wineRed correlation matrix:

Text

Description automatically generated

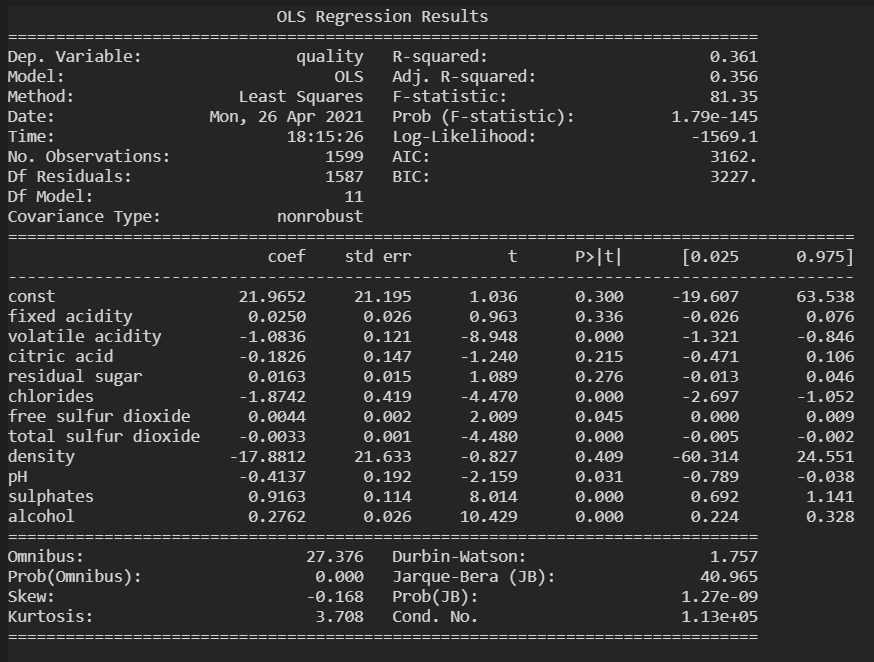
wineWhite correlation matrix:

Text

Description automatically generated

**RED WINE ANALYSIS**

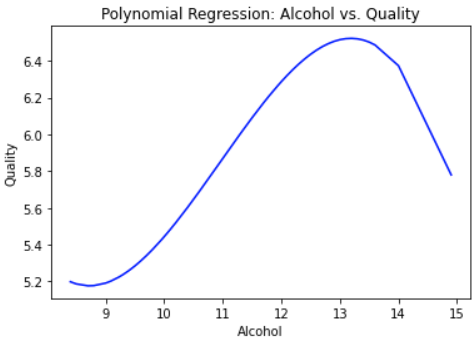
OLS Regression on wineRed to see which p values are significant:





The MSE is still fairly high, so we can try using a different regression model.

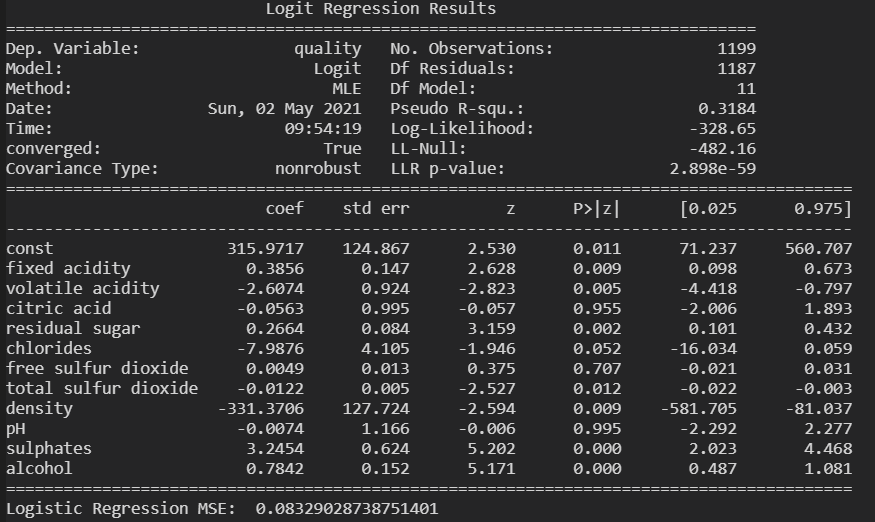
Polynomial regression using alcohol as the predictor for quality:





Although the curve shows a clear relationship, The MSE is fairly high, so this model may not work the best. We can try using classification instead.

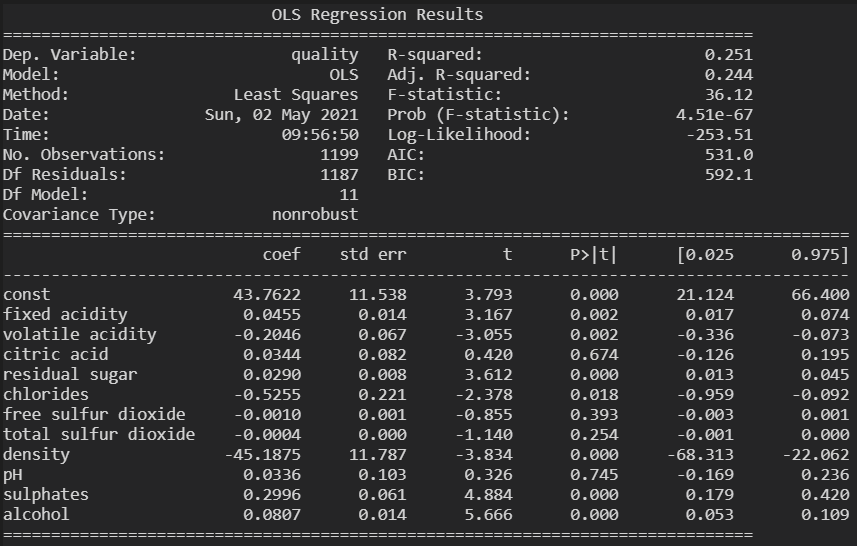
Logistic Regression on wineRed to see which p values are significant – , so quality is 1 if greater than or equal to 7, 0 if less than:







OLS with this classification:





It seems overall with classification we yield much smaller MSEs and higher accuracy scores as well. So we can try some more classification models to see how they fare:

Random forest classification:



**WHITE WINE ANALYSIS**