

In this homework, you will do some data analysis using R for the Forest Fire Data described

<https://archive.ics.uci.edu/ml/datasets/forest+fires>

The dataset is used to find the relationship between the burned area of forest fires and meteorological data.

1. Import the data into R.
 - a. How many observations are there in the dataset?
 - b. How many observations are there with a fire (i.e., $\text{area} > 0$)
 - c. How many observations are there with a rain (i.e., $\text{rain} > 0$)
 - d. How many observations are there with both a fire and a rain?
2. Show the columns month, day, area of the all the observations.
3. Show the columns month, day, area of the observations with a fire.
4. How large are the five largest fires (i.e., having largest area)
 - a. What are the corresponding month, temp, RH,

wind, rain area?

- b. Add one column to the data indicating whether a fire occurred for each observation (True for area >0 and False for area ==0)

5. Construct a matrix with 10 columns and 10 rows, filled with random numbers between 0 and 1. Apply two different methods.

- a. Calculate the row means of this matrix.
- b. Remake the above matrix, with 100 columns, and 10 rows. Then calculate the column means.