Research question:  **How to classify wine according to their quality**

i.e. for Binary classification: we intend to find out if the class of wine may be predicted based on quality data

for multi-class classification: we intend to find out if the class of red/white wine may be predicted based on physicochemical tests data

for regression: we intend to find out if the numerical value of wine quality may be predicted based on physicochemical tests data

background/motivation health.

Features (number and names of columns of data and what they represent)

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  
Output variable (based on sensory data):  
12 - quality (score between 0 and 10)

Instances: 4898, characters of red and white wine

Data sources : <https://archive.ics.uci.edu/ml/datasets/wine+quality>

Data mining methods: API

Planned visualizations: 2D

Planned models (appropriate models and loss for the task)

Validation methods: Cross Validation