**Data Set Information:**

The two datasets are related to red and white variants of the Portuguese "Vinho Verde" wine.

These datasets can be viewed as classification or regression tasks. The classes are ordered and not balanced (e.g. there are much more normal wines than excellent or poor ones). Outlier detection algorithms could be used to detect the few excellent or poor wines. Also, we are not sure if all input variables are relevant. So it could be interesting to test feature selection methods.

**Attribute 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 – quality1 : 와인 품질이 고급이면 1, 아니면 0

13 – quality2 : 와인 품질을 0~10 사이의 등급으로 표현됨.