19AI704 Applied Predictive Analytics

Evaluation Lab2

PCA

*Part1*

*Carry out PCA on wine.csv after carrying out normalization. Analyse your results of PCA with normalization (as was done in Dim Reduction lab).*

1. First drop column “Type” and normalize the data.
2. Carryout PCA and analyse the result as done in the dim reduction lab ex completed in the class.
3. State the percentage of information contained in the Principal Components one and two.
4. Display Standard deviation, Proportion Variance and Cumulative proportion. Analyse

the results

1. Display the weights of PC1.
2. Demonstrate the derivation of any two component values using the weights and the original attribute parameters.
3. How many components would you have to consider to retain 90% of variance information?

*Part2*

*Further analyse your results of PCA with normalization versus PCA done without normalization*.

*How many components would have to be retained in either case to retain 95% of variance information*?