# Introduction

## 1:1 Problem statement and research motivation

The ever-growing wine industry has seen a decline in both consumption and production recently. The growth of the industry relies on the satisfaction of consumers. Thus, the relationship between alcohol content and wine quality is a critical topic in the wine industry, as prior research suggests that alcohol content can significantly impact the sensory characteristics of a wine (Sam, et al., 2021). Ensuring the wine industry relishes its glory days again with the help of our research gave us the motivation to figure out whether wine with higher alcohol content has a significantly higher quality rating than then the wines with lower alcohol content.

## 1:2 The data set

We used the Wine Dataset from Kaggle, which contains 1,599 wine samples with 12 features. Our research focuses on alcohol content, shown as a percentage, and quality ratings ranging from 1 to 10. The dataset includes factors such as acidity levels, residual sugar, and pH values, helping us understand their influence on overall quality. By analysing this dataset, we aim to explore how alcohol content affects wine quality and provide insights for winemakers and wine enthusiasts.

## 1:3 Research question

## 1:4 Null hypothesis and alternative hypothesis (H0/H1)

# Bibliography

Sam, F. E. et al., 2021. Techniques for Dealcoholization of Wines: Their Impact on Wine Phenolic Composition, Volatile Composition, and Sensory Characteristics.