Wine Qualility Prediction System through a Data Mining Approach

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» Initials

Wine

- an alcoholic drink typically made from fermented grapes
- * Once viewed as a luxury good
- nowadays wine is increasingly enjoyed by a wider range of consumers

Idea Overview

- Build an interface to predict the quality of the red wine. (Through data mining approach)
- Result of the system: Quality of wine, given chemical information and machine learning model.



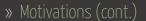
Motivations

Wine itself

- * Lowers bad cholesterol
- Keeps heart healthy
- Regulates blood sugar
- * Reduces the risk of cancer and many more!

Wine Industry

* To support its growth, wine industry is investing in new technologies for both wine making and selling processes.



Wine certification

- prevents the illegal adulteration of wines (to safeguard human health)
- * assures quality for the wine market

Quality Assessment

- * often part of the certification process
- used to improve wine making (by identifying the most influential factors)
- used to stratify wines such as premium brands (useful for setting prices)



» Existing Approach Limitations

Limitations

Decisions on wine quality prediction are mostly done scarce and considers small datasets.

- 1991's the "Wine" dataset includes 178
 examples with measurements of 13 chemical
 constituents
- 1997's the "Wine" dataset includes 170 samples from Germany but predict 100% accurately.
- * 2001's wine dataset includes only 36 examples were used and 6% error achieved.



- Proposed a data mining approach to predict human wine taste preferences that is based on easily available analytical tests
- Compared to other domain, a large dataset is considered with white and red vinho verde samples from northwest Portugal have increased by 36% from 1997 to 2007

- top ten wine exporting country, with 3.17% of the market share in 2005
- Exports of its vinho verde wine (from the northwest region) have increased by 36

» Advantages of this Project

- * Such model is useful to support the oenologist wine tasting evaluations and improve wine production.
- * similar techniques can help in target marketing by modeling consumer tastes from niche markets.

» Project Demonestration

Important File:

Actual paper link is given here Dataset Link here

Project

Project Github Link is given here

Thanks for your attention! Good Day