# California Wildfires Dashboard - Project Overview

It certainly seems like California wildfires have become larger, more frequent and more destructive in recent years…..but have they really? That is the central question that this project seeks to answer.

We will do this by providing a dashboard to explore the recent history of wildfires in California alongside drought and temperature trends (as time permits).

# Potential Datasets & Tools

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| --- | --- | --- |
| Source | Link | Description |
| Kaggle | <https://www.kaggle.com/ananthu017/california-wildfire-incidents-20132020> | Fire incidents from 2013-2020 (scraped from <https://www.fire.ca.gov/incidents/> ) |
| NADM | https://droughtmonitor.unl.edu/Data/DataTables.aspx | % of CA in drought from 2000-present. |
| NOAA Climate Data Online | <https://www.ncdc.noaa.gov/cdo-web/datasets> | Normals/annual for all California stations. |
| USDA/US Forest Service | [ttps://www.fs.usda.gov/rds/archive/Catalog/RDS-2020-0016](https://www.fs.usda.gov/rds/archive/Catalog/RDS-2020-0016) | Wildfire Hazard Potential data |
| Convert CSV to GeoJSON | <https://github.com/mapbox/csv2geojson> | This could fill requirement for “additional JS library” if needed. |

# Key Metrics

### Wildfire Incident Metrics

Incident: Date Started, Duration, Acres Burned, County, Location,

Derived: Incident Duration: Date Extinguished – Date Started, Devastation Index: (Crews Involved + Engines + Tankers + Helicopters) \* Fatalities

This visualization is the heart of the dashboard. It provides a map view of CA, with a county border layer. User can select a year (or see all years) to see that year’s fires on the map. The map uses Marker Clusters so that clusters of fires can be explored.

### Drought Metrics

This visualization is the heart of the dashboard. It provides a map view of CA, with a county border layer. User can select a year (or see all years) to see that year’s fires on the map. The map uses Marker Clusters so that clusters of fires can be explored.

# Key Visualizations

### Wildfire Incidents Map

This visualization is the heart of the dashboard. It provides a map view of CA, with a county border layer. User can select a year (or see all years) to see that year’s fires on the map. The map uses Marker Clusters so that clusters of fires can be explored.

### Annual Wildfire Analysis

This visualization provides an interactive bar chart where the user can select a county (or all CA) and see the number of wildfires per year alongside the number of acres burned per year and potentially other variables of interest (% of CA in drought)..

### Drought Trends

Visualization TBD – Possibly a line chart of % of CA in drought, by year and by month.

### Bonus: Wildfire-Temperature Analysis (not gonna happen)

This visualization shows a candlestick chart of annual temperatures (tmin, tmax, tavg) for CA by year. A bar chart of wildfires per year is below/next to it for ease of comparison. This is a bonus visualization because it is a lot of work and also because getting the data for this will require a lot of effort, it appears, because historical temperature data is tracked by station.

Inspiring Visualizations







