Prediction of Wine Quality

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Agenda

For this project, Kaggle's Red Wine Quality dataset is used to build various classification models to predict whether a particular red wine is "good quality" or not. Each wine in this dataset is given a "quality" score between 0 and 10.

Problem Statement

Consumers often struggle to choose high-quality red wines due to the vast variety available. Current methods rely on personal preference or recommendations, lacking an objective approach.

Project Overview

This project aims to develop a data-driven solution to predict "good quality" red wine based on its characteristics.

Who are the end users?

Wine enthusiasts seeking to make informed choices and explore new high-quality options.

Wine retailers and distributors aiming to optimize their product selection and recommendations.

Wine producers striving to understand consumer preferences and refine their production processes.

Solution & its Value Preposition

Develop classification models trained on a dataset of red wine characteristics to predict "good quality."

Makes informed wine selection easier, leading to more enjoyable drinking experiences.

Optimizes product selection, improves customer recommendations, and potentially boosts sales.

Provides insights into consumer preferences to refine production processes and potentially gain a competitive edge.

Important Factors

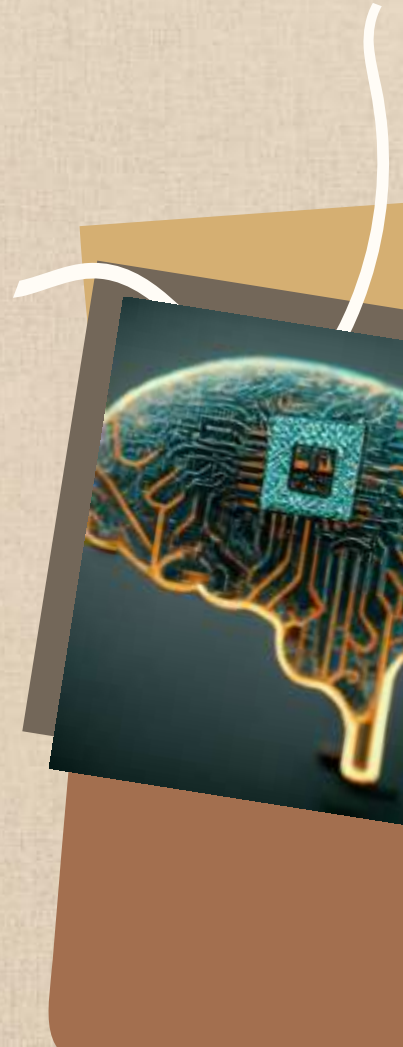
The dataset will include various chemical properties of the wine, such as acidity, sugar content, and alcohol level.

We'll consider external factors that may influence quality perception, like grape variety and region.

Modelling

We'll explore different classification models like Logistic Regression, Decision Trees, Random Forests, and Support Vector Machines.

The chosen model will be evaluated based on its accuracy in predicting "good quality" wine.



Result

We expect to develop a classification model that can accurately predict good quality red wine based on its characteristics.

The model's performance will be measured using metrics like accuracy, precision, recall, and F1-score.

The project aims to achieve a high accuracy rate in predicting good quality wine.