**Introduction**

Wine Quality evaluation is a main part of the certification process of wines and can be used to improve wine making and to stratify wines such as premium brands or pricing. And this might be also important part of our better lifestyle to choose good quality wine based of facts.

**Red Wine Quality Data Set**

Available from the UCI machine learning repository Available on the UCI machine learning repository (https://archive.ics.uci.edu/ml/datasets/wine+quality). The dataset contains a total of 12 variables such as critic acid levels, pH, alcohol, and so on. There was also a quality measure between 0 and 10. These were recorded for 1,599 observations.

**Hypothesis: What factors makes better quality of wine?**

H0: More Alcohol make better quality of wine

H1: More sugar?

1. *Alcohol: the amount of alcohol in wine*
2. *Volatile acidity: acetic acid content which leading to an unpleasant vinegar taste*
3. *Sulphates: a wine additive that contributes to SO2 levels and acts as an antimicrobial and antioxidant*
4. *Citric Acid: acts as a preservative to increase acidity (small quantities add freshness and flavor to wines)*
5. *Total Sulfur Dioxide: is the amount of SO2*
6. *Density: sweeter wines have a higher density*
7. *Chlorides: the amount of salt*
8. *Fixed acidity: are non-volatile acids that do not evaporate easily*
9. *pH: the level of acidity*
10. *Free Sulfur Dioxide: it prevents microbial growth and the oxidation of wine*
11. *Residual sugar: is the amount of sugar remaining after fermentation stops. (Wines > 45g/ltrs are sweet)*

**Justification for the inclusion of the control**

**Results (brief discussion, and either regression table or the plot of regression coefficients with credible intervals)**

**Regression table (estimates, standard errors, 0,95 credible intervals)**