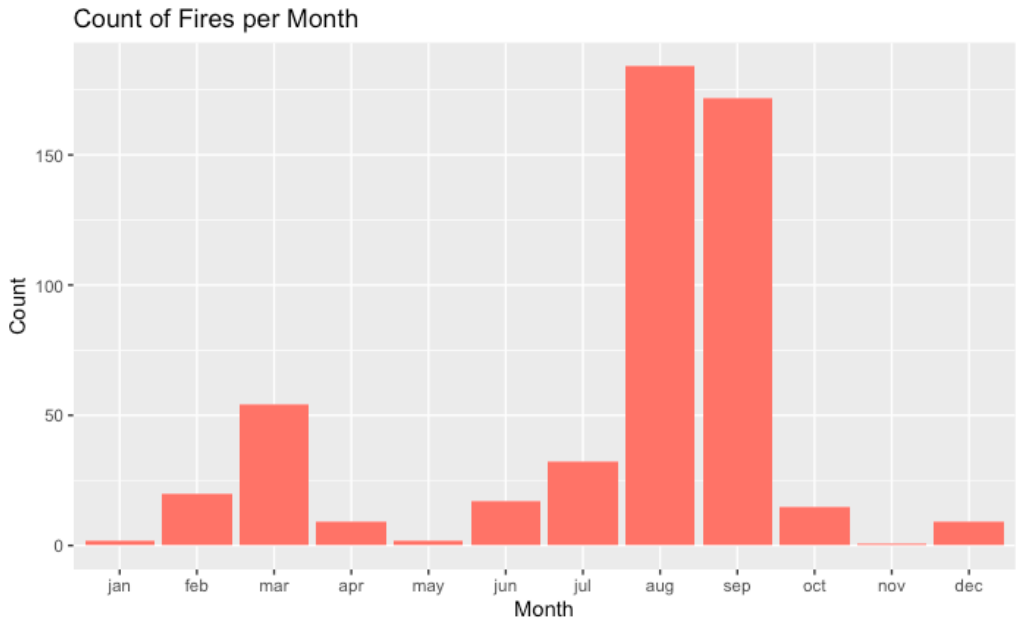
Portugal Forest Fire Report

Data is taken form Montesinho Park in Portugal. There are 13 separate variables found in the datasets which include: X-spatial coordinate, Y-spatial coordinate, Month, Day, FFMC, DMC, DC, ISI, Temp, RH, Wind, Rain, Area. This dataset comes from Paulo Cortez and Anibal Morais from the Department of Information Systems/R&D Algoritmi Centre at the University of Minho in Guimaraes, Portugal. The data is from the Montesinho natural park which is located in the Northeast region of Portugal and it the data collected is from January 2000 to December 2003.

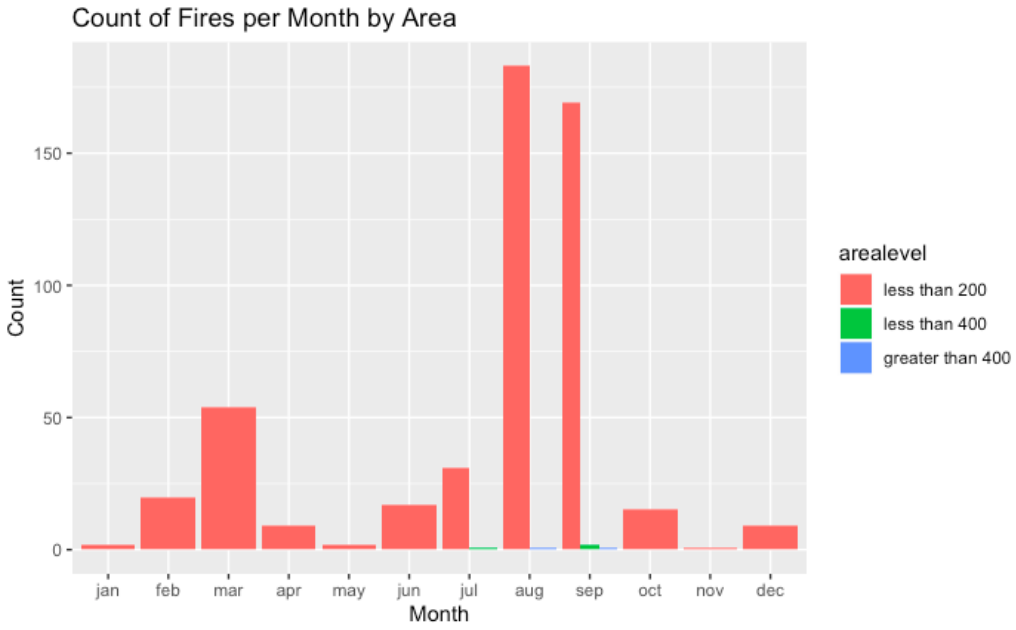
With this data set we will be looking to see what time of year do the most forest fires happen Montesinho National Park? What time of year has the largest forest fires Montesinho National Park? Is there a significant linear relationship between temperature, rain, wind speed or relative humidity and the amount of burned area? Do more fires happen in a specific area of Montesinho National Park?

The data was downloaded through as a csv. The data was cleaned by re-ordering the month and day variables. Added a factor variable for area with three levels which included less than 200 hectares, less than 400 hectare and greater than 400 hectares. The data had to have subsets of area level and time of year. The data was checked to see if there were any missing values.

First we checked which months had the most fires. We used the count of fires that happened each month. The data showed March, August, September had to most fires per month.



Going more in depth we used our three levels of area to show which months had the greatest amount of area the fire covered. The data showed that July, August, September had the greatest areas of fire. It also shows that there are more smaller fires than there are bigger fires.


Count of Fires per Month by Area
150
100
50
0
Count
jan
feb
mar
apr
may
jun
jul
aug
sep
oct
nov
dec
Month
arealevel
less than 200
less than 400
greater than 400