



SENTIMENT ANALYSIS OF US AIRLINES ON TWITTER

How travelers expressed their feelings on Twitter

Abstract

The Airline industry operates in an intensely competitive market. Travelers drive the evolution of the industry. Twitter allows travelers to be aware of the problems of each major airline, and to choose the one that offers the best service. Airlines can use tweets to recognize their weaknesses and improve their service

Daniela Fernandez Espinosa

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Professor Jeff Hemsley

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Story

The companies are constantly looking for ways to better understand their customer's preferences to offer them better service and stay active in the global market. Twitter has become a great ally for extraction and analysis of data.

The following study shows how the travelers expressed their sentiments on Twitter regarding Airline service.

Motivation

Having a clear picture of the opinion of travelers regarding airline service, allows Airlines to make better commercial decisions. An improved commercial strategy allows US Airlines to attract new customers, retain existing ones and excel in the global market.

On the other hand, Twitter allows travelers to know the opinions of other passengers regarding the services of airlines. With this information, they can make better decisions about which airline they should choose.

Questions

Which Airline received how many negative tweets?

In this dataset we are comparing the tweets related to 6 US airlines (American Airlines, Delta, Southwest, United, US Airways, Virgin Airlines).

It is important to know which airline received the major number of negative tweets and how many negative tweets received to make a service comparison.

What gender tweeted the most about the service of the airlines?

By knowing the gender of their customers, airlines can restructure their market segmentation strategy.

What are the main reasons for negative tweets?

By knowing their weaknesses, the airlines can plan strategies to avoid the displeasure of their clients.

What are the locations and sentiment of tweets across the main airports in United States?

By knowing the location and sentiment of the tweets, Airlines can put special attention on the service provided in a certain location to avoid losing customers.

What is the sentiment of tweets per time zone?

By knowing the sentiment of the tweets per time zone, Airlines can put special attention on the service provided in a certain location to avoid losing customers.

What are the main reasons per negative tweet per airline?

With this information travelers can compare the service of different airlines and make better decisions.

Data Description

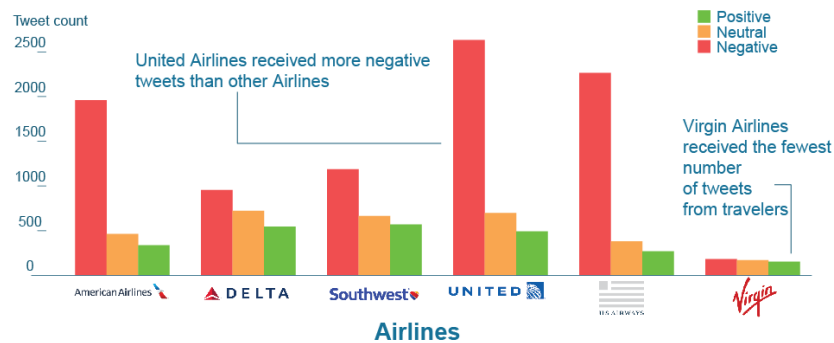
For this dataset, it was gathered 14,641 tweets related to the 6 major US Airlines on February 2015. This dataset contains 14,641 rows and 18 columns. The last column “gender” was inferred based on the first name of each user.

This dataset contains the tweets of 7,701 users.

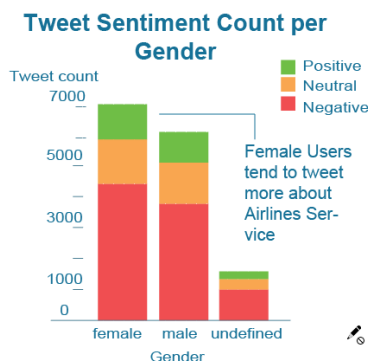


Data descriptive plots

It is important to know which airline received the major number of negative tweets and how many negative tweets received to make a service comparison.

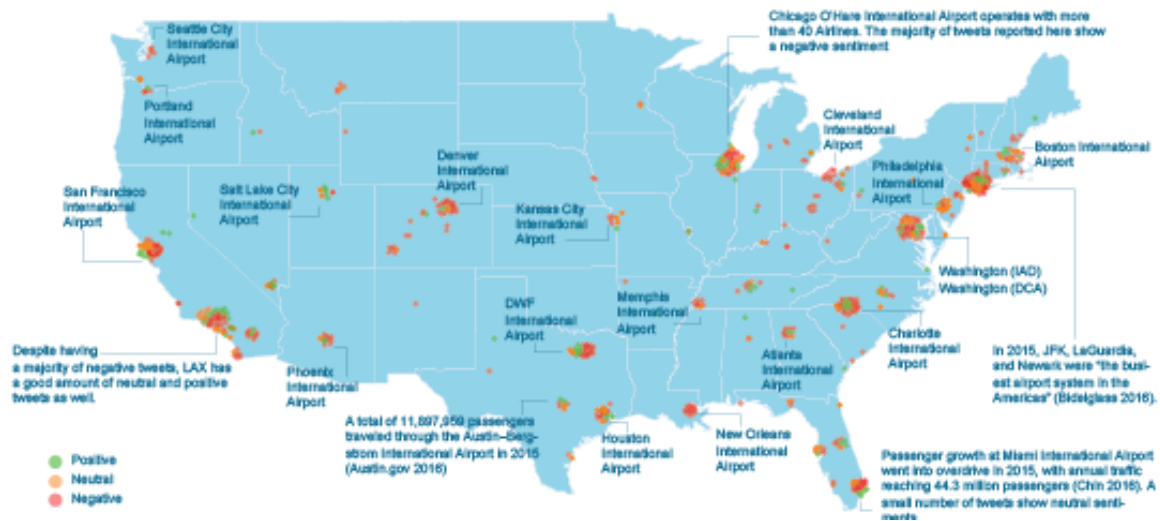


By knowing the gender of their customers, airlines can restructure their market segmentation strategy.



Key visualization

By knowing the location and sentiment of the tweets, Airlines can put special attention on the service provided in a certain location to avoid losing customers.



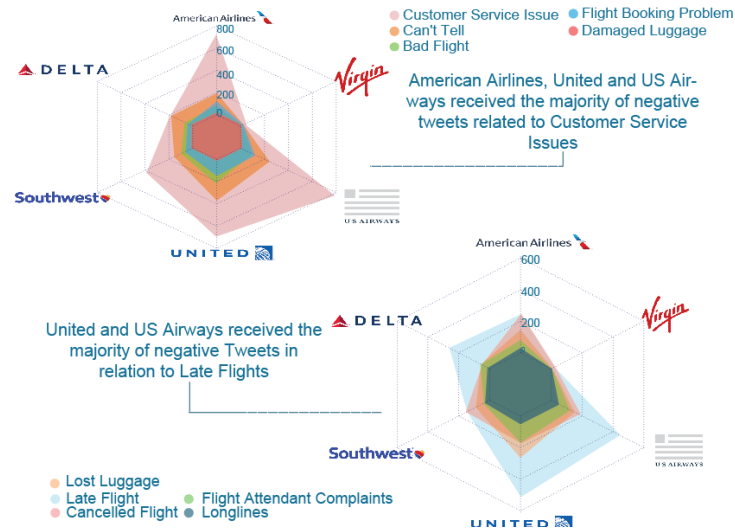
Supporting Visualization

By knowing their weaknesses, the airlines can plan strategies to avoid the displeasure of their clients.

Negative Reasons

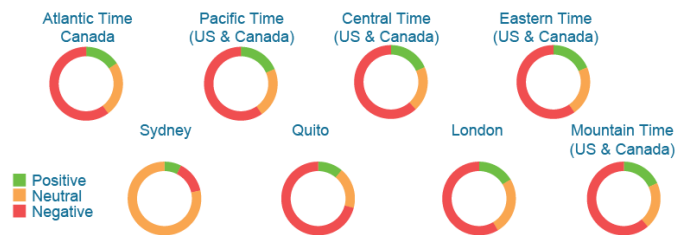


With this information travelers can compare the service of different airlines and make better decisions.



By knowing the sentiment of the tweets per time zone, Airlines can put special attention on the service provided in a certain location to avoid losing customers.

Sentiment Analysis according to Time Zone



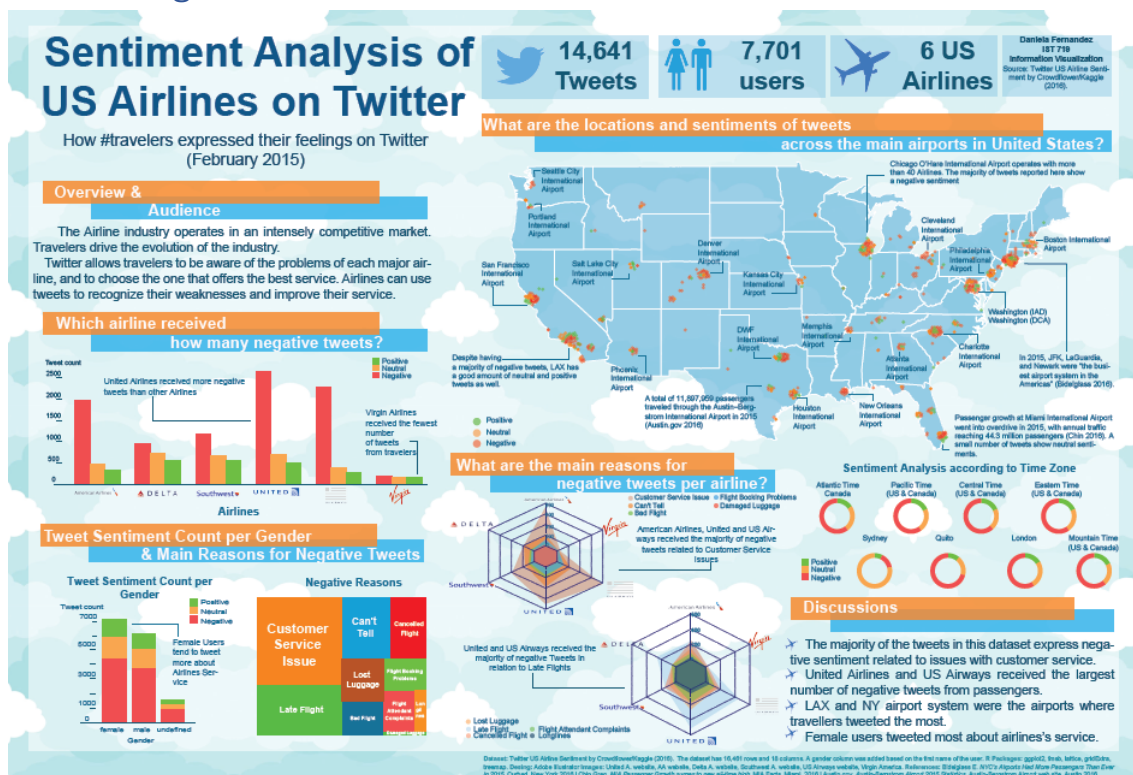
Color

I decided to use the color of twitter (clear blue) as the main color for my poster. The green, orange and red represented the sentiment of the tweets.



Source: <http://paletton.com/#uid=72P0A0kKmM-myNnt0MGmntTMInc>

Final Design



Sources

Dataset

Twitter US Airline Sentiment by Crowdfunder/Kaggle (2016)

Images

United A. website, AA website, Delta A. website, Southwest A. website, US Airways website, Virgin America.

References

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