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IST 719, 2020-0108:37939

Work-in-Progress Report

Understanding Wildfires

DATASET DESCRIPTION:

The dataset includes US fires that burned 1,000 or more acres between 1992 and 2015. The data was collected from reporting systems of federal, state, and local fire organizations. I obtained the source data from Kaggle.

COMPELLING STORY:

The public's attention has been gripped by coverage of massive destructive fires that have occurred in recent years. An analysis of 24 years worth of large fires may help us understand how wildfires have affected United States and develop some understanding of their behavior.

AUDIENCE:

US citizens concerned with the apparent increase in large wildfires across the US.

QUESTIONS:

Is the United States experiencing longer fire seasons? (answered page 3, plot 1)

Are we experiencing larger fires? (answered page 3, plot 2)

What are the primary cause of the fires? (answered page 4, plot 3)

What years saw the most fires? (answered page 4 plot 4)

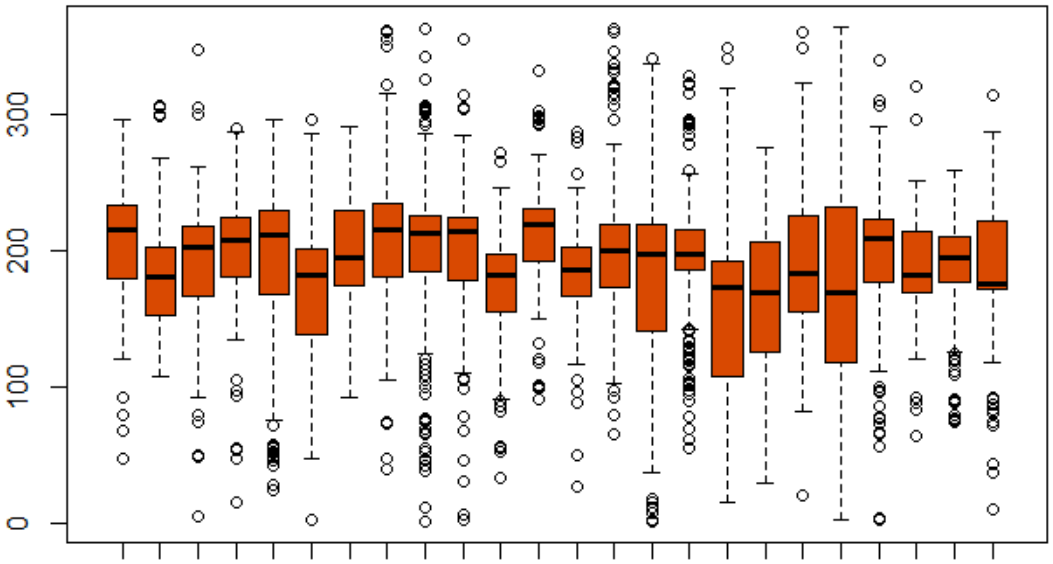
* Questions were developed and explored based on the plots found on page 5.

Understanding Wildfires

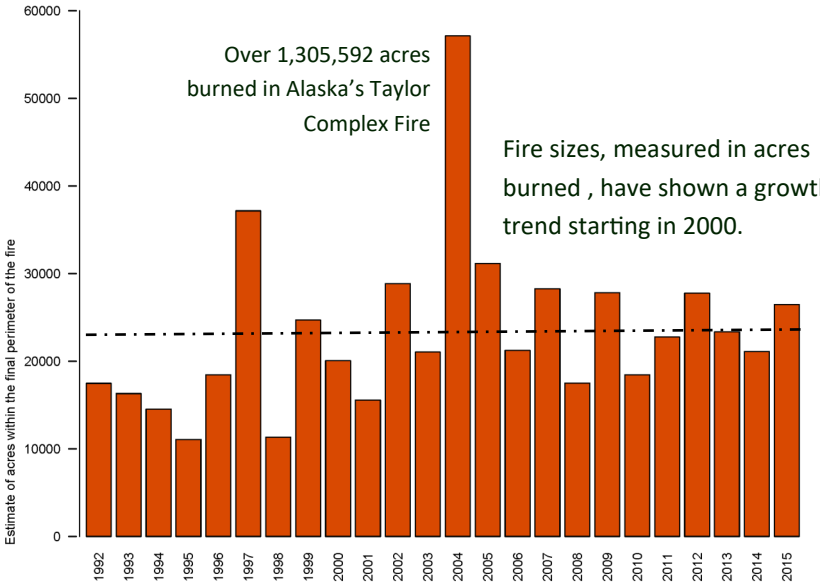
In recent years our attention has been gripped by coverage of massive and destructive fires in the United States. What does 24 years worth of data tell us about wildfires and their behavior?

Is the Fire Season Getting Longer?

The fire season has remained consistent over the past 24 years. 2008—2011 are the longest fire seasons but 2012 -2015 return to the what we see in previous years.

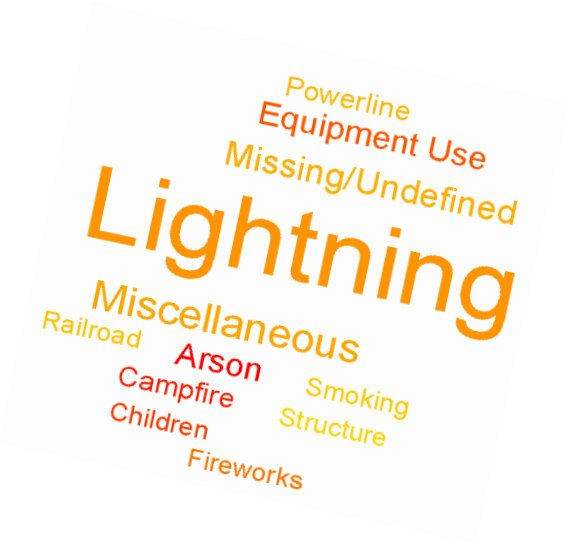


Are Fires Getting Bigger?



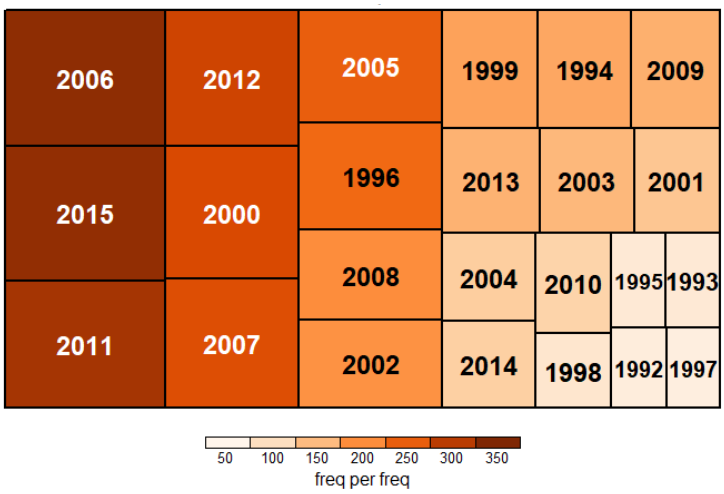
Over 1,305,592 acres burned in Alaska's Taylor Complex Fire

Fire sizes, measured in acres burned , have shown a growth trend starting in 2000.



Are we seeing more fires each year?

This dataset alludes to the idea that more fires occurred after the year 2000. This dataset does not take into account changes in reporting standards that occurred during these years.



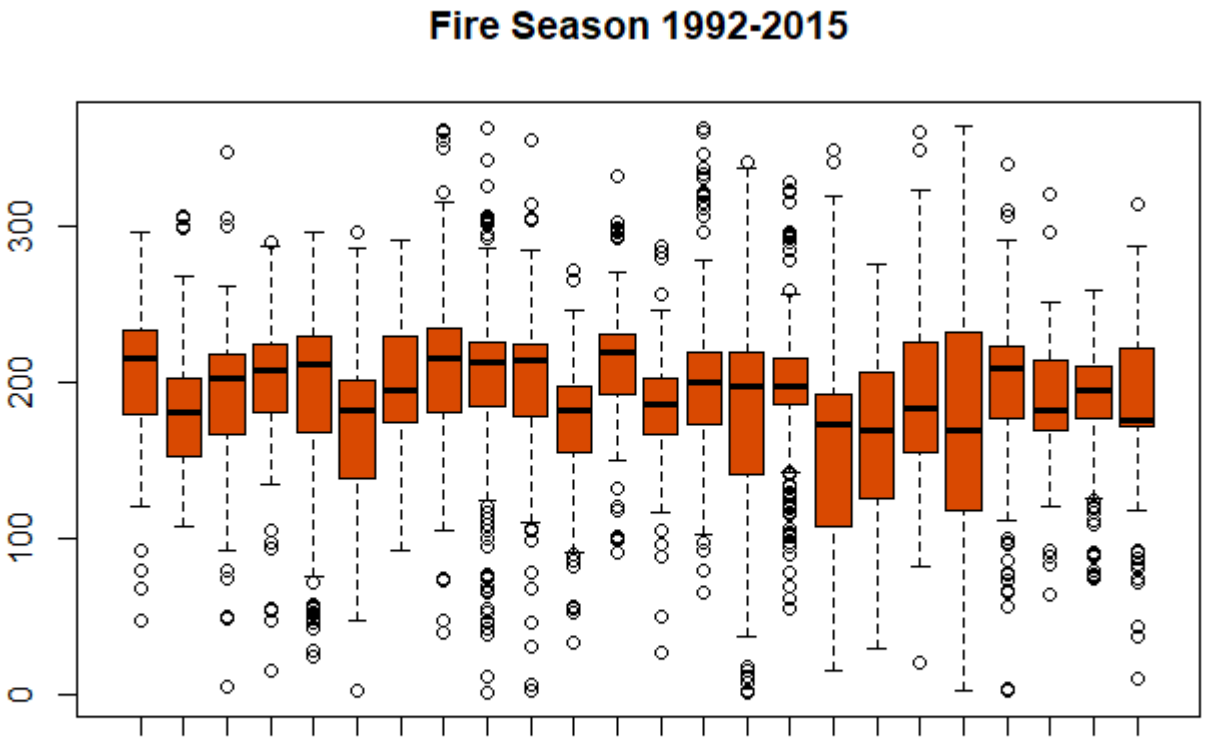
Data Source:

Multidimensional Plots

Plot 1

The fire season has remained consistent over the past 24 years. 2008—2011 are the longest fire seasons but 2012-2015 return to the what we see in previous years.

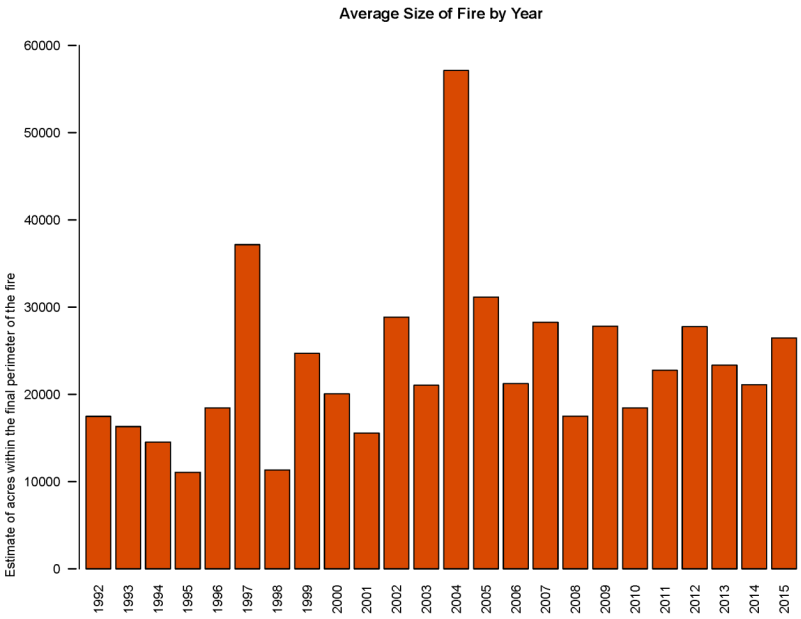
TO-DO: IMPROVE TITLE, CHANGE Y-AXIS TO REFELCT MONTHS RATHER THAN DAY OF YEAR, ADD YEAR TO X-AXIS, MAYBE



Plot 2

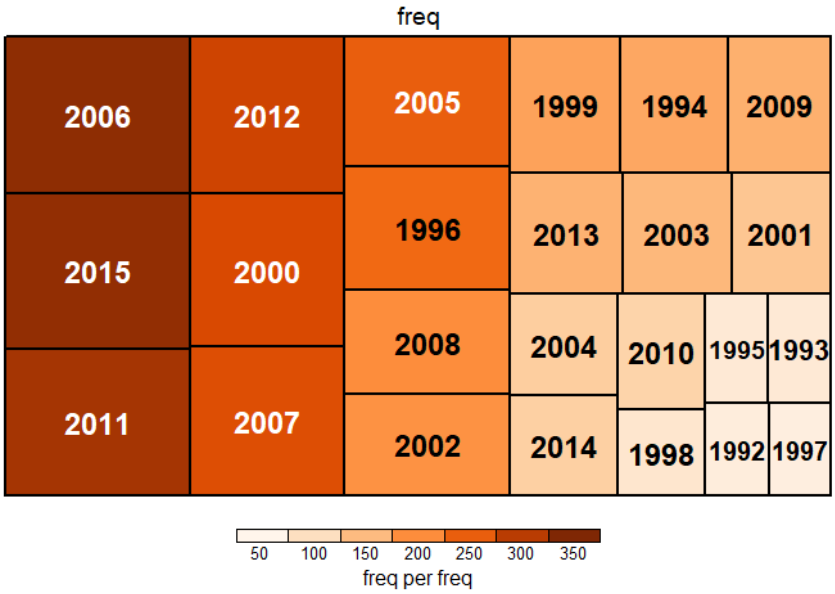
Fire sizes, measured in acres burned have remained consistent over the past 24 years. In 2004, over 1,305,592 acres burned in Alaska's Taylor Complex Fire contributing to the spike we see here.

TO-DO: ADD/CHANGE COLOR, IM-RPOVE TITLE AND AXIS LABELS, ADD TREND LINE mean = 23783.15



Plot 3

WordCloud for cause of fires

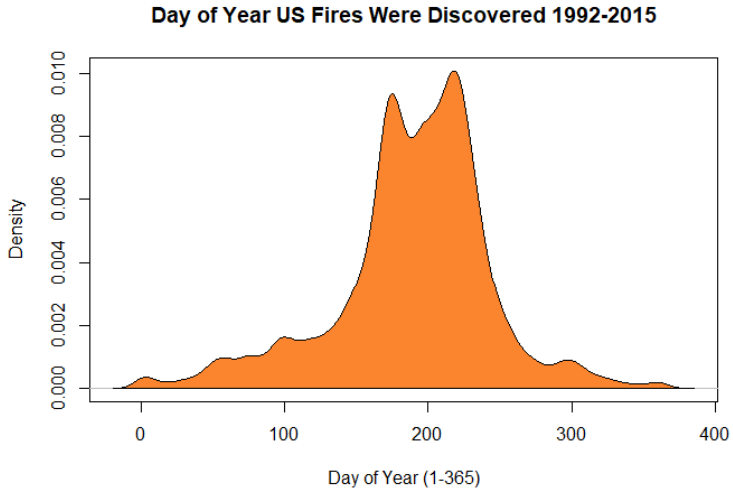


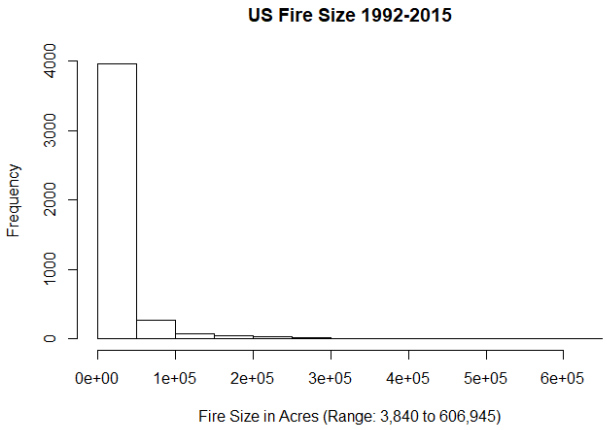
Plot 4

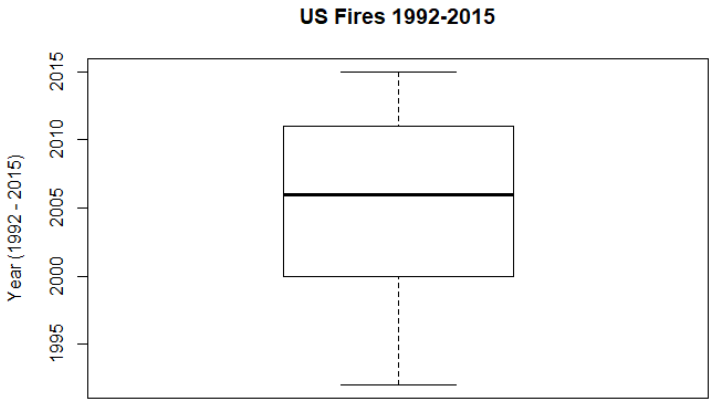
treemap showing frequency by years

TO-DO: IMRPOVE TITLE AND LEGEND

Plots used to understand the data







Source: Fires.csv