Topical Analysis Across United States Using Twitter

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Benefits of this Program

- Customizability by small changes in the program based on specific needs.

- Geographical Insights into Most Popular Topics.

- Real Time Changes in Preferences can be Realized.

An Update on Our Progress ...

Literature on The Topic

Modern Technologies for Big Data Classification

- "Modern Technologies for Big Data Classification and Clustering", is abook that has a chapter dedicated to grabbing data from Twitter.
- Author outline topics on why Twitter is a good platform for data analysis
- They also discuss extracting data using Representational State Transfers and the STreaming API.
- Citation: https://books.google.com/books?id=X4wtDwAAQBAJ&source=gbs_navlinks_s

Modeling Public Mood and Emotion: Twitter Sentiment and Socio-Economic Phenomena

- Outlines a study done by three authors in which they perform a sentiment analysis to track six mood states.

- This literature focuses on the relationship between overall public mood and social, economic, and other major events in the media and popular culture.

- This is an example of what our project could be like, given more time and refinement.

Ggplot2: Elegant Graphics for Data Analysis

- Dove into many differents ways of visualizing data.

- Literature contains several different forms of visual representations including bar graphs, histograms, box plots, and many more.

- We used this research to formulate the best ways to visualize the data we collected.
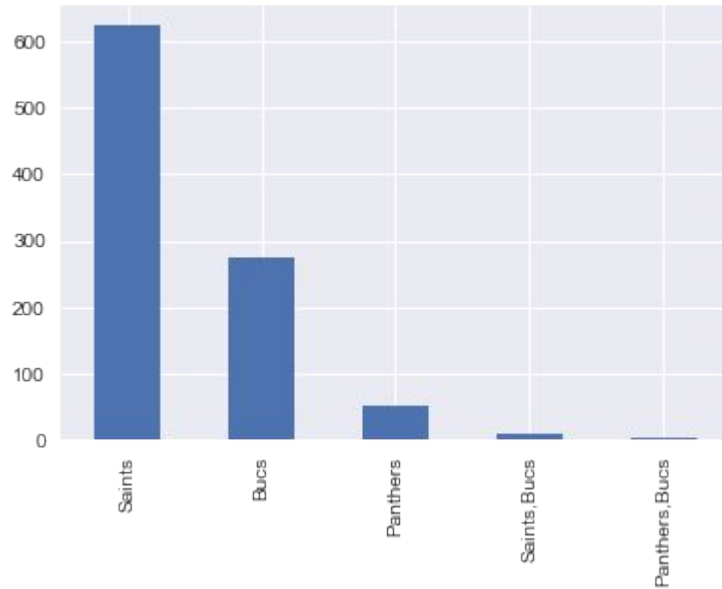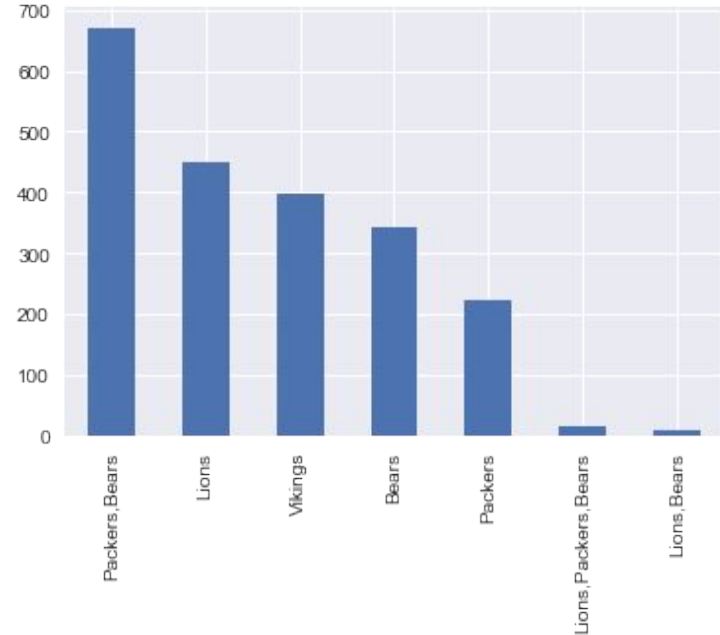
NFL Visualization Results

NFC East & NFC West Divisions
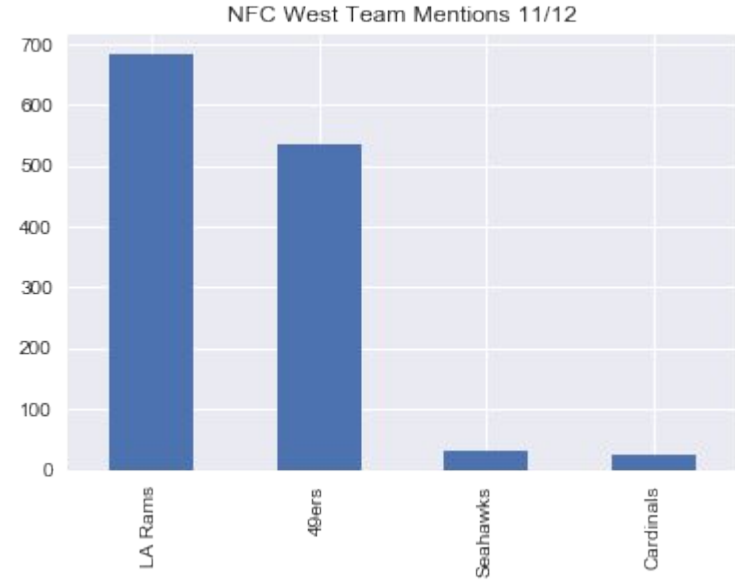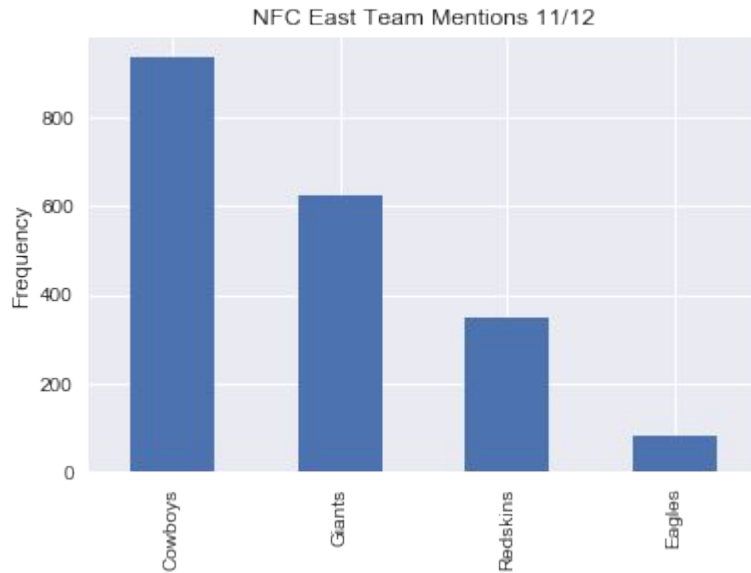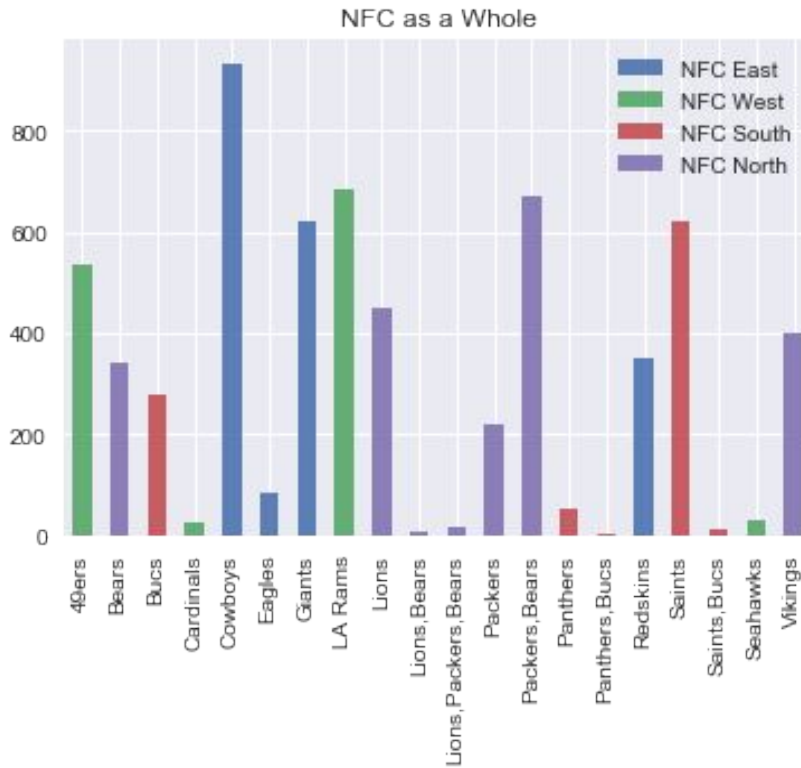
NFC South & NFC North Divisions

NFC South Team Mentions 11/12

NFC North Team Mentions 11/12

Looking at the Entire Conference
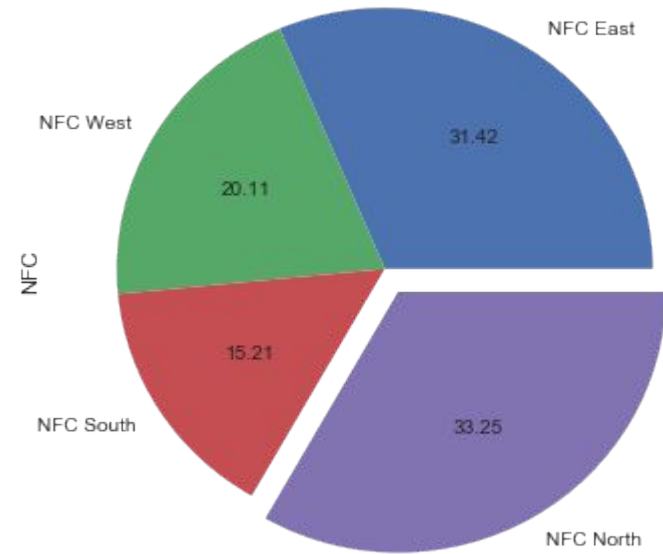
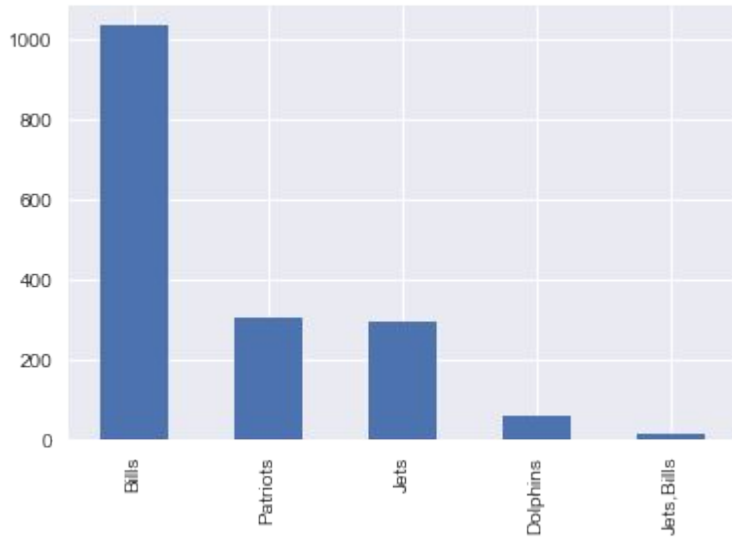# AFC Conference Analysis

AFC East & AFC West Divisions
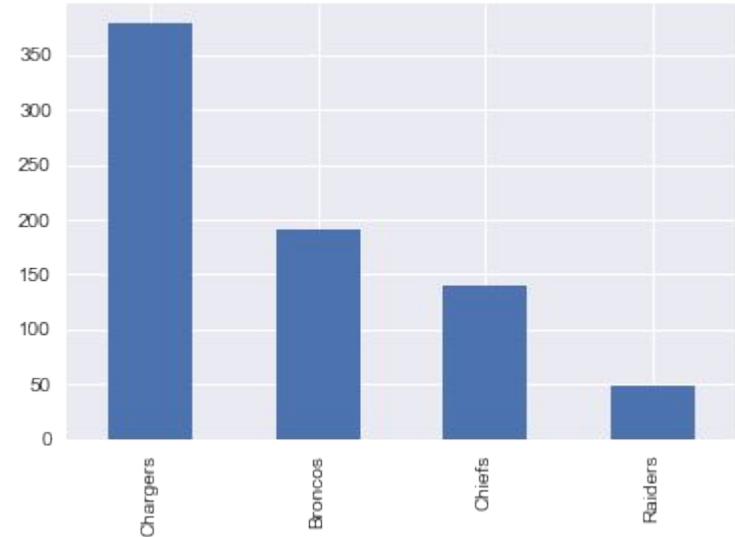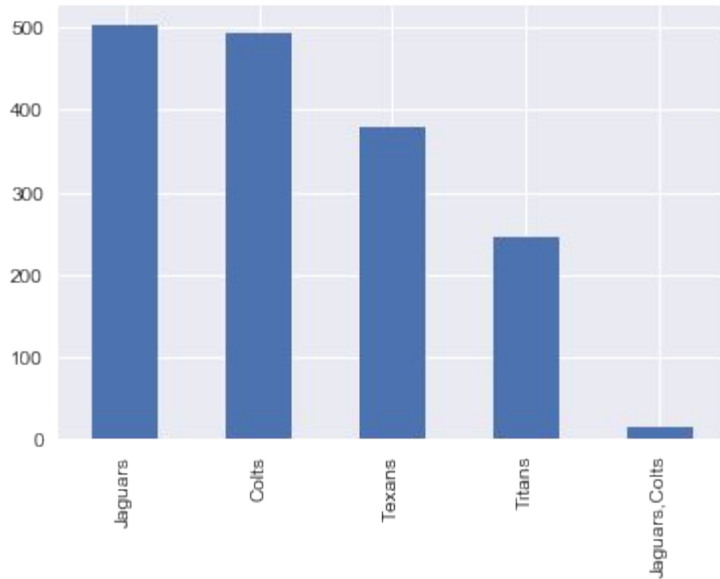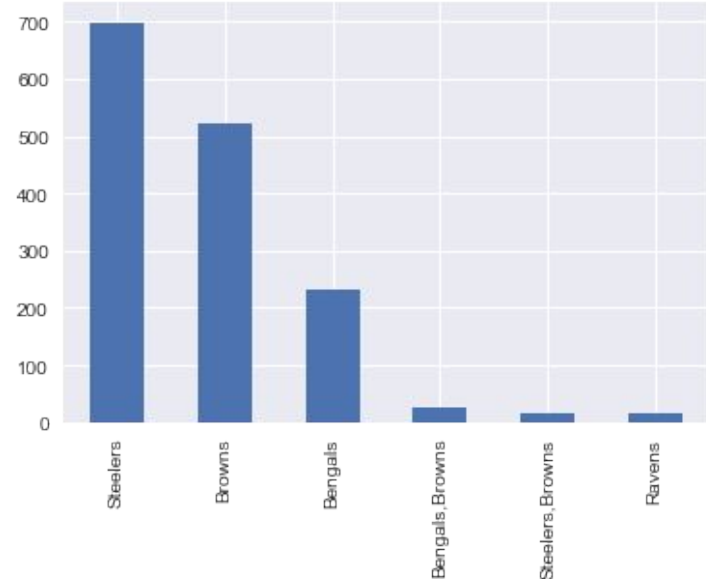
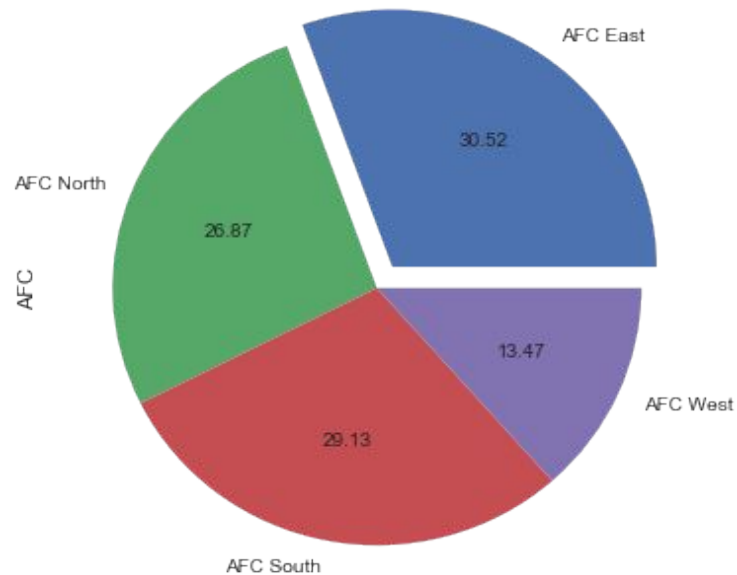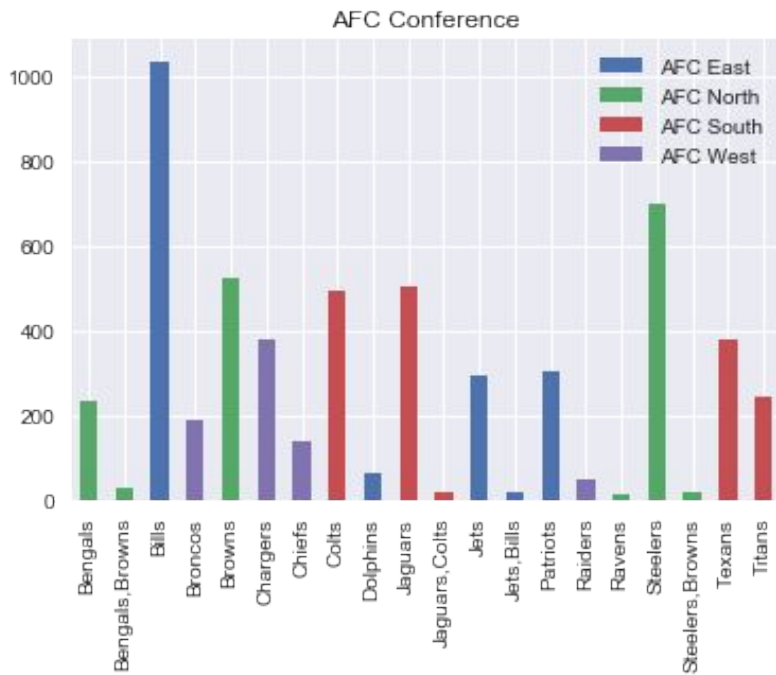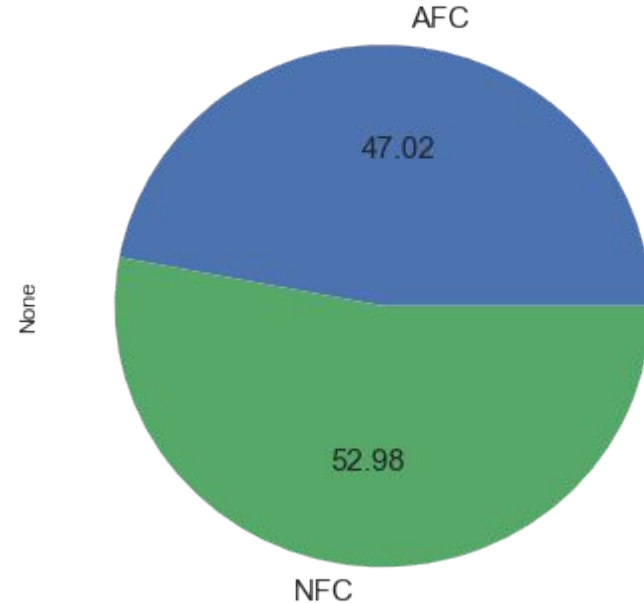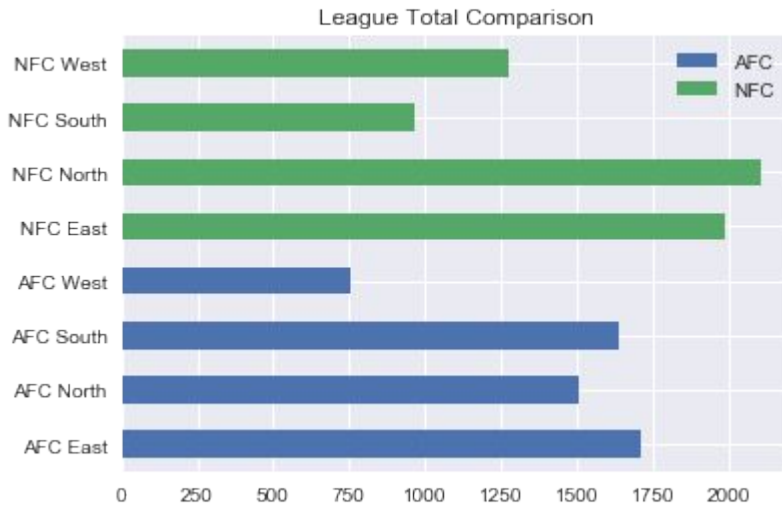# AFC North & AFC South Divisions

AFC South Team Mentions 11/12

AFC North Team Mentions 11/12
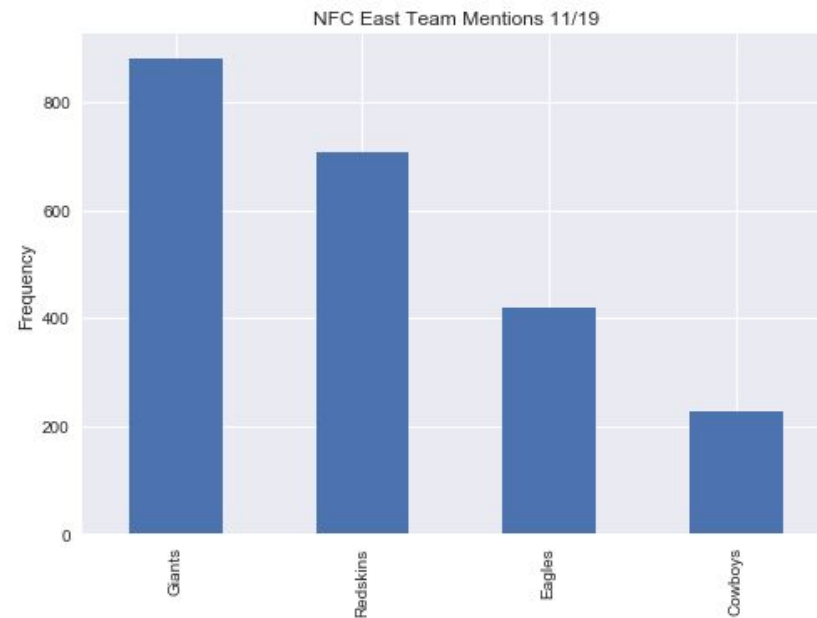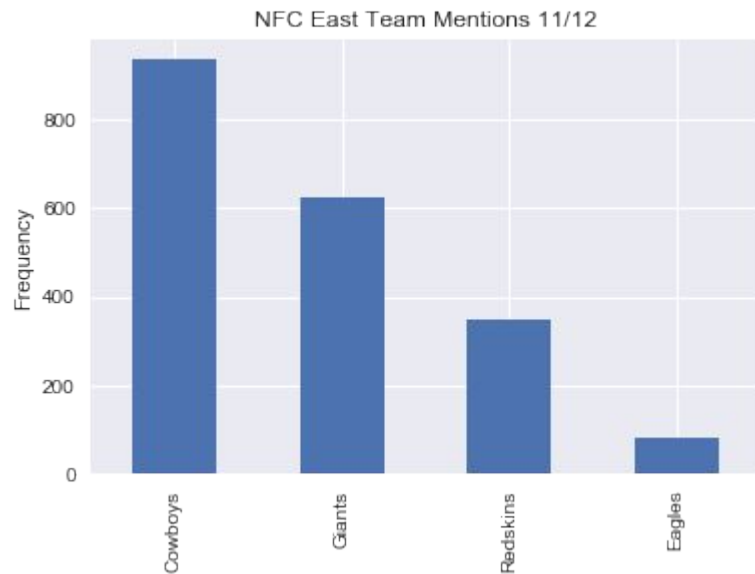
AFC Conference

Some Cross - Conference Analysis

Comparing Time Series Changes in NFL Tweets

NFC East Week to Week
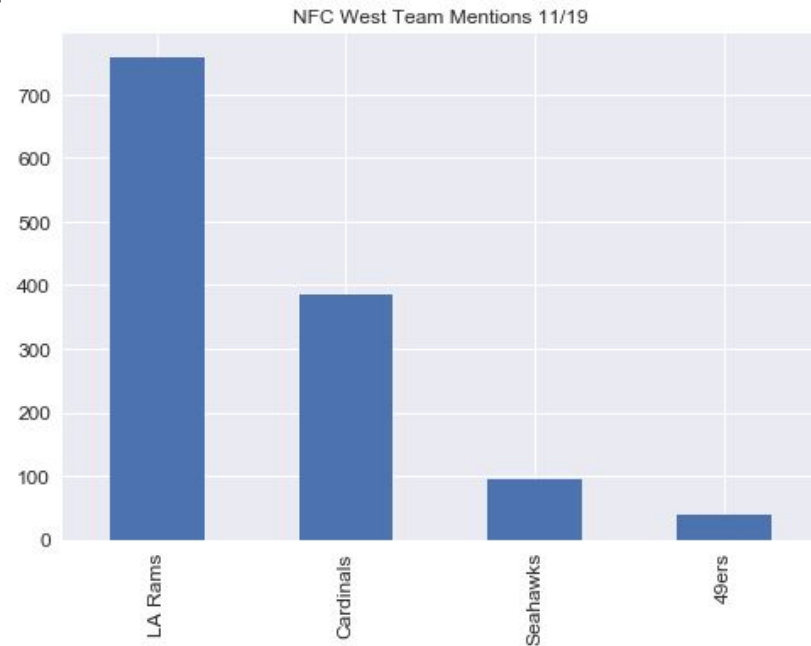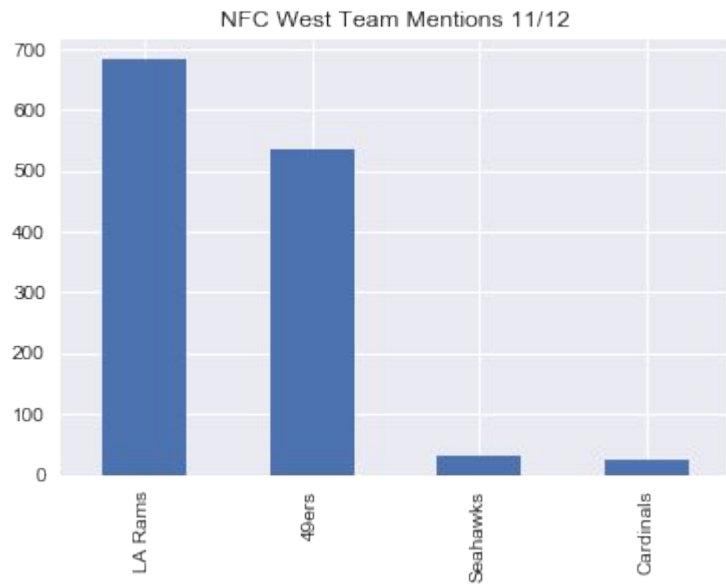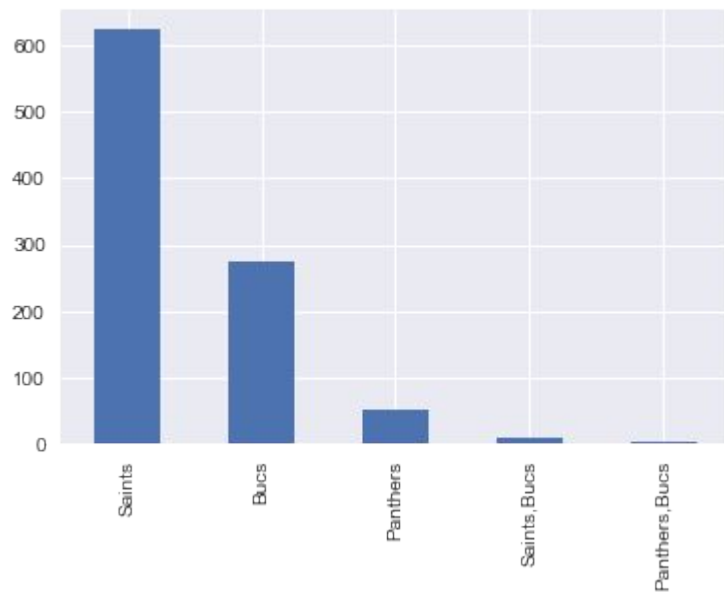

NFC East Team Mentions 11/12

NFC East Team Mentions 11/19

NFC West Week to Week

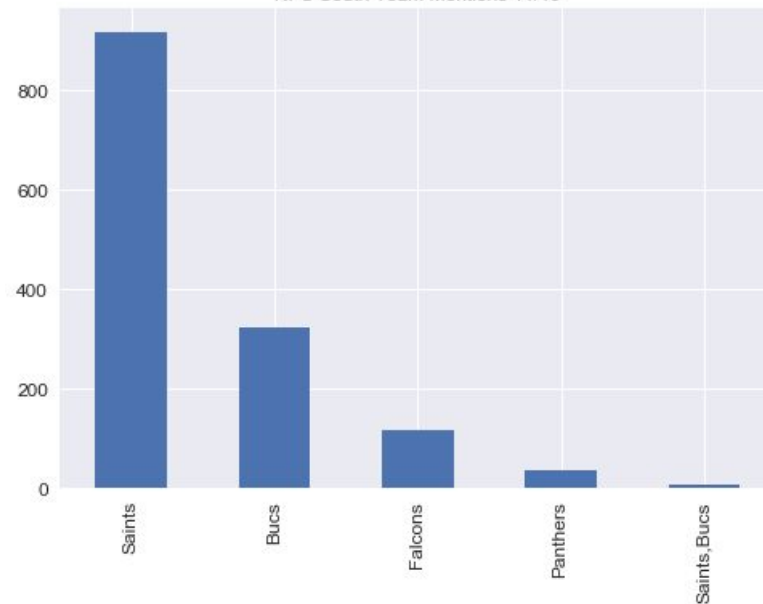NFC West Team Mentions 11/12

NFC West Team Mentions 11/19

NFC South Week to Week

NFC South Team Mentions 11/12
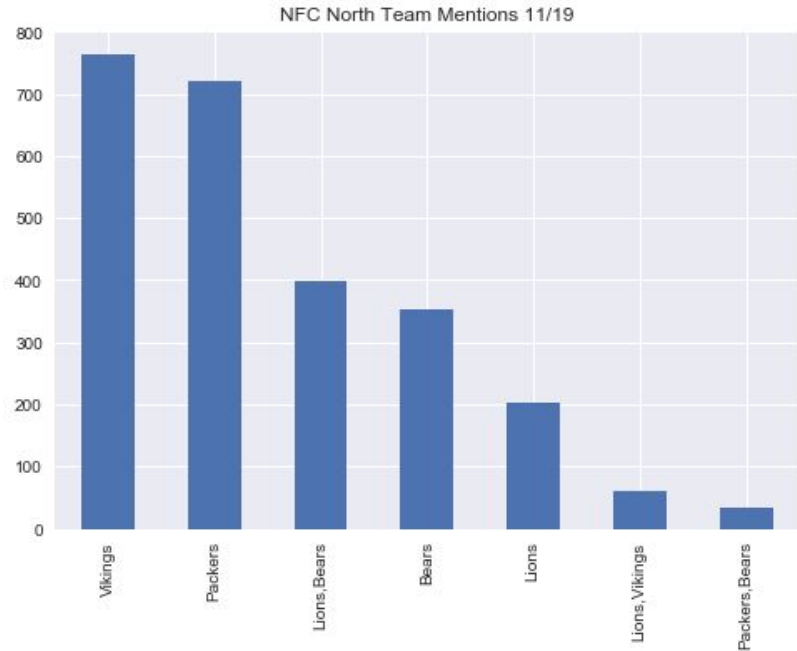

NFC South Team Mentions 11/19

NFC North Week to Week

NFC North Team Mentions 11/12

NFC North Team Mentions 11/19
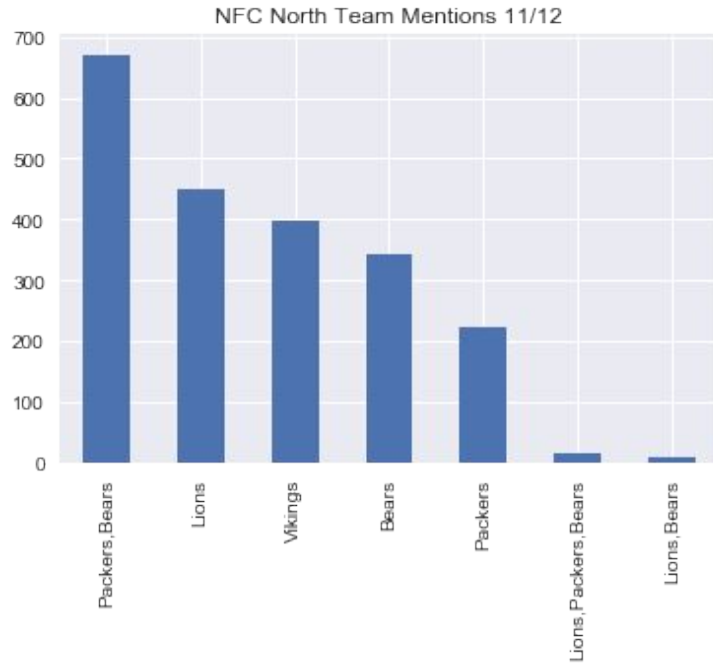
Week - to - Week NFC Conference

1st Week

- NFC East — 31.42
- NFC West — 20.11
- NFC South — 15.21
- NFC North — 33.25
- NFC

2nd Week

- NFC East — 30.01
- NFC West — 17.20
- NFC South — 18.80
- NFC North — 34.00
- NFC

AFC Conference Analysis

AFC East Week – to – Week

AFC East Team Mentions 11/12

AFC East Team Mentions 11/19
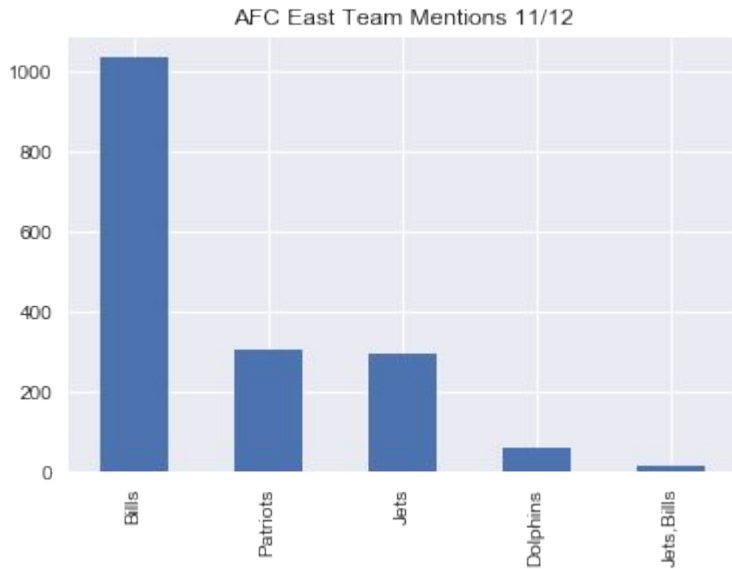
AFC West Week - to - Week

AFC North Week - to - Week

AFC North Team Mentions 11/12

AFC North Team Mentions 11/19

AFC South Week - to - Week

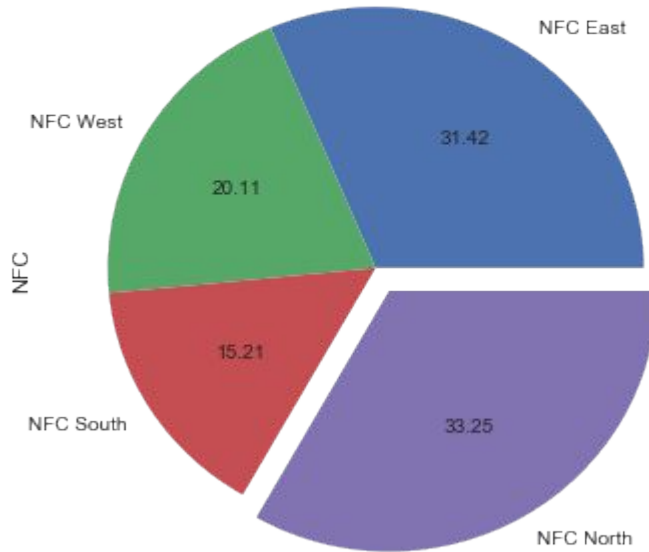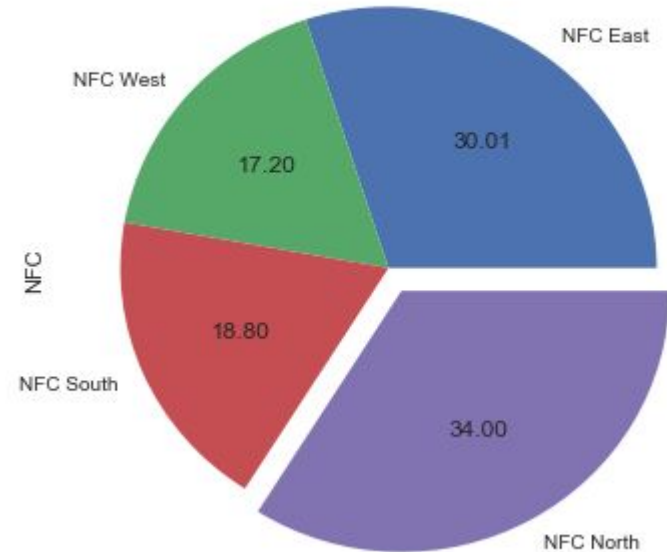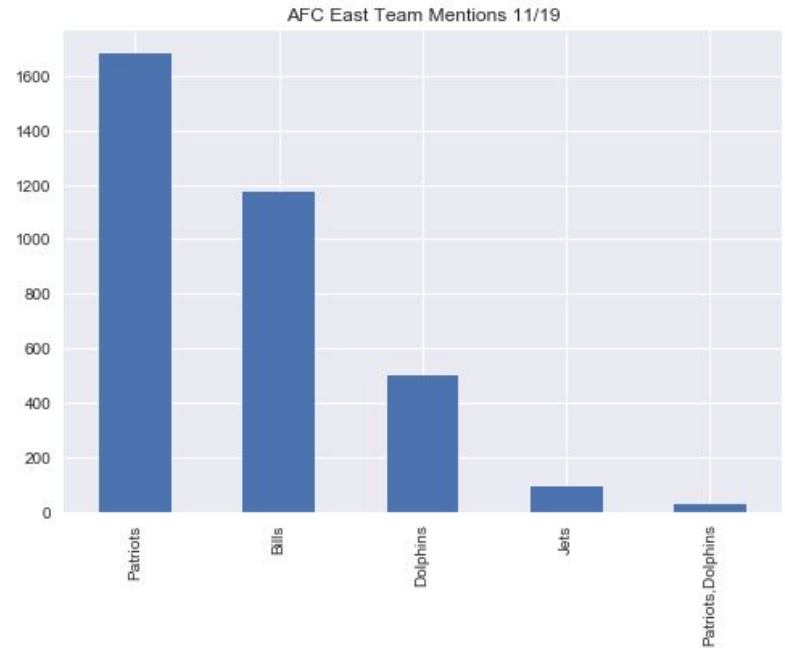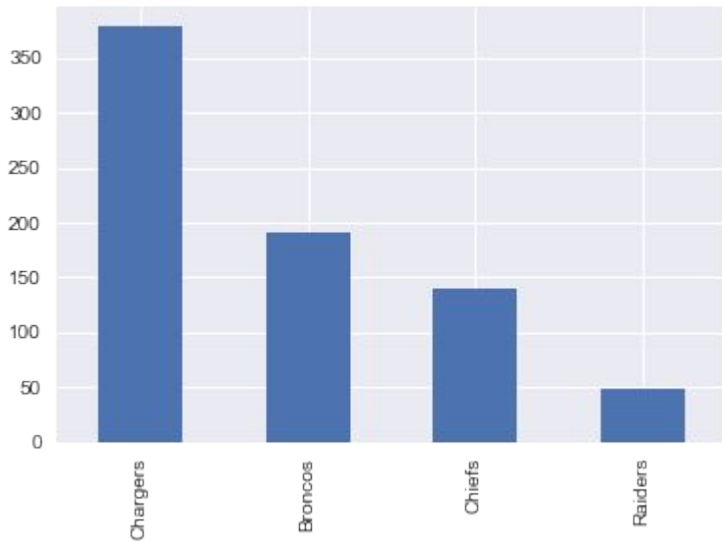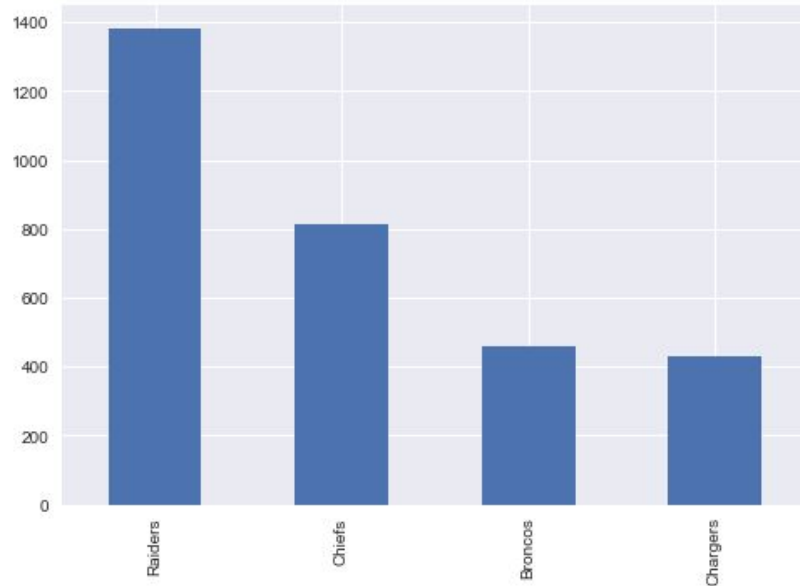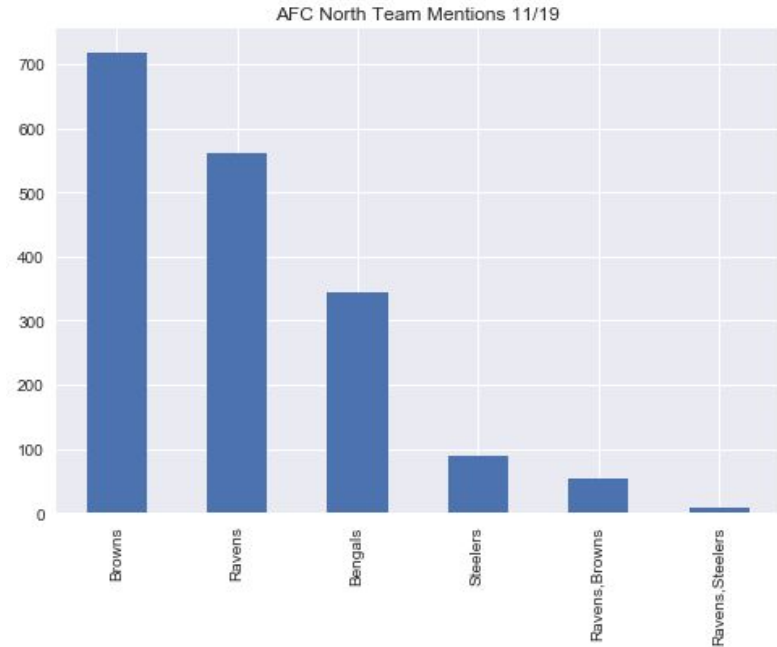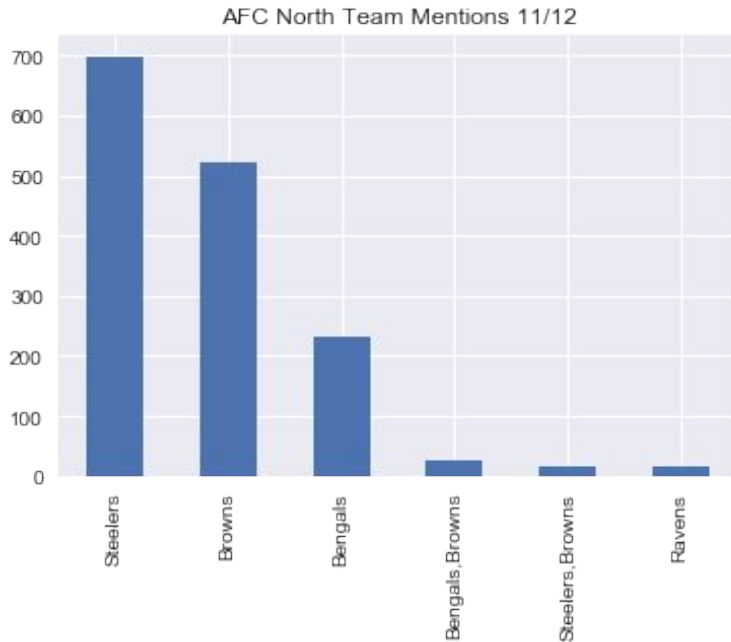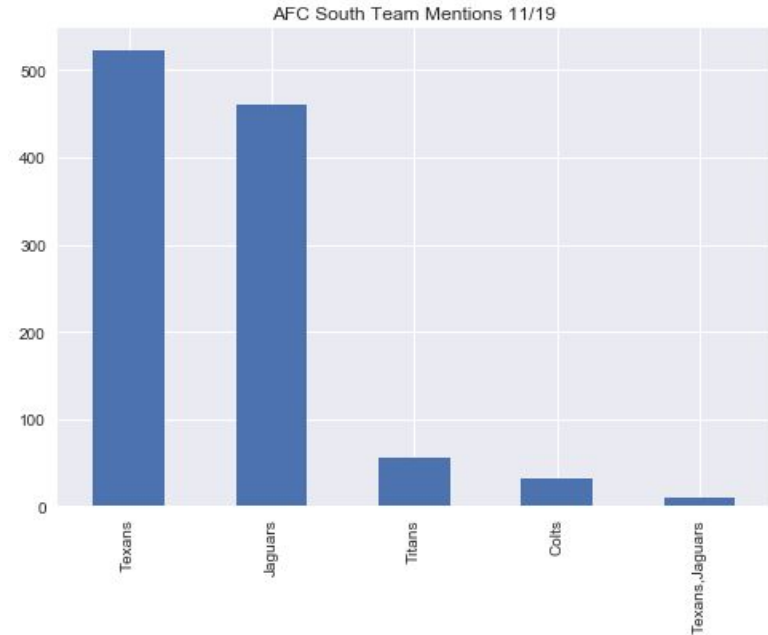AFC South Team Mentions 11/12

AFC South Team Mentions 11/19
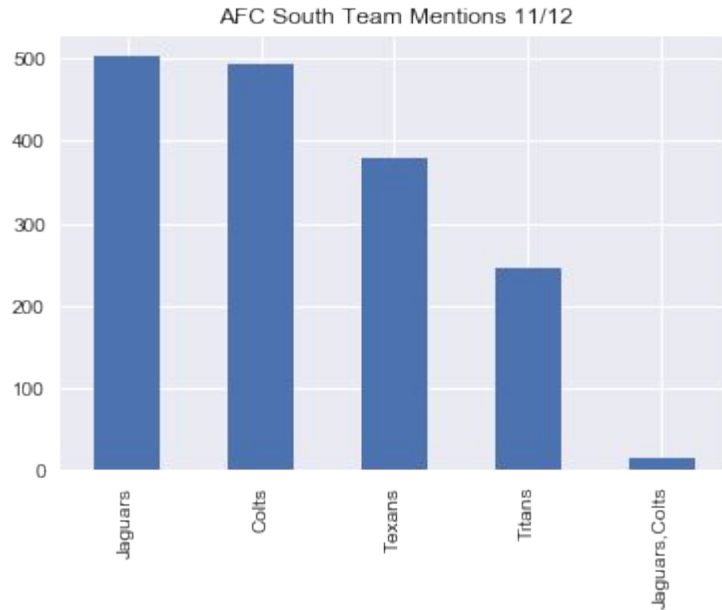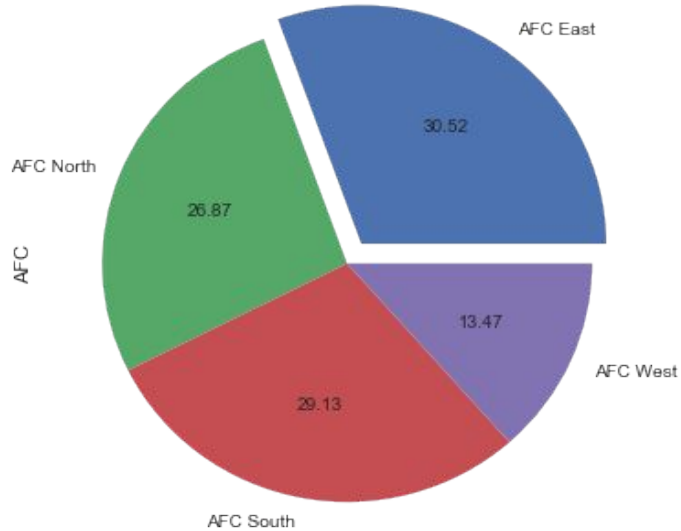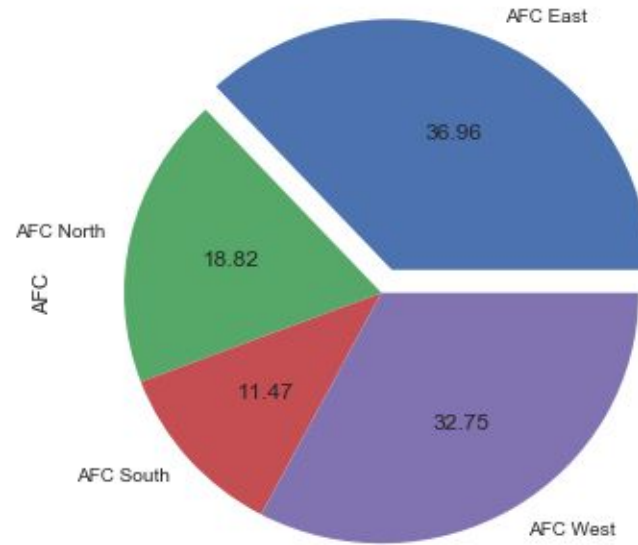
AFC Conference

Weekly Cross - Conference Analysis

League Total Comparison 11/12
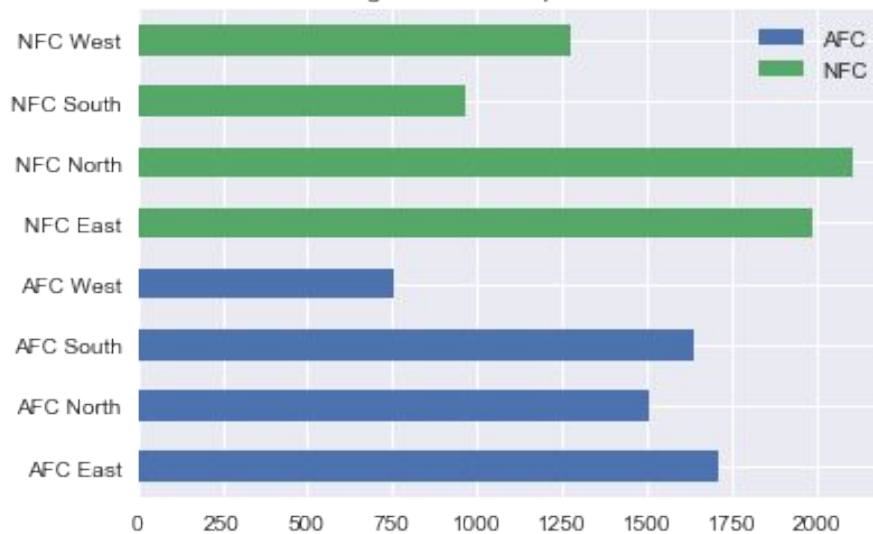
League Total Comparison 11/19

Weekly Cross - Conference Analysis

1st Week

AFC

47.02

None

52.98

NFC

2nd Week

AFC

55.85

None

44.15

NFC
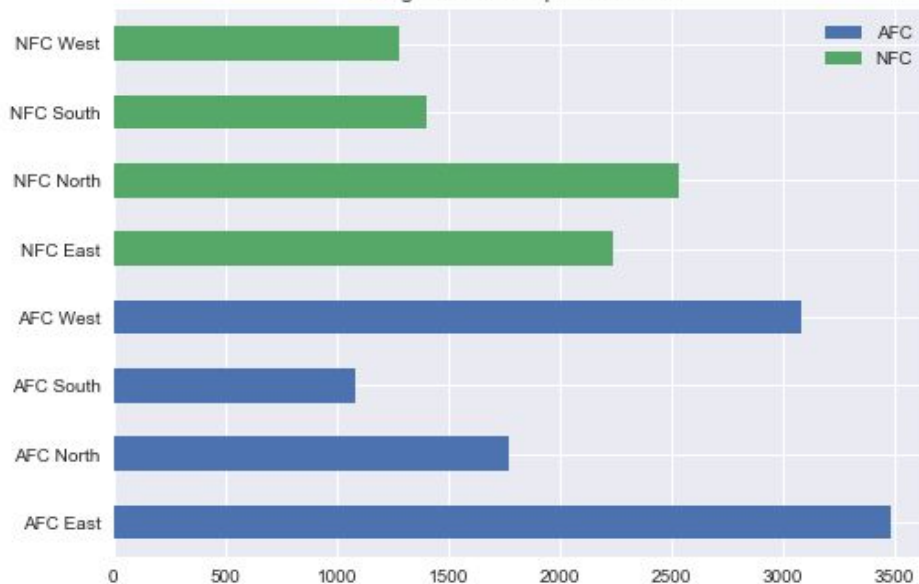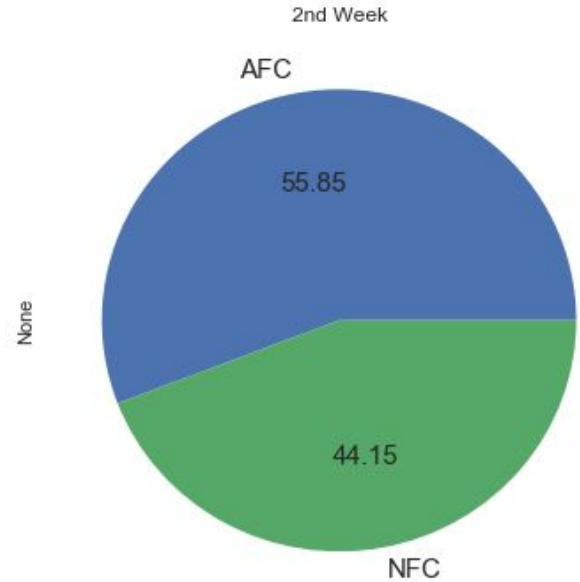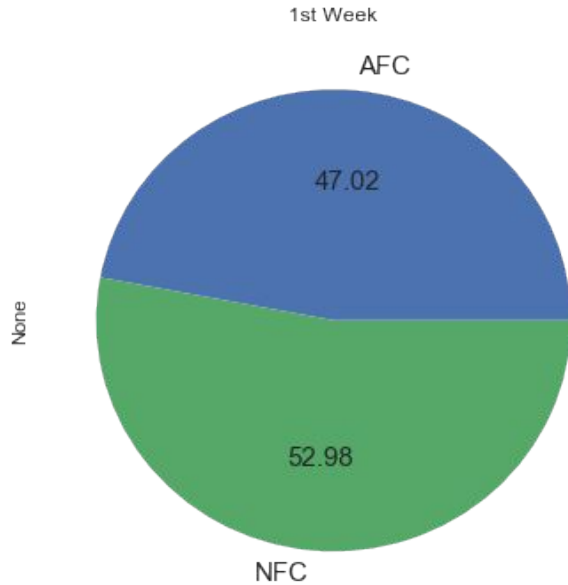
Cool Insights Over Time

- Running this program every week during the NFL would provide a very interesting look at patterns of team and conference popularity

- This presents a very cool practical application for marketers of NFL teams.

Religious Frequency Data

The Big Four

1. Running the streaming program we filtered under the hashtag (#Religion).

2. Using this data we extracted categorical data from the various major religions in the world.

3. We want to focus on the Big Four: Christianity, Islam, Judaism, and Catholicism, but also added Atheism as a contrasting category.

Visualization of Religion Frequency
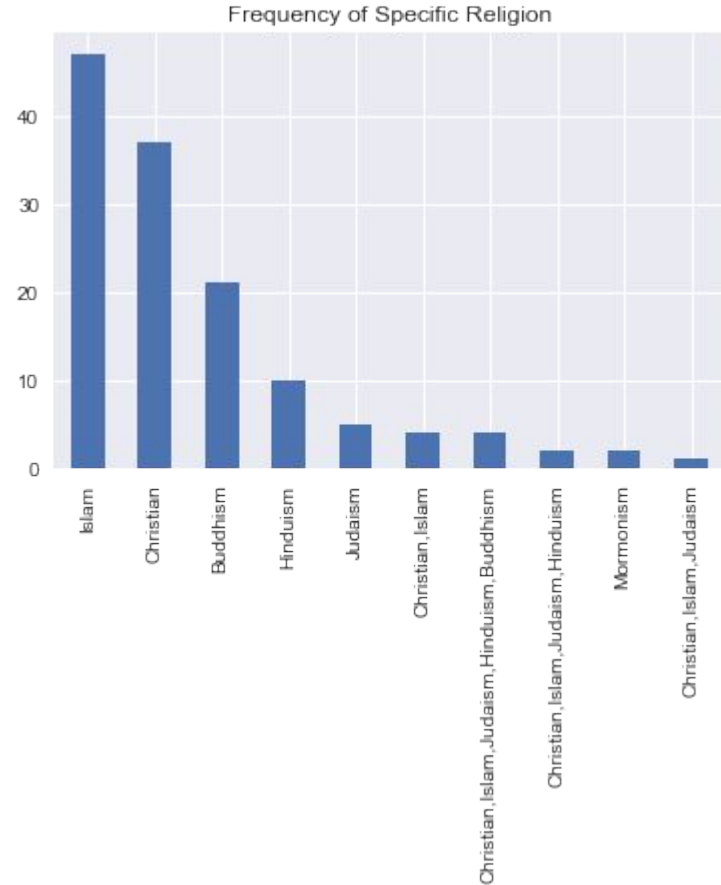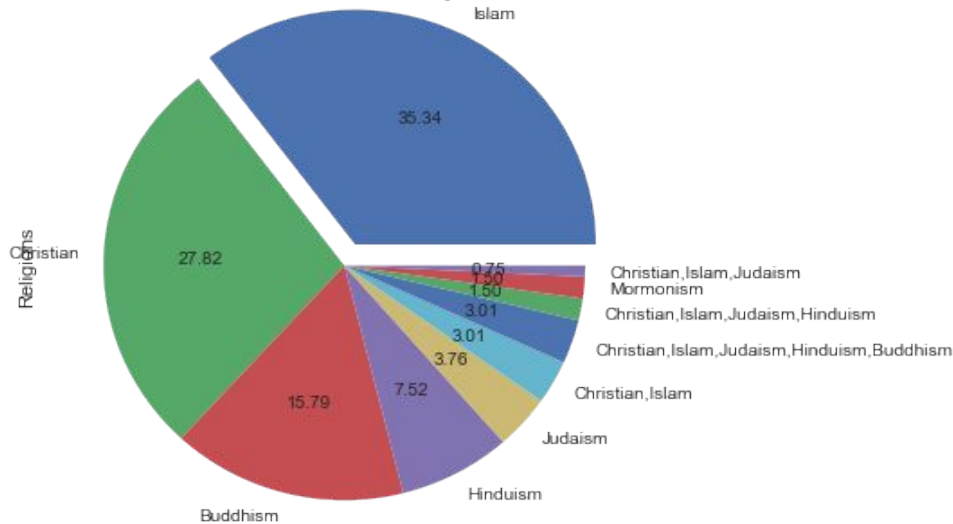
Assumptions from Data

- The most popular religions in the world are tweeted about most, which makes sense to us, but wouldn't always have to be the case.
- We can use this program to track trends in religious discourse across time and locations.

Documenting our Troubleshooting

Not All Ran Smoothly

1. While running our streamer for financial data, we were unable to retrieve the JSON file from our laptop.

2. The code ran perfectly, but we couldn't find the file it was originally saving to, and we ran out of time to figure it out.

3. Although we are extremely disappointed, we are confident in the programs effectiveness heading into the coming months.

Looking Forward

Continual Adaptation and Refinement

1. Although this was a semester project, we will work to refine the program and make it better.

2. We believe there is real world value in the data that could be gathered from this program with enough time.

3. Our next steps are to figure out a better way to analyze data from local colleges, because that is where we see the most applicable form of data visualizations and insights for college marketers or campus recruiters.