# Predicting Forest Fire

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## Objective:

Use california weather and humidity data of all the past forest fires and predict a probability of forest fires at any given weather condition

## Problem Definition:

The model should predict a probability of a forest fire given the following conditions:

- Humidity
- Wind
- Temperature
- Time since last forest fire

    Reasoning: Dog hair forests- densely populated trees the width of a dog hair are big contributors of forest fire fuel
- geographical location

Humidity and wind are likely to be the biggest contributing factors based on the following sites:

- https://www.nps.gov/articles/wildland-fire-behavior.htm
- https://www.auburn.edu/academic/forestry_wildlife/fire/weather_elements.htm

## Performance Measurement:

- Benchmark model: 1 - %humidity = probability of fire.
- Accuracy will be measured with a validation set which will be 30% of collected data

## Similar Projects:

https://towardsdatascience.com/predicting-california-wildfire-size-with-neural-networks-building-a-machine-learning-project-from-db0e57dce4c9

https://towardsdatascience.com/leveraging-machine-learning-to-predict-wildfires-contributing-to-the-united-nations-sustainable-a10c5044dcae

## Data Sources