Predicting wine quality based on chemical properties

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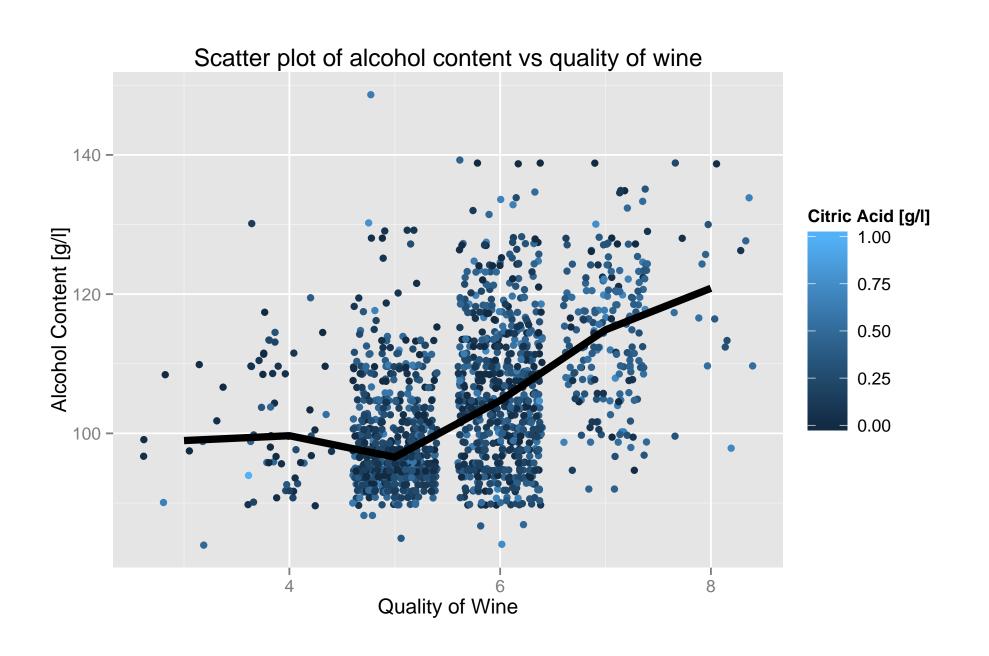
Problem

▶ Can we predict how people will rate a certain type of wine (from 0 to 10) based on its chemical properties?

▶ Useful for producers/sellers of wine. They can improve their product/decide to buy specific wines based on a taste prediction. The model may be able to make a specific recommendation for enhancing the taste of some wines.

▶ The data base has "blind" assesments of wine taste (0-10) and 11 chemical properties for each wine (alcohol content, sugar content, sulphates, pH, etc.).

Input/Output

Enter wine's chemical composition:

On a scale from 0 to 10 your wine is:

6.5

Recommended action:

Increase alcohol content

Scatter plot (Red wine)

Scatter plot of alcohol content vs quality of wine

Methods - Supervised Learning

▶ Multiple regression over the available chemical properties

▶ SVM classifier

▶ Neural Networks