

1. )

Metric	Performance
R <sup>2</sup>	0.311 +/- (0.046)
RSS	-27.6752333498285

2. )

Attribute	Coefficients
Fixed Acidity	0.0733813321067725
Volatile Acidity	-1.04484561997603
Citric Acid	0.00783061879633204
Residual Sugar	0.0457135064033707
Chlorides	-0.629589174474576
Free Sulfur Dioxide	0.00654260849288343
Total Sulfur Dioxide	-0.00278263151461045
Density	-70.8845024974789
pH	0.377741105938512
Sulfates	0.776173972489509
Alcohol	0.267349992346876

The coefficient determines how much influence an attribute has on the quality of the wine. This means that the sign of the coefficient (positive/negative) determines the direction in which the quality will deviate, and the value of the coefficient determines the amount at which the quality will deviate in that direction. Therefore, the characteristic that lowers wine quality is Density, whereas the characteristic that increase wine quality are Sulfates.

3. ) <https://towardsdatascience.com/linear-regression-models-4a3d14b8d368>  
<https://machinelearningmastery.com/how-to-configure-k-fold-cross-validation/>

4. ) `sklearn.model_selection`  
`sklearn.neighbors`  
`sklearn.linear_model`  
`numpy`  
`pandas`  
`sys`