

CIS 3200 FINAL PROJECT

Group 5

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PROBLEM BACKGROUND

Global warming has been affecting not only our lives but also the businesses we the people made and the resources that we have:

- One of business is the winery industry or the grapevine industry.
- Wine as an economic commodity is at risk due to the warming temperatures that is the result of climate change.
- Wines being an agricultural product, they are very sensitive to climate change.
- Their taste and quality depends on how they are being fermented, processed and delivered. And for them to taste good and better, the temperature that surrounds them is a very important factor.
- Wine industry right now is not prone to data problems, but in ways now we can build a more consistent round of data for wine businesses.

BUSINESS PROBLEM

Global Warming and its effects to winery businesses and grapevines, and how data mining can help analyze the trends.

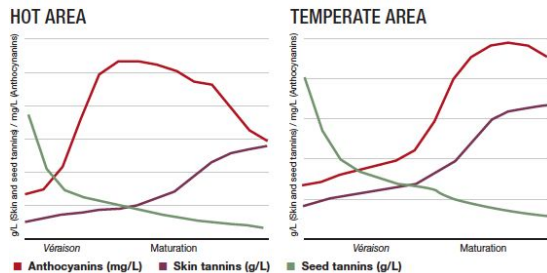


BUSINESS PROBLEM → DATA MINING PROBLEM

With Data mining, we can discover trends that affect the winery business which is from the issue of global warming.

In a business, the trends will help them know the harvest, planting and when their product is getting more sales.

CLIMATE CAN IMPACT PHENOL CONCENTRATIONS AT HARVEST



Climate creates quantitative differences in the ratio of anthocyanins to skin tannin levels at harvest. The more anthocyanins there are relative to tannins, the 'finer' the tannins in fermented juice.

2018 TOTAL U.S. WINE MARKET VALUE



Source: Gomborg, Fredrikson & Associates, bw166.com.

2018 TOTAL U.S. WINE MARKET VOLUME



Source: Gomborg, Fredrikson & Associates, bw166.com.



THE WINE DATASET

We will use the the wine dataset, a database that was designed by UCI.

The dataset contains records of wine classified into three different targets: 0, 1, and 2.

The attributes of each targets consists of:

- Alcohol
- Malic acid
- Ash
- Alcalinity of ash
- Magnesium
- Total Phenols
- Flavanoids
- Nonflavanoids Phenols
- Color intensity
- Hue
- OD280/OD315 of diluted wines
- Proline

REFERENCES

Wine Dataset. <https://archive.ics.uci.edu/ml/datasets/wine>