

Pitch: Smoke Gets in Your Eyes

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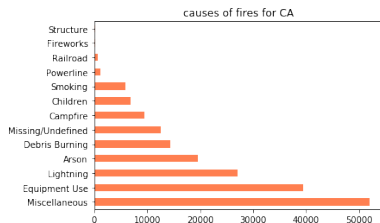
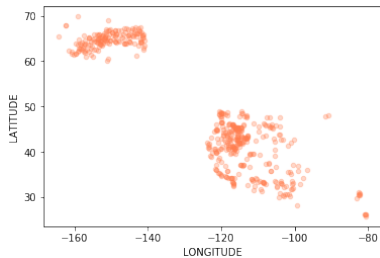
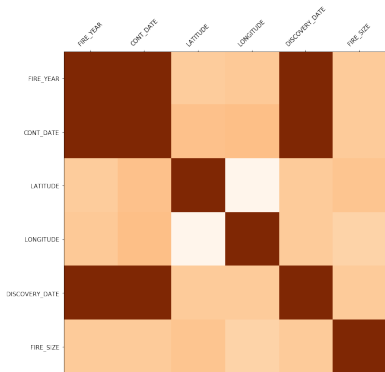
Wildfires

- Wildfires have long been a problem in the U.S., especially on the West Coast.
- It is a problem that is not likely to disappear
- In fact, FiveThirtyEight wrote in July that “Wildfires In The U.S. Are Getting Bigger”

- At the same time, poor air quality is also a problem in the U.S.
- Changes in air quality happen both due to the wildfires and because of other factors
- The U.S. Environmental Protection Agency (EPA) collects large amounts of data on air quality all across the U.S.

- How well can we predict the maximal size of a wildfire from the data we have when it is first observed?
- Can we trace changes in air quality back to local wildfires with high precision?
- And together, can we accurately notify about coming changes in air quality based on wildfire observations?

- Kaggle provides a large database encompassing 24 years and 1.88 million wildfires in the U.S.
- The wildfire data was originally collected by the U.S. Forest Service
- The EPA publishes a variety of air quality data from 1980 to 2018.



- Multiple machine learning models will be evaluated for both parts of the project
- In addition, combining the datasets requires building a model for how multiple wildfires would interact to change air quality at different distances from the fires

- Wildfire database:
`www.kaggle.com/rtatman/188-million-us-wildfires`
- EPA air quality data:
`aq5.epa.gov/aq5web/airdata/download_files.html`
- FiveThirtyEight piece:
`fivethirtyeight.com/features/
wildfires-in-the-u-s-are-getting-bigger/`

Thank you!