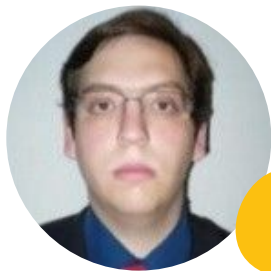




Droughts in the USA

May, 2021

Team



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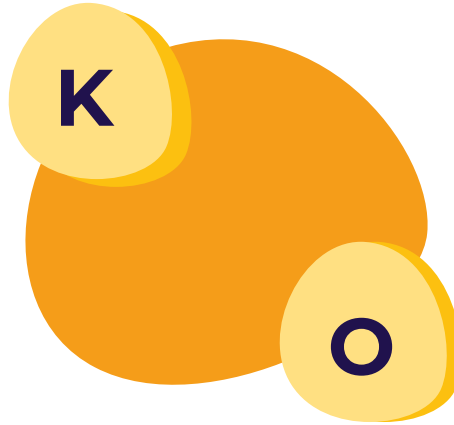
Leo Muñoz
leomgarduno



We analyzed the
droughts levels
across the US and its
possible correlation
with **wildfires**
throughout the years
2000 to 2016.

Our Data

United States
Droughts by County.
[Source: Kaggle.com](https://www.kaggle.com/datasets/mtbs/mtbs)



MTBS
[Source: mtbs.gov](https://mtbs.gov)

Questions

Droughts

- Where are droughts generally located in the US?
- How does the drought intensity vary in the US?

Fires

- How does the wildfires locations correlate with the droughts in the US?

Data Cleanup & Exploration

We created a drought level based on the dataset values. This cleanup process was summarized on a .py function.

1

We chose to analyze wildfires. We cleaned up the dataset to .loc only this fire type.

3

We generated animated maps to compare the drought levels and the wildfires across the US.

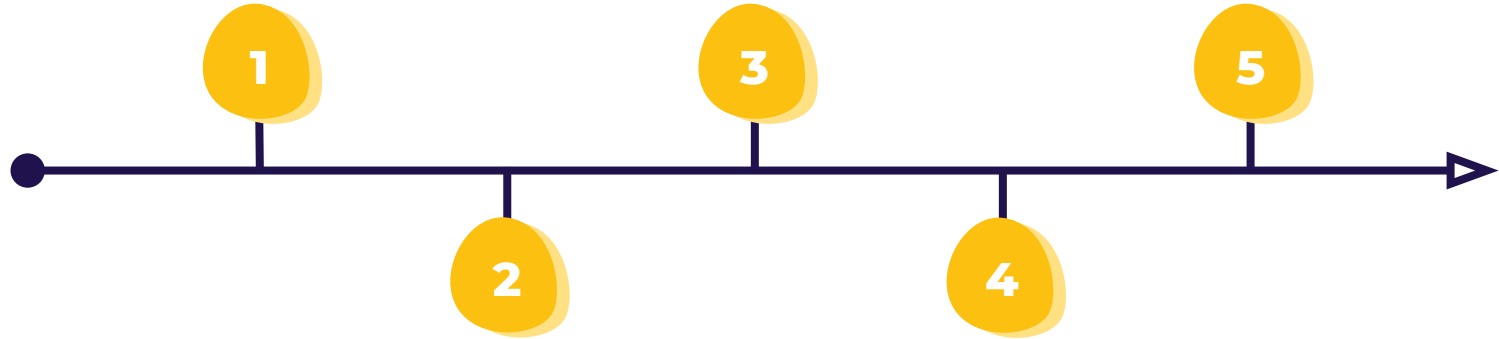
5

2

We wanted to correlate the drought level with the temperature increase in the US. However, we didn't find a free OpenWeather historic API.

4

We created bar and line plots to identify trends in both drought levels and wildfires.



Droughts Levels



No drought



*Abnormally dry
conditions*



*Moderate
drought*



*Severe
drought*



*Extreme
drought*



*Exceptional
drought*

Fire Types

Prescribed fire

Any fire intentionally ignited by management actions in accordance with applicable laws, policies, and regulations to meet specific objectives.

Wildland Fire Use

An event dealing with the management of a naturally ignited wildland fire to accomplish specific prestated resource management objectives in predefined geographic areas outlined in the Fire Management Plans.

Wildfire

An unplanned, unwanted wildland fire including unauthorized human-caused fires, escaped wildland fire use events, escaped prescribed fire projects, and all other wildland fires where the objective is to put the fire out

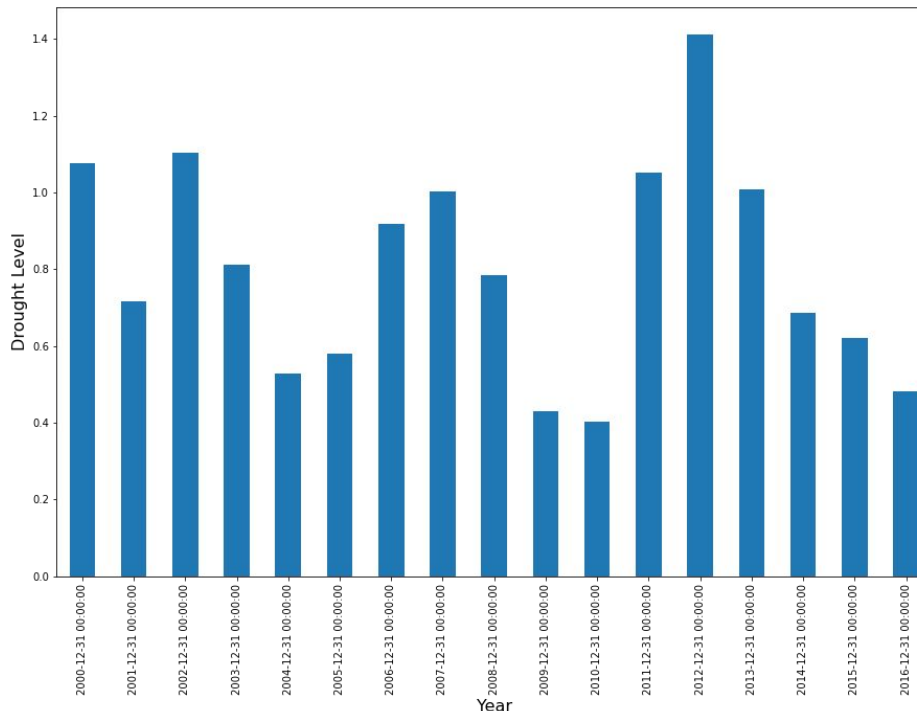
Average National Drought Level in the US

1.4

Has been the highest *average* drought level, it occurred in 2012.

2.4

Is the highest drought *average* level, located in Churchill County, Nevada.



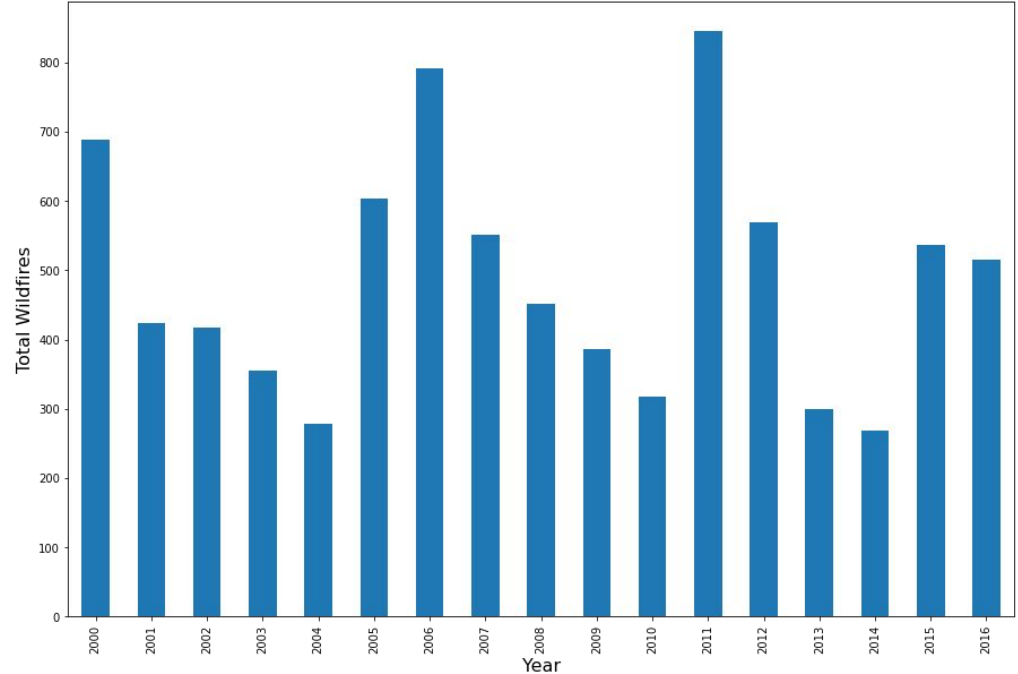
Wildfires in the US per Year

8,303

Wildfires in the US

2011

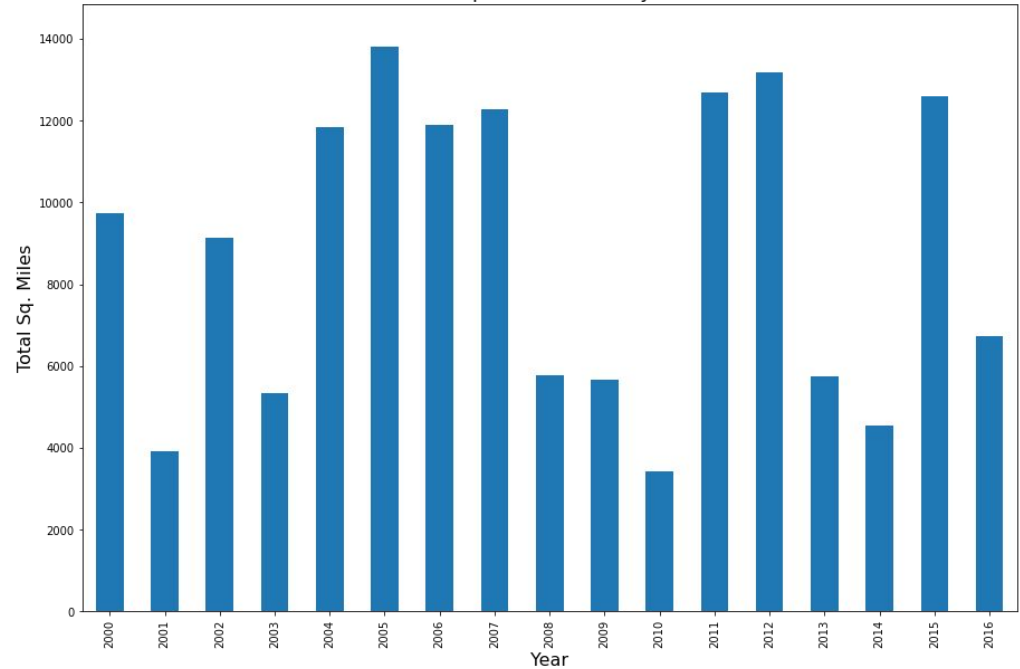
Was the year with most wildfires, 846.



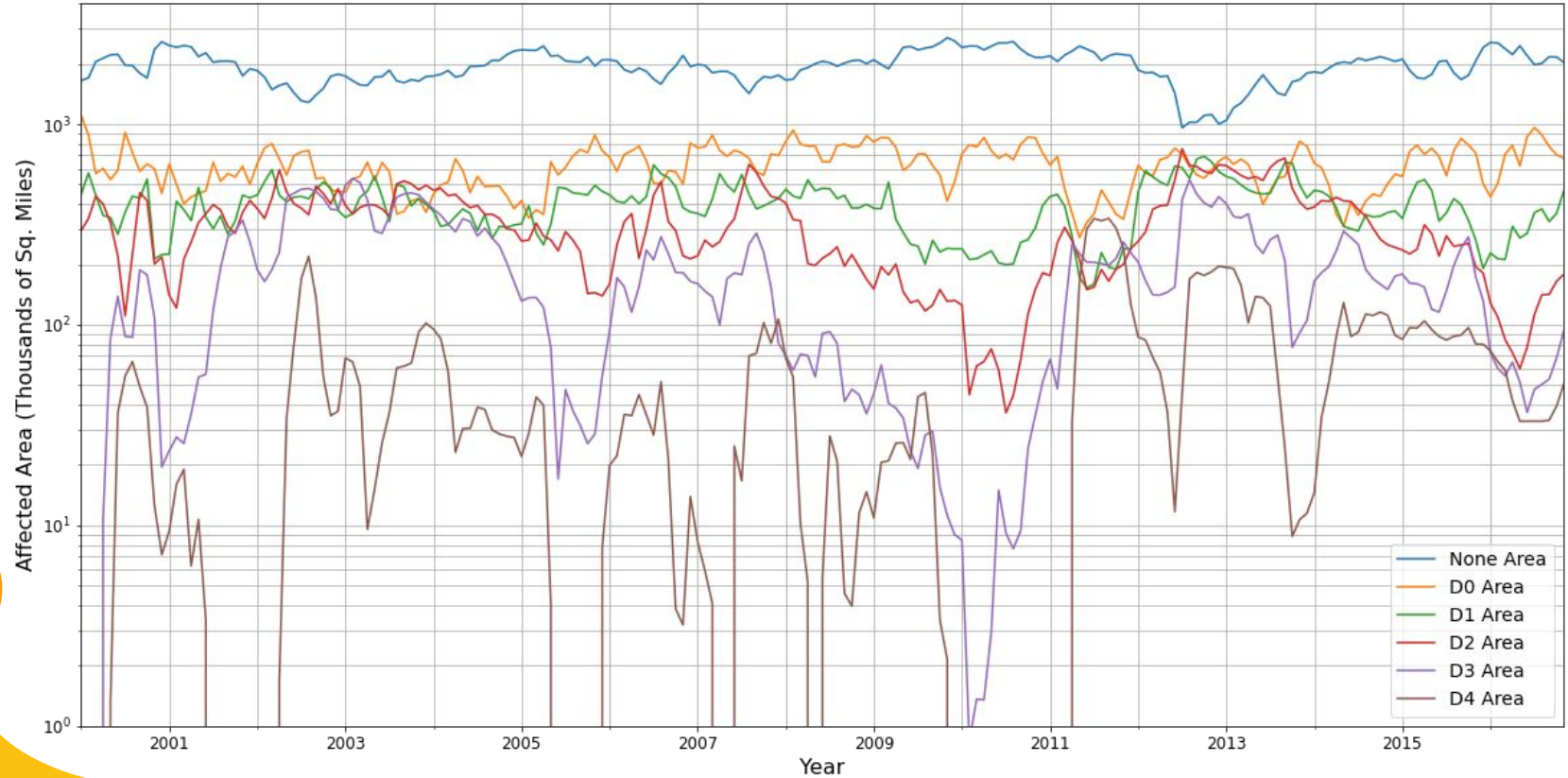
Sq. Miles Burned by Year

2005

Was the year with the most sq. miles burned in this period.

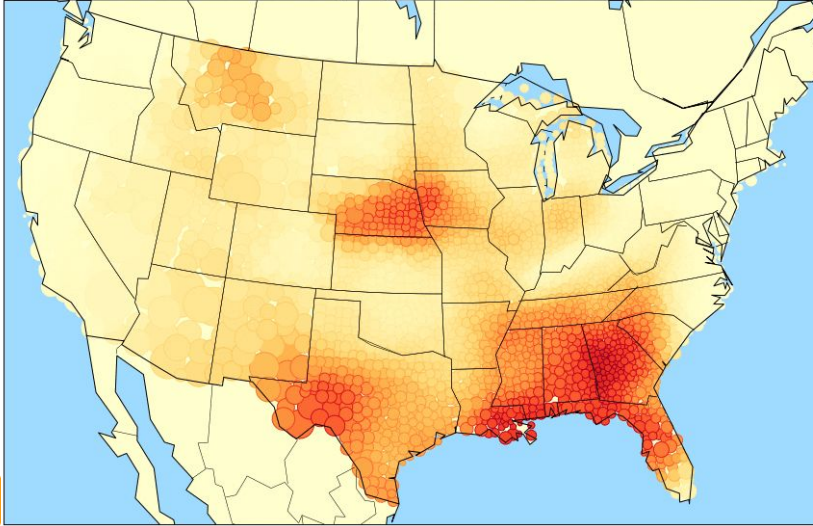


Continental US Drought Area by Level

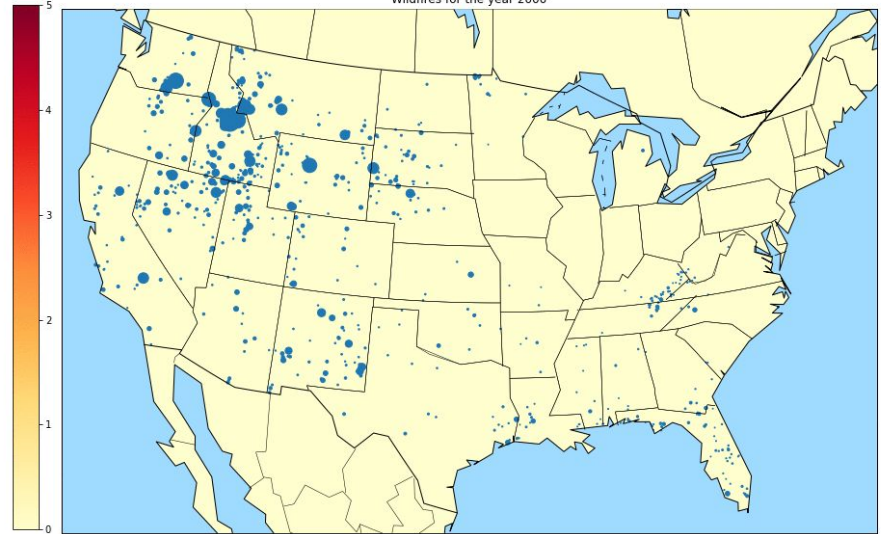



Drought Level VS Wildfires in the US

US Average Drought Level for the Year 2000



Wildfires for the year 2000



The background is a vibrant composition of organic, flowing shapes in various shades of yellow and orange. In the top right corner, there is a pattern of small dark blue dots. The bottom right corner features a series of parallel white diagonal lines. The overall aesthetic is modern and abstract.

Highest drought level
locations seem to be
located as the
wildfires.