

1. Regression equation:

Wine quality = -volatile acidity\*0.24269054 - chlorides\*0.09255417 - pH\*0.10230787 + sulphates\*0.13606521 + alcohol 0.4310639

2. Five most useful variables

After investigation of problem we choose volatile acidity, chlorides, pH, sulphates and alcohol. Those factors had the biggest absolute value of regression coefficient, which mean that they have the biggest influence on the output.

3. Error estimation

MSE = 0.6577374930155119

R2s = 0.3257866157041702

Code can be seen on GitHub with following link:

[https://github.com/Yooru6/Machine-Learning-Group-Assignments/blob/master/Methods/Methods\\_4\\_LinearRegression/T4\\_LinearRegression.ipynb](https://github.com/Yooru6/Machine-Learning-Group-Assignments/blob/master/Methods/Methods_4_LinearRegression/T4_LinearRegression.ipynb)