







III. RESULT ANALYSIS

In this section we explain the results obtained by performing AHP, SVM and RF respectively. The AHP process yields the following results:-

Types of Wines

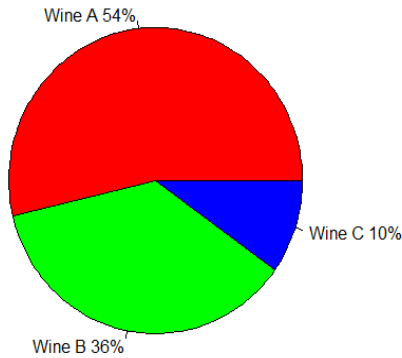


Fig. 10 Wine selection using AHP

The various Machine Learning languages yield a different output of accuracies. SVM and RF technique give a better accuracy depending on the data set. Here RF gives a better accuracy because it works well on larger data sets compared to SVM. The two techniques can be differentiated on the bases of following criteria: -

Criteria	SVM	RF
Result	Solution is unique	Solution is random
Accuracy	0.6654	0.7033
Working	Works well in case of small data sets	Works well in case of large data sets
Over fitting	Reduces over fitting with the use of regularization	Reduces over fitting with the use of optimal number of trees

Table-6

IV. CONCLUSIONS

The Analytical Hierarchy process is a well known classification algorithm. We have used this technique in this paper to recommend wine on the basis of its

components. The results obtained show the Wine selection on the basis of its attributes. The Machine Learning Techniques used here help in finding the component accuracy of wine attributes. The obtained results show that accuracy of RF is better as compared to SVM which is approximately 70.33% while that of SVM is 66.54%. Hence proper usage of Machine Learning techniques will help in finding the proofs in order to recommend a particular wine keeping in mind its contents.

V. FUTURE WORK

In order to make it more concrete we are going to use effective technique called Ensemble as well as Deep learning in our upcoming work.

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