

Proposal

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1. Project Description

This project is going to predict human wine taste preferences from physicochemical properties which are easily obtained through analytical tests.

2. Attribution Information:

Input variables (based on physicochemical tests):

- 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)

3. Methods

- 1) I will test if there are some variables that are missing or inefficient and delete them;
- 2) Test if it is practicable to do dimensionality reduction;
- 3) I will do collinearity or other algorithms about feature selecting to choose several features;
- 4) I plan to use SVM / KNN /Decision tree to find the most suitable algorithm.