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Project 1.1



Preliminary Presentation, August 2022

Blueberry Winery Strategy

Agenda

01

Project Background

02

Description of the Project Data

03

6 Preliminary Findings

04

Recommendations

01 Project Background

Project Background

01

Blueberry Winery is a start-up winemaker in Portugal (Vinho Verde)

02

Task1: limitations of presented data set

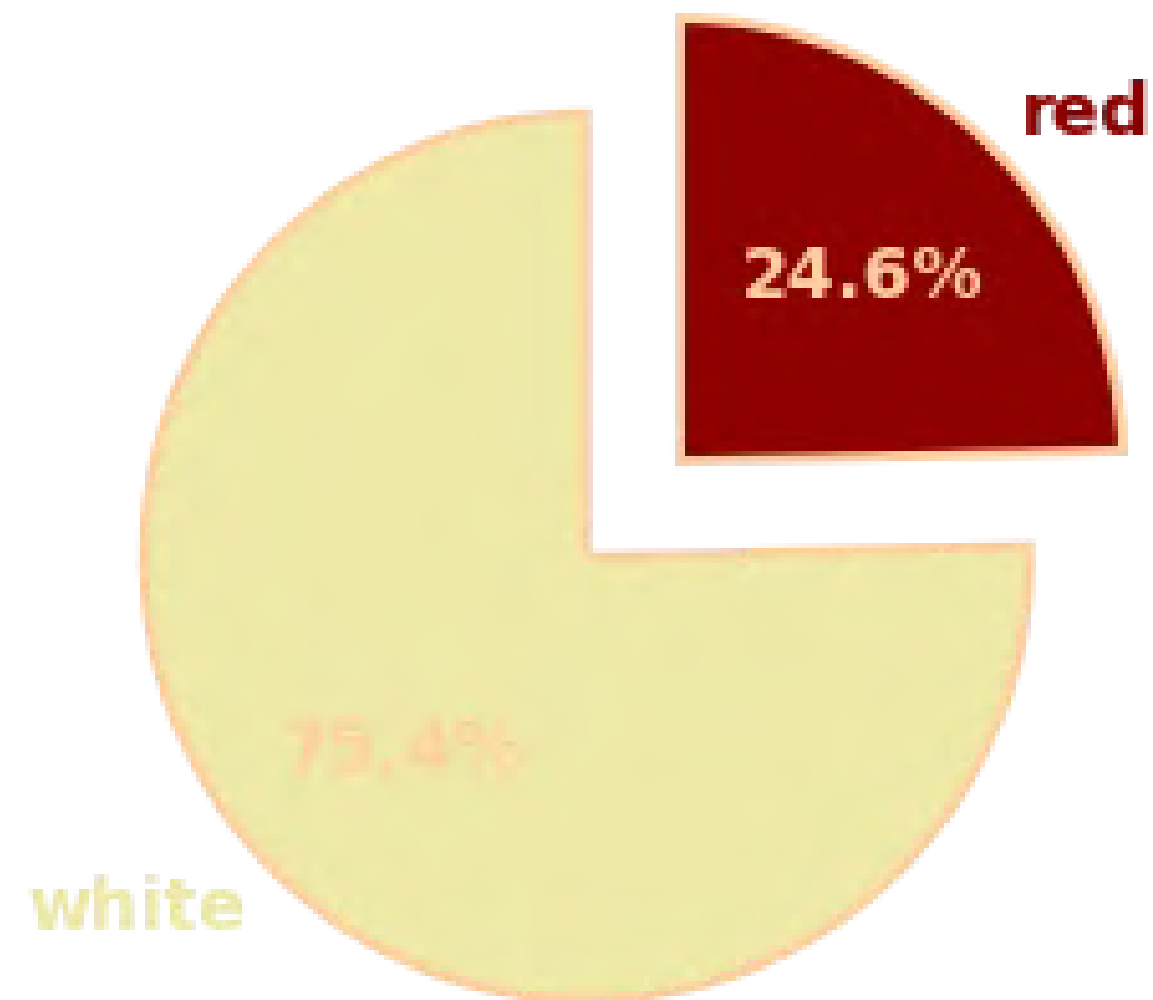
03

Task2: based on the wine samples analyse and present the findings of what makes a good wine

02 Description of Data

Description of Data - samples

quantity wines in the dataset



01

Sample size

- 1599 red wine and 4898 white wine
- Portuguese "Vinho Verde"

Description of Data - chemistry

02 11 Chemical features



1 - fixed acidity

2- volatile acidity

3 - citric acid

4- residual sugar

5 - chlorides

6- free sulfur dioxide

7- total sulfur dioxide

8- density

9- pH

10 - sulphates

11- alcohol

- fresh
- sour
- spritzy
- full body

- sweetness
- dryness

- preserve wine from oxidation

- unwanted bacteria

- from sugar
- higher in red

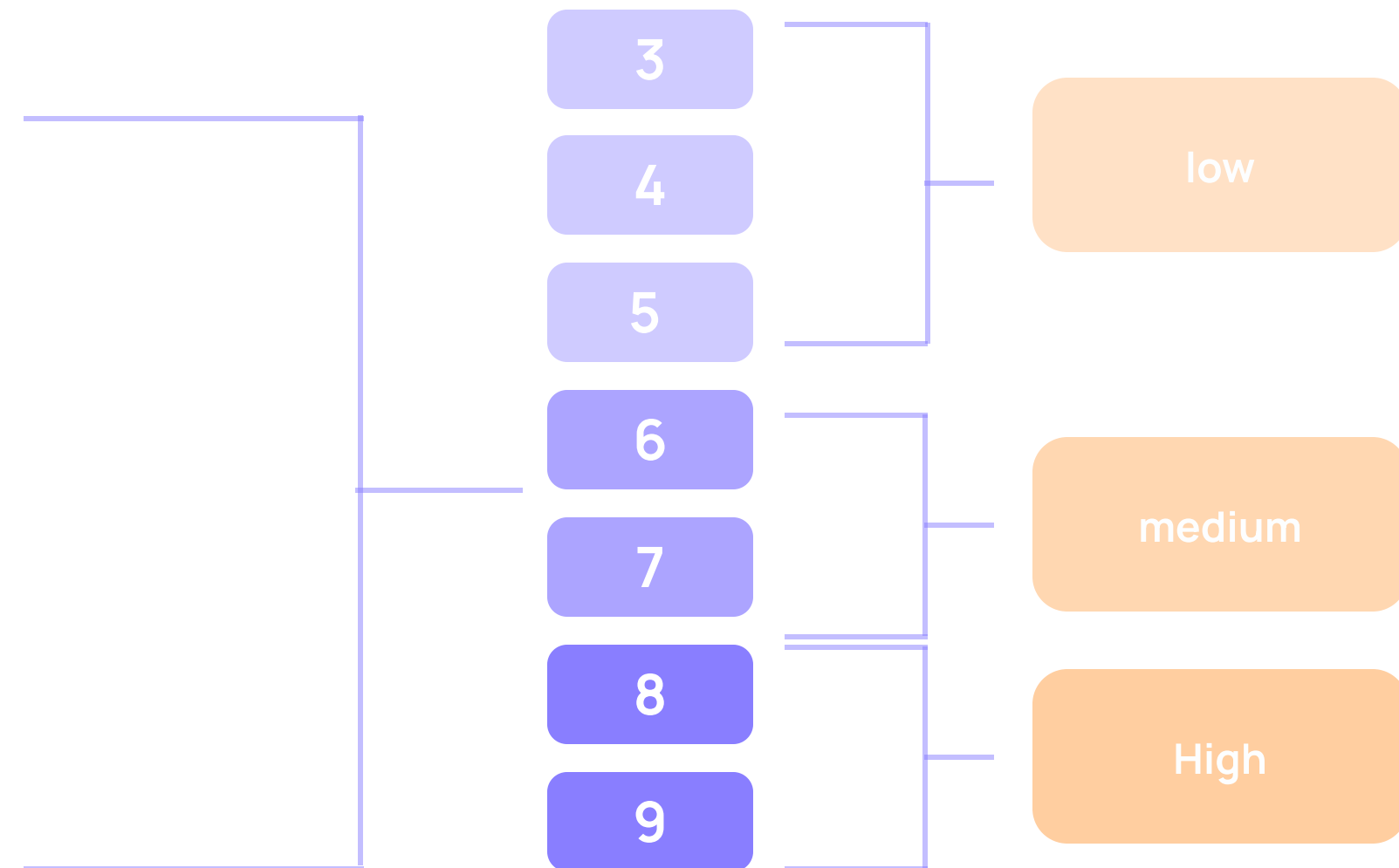
Description of Data - quality

03 Ratings

- at least 3 evaluations made by wine experts



Score



03 Preliminary Findings

1.

Wine Quality

01

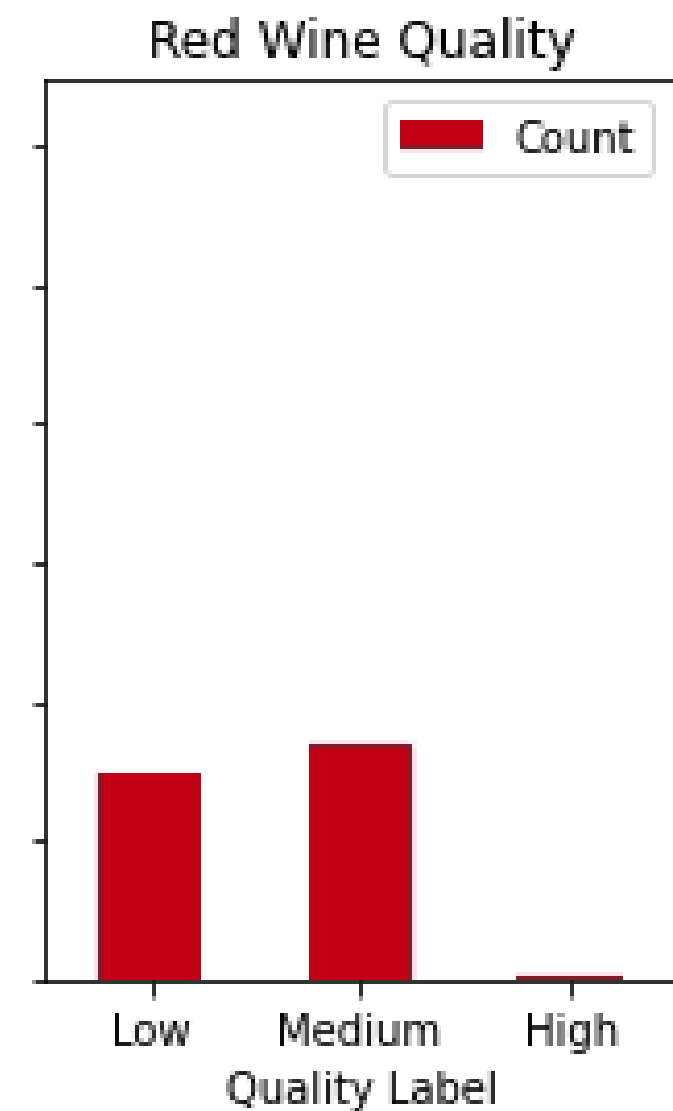
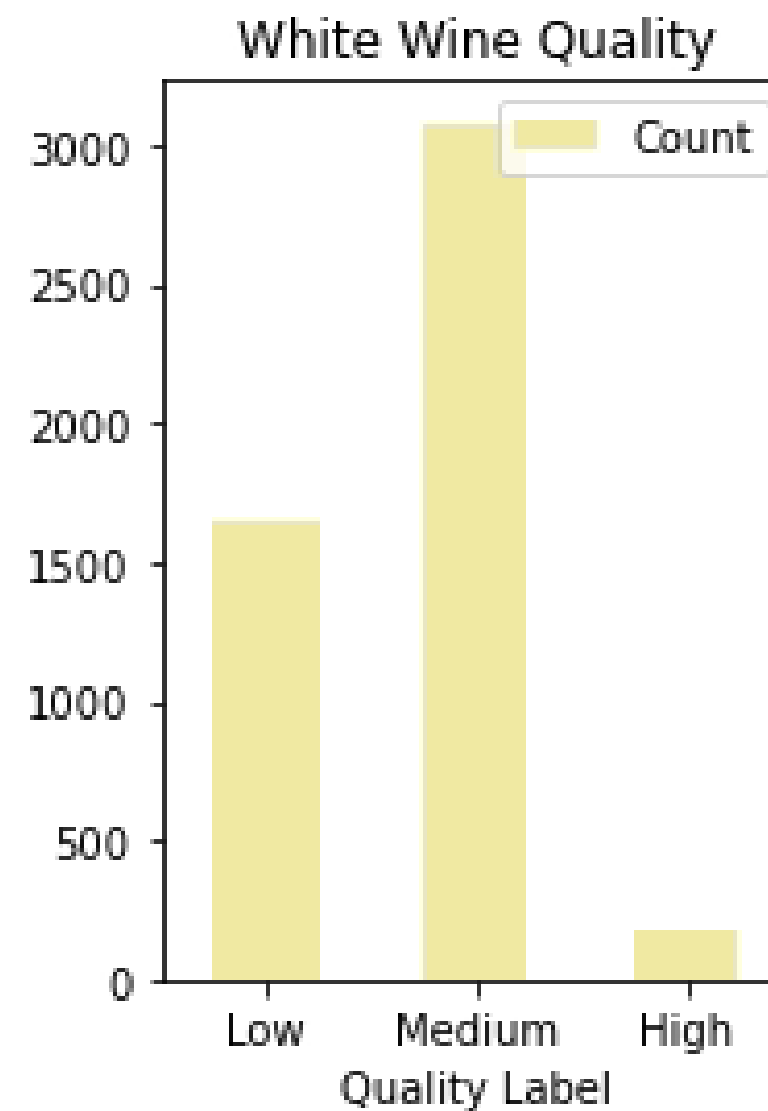
White Wine Quality

- Medium quality wine has the highest count. Low quality wine is in second place and high quality wine is in the last place

02

Red Wine Quality

- The same quality configuration as white wine



1.

Wine Quality

03

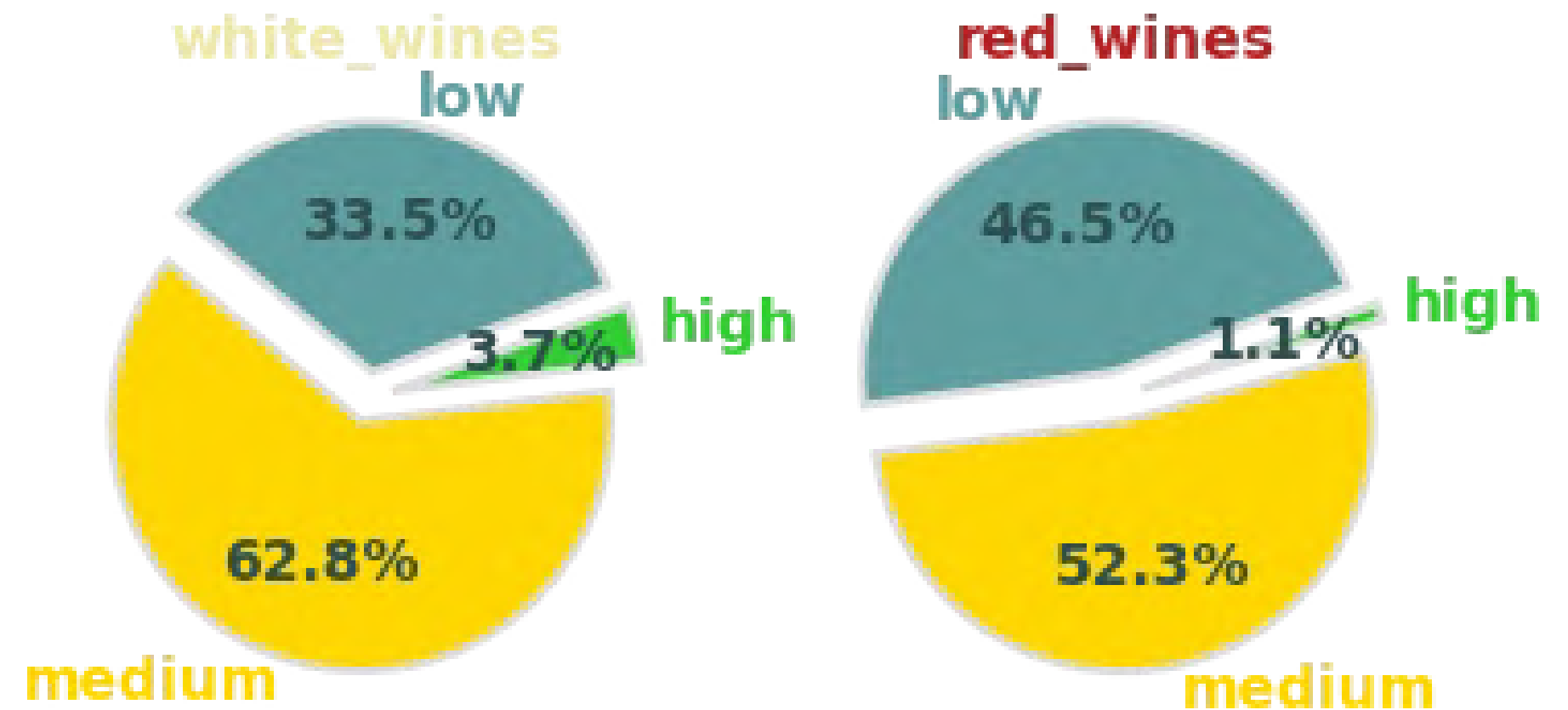
Comparison of White -and Red Wine

- based on the percentage of White/Red Wine
- more high quality White Wine compare to Red Wine
- the same apply to medium quality wine
- less low quality White wine than Red wine

04

Conclusion

It is in alignment to the assumption that Vinho Verde region produces high quality White wine and is the most popular and well known in Portugal



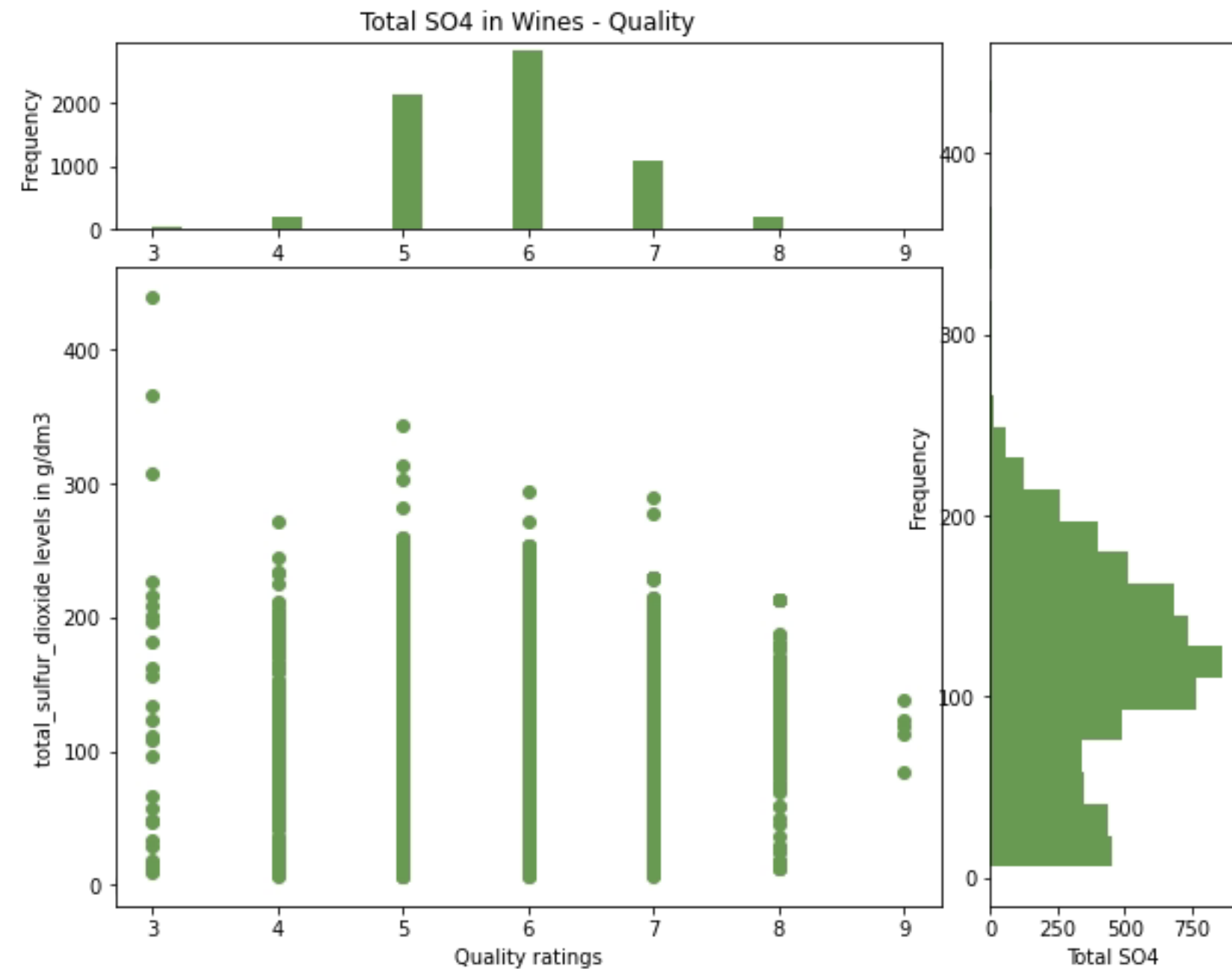
2. Higher SO4 in low quality wines

01

- Low-quality white wines have a higher total sulfur on average
- big difference in averages between groups

02

Free Sulphur is significantly lower in red wines



2. Higher SO₄ in low quality wines

01

- Low-quality white wines have a higher total sulfur on average
- big difference in averages between groups

02

Free Sulphur is significantly lower in red wines

03

Conclusion

- preservatives taste might be strong in low-quality wines through
- Vinegary/ old taste crucial for quality

average levels of total SO₄ in wines in g / L

	Quality	All wines	White Wines	Red Wines
Low		124	149	45
Medium		116	129	33
High		118.5	122	21.5

3.

Residual Sugar

01

Red Wine Residual Sugar

- there are outliers, but in general the proportion of residual sugar is relatively low in comparison to white wine
- no significant difference between the wine quality

02

White Wine Residual Sugar

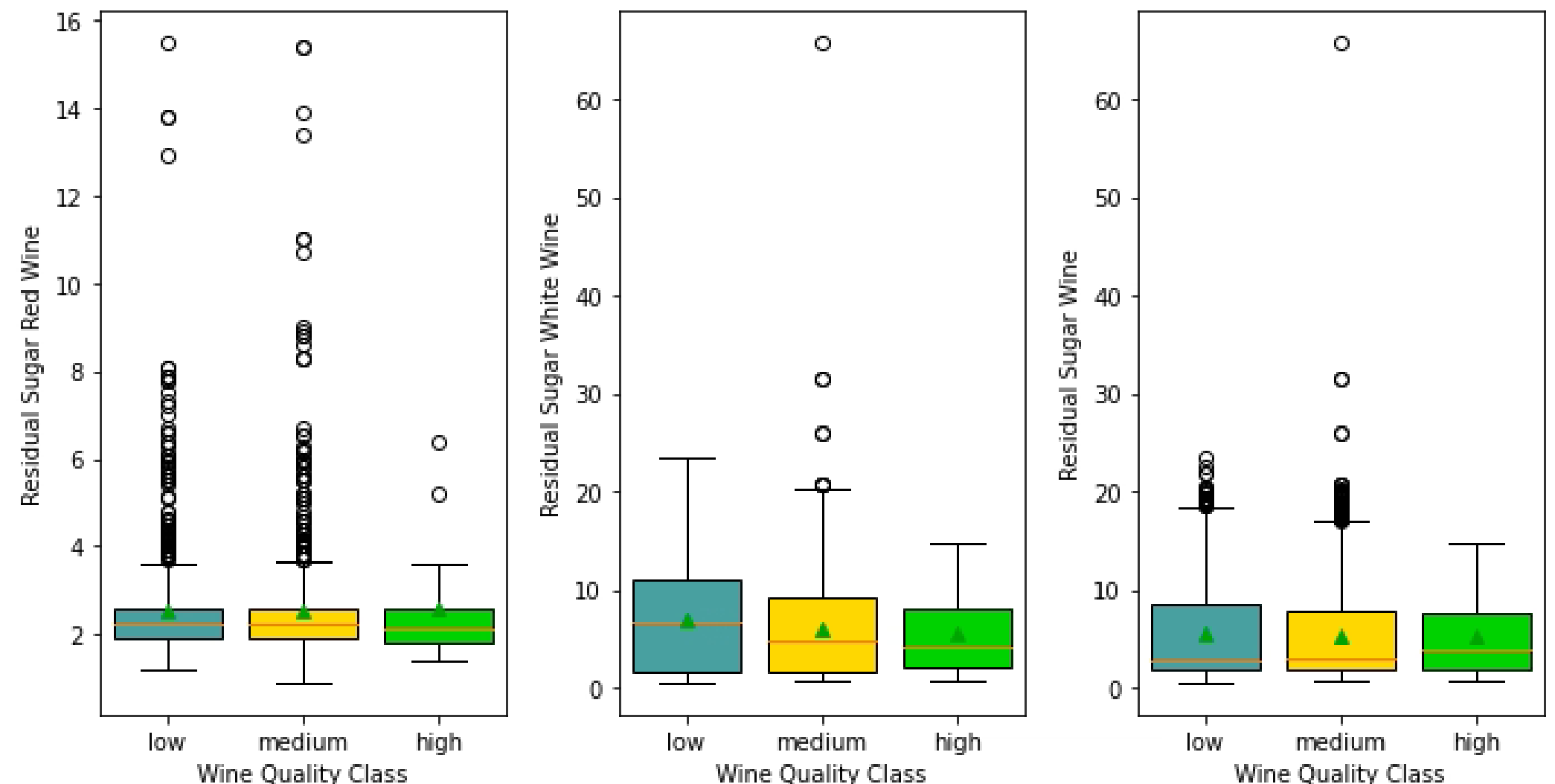
- more residual sugar compare to Red Wine
- minimal difference between the wine quality in general, the lower the residual sugar, the higher the quality

03

Both Wine's Residual Sugar

- similar to White Wine diagram
- the reason is probably because of the high sample count of White wine
- White wine is sweeter than Red Wine, because the higher the residual sugar, the sweeter the wine

Wine Quality - Residual Sugar Red/White Wine



3.

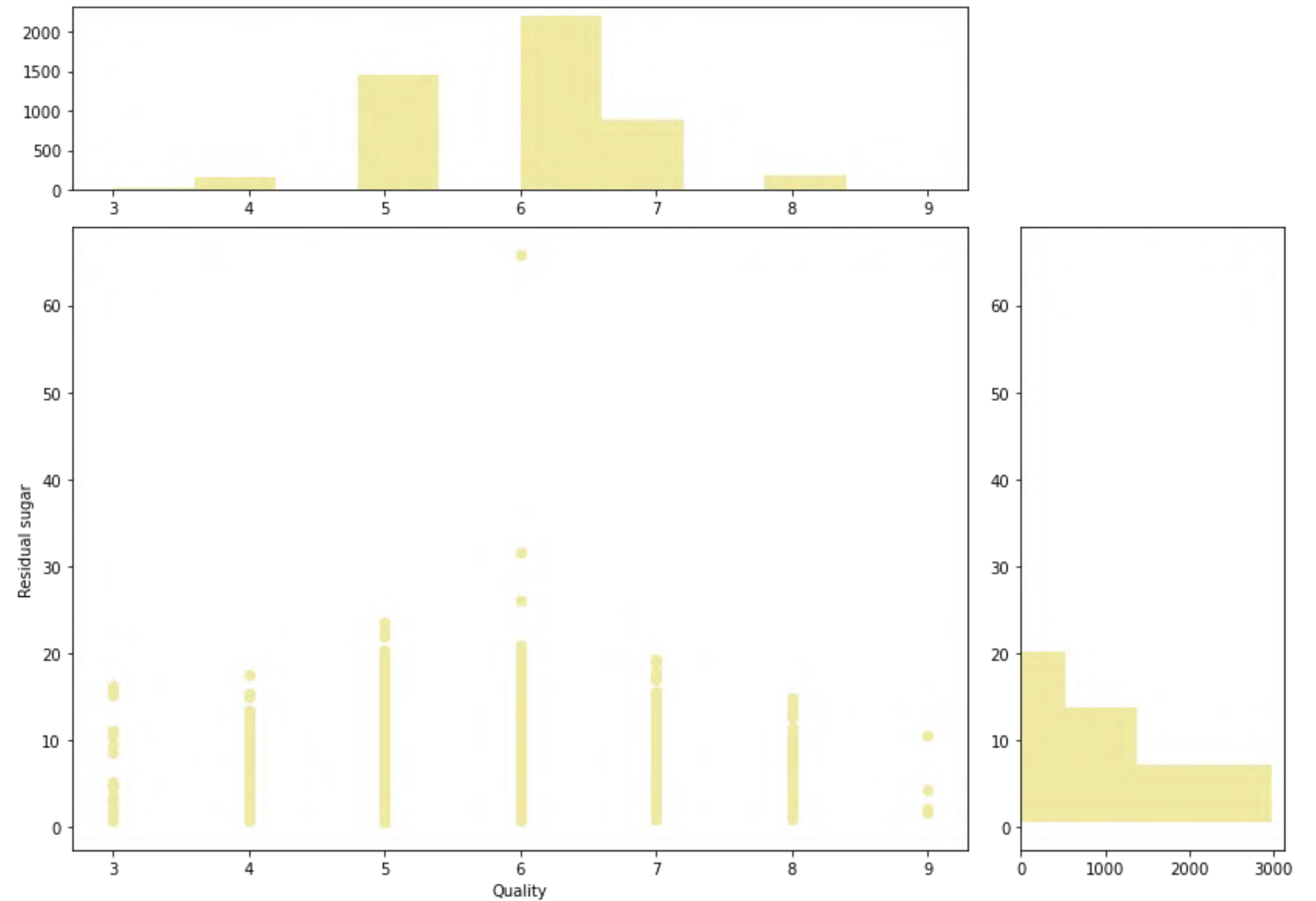
Residual Sugar

01

Findings

- the diagrams show again, that high quality White wines have relatively lower residual sugar level.

White Wine Residual sugar - Quality

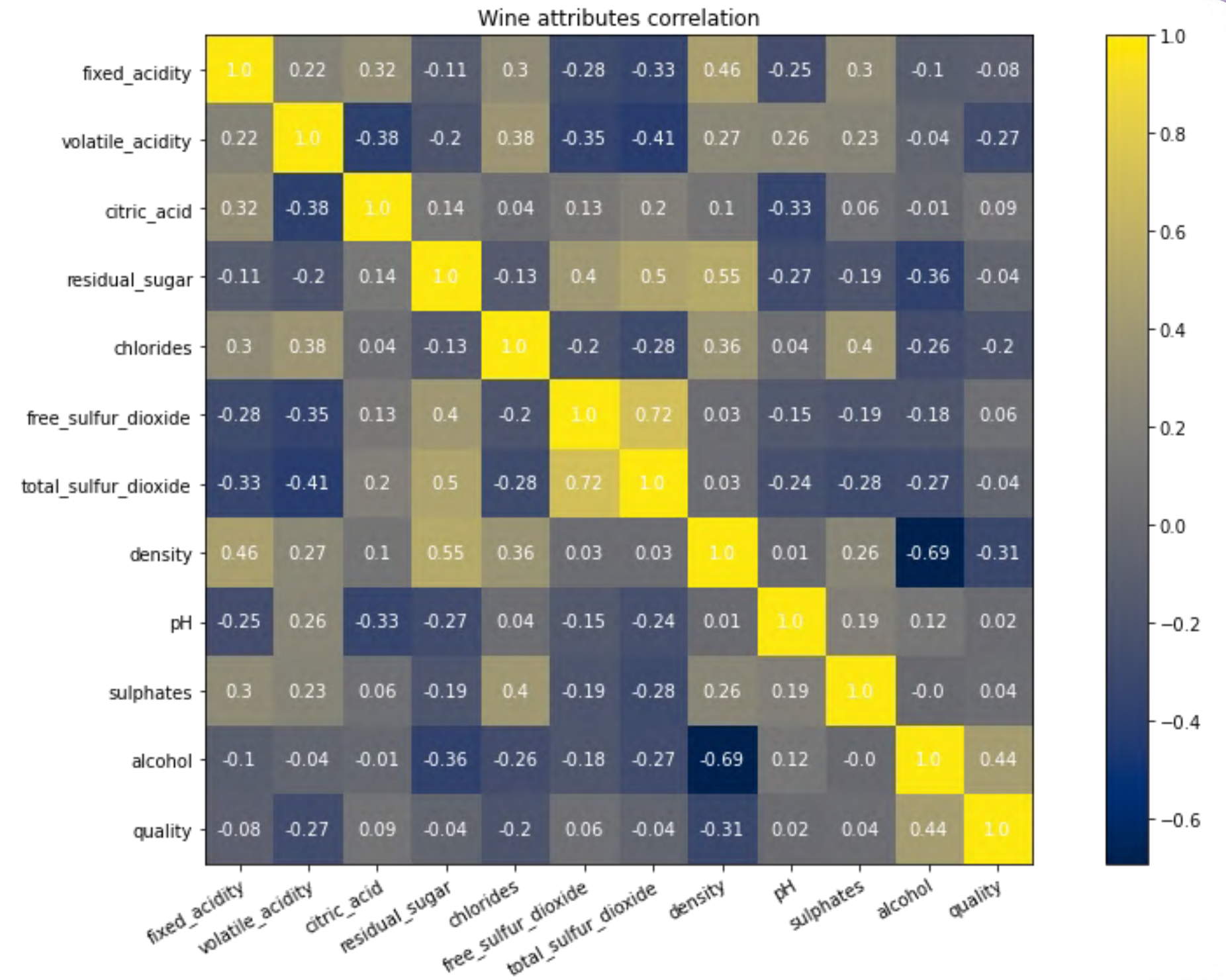
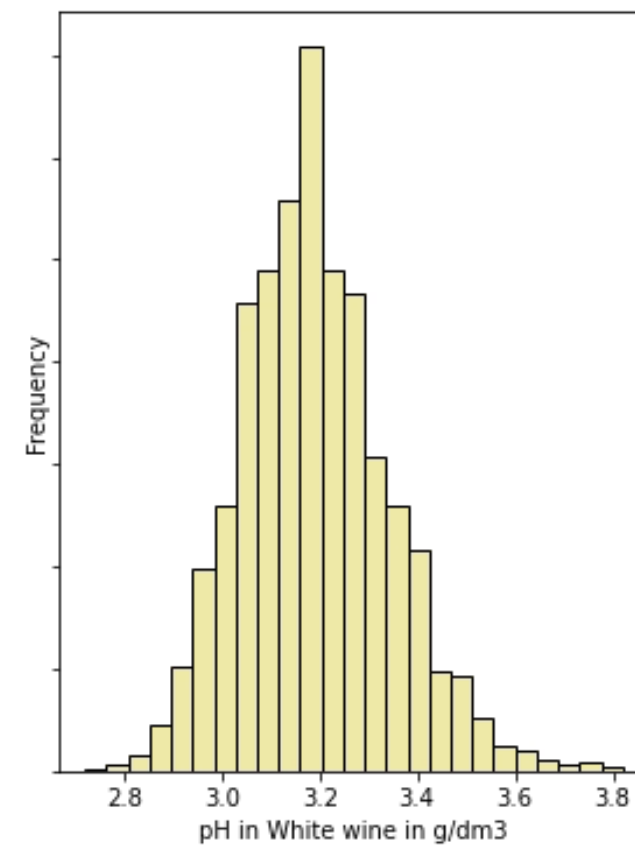
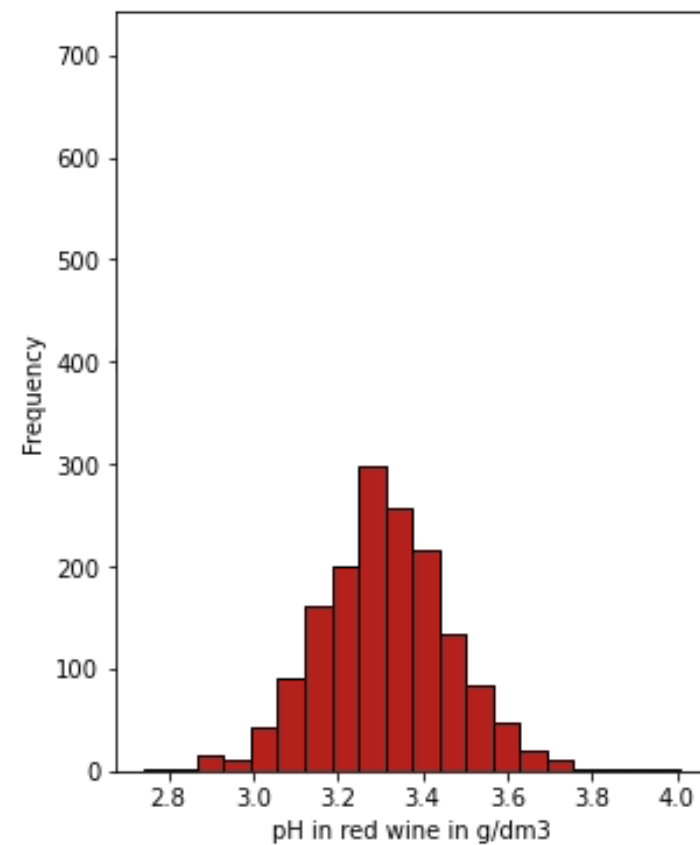


4. Similar pH value in red and white



Conclusion

- pH Value has no correlation to quality
- low pH solutions = lower unwanted bacteria



5.

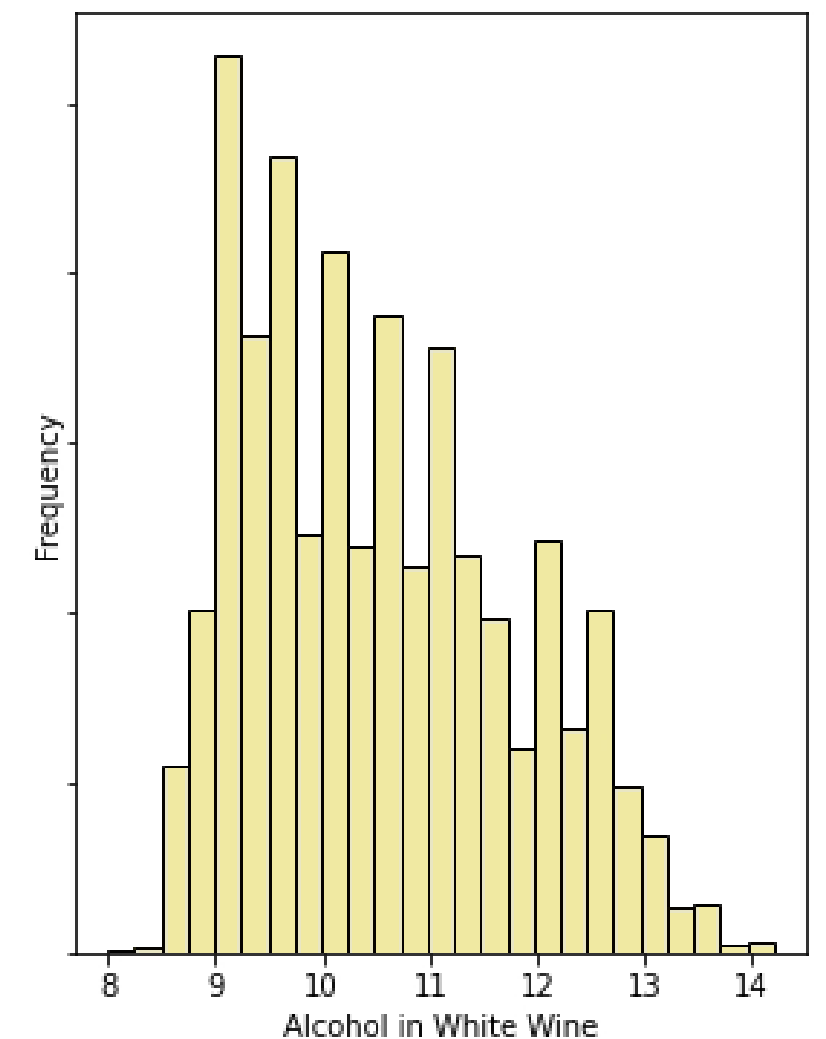
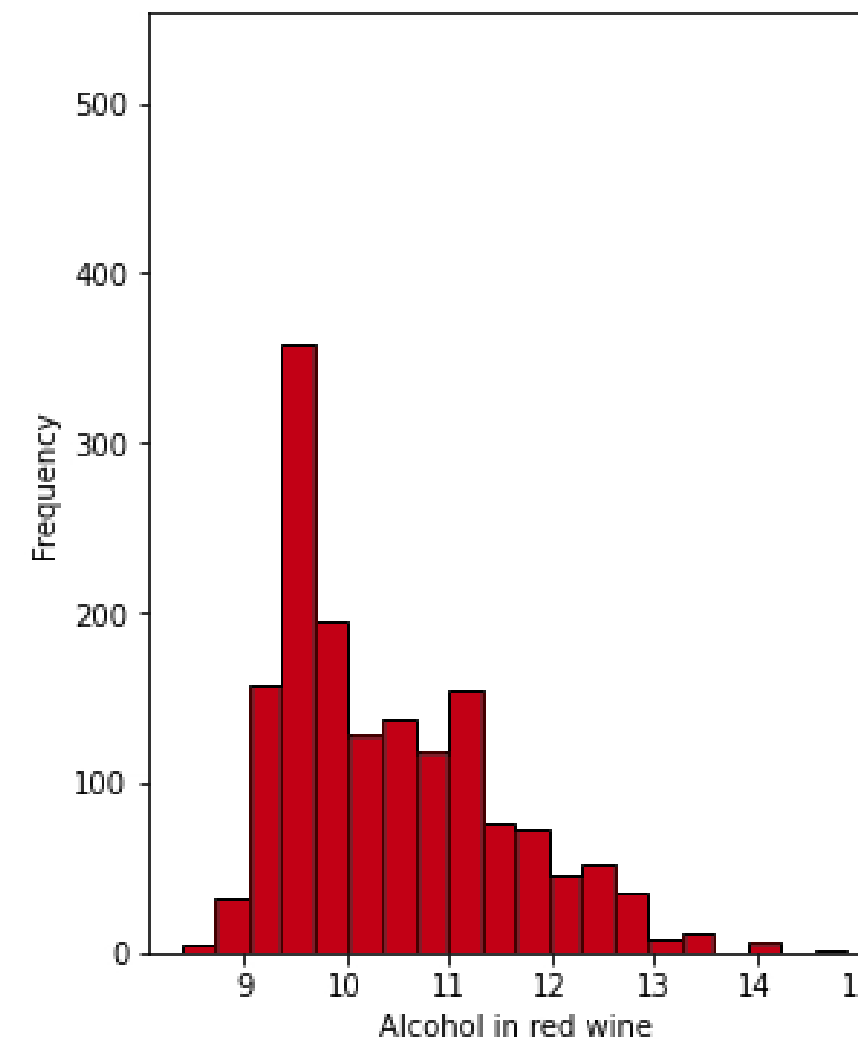
Alcohol

01

Findings

- White Wines have a higher frequency. The reason for this could be the higher sample count
- Both Red and White Wines have a similar alcohol percentage, if the frequency is not considered
- In reality, Red Wines have, in general, a higher alcohol percentage than White Wines
- Reasons:
 - White Wine is sweeter than Red Wine, that means white wine has more residual sugar
 - Red Wines in contrast have lower residual sugar level because the sugar will be converted to alcohol (fermentation)
- These also align to the residual sugar findings above

Alcohol in Wine



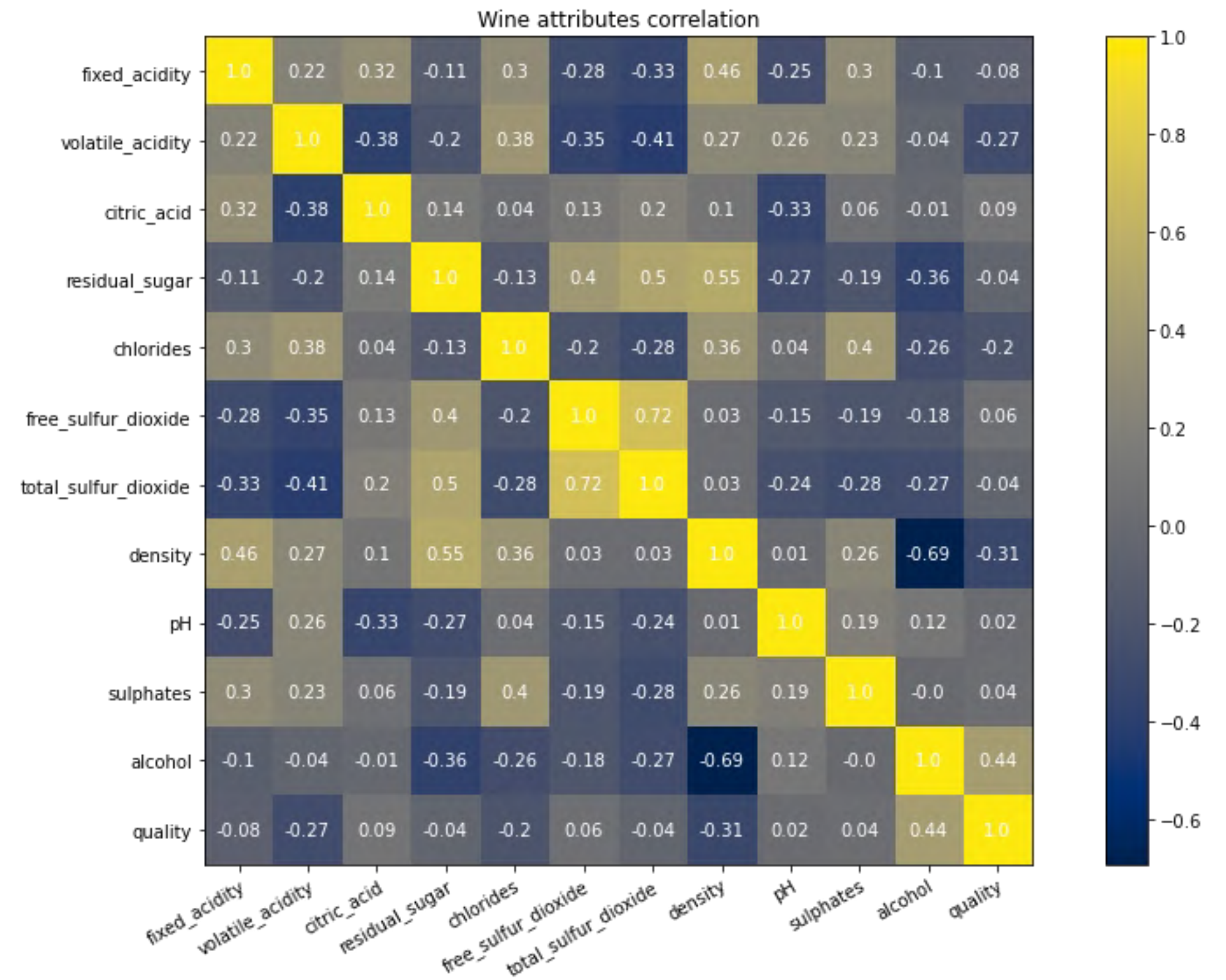
5.

Alcohol

01

Findings

- Alcohol correlate to quality. That means, alcohol percentage play a great role on wine quality



04 Recommendations

4. Recommendations - missing infos



Pricing

Grape Types

Phenolics/
Tannin

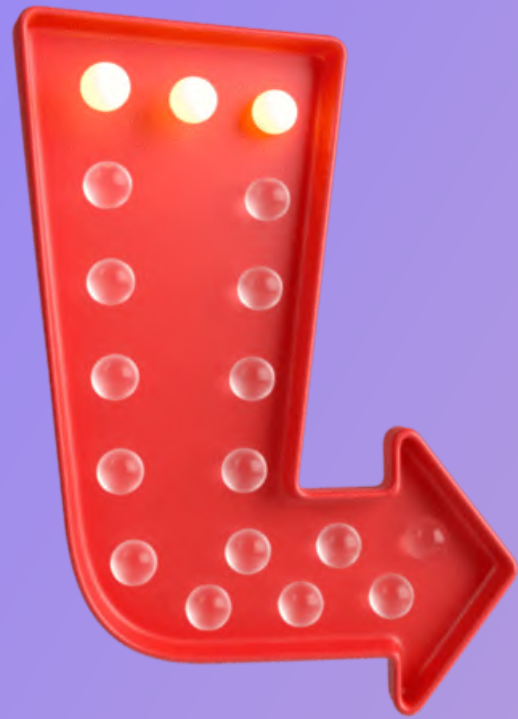
4. Recommendations - general



More samples
for red wines

Strong
correlation
between SO₄
and quality

Focus on white
wine
production



Thank You