

## Second Journal Article Summary

The purpose of this assignment is to select a short article from the chemical literature that applies some aspect of either a principal component analysis or a cluster analysis to the problem at hand, to read it, and to prepare a summary of it.

**Finding an Article.** It isn't easy to find a good article by simply browsing through the journals in our library. To search for a suitable article try using appropriate key words such as "principal component," "pca," or "cluster analysis."

**Selecting an Article.** After finding several possible articles, look them over quickly with an eye toward selecting one for this assignment. A good article should be of moderate length (3-6 pages) and should feature the chemometric analysis as an important part of the work being reported. When you have made a selection, e-mail me with a link to the article (or send me a pdf copy of the article) and I will let you know if it is indeed appropriate. Be sure to have some back-up articles in mind in case your first choice is not appropriate. Each of you must have a different article, so your first choice may already be taken.

**Reading the Article.** You should plan on reading through your article several times before trying to prepare a first draft of your summary. In fact, for your first read you may find it difficult to finish the article in one sitting; this isn't unusual as scientific articles can be quite dense. With each pass, however, you should be able to get deeper into the article and to make more sense of the work being reported. Although the chemometric method(s) being used should be familiar (one hopes!), other techniques used in the paper may be less familiar to you. Be prepared, therefore, to do some additional research as needed. The course's main textbook may be a useful resource. Assuming that your article includes sufficient data, try to replicate the author's analysis of the data using R.

**Writing the Summary.** Your goal is to prepare a short summary of the article that could be understood by a classmate (in fact, you may wish to have a classmate respond to a rough draft of your summary). Your summary should clearly explain the analytical problem at the heart of the article, the factors being explored, the experimental design(s) used, the conclusions drawn from the analysis of the resulting data, and your evaluation of their work (yes, you are allowed to have an opinion on this!). Your summary should not get into the nitty-gritty details of the data analysis included in the article; an interested reader can always go back to the article for the blow-by-blow details.

Your summary must be double-spaced in 12-point font, and should be no more than 1.5 to 3 pages. Please attach a copy of the journal article to your summary. Be sure to check your spelling and grammar for correctness, and read through your final draft with an eye for clarity.

**Due Date.** Your choice of an article is due by Monday, May 7<sup>th</sup> and your summary is due by Friday, May 11<sup>th</sup>.