Group 5: Multivariate Analysis of Scotch Whisky Components

STAT394

This group will work with the data from Table 1 of the work by Shand et al. (2017).

Your report must contain, at least, the following elements with proper analyses and justification:

- A high-level description of the study and its motivation.
- A quantitative descriptive analysis of the data.
- A graphical/qualitative analysis of the data.
- Can you assume that the data follow a multivariate normal distribution?
- Are there "surprising" observations?

You must try to answer the question (with a proper discussion):

- Is the cluster analysis shown in Fig. 7 consistent along at least three different distances?

References

Shand, C. A., Wendler, R., Dawson, L., Yates, K. & Stephenson, H. (2017), 'Multivariate analysis of Scotch whisky by total reflection x-ray fluorescence and chemometric methods: A potential tool in the identification of counterfeits', *Analytica Chimica Acta* **976**, 14–24.