Analyzing Drought Prediction in the United States

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# Purpose

The purpose of this project is to use the “Predict Droughts using Weather & Soil Data” dataset available on Kaggle to explore the accuracy of drought prediction in the United States in addition to exploring the various features that contribute to a drought.

Another possible avenue for the project, if time allows, is to compare drought data with wildfires in the United States to see if there is a correlation among the drought locations available.

The analysis is planned to be presented using Tableau charts with a possible interactive dashboard.

# Data Sets

Predict Droughts using Weather & Soil Data

<https://www.kaggle.com/datasets/cdminix/us-drought-meteorological-data>

The drought data is divided between four spreadsheets:

* Soil\_data.csv contains the soil data obtained from 3,109 locations
* Train\_timeseries.csv, validation\_timeseries.csv, and test\_timeseries.csv all contain meteorological records for each location that exists in the soil\_data.csv

Visualize meteorological conditions and geographic features:

* Compare the type of land common for the different drought conditions
* Evaluate the elevation where droughts occur
* Examine the different soil conditions present

# Other Resources

Soil Data (Slopes and Elevation):

* <https://www.fao.org/soils-portal/data-hub/soil-maps-and-databases/harmonized-world-soil-database-v12/en/> (linked from presentation)
* Slope is the percent change in that elevation over a certain distance (<https://tompkinscountyny.gov/files2/planning/nri/land_resources.pdf>)

1.88 Million US Wildfires

<https://www.kaggle.com/datasets/rtatman/188-million-us-wildfires>