Weekly assignment

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This week you may choose your preferred assignment out of the following three options:

Week 8 assignment: option 1

Please hand in a short summary of the group exercise of lecture of Week 8. The relevant article (Behler et al., 2022) is with the lecture slides of Week 8.

Discussion points for the article:

a) Which unsupervised learning methods are used in this publication?

b) What information has been given about the unsupervised method(s) in the paper? (Give all relevant details.) Which other statistical methods were used?

c) How are the (unsupervised learning) results presented in the study?

d) Do you think the unsupervised learning method(s) in the paper was/were applied correctly? Why (not)?

(If you missed the lecture you may also hand in your summary of the group exercise of Week 6 or 7. If you have not done any of these exercises, I suggest the one of Week 8: it is the easiest article of the three and covers all of the main methods of unsupervised learning.)

Week 8 assignment: option 2 (PCR or PLS)

Perform PCR or PLS in the alexithymia dataset. Can you use the components to predict the depression score (CESD)? Do you have the same (number of) components as for the PCA? Why (not)? Did you expect this result?

Week 8 assignment: option 3 (Gaussian mixture model)

In week 7, you tried k-means and hierarchical clustering on the PCs from the TAS questionnaire. Does a Gaussian mixture model give you clearer clustering results? Why (not)?

What you should hand in:

A short summary of your findings (about 350-400 words) for your chosen assignment. If you wish, you may do two or all three tasks.

Deadline

The deadline for this assignment is **Thursday, 11 April 2024, 23:59**.