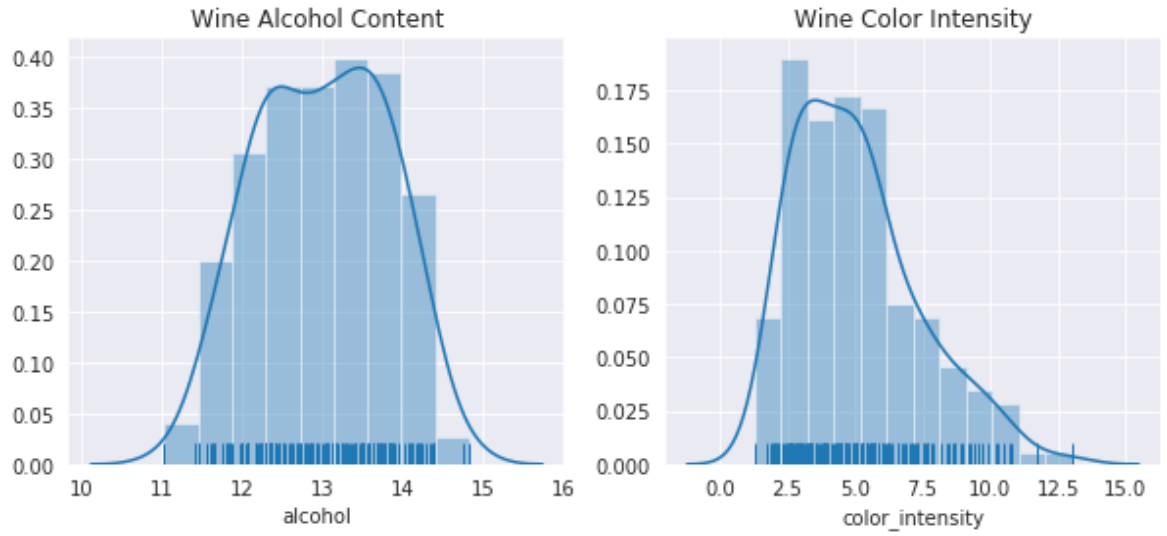
Week 3 Quiz

Bryan Gibson - brg2130

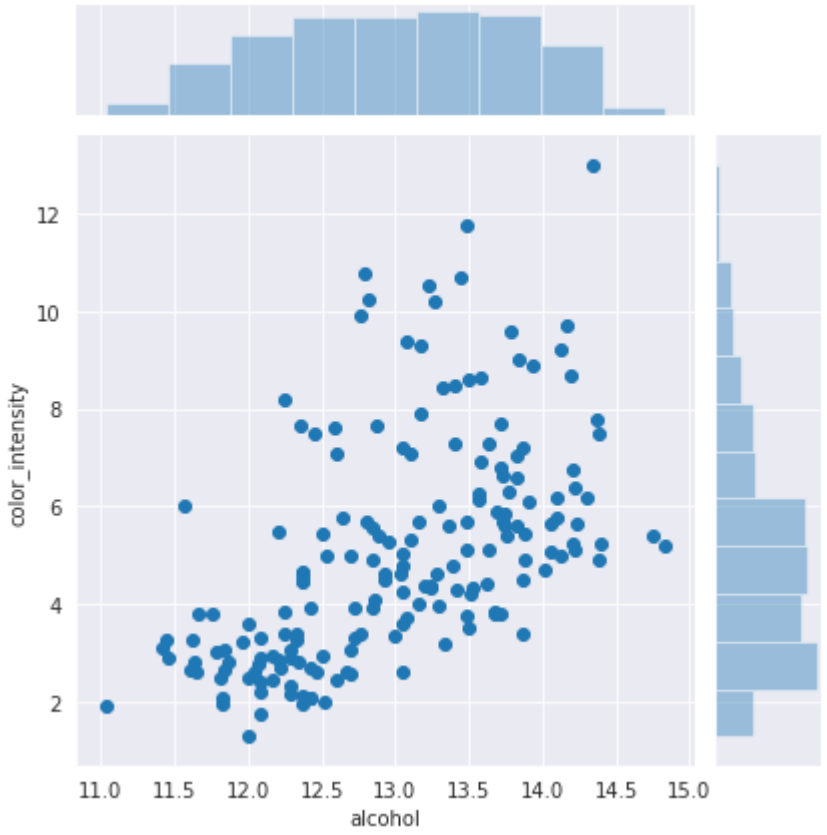
In [1]:
```
import pandas as pd
import numpy as np
import matplotlib.pyplot as plt
import seaborn as sns

sns.set_style('darkgrid')

%matplotlib inline
```

In [2]:
```
# Use pandas to read in 'wine_dataset.csv'
# This is a dataset of various wines with a target of categorical var
iable 'class'
df = pd.read_csv('../data/wine_dataset.csv')
```

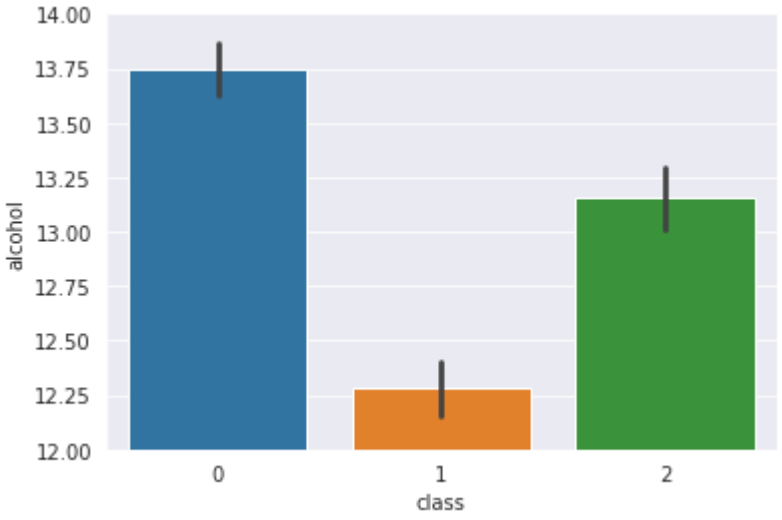
In [3]:
```
# 1. Create two axes using plt.subplots with 1 row , 2 columns, figsi
ze=(10,4)
fig,ax = plt.subplots(1,2,figsize=(10,4))

# 2.1 In the first axis, plot the distribution of df.alcohol using sn
s.distplot with rug=True
sns.distplot(df.alcohol, rug=True, ax=ax[0])

# 2.2 Add the title 'Wine Alcohol Content' to ax[0] using set_title
ax[0].set_title('Wine Alcohol Content')

# 3.1 In the second axis, plot the distribution of df.color_intensity
using sns.distplot with rug=True
sns.distplot(df.color_intensity,rug=True, ax=ax[1]);

# 3.2 Add the title 'Wine Color Intensity' to ax[1] using set_title
ax[1].set_title('Wine Color Intensity');
```



In [4]:
```
# Visualize correlation between alcohol and color_intensity using joi
ntplot
sns.jointplot(x='alcohol',y='color_intensity',data=df);
```



In [5]:
```
# plot x=class vs y=alchohol using sns.barplot
ax = sns.barplot(x='class',y='alcohol',data=df);
# set the y-axis limits to (12,14) using set_ylim
ax.set_ylim(12,14);
```



What's being plotted in the catplot?

The mean alcohol level for each category, with a 95% confidence interval.

Does it look like there is a difference in alcohol level between class? Why?

Yes, as there is no overlap in confidence intevals, there is likely a significant difference between the means of these groups.

(**Note** However, overlap does not necessarily mean there is no difference! See Section 2.6 of Statistical Rules of Thumb by Gerald van Belle Chapter 2 pdf (http://www.vanbelle.org/chapters/webchapter2.pdf))

In [6]:
```
# when completed,
#   make sure you've replaced [Name] and [UNI] in the first cell and
 filename
#   use Print Preview, Print-> Save to pdf
#   and post pdf to GradeScope
```