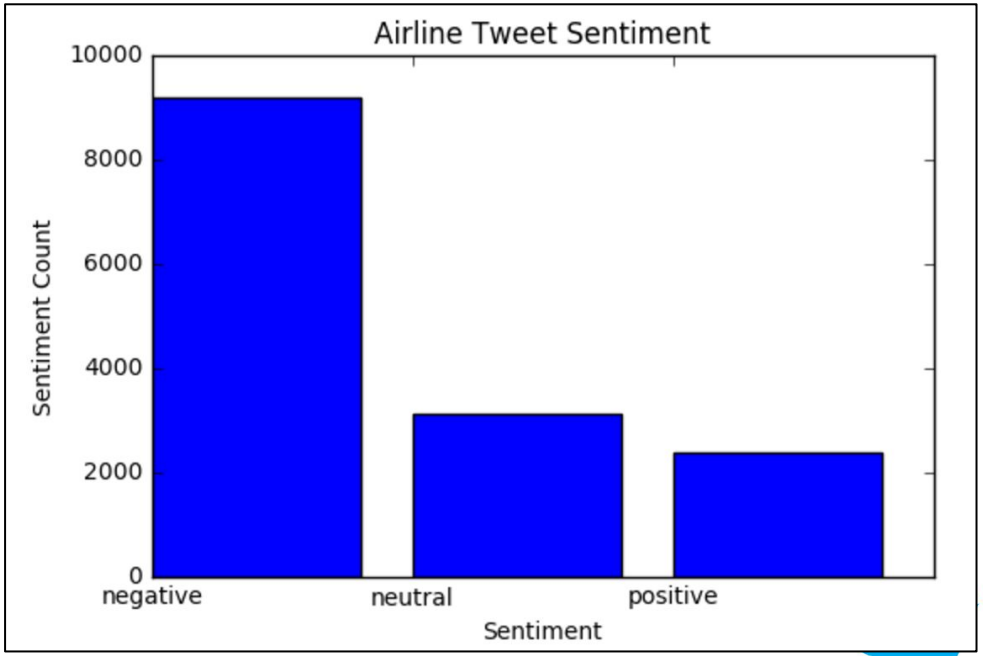
```
['tweet_id',
 'airline_sentiment',
 'airline_sentiment_confidence',
 'negativereason',
 'negativereason_confidence',
 'airline',
 'airline_sentiment_gold',
 'name',
 'negativereason_gold',
 'retweet_count',
 'text',
 'tweet_coord',
 'tweet_created',
 'tweet_location',
 'user_timezone']
```



General sentiment

- Tweets were overwhelmingly negative in sentiment
- Similar distribution regardless of time zone
- Slightly more negative in central time

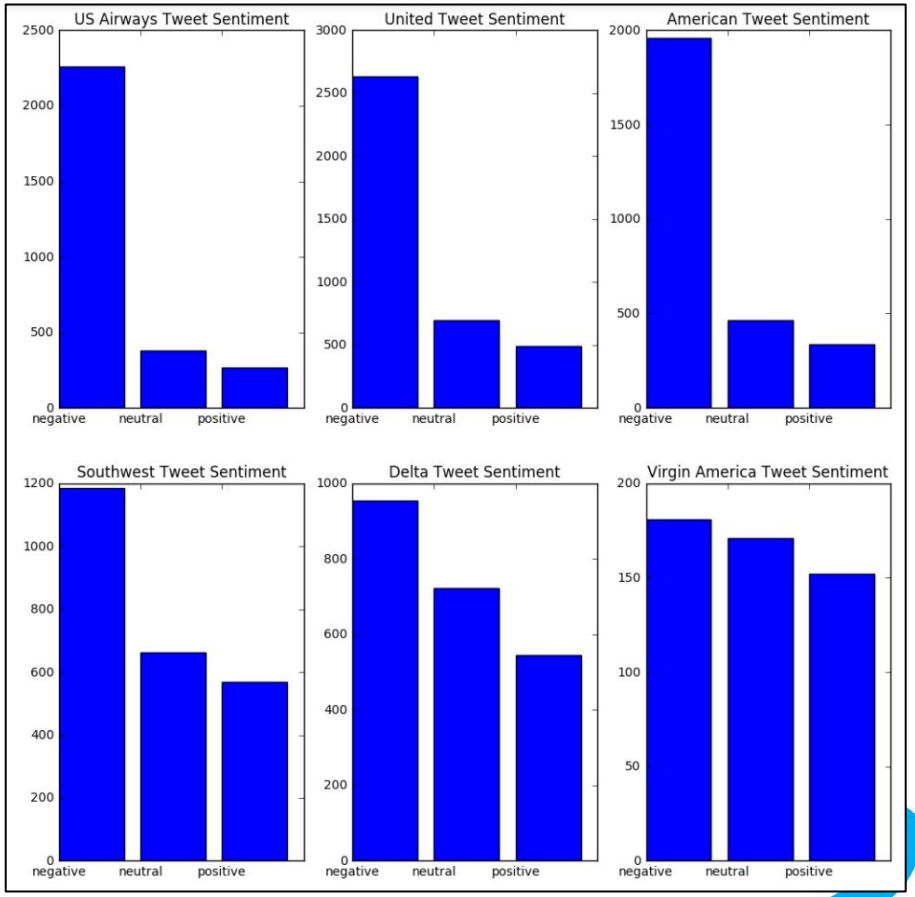




Variation by airline

- Significant difference from airline to airline
- Most negative are US airways (78%) and American (71%)

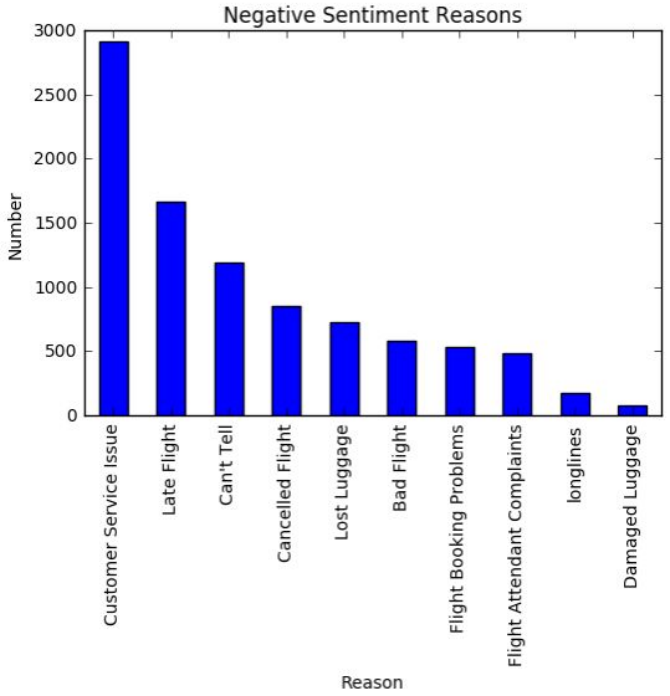
airline_sentiment	negative	neutral	positive
airline			
American	0.710402	0.167814	0.121783
Delta	0.429793	0.325383	0.244824
Southwest	0.490083	0.274380	0.235537
US Airways	0.776862	0.130793	0.092345
United	0.688906	0.182365	0.128728
Virgin America	0.359127	0.339286	0.301587



Customer service and service problems lead complaints

Customer service, followed by flight problems were issues most likely to be discussed on Twitter

- Airlines can think about alternate channels or an improved process to manage this



Conclusion

- Airlines have the opportunity to intervene and improve the customer experience
- Still TBD: Parsing and comparing model with test-train

Next Steps

- Moving forward there are two directions I would like to take the project
    i. More detailed analysis on this data set. For example, timing data or location data.
    ii. More detailed analysis on Twitter: the goal of my original project was to examine a series of verticals and compare the complaints, type, and percentage of complaints. Would still like to accomplish this.