
Wine
Für dich, Für uns, Für alle
Bluberry Winery
Code Analytics
Arun & Jay
12.02.2021

AGENDA

01. **Introduction**

What, Why our story needs to be heard

02. **Data Collection**

What we found

03. **Methods/Analysis Plan**

How we want to find the valuable insights from the data

04. **Data Analysis**

Results - Exploratory analysis – Machine Learning Methods

05. **Price Prediction**

How we want to continue to next step

01. Introduction

- Background - Why our story needs to be heard
- Goal - What we want to tell

Background

- **Blueberry Winery** is one of the start-up Wine Manufacturing company in Portugal.
- **Blueberry Winery** is trying to enter the business with a good amount of analytics & research on domain knowledge

Goal

- **Blueberry Winery** wants to achieve the best 'Customer Satisfaction' towards the Quality and Price
- To Analyse and find the composition of factors that contribute to the quality wine

02.
Data Collection

- What we get

Wine Types

White Wine

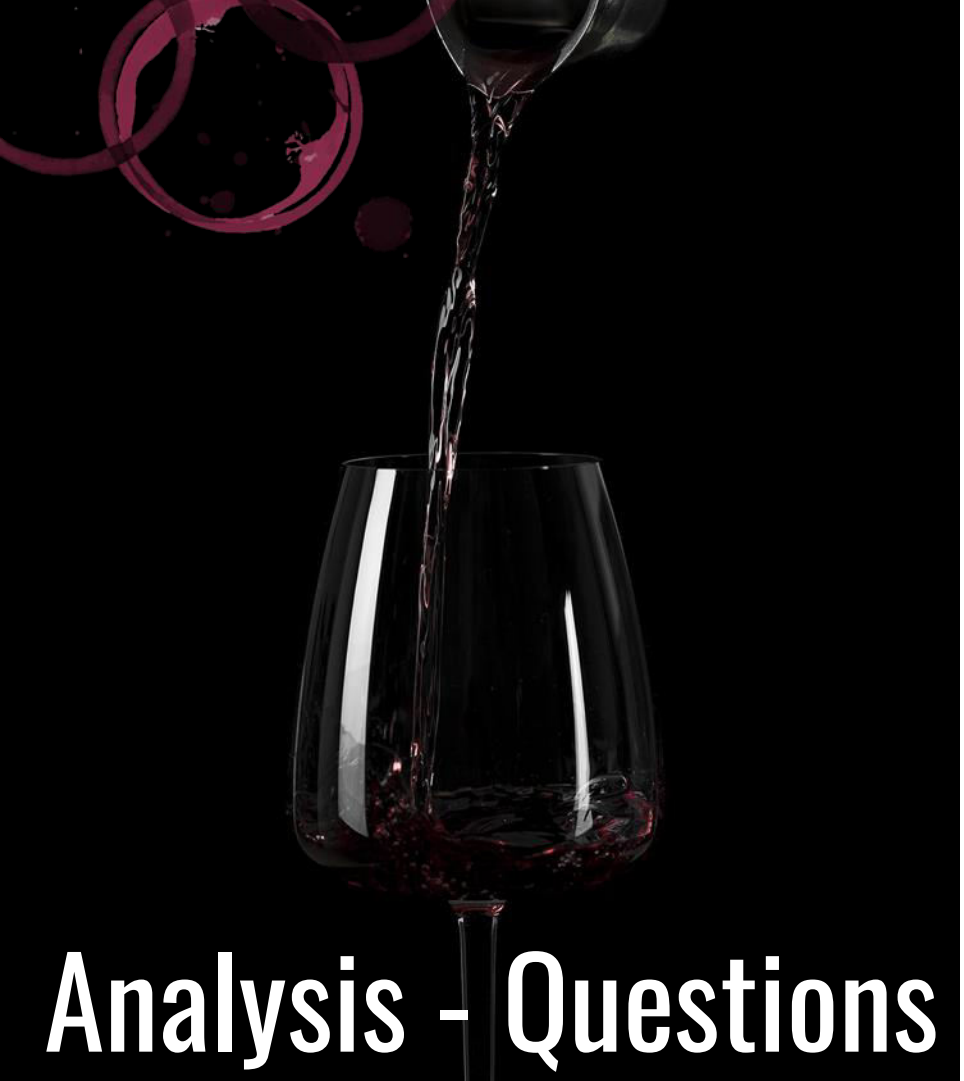
DataAttributes / Ingredients

- Fixed Acidity
- Volatile Acidity
- Citric Acid
- Residual Sugar
- Chlorides
- Free sulfur dioxide
- Total sulfur dioxide
- Density
- pH
- Sulphates
- Alcohol
- Quality

Red Wine

03. Methods/Analysis Plan

- How we want to find the valuable insights from the data



Analysis - Questions

Question 1

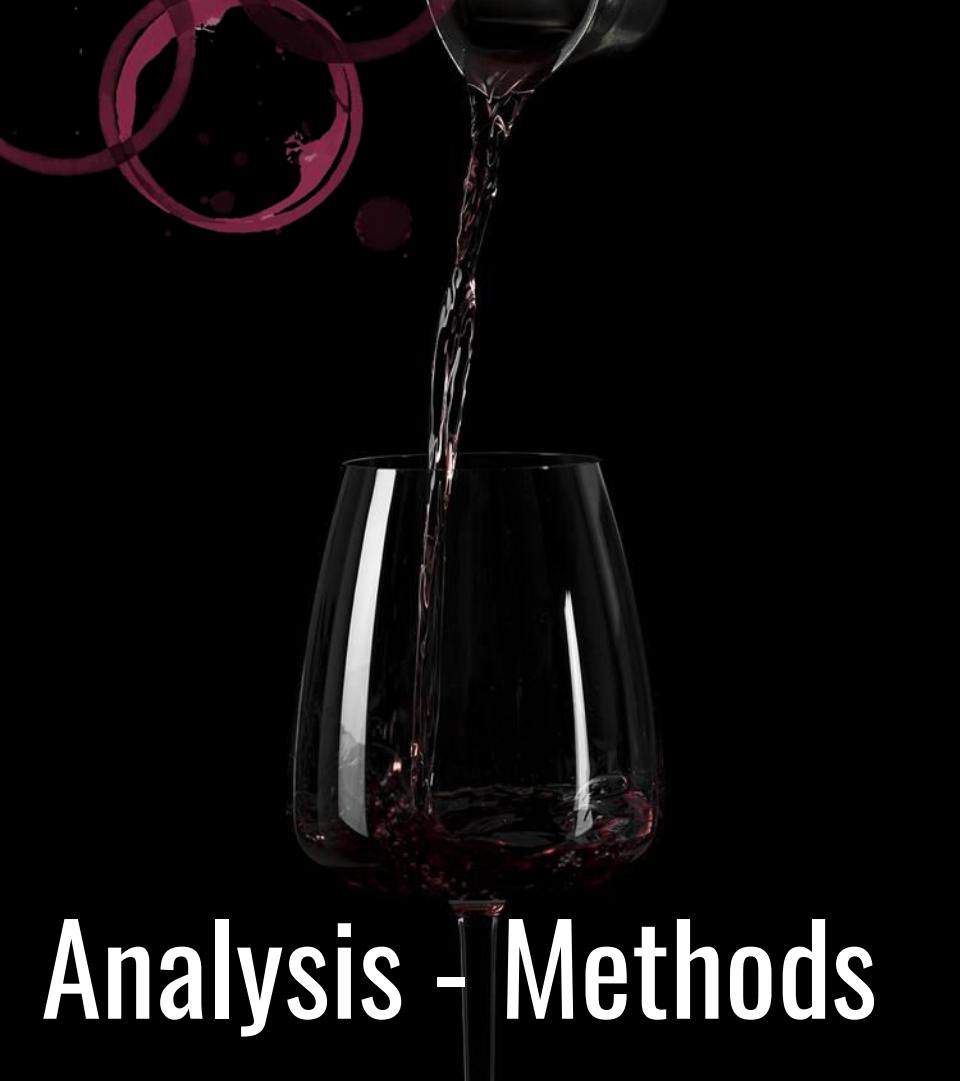
Which factor or combination of factors affect the quality of red & white wines?

Question 2

Do the different types of wines have different factors affecting quality?

Question 3

Is there any other interesting trends that exist in other columns besides quality?



Analysis - Methods

Method 1

Using Exploratory Data Analysis to find the distribution of factors of each Variable

Method 2

Using Machine Learning Methods to find the Best Composition factors to contribute the quality wine

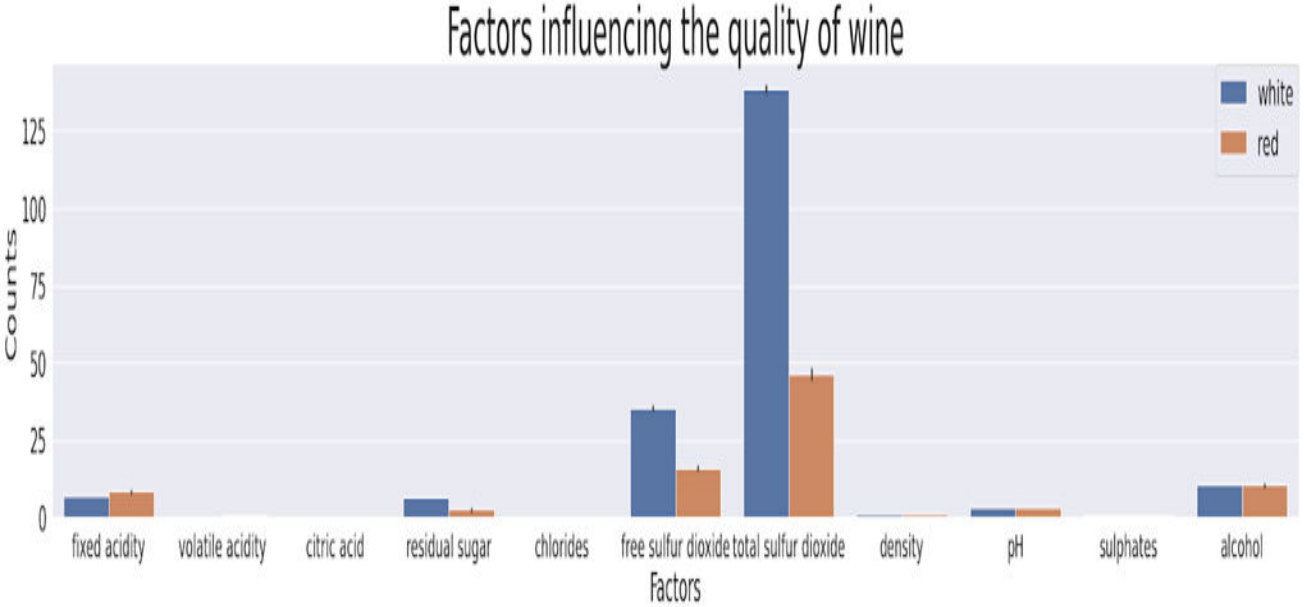
Method 3

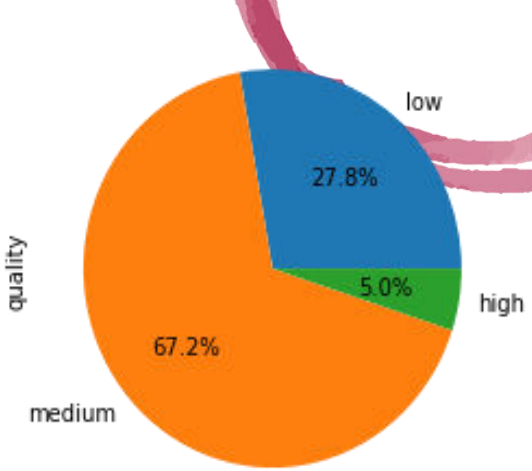
Explore wine Quality using Machine learning method,testing

04.
Exploratory Data Analysis

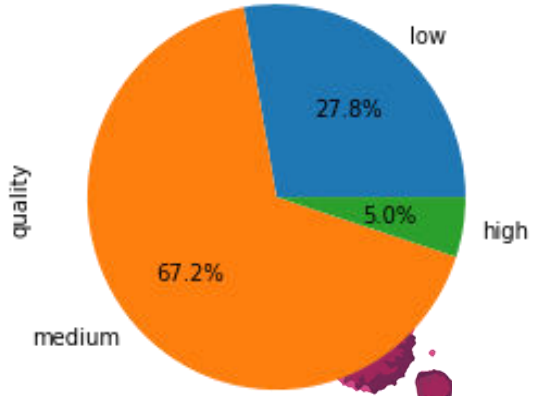
- Results - Exploratory analysis

The tendency of variables in the red and white wine





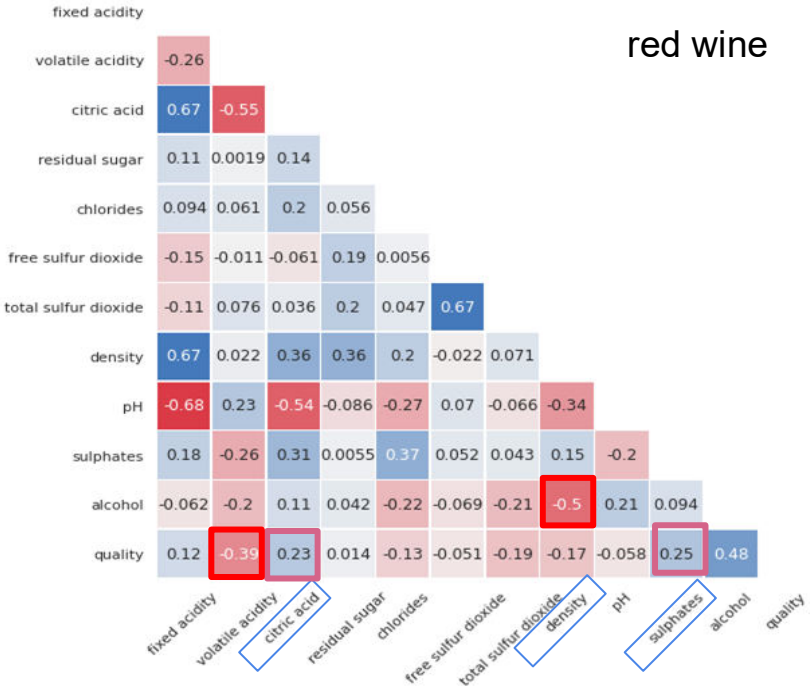
Red Wine - Quality



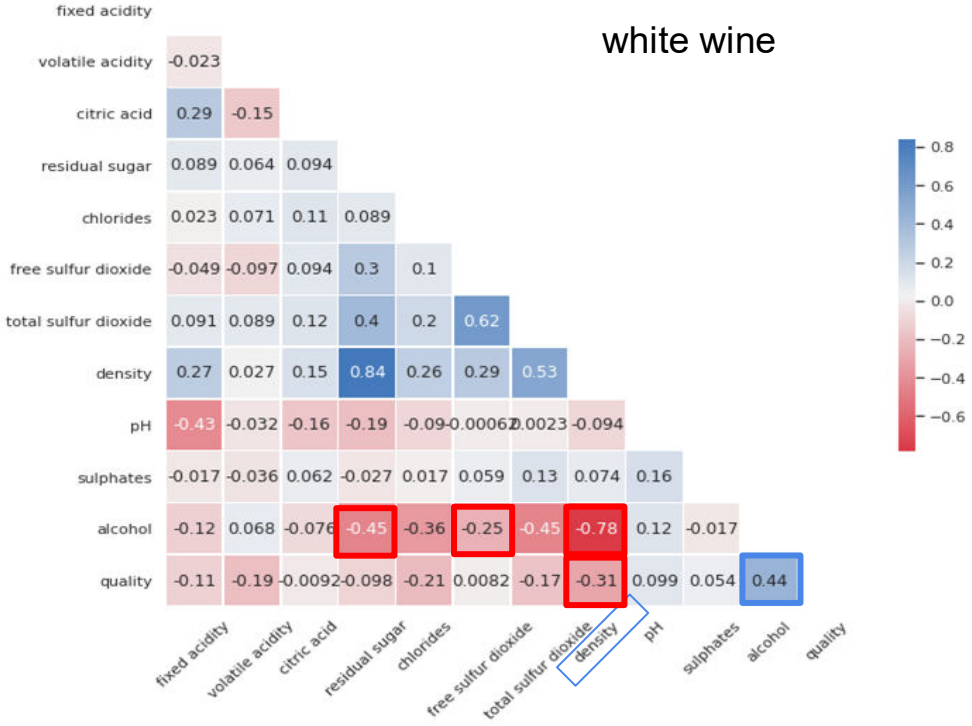
White Wine - Quality

Correlation between all variables for red & white

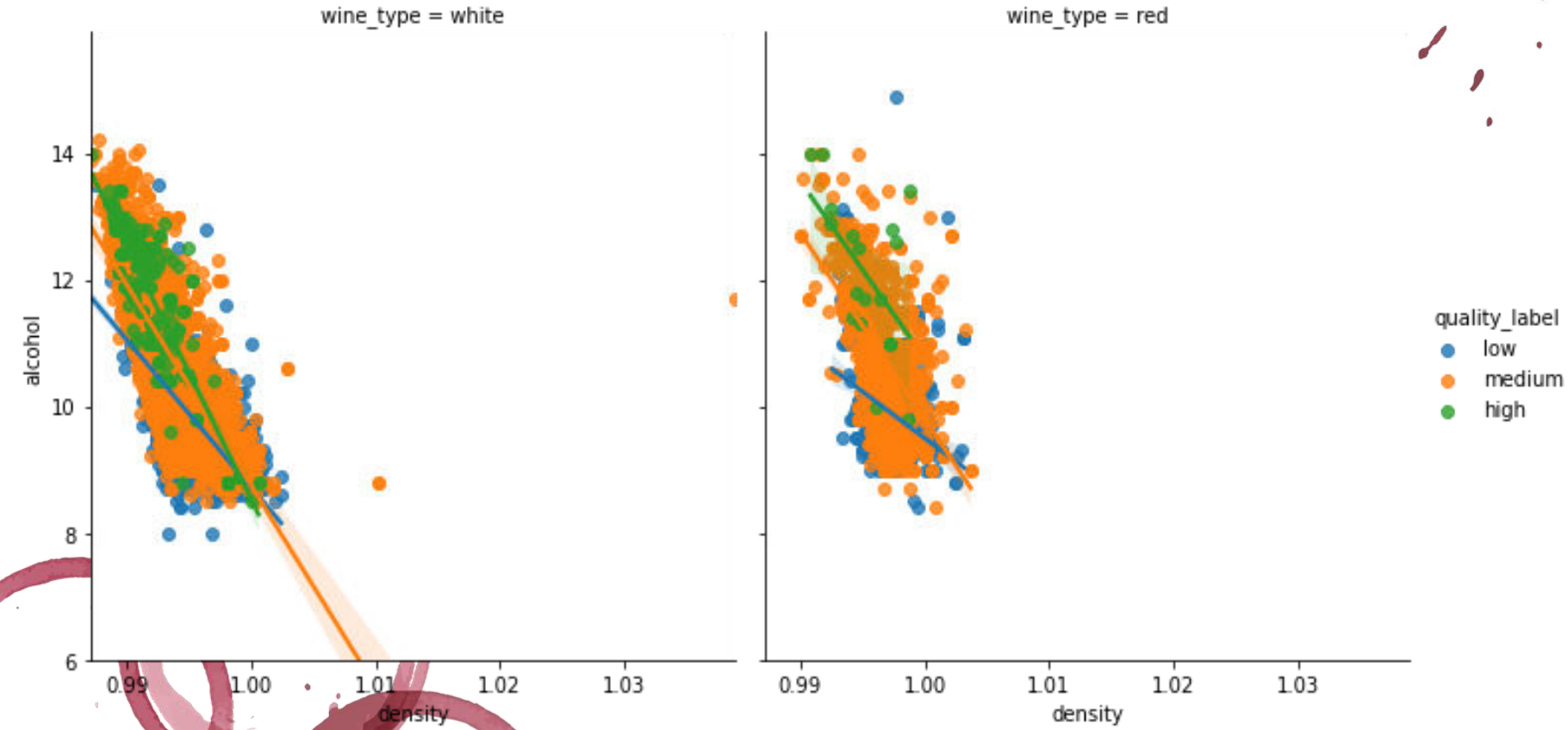
red wine



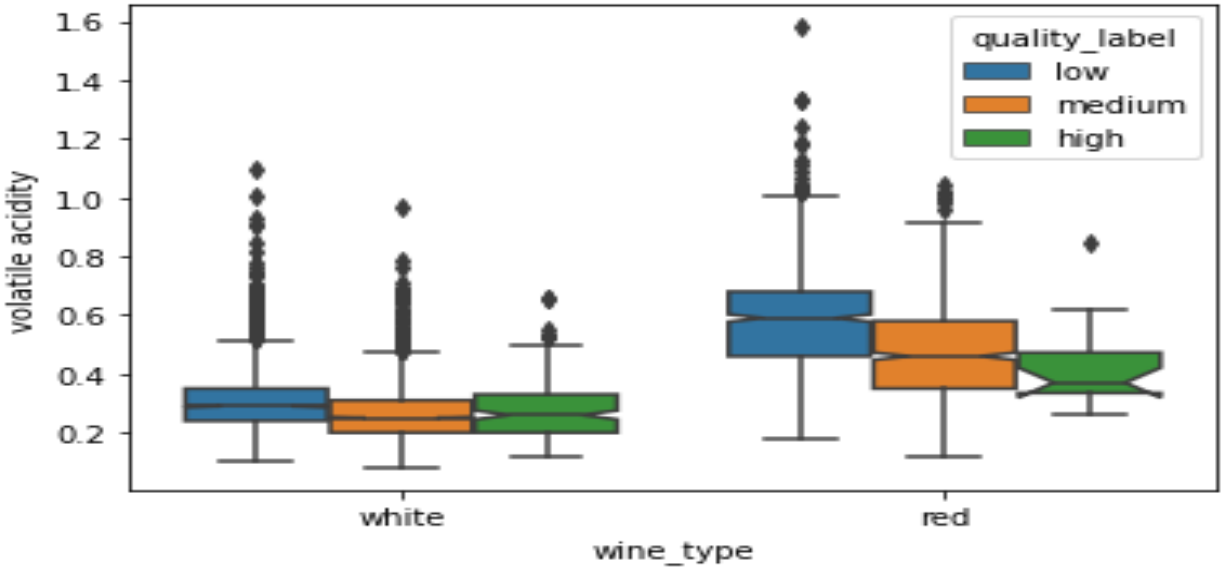
white wine



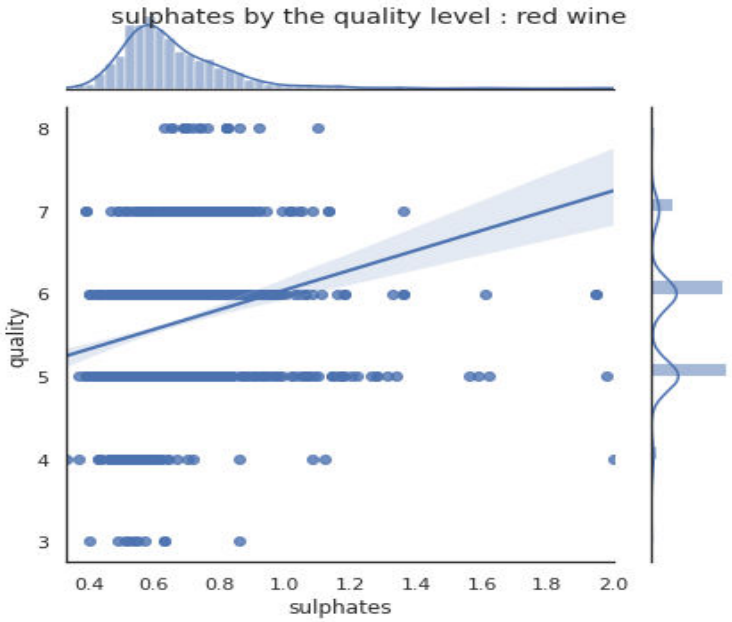
Critical factors influence the quality

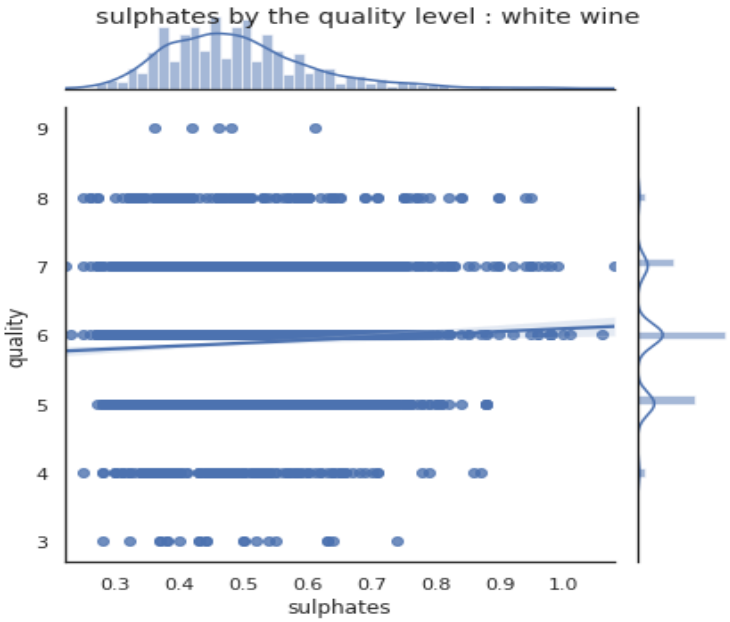


Effect of Volatile Acidity on wine quality

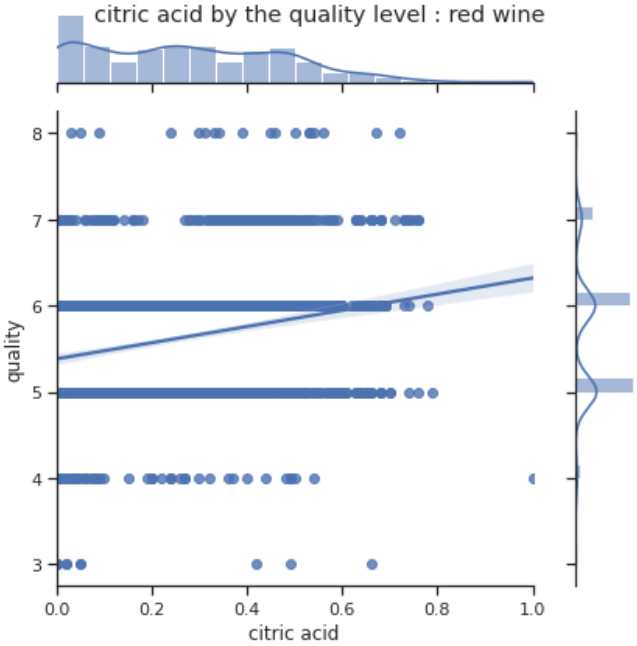


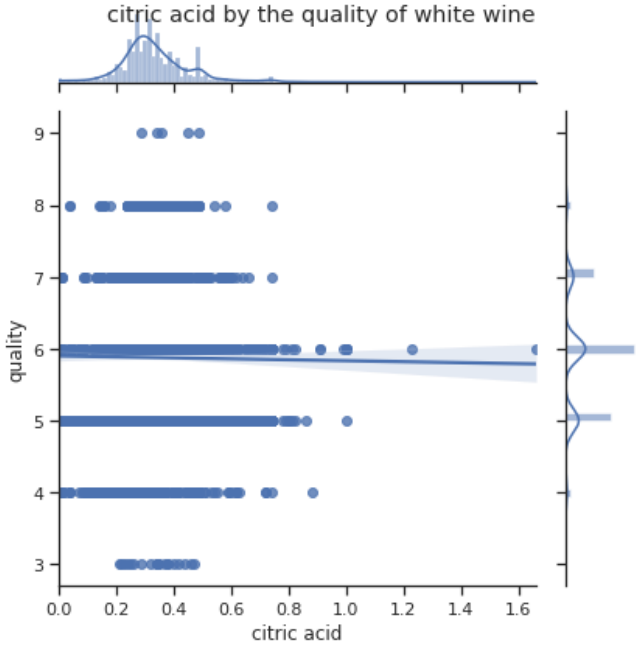
Effect of sulphates on wine quality





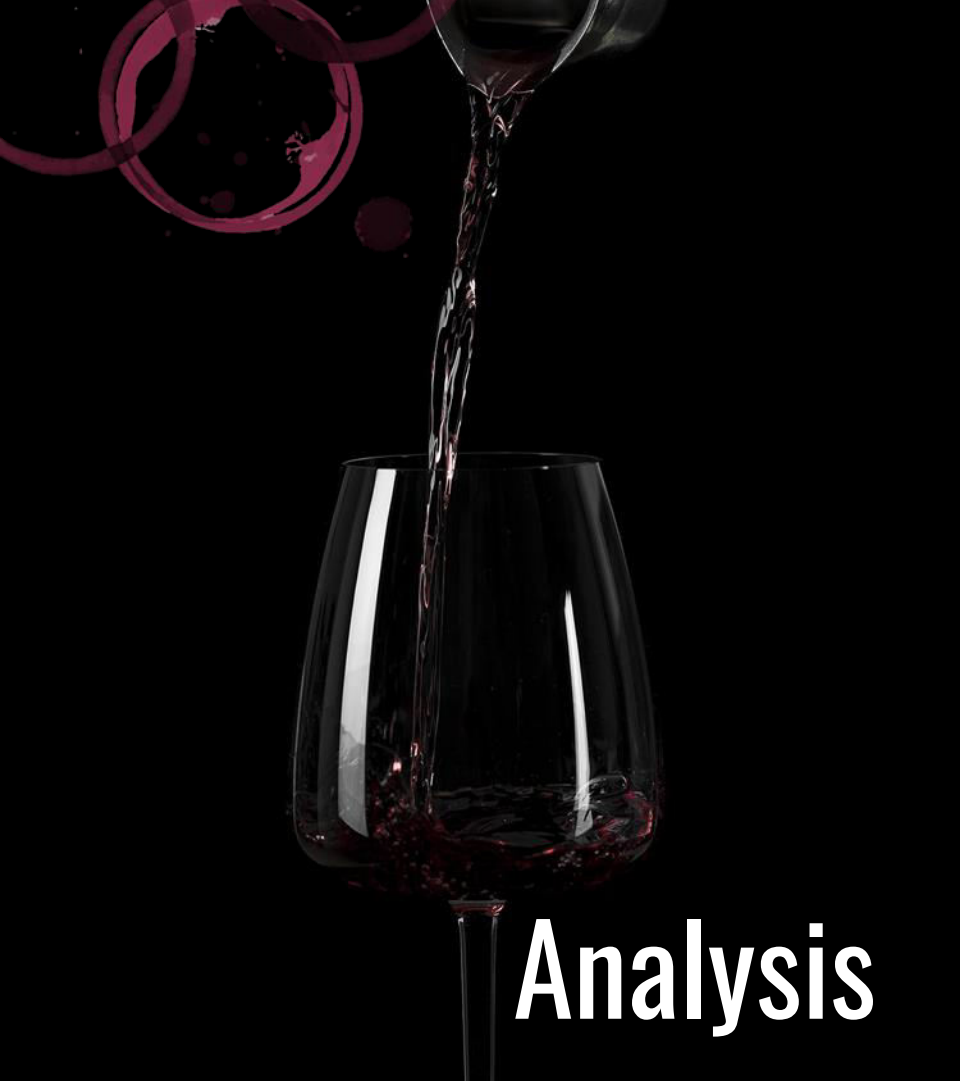
Effect of Citric Acid on wine quality





05.
Back to Future

- How we want to continue to next step



Analysis

Method 1

Using Exploratory Data Analysis to find the distribution of factors of each Variable

Method 2

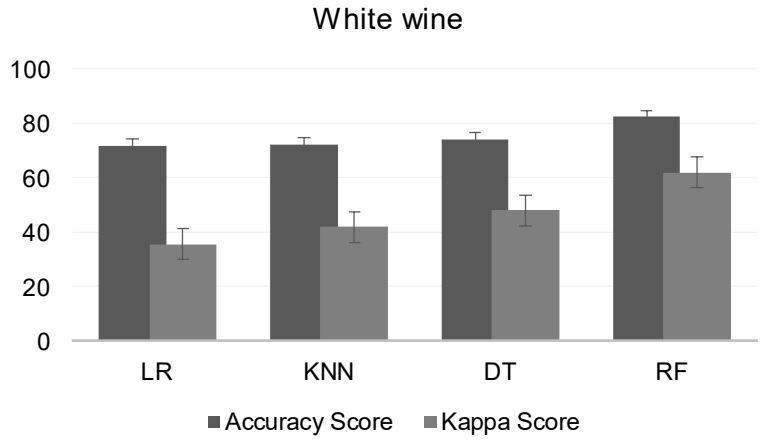
Using Machine Learning Methods to find the Best Composition factors to contribute the quality wine

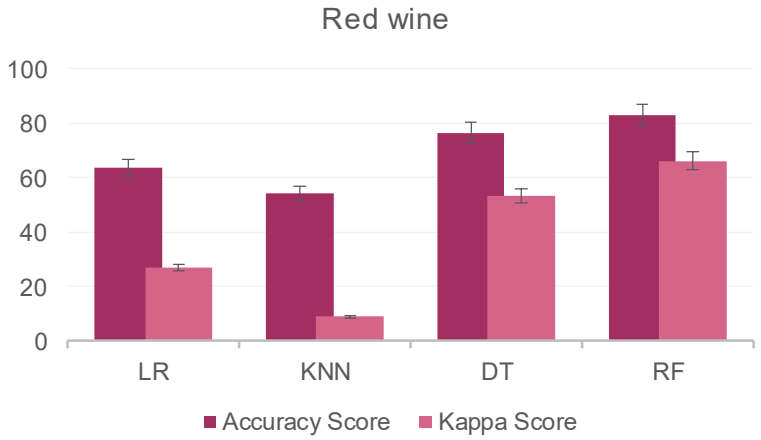
Method 3

Explore and Testing the Machine learning method which arrived

Important Factors towards predicting Wine Quality

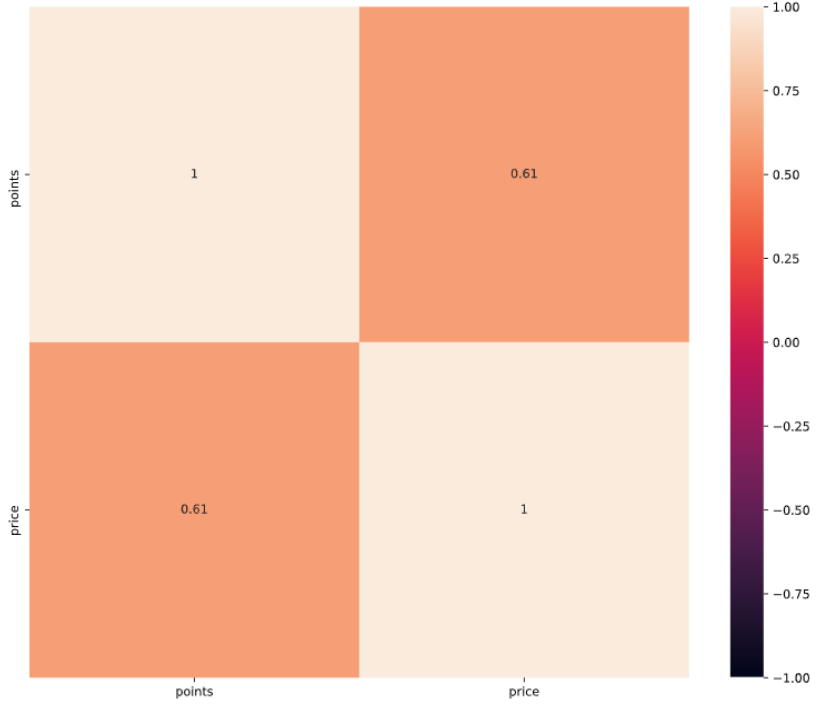
Machine Learning Model Scores



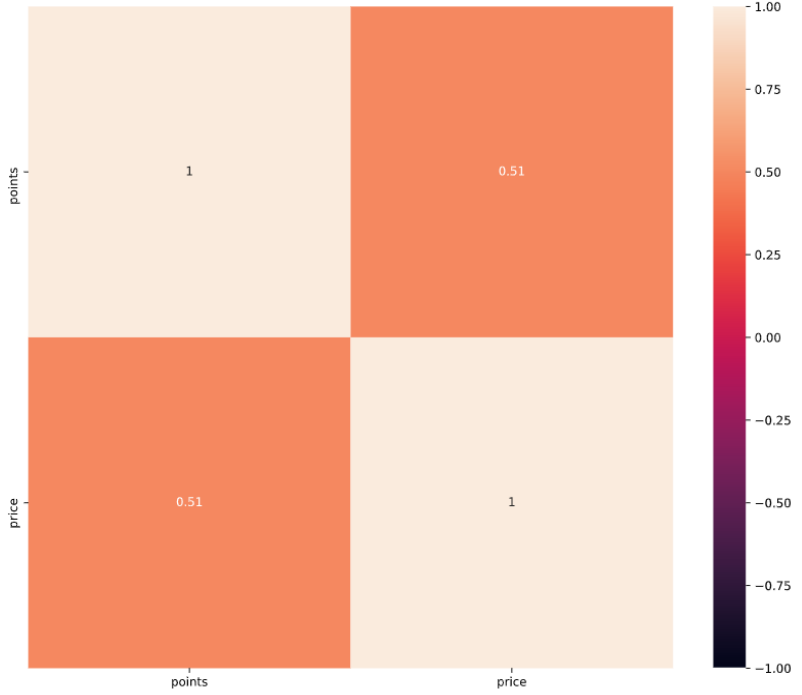


LR – Logistic Regression Algorithm
KNN – K Nearest Neighbor's Algorithm
DT – Decision Tree Classifier Algorithm
RF – Random Forrest Classifier Algorithm

Points Vs Prize - Correlation



White Wine



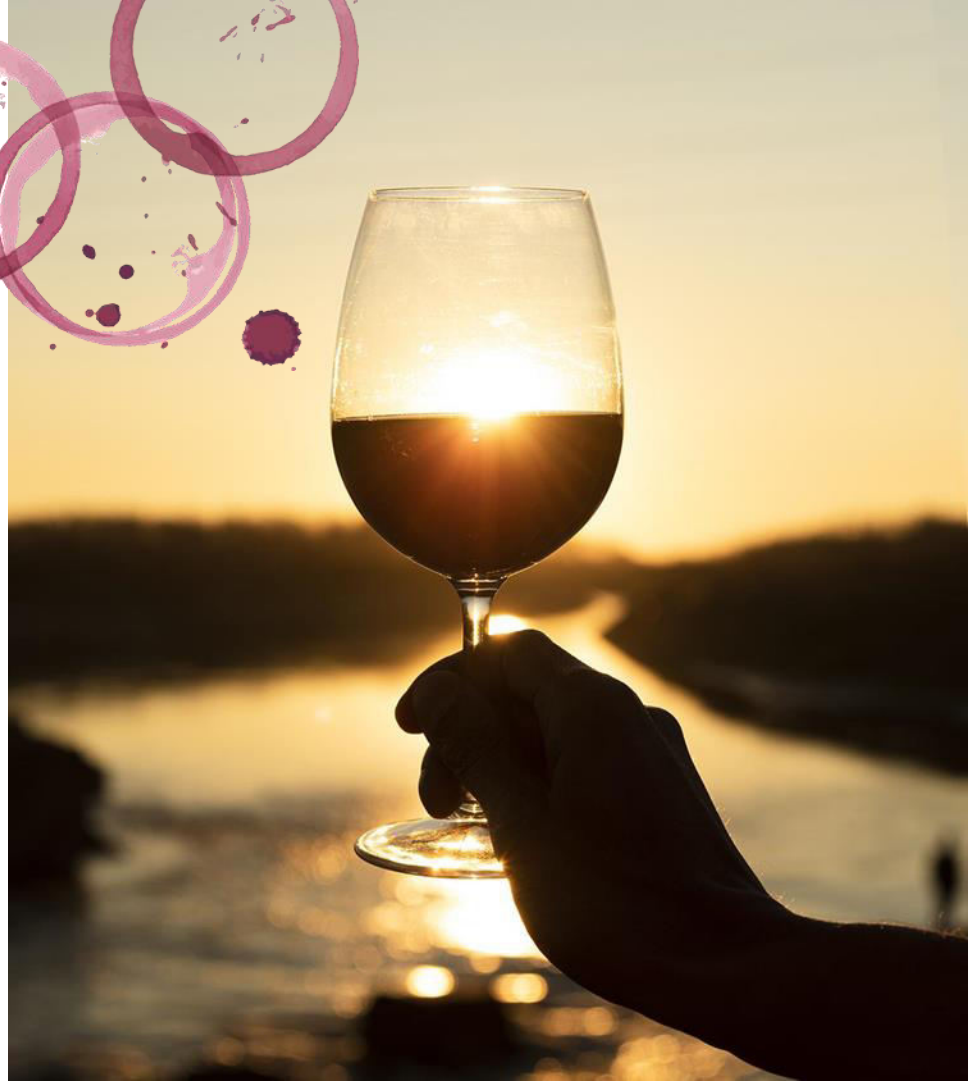
Red Wine

Comparison of estimated price for wines in dataset1 to the price in the dataset2

LR – Logistic Regression Algorithm
KNN – K Nearest Neighbor's Algorithm
DT – Decision Tree Classifier Algorithm
RF – Random Forrest Classifier Algorithm

THANKS

Do you have any questions?




Wine
Für dich, Für uns, Für alle