Question 1: Analysis

Between what latitudes and longitudes do we see the highest occurrence of fires?

The highest frequency was observed at latitudes ranging from 20 to 60 and longitudes from -60 to -125.

Question 2: Analysis

What was the average fire duration from 2014-present?

Average fire duration has increased from 2014-2021 by 5 days. There was a small dip in duration in 2022. Present, 2023 data is incomplete.

Question 3: Analysis

What was the average fire duration per state?

The highest states were Mississippi and Massachusetts. This was unexpected due to the fact that California had the highest fire occurrences by a significant amount.

Question 4: Analysis

What was the trend of frequency of fires grouped by year?

The was a strong positive correlation between year and average fire duration. In 2015 there were approximately 12,000 fires. By 2022 we have almost tripled that at a staggering 34,000.

Question 5: Analysis

What counties had the most fires?

After pulling our data specific to the counties and number of fires we were able to calculate that Los Angeles County had the most wildfires our of all the counties with close to 19,000 from 2014 to present. We pulled the top 10 to create our pie graph to be more visually appealing and clearly see that Los Angeles country and Riverside hold the top two.

Question 6: Analysis

What top 10 cities have the most fires?

After collecting data from the number of fires for the top states we were able to see that California was the top state by a lot which was no surprise because the top six counties were all from the same state.

Question 7: Analysis

What months did the most fires occur?

We utilized the data from number of fires, years, and most specifically months to create our heat map. After analyzing the heat map it was clear to seat that from 2014 to present the months July and August were the highest in fires which correlated well with those being the highest average temperatures in the united states.

In conclusion, while the dataset is flawed towards to United States due to National Interagency Fire Center being based there and the data from the 2003 to 2013 being unreliable, it still can be useful when the data is properly cleaned up. By simply analyzing the years 2014 to the present year, the analyst will have much more consistent findings regarding wildfires in America. With proper cleaning, the findings gave an unfortunate result of a trend in increasing wildfires peaking their worst in the years 2020 to 2021 with almost 35,000 in the later year. There was a dip in fire duration in the year 2016. However, by the year 2018, the wildfires continue for longer periods of time with the peak being in 2021 with wildfires going for almost 2 weeks before the fire is extinguished. One important note to mention is that much of the bleak data does come from the state of California which makes it a potential outliner. This fact being known and demonstrated by the fact that of all the counties in the US, the half of the top ten with the most wildfires are from California. Once this state is removed, the number of fires for the top ten states are approximately around 2,000 annually as opposed to the peak in 2021 for California being nearly 14,000. While the data does suggest a downward trajectory of fewer fires for the current year, there is still much progress to be made if the US is to return to numbers reported in 2014.