

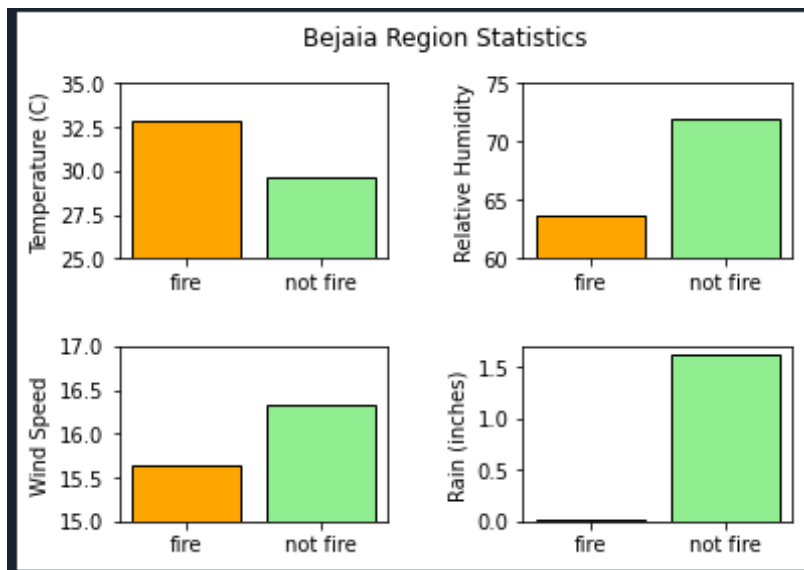
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COSC 311

Lab 3

Dr. Wang

### Lab 3



1.
  - a. From this data I learned that temperature is directly correlated with the chance of fire. The higher the temperature, the higher chance of a fire. Other than that, all the other data is higher when there is no fire.

Sidi-Bel Region Medians :

FFMC = 84.85

DMC = 13.15

DC = 31.5

2. ISI = 4.6

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Bejaia Region Quartiles for Temperature :
25 % Quartile - 29
60 % Quartile - 32
75 % Quartile - 34

Bejaia Region Quartiles for Relative Humidity :
25 % Quartile - 60
60 % Quartile - 73
75 % Quartile - 78

Bejaia Region Quartiles for Wind Speed :
25 % Quartile - 14
60 % Quartile - 17
75 % Quartile - 18

Bejaia Region Quartiles for Rain :
25 % Quartile - 0.0
60 % Quartile - 0.1
75 % Quartile - 0.5

```

3.

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Sidi-Bel Region Standard Deviations :
Temperature = 3.6605129438500184
Rain = 1.480652797336956
BUI = 13.81382022708875
FWI = 8.104005673421685

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4.

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Bejaia Region Dataset Correlatoin Coefficient
between RH and other statistics :
Temperature = -0.6601505504342499
Ws = 0.24577445895806885
Rain = 0.3291626170356644
FFMC = -0.6531529118901973
DMC = -0.34708013592219367
DC = -0.3142712238307086
ISI = -0.5864099949298507
BUI = -0.33823263630375583
FWI = -0.4760673581458338

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Strongest positive correlation of RH is with
Rain:

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0.3291626170356644
```

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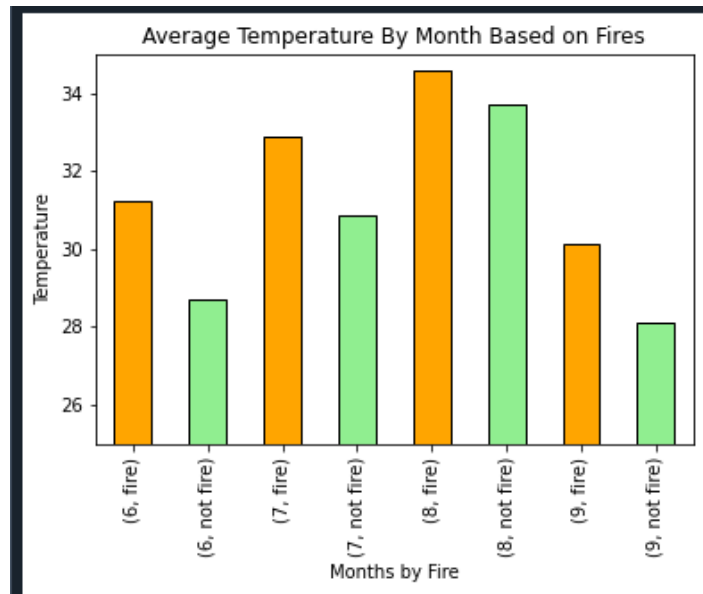
Strongest negative correlation of RH is with
Temperature:

```

```
-0.6601505504342499
```

5.

6. As temperature was a key attribute between the correlation of fires and no fires, I think it would be beneficial to show more comparisons about the data. For example, showing the graph from lab 2, which highlights this comparison, but for each month. Using this model, I think it would be more accurate to show the averages of this data for each month when comparing the data.



- a.
- b. This highlights the correlation between temperature and fire, as each month, the temperature was higher when there were fires.