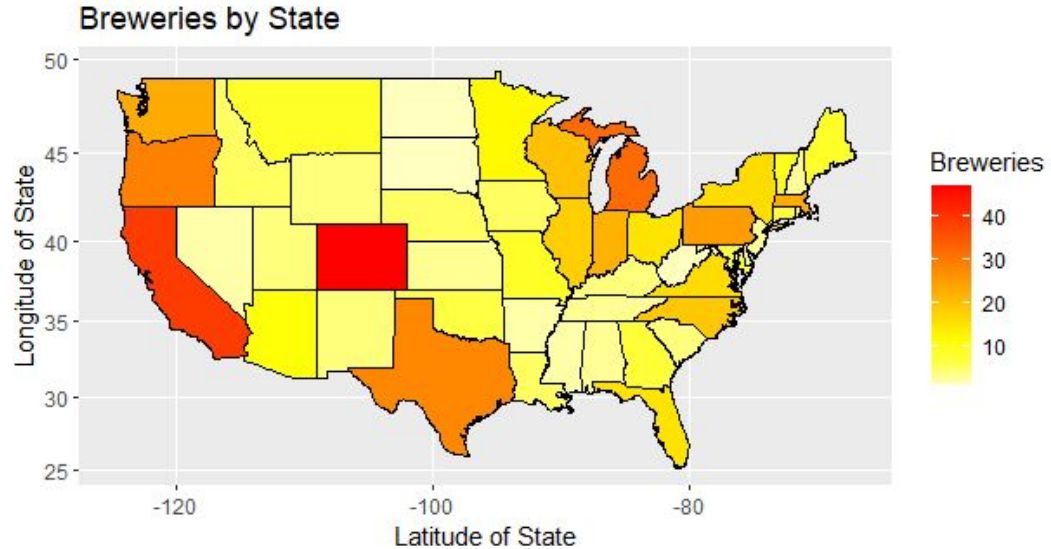# Oktoberfest EDA for Budweiser

By: Rachel and Santiago

Question 1

How many breweries are present in each state?

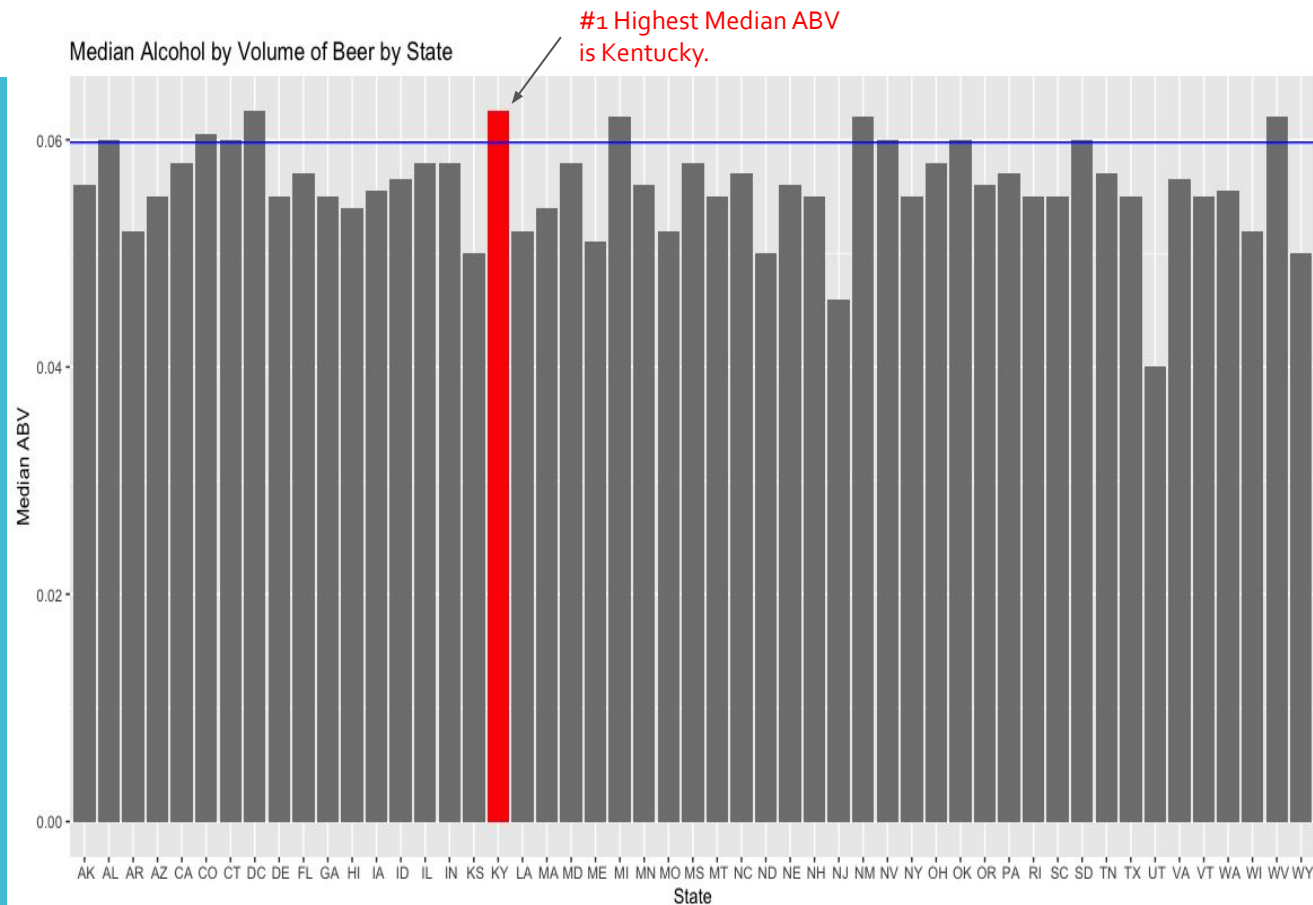**Below, one can clearly see how many breweries exist in each state.**

Question 3

Address the missing values in each column.

The ABV column appears to have 62 missing values, which equates to 2.5% of total values.
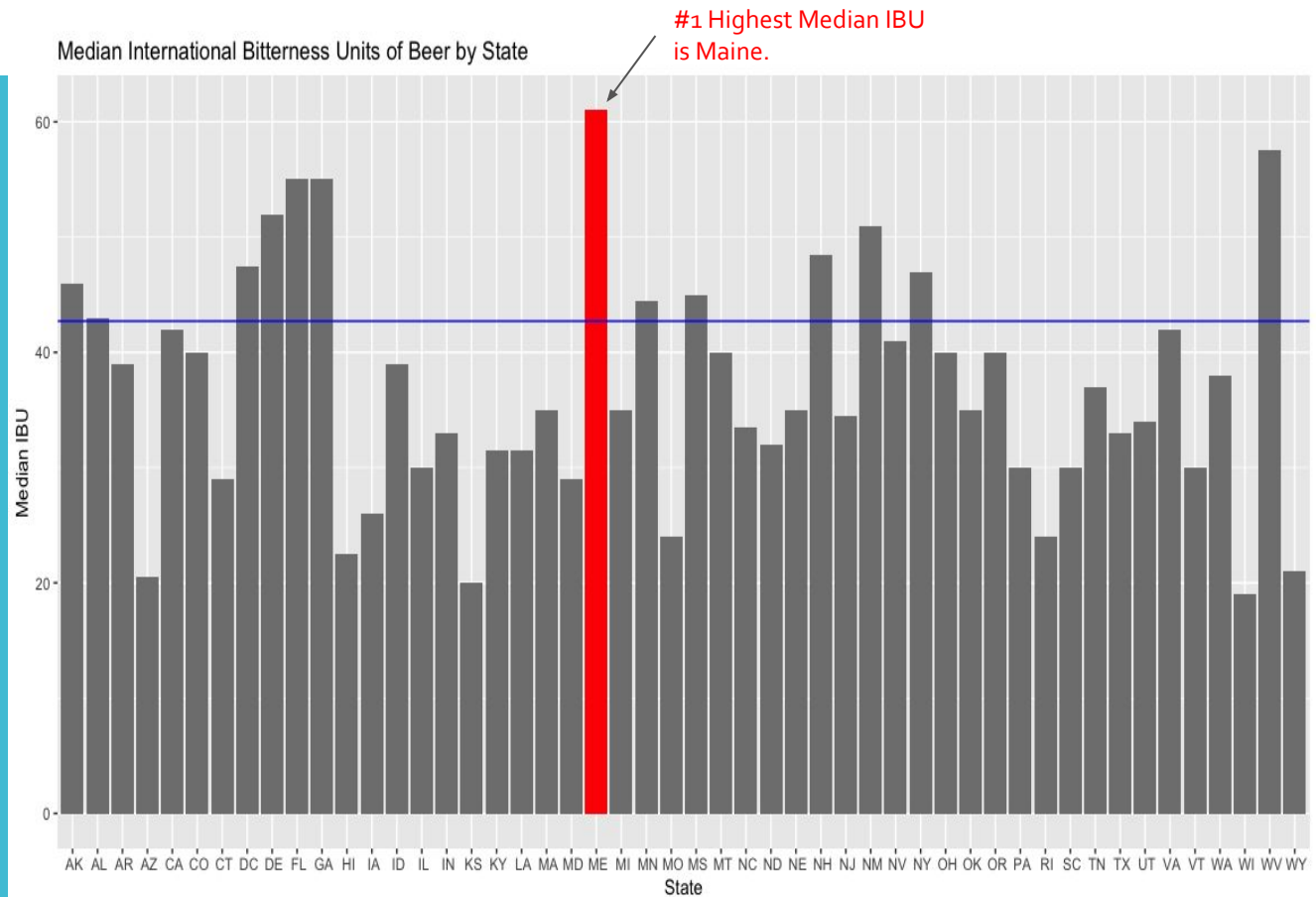
The IBU column appears to have 1,005 missing values, which equates to 42% of total values.

The missing ABV values will have little effect on our results, whereas the missing IBU values will have a much greater effect on our results.

Question 4

Median Alcohol by Volume of Beer by State

#1 Highest Median ABV is Kentucky.

Question 4

Median International Bitterness Units of Beer by State

#1 Highest Median IBU is Maine.

Question 5

Which state has the maximum alcoholic (ABV) beer? Which state has the most bitter (IBU) beer?

Colorado appears to have the maximum alcoholic (ABV) beer with a % alcohol content at 12.8%.

Oregon appears to have the most bitter (IBU) beer with a bitterness level at 138 IBU.

Question 6

Summary Statistics

### Distribution of Alcohol by Volume in Beers

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of
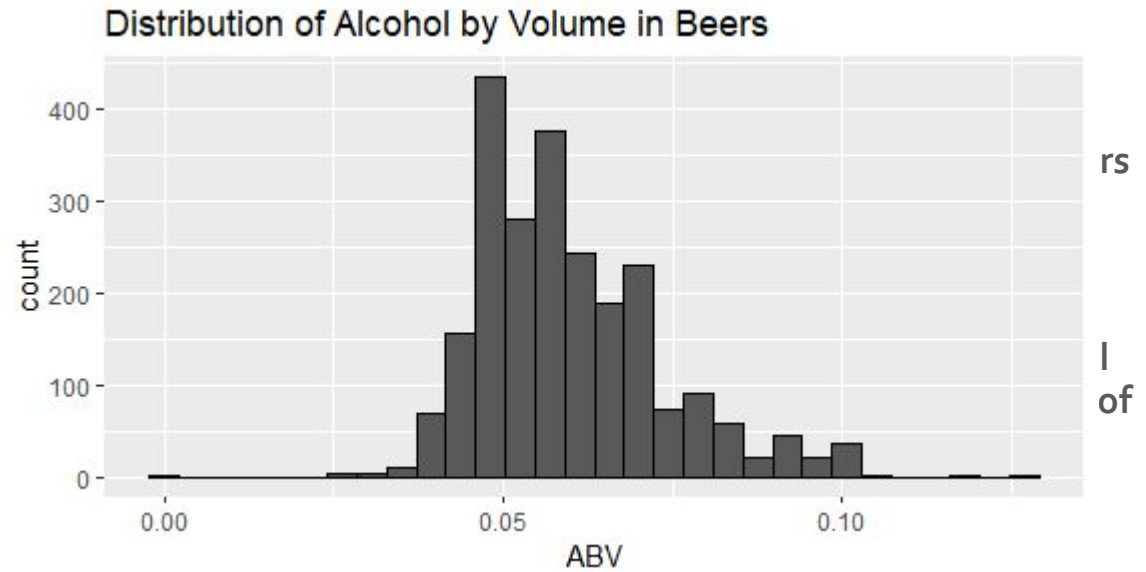
Question 7

Is there any apparent relationship between the bitterness of the beer and its alcohol content?

Draw a scatter plot.

Our scatterplot and regression line suggest that there is a positive correlation between ABV and IBU.

Using ggpairs, we also obtained a correlation coefficient of +0.671 which supports our claim.

Based on our findings, we can infer that an increase in ABV is associated with an increase in IBU (or, vice versa).
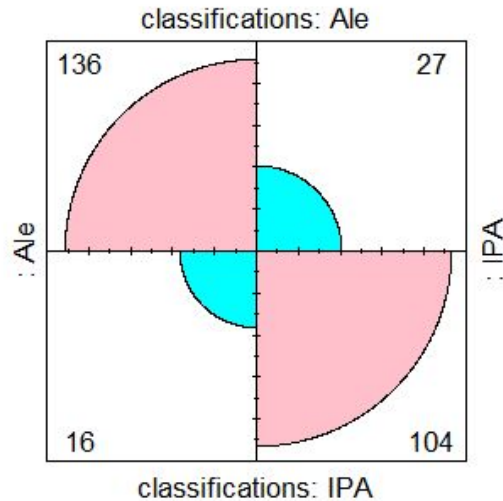

Relationship Btwn. ABV and IBU
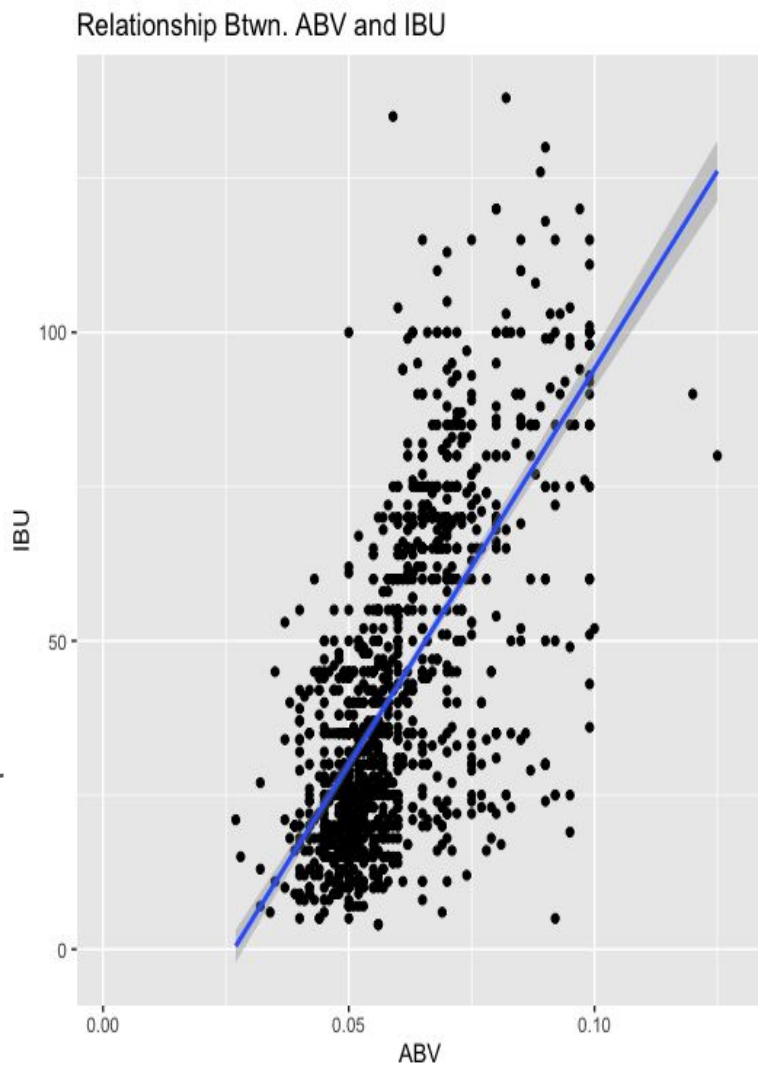
Question 8

Can we predict IPAs vs. Ales based on ABV and IBU?

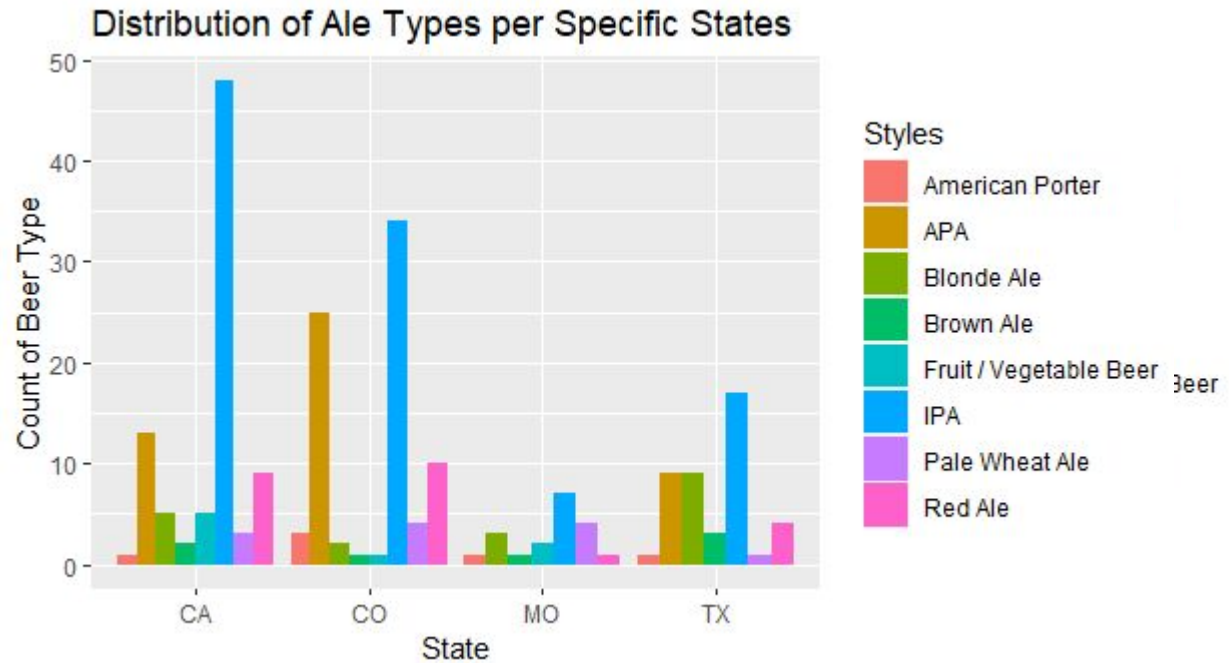Statistical evidence suggests yes.

Predicition of IPAs and Ales

classifications: Ale

| 136 | 27 |
| 16 | 104 |

classifications: IPA

Question 9

Ales vs Other Beers
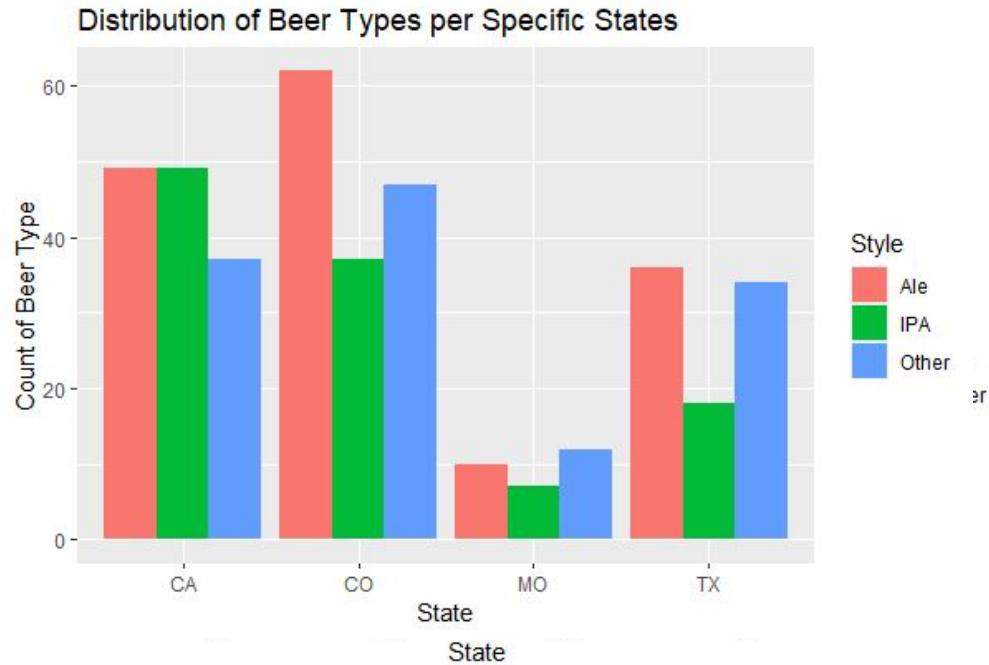
Question 9

Ale Distribution

Distribution of Ale Types per Specific States

Questions?

Thank you!

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Youtube Presentation

https://www.youtube.com/watch?v=47FJX-wTjNc