
Wine Quality
Tess Kramer

What is Wine Quality?

Wine Quality

- There is different fundamental traits that comprise a good wine
- Be considered “good” there must be a proper balance

What is the Goal of this Analysis?

Permise:

- You Want to Open a Winery
    - Serving Wine of the Highest Quality
- You Come to Me as I am a Wine Consultant
- Together We can make Your Idea come to Life

The Approach

Type of Wine

- What type of wine are you going to serve?
  - Both red and white wine

What my Job Is

- Use datasets and models to:
  - Draw meaningful insights
  - Solve problems
  - Offer expertise in data management

The Dataset

The Dataset

- Using the amount of various chemicals in wine to predict the overall quality of wine

Wine_Quality

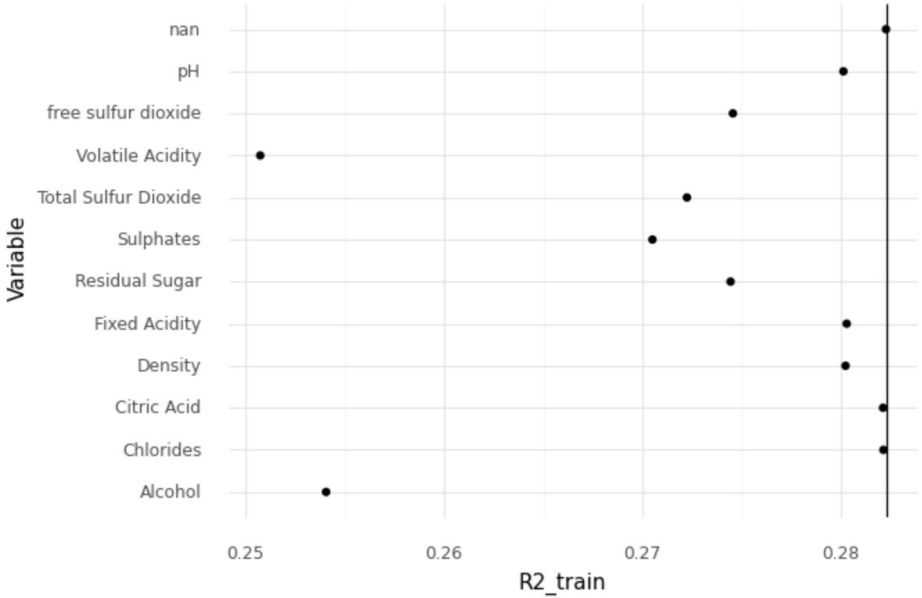
Fixed Acidity	Volatile Acidity	Citric Acid	Residual Sugar	Chlorides	free sulfur dioxide	Total Sulfur Dioxide	Density	pH	Sulphates	Alcohol	Quality
7	0.27	0.36	20.7	0.045	45	170	1.001	3	0.45	8.8	6
6.3	0.3	0.34	1.6	0.049	14	132	0.994	3.3	0.49	9.5	6
8.1	0.28	0.4	6.9	0.05	30	97	0.9951	3.26	0.44	10.1	6

Calculating the Quality with Linear Regression

Linear Regression:

- A basic predictive analytics technique that uses data to predict output variables.

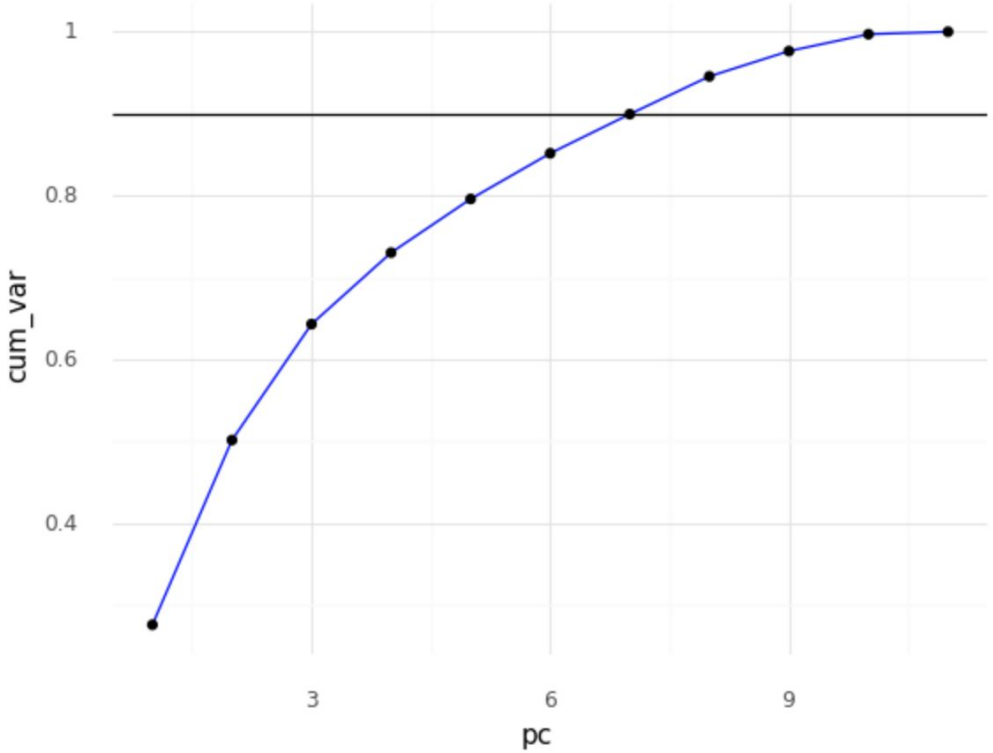
Citric Acid: 0.282152
Chlorides: 0.282172
All Predictors: 0.282301



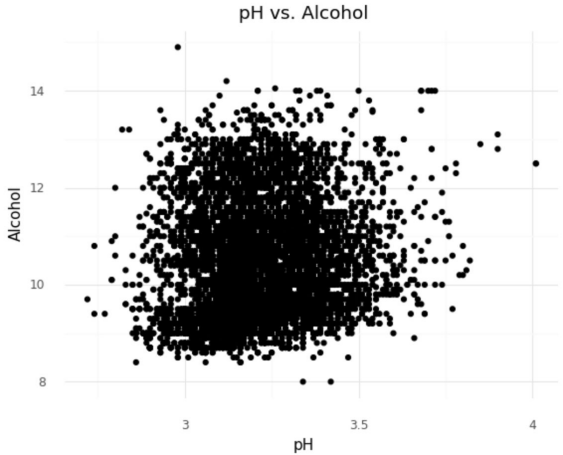
Calculating the Quality with PCAs

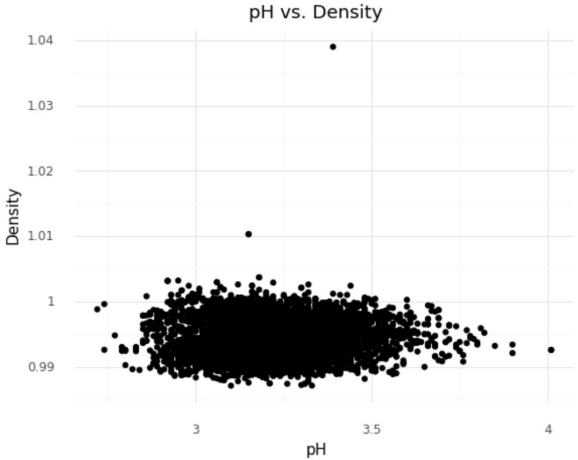
No PCAs: MSE 0.774
With PCAs: MSE 0.5869

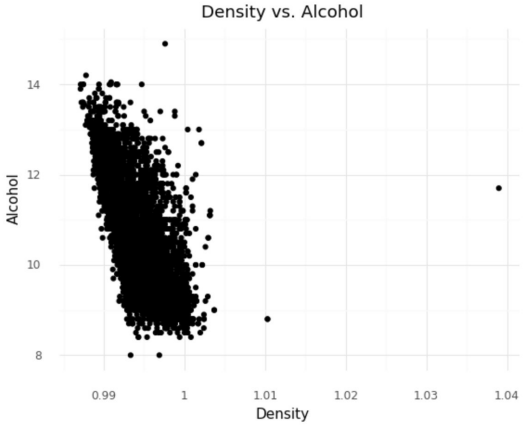
Difference in MSE is 0.18763



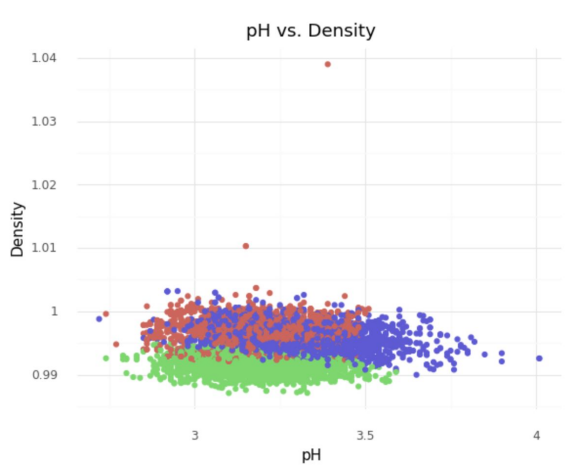
Calculating the Quality

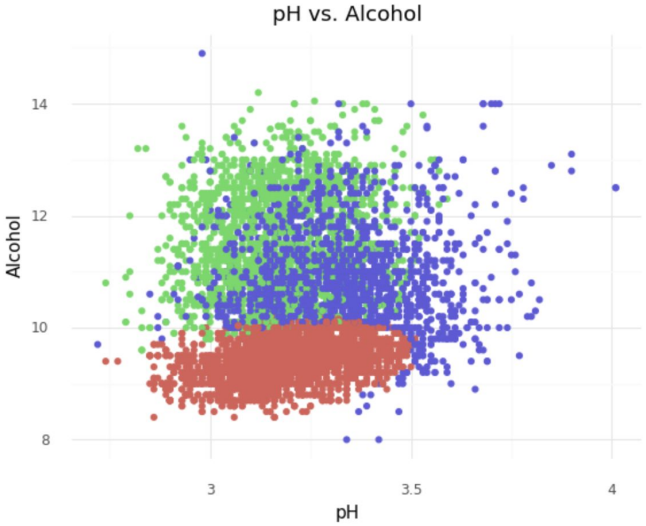


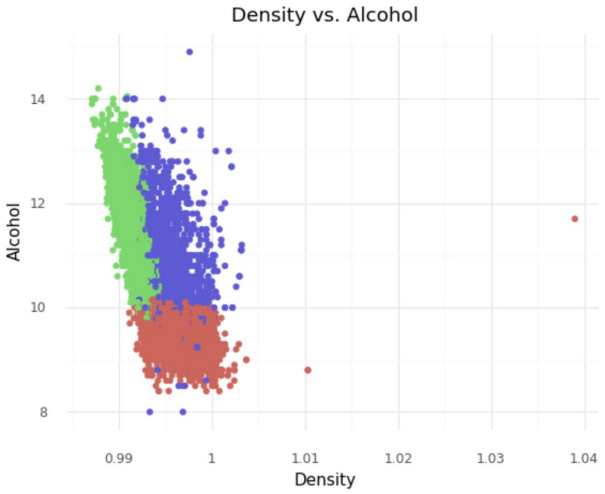




Calculating the Quality







factor(cluster)
0
1
2

Thank you!