MthStat 568/768 – Multivariate Statistical Analysis – Spring 2024

Homework 6

Due Wednesday, April 24

1. (a) Carry out a hierarchical agglomerative cluster analysis of the primate_scapulae data using complete linkage. Use the variables *AD.BD*, *AD.CD*, *EA.CD*, *Dx.CD*, *SH.ACR*, *EAD* and *beta* only. (Remember to scale the variables prior to clustering.) Does the dendrogram suggest a definite number of clusters as the best solution? If not, what would be reasonable solutions?

   (b) Decide on a reasonable solution in part (a) and assess that solution using a silhouette plot.

   (c) Is there any correspondence between the clusters obtained above and the primate species as indicated by the variable *class*?