
Wine
Für dich, Für uns, Für alle
Bluberry Winery
Code Analytics
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AGENDA

01. **Introduction**

What, Why our story needs to be heard

02. **Data Collection**

What we found/have

03. **Methods/Analysis Plan**

What we going to do

04. **Data Analysis**

Exploratory analysis
Machine Learning Methods
Model Validation

05. **Price Prediction**

Price prediction
Price Suggestion

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

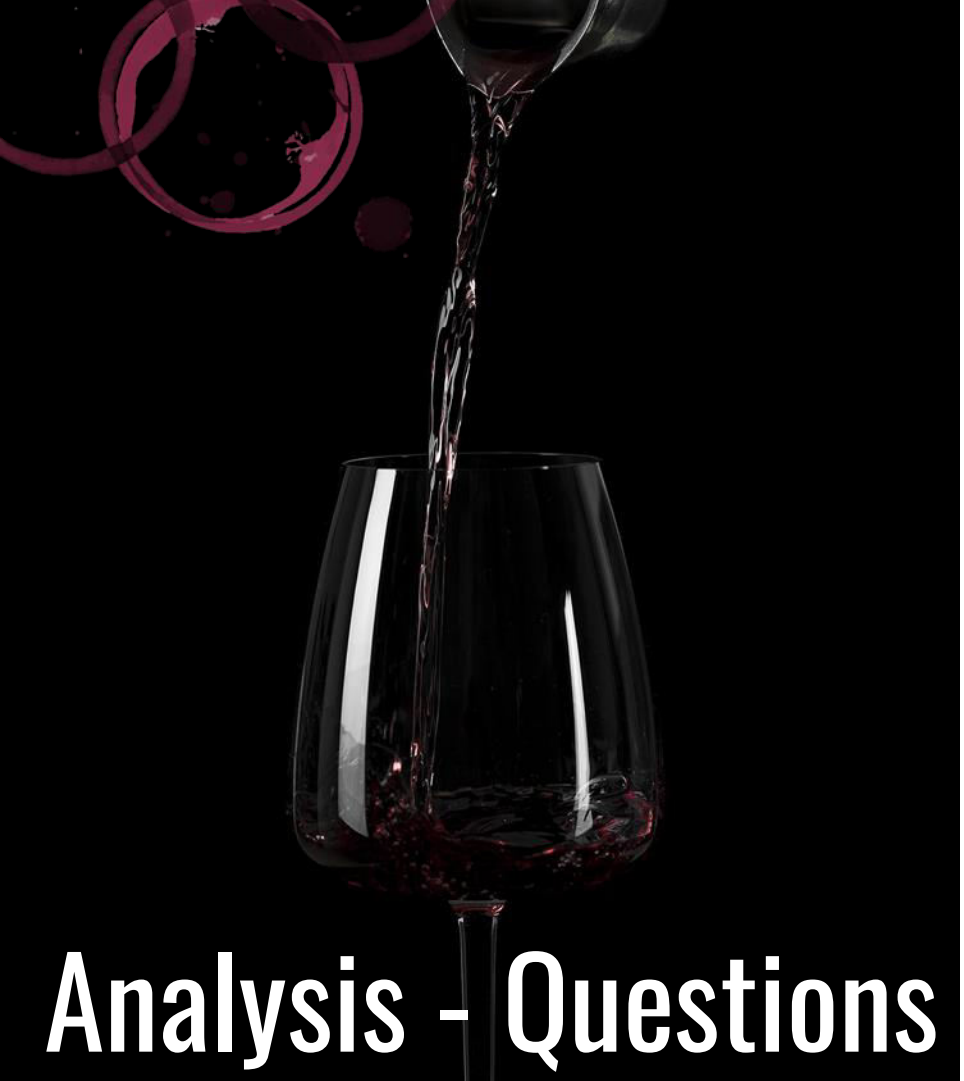
DataAttributes / Ingredients

- 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

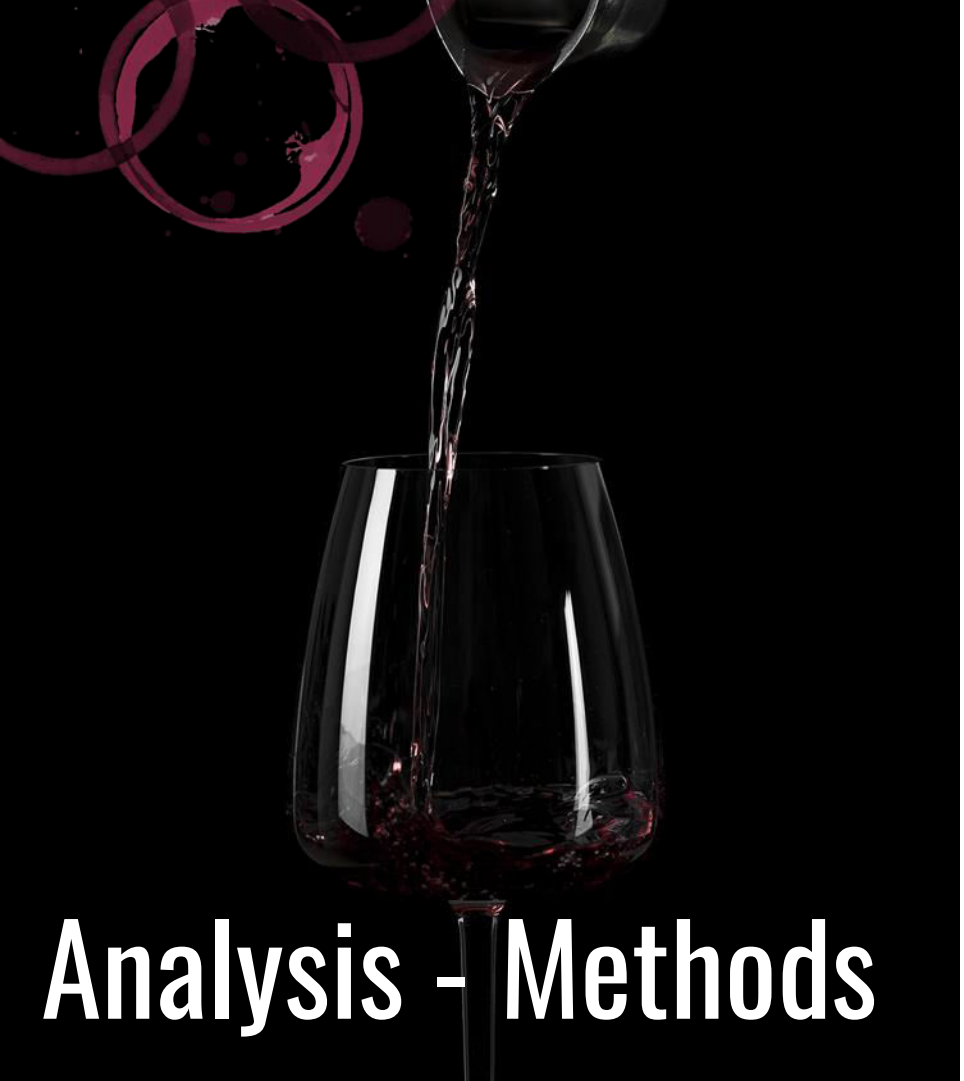
Which factor or combination of factors affect the quality of red & white wines?

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

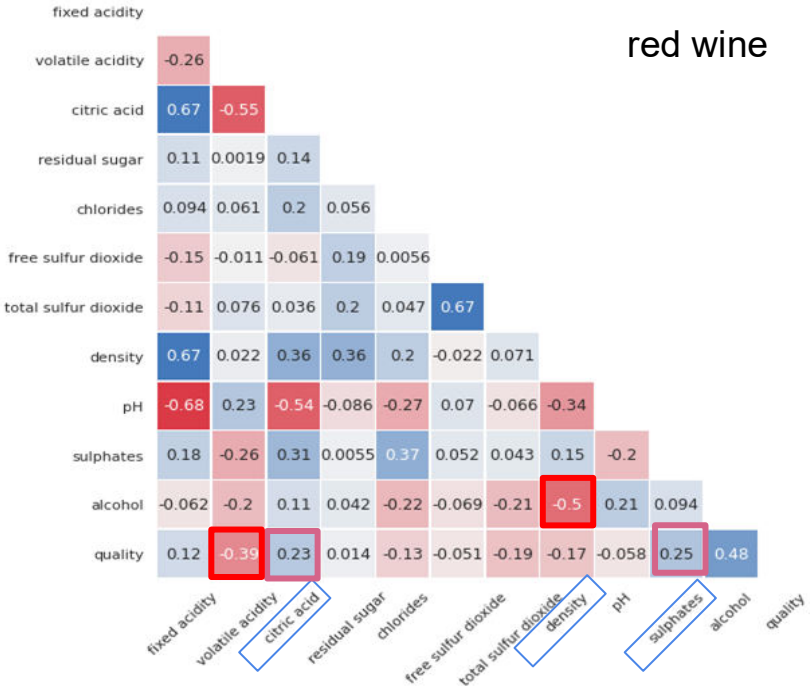
Explore Sales dataset and predict the price for the wine quality

04.
Data Analysis

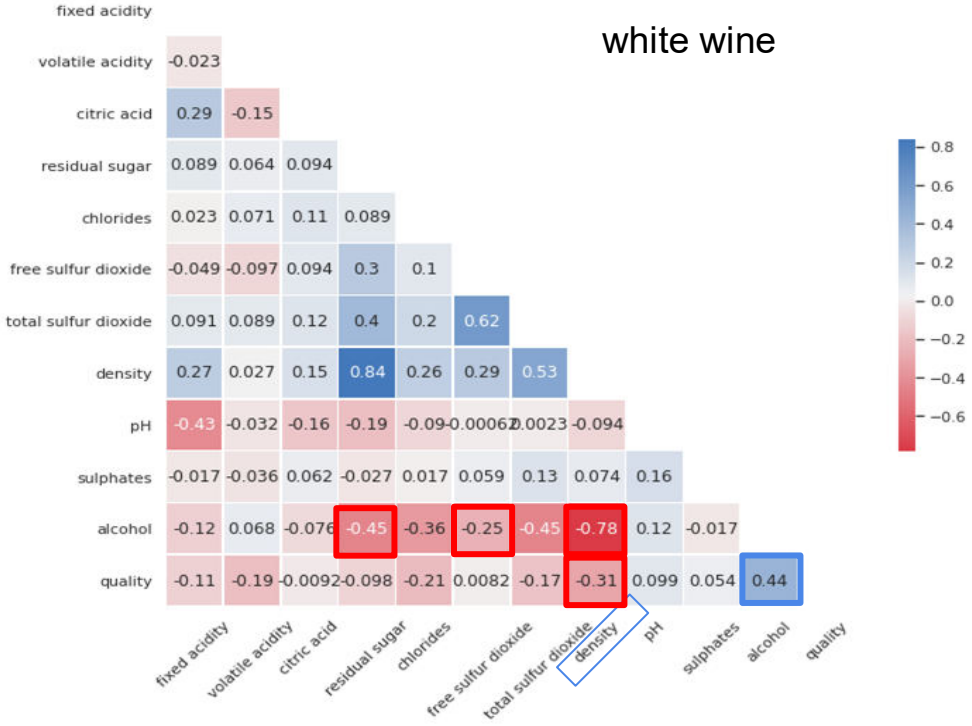
- Results - Exploratory analysis
- Feature Selection
- Machine Learning Methods

Correlation between all variables for red & white

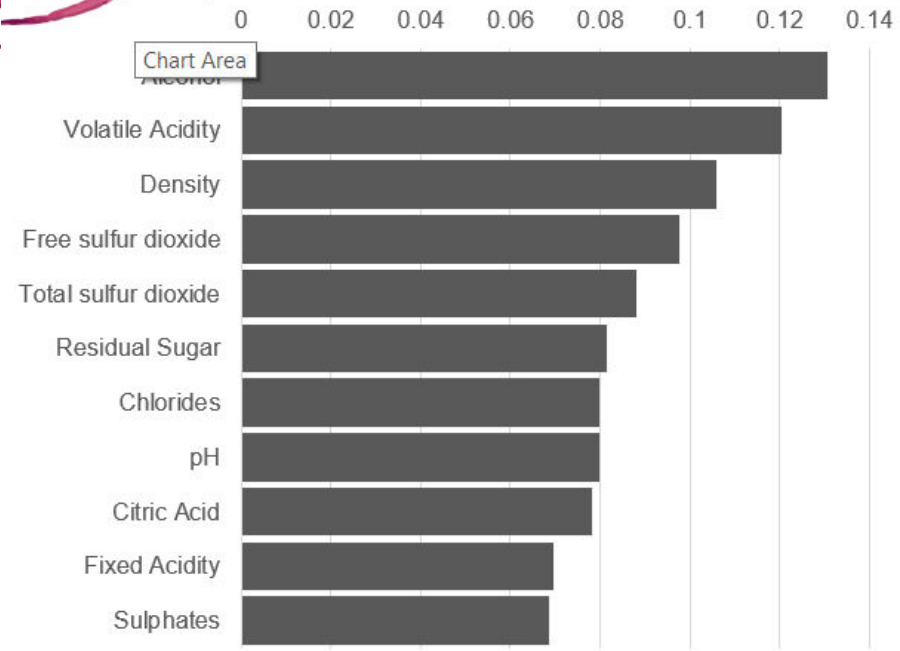
red wine



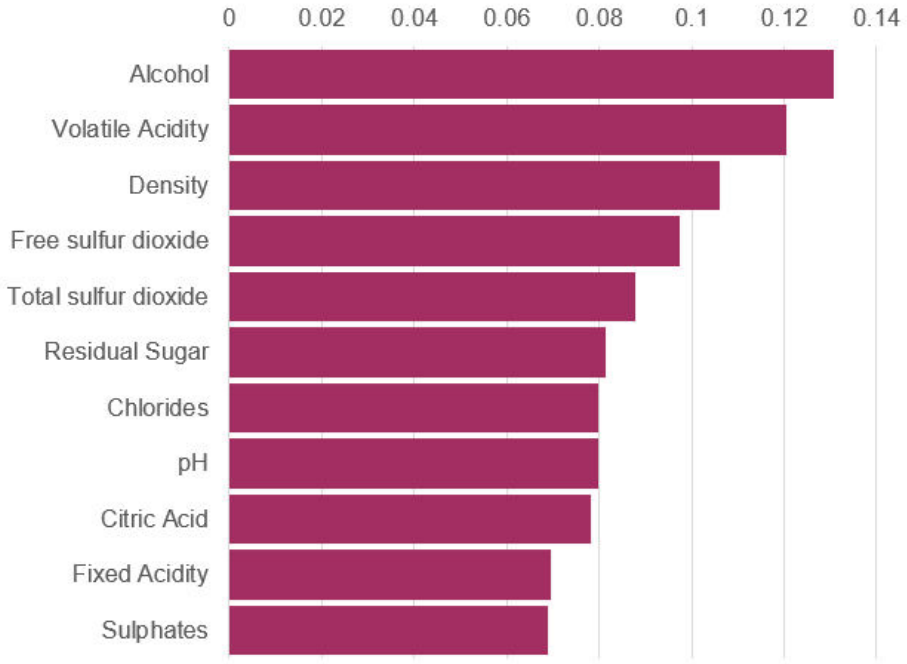
white wine



Important Factors towards predicting Wine Quality

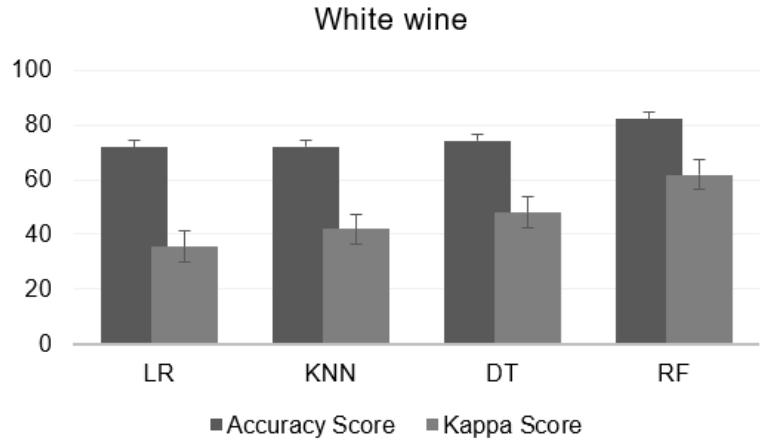


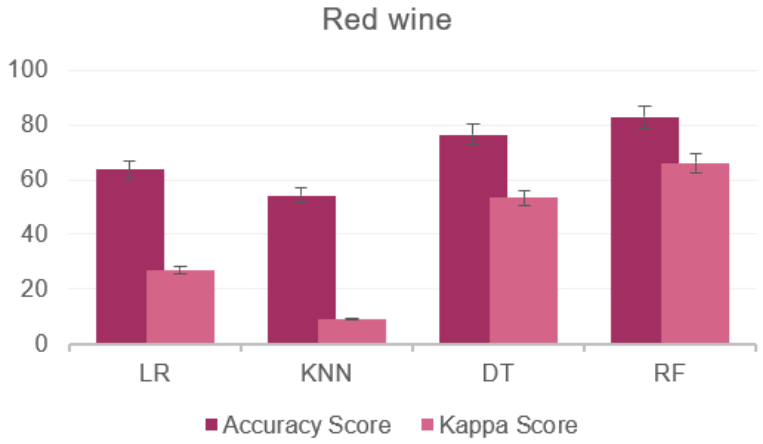
White Wine



Red Wine

Machine Learning Model Scores



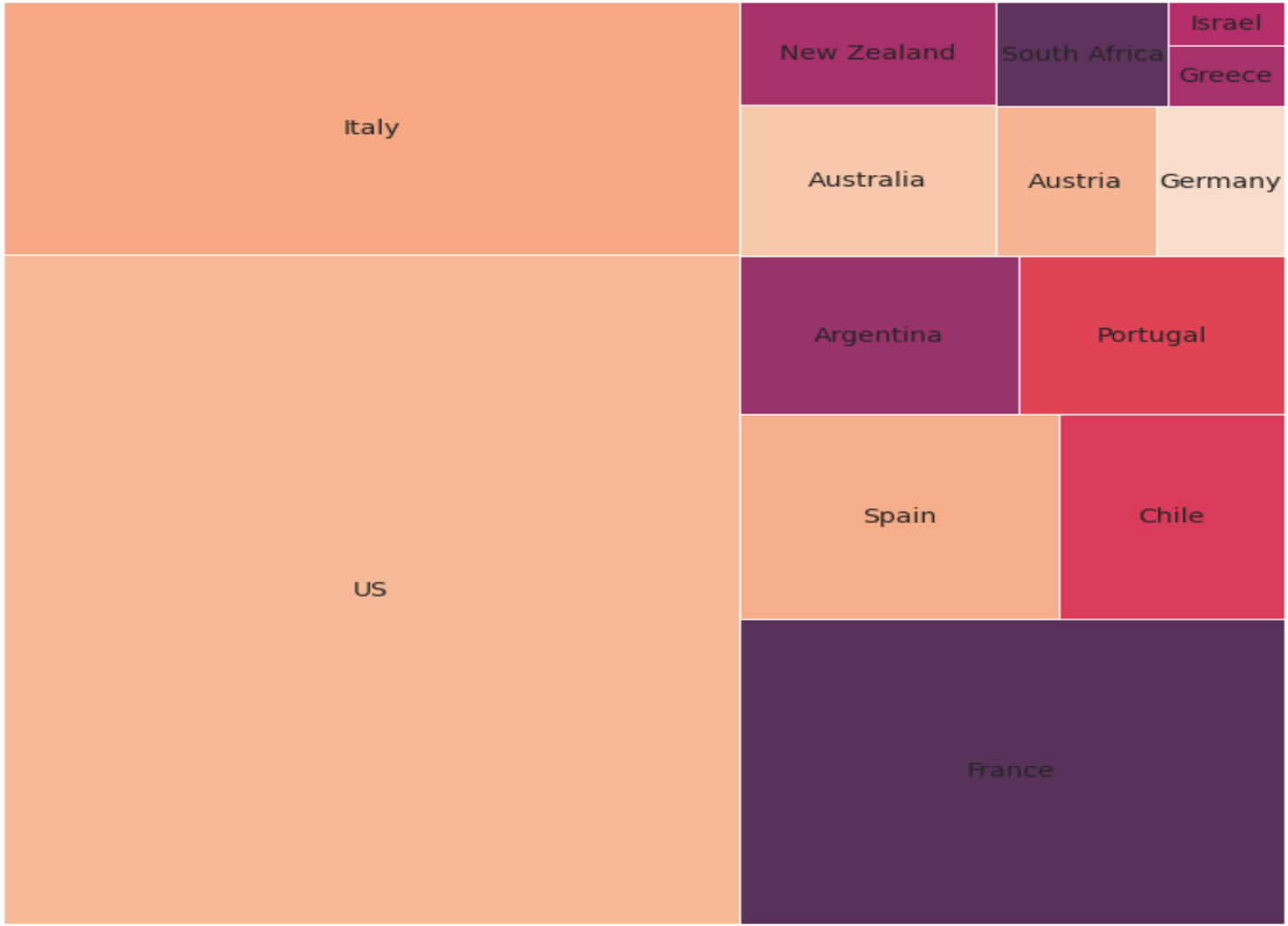


LR – Logistic Regression Algorithm
KNN – K Nearest Neighbor's Algorithm
DT – Decision Tree Classifier Algorithm
RF – Random Forrest Classifier Algorithm

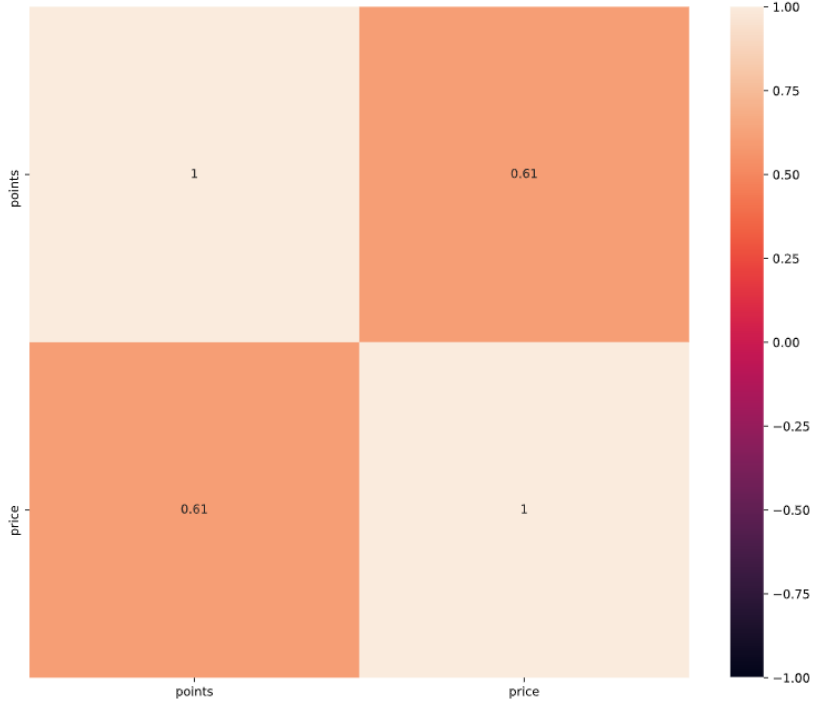
05.
Price Prediction

- Sales Dataset Exploration
- Price Prediction & Suggestion

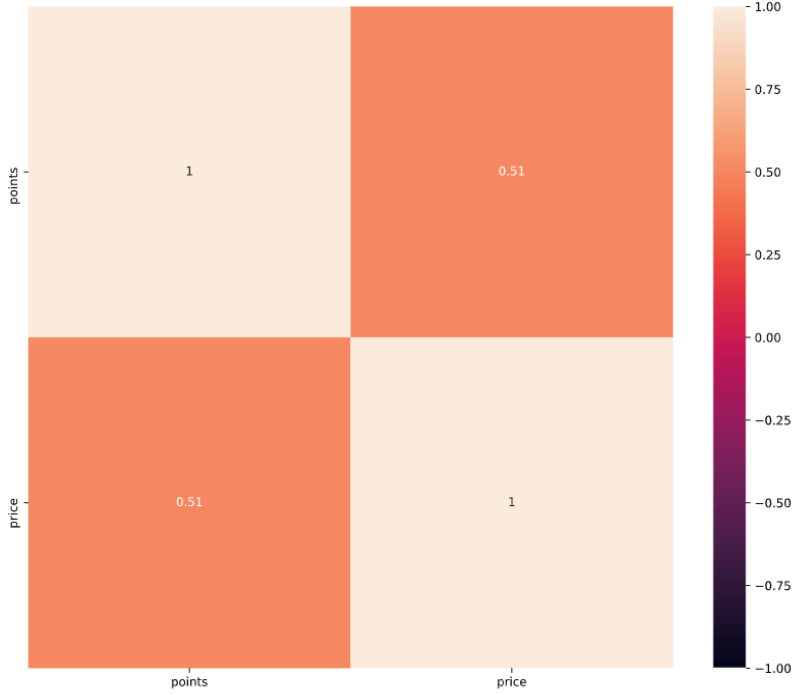
Sales data distribution



Points Vs Prize - Correlation



White Wine



Red Wine

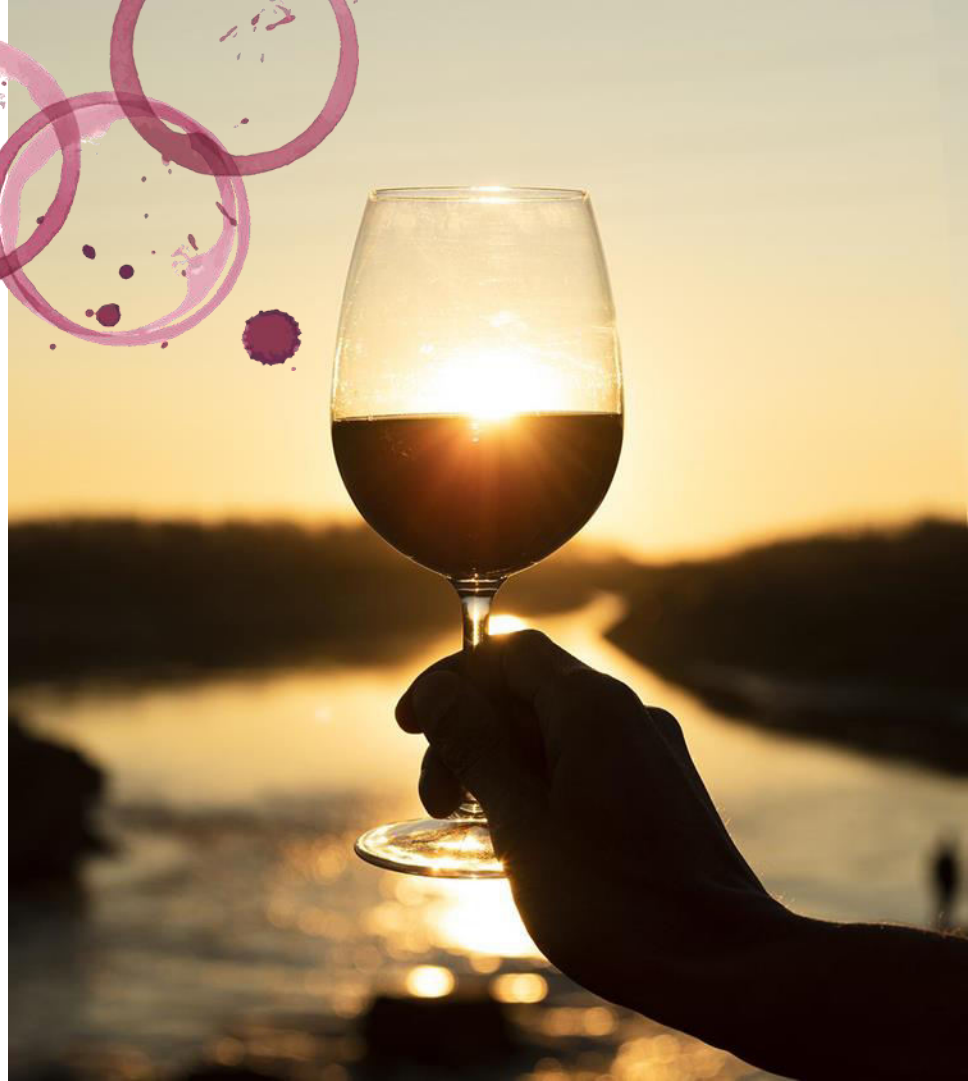
Comparison of estimated price for wines in dataset1 to the price in the dataset2

White Wine

Red Wine

THANKS

Do you have any questions?




Wine
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