Psychology 594

Some Later Assignments

October 1, 2010

I. (1) problem 10.17 from Johnson and Wichern; see attached problem (do in MATLAB)

(2) Give the partial covariance matrix and the partial correlation matrix for predicting the 4 variables from 8; also, give the regression coefficients for predicting 4 from 8.

II. When you are in SYSTAT and in the discriminant module, do an example using `iris.syz`, and maybe comment on the nice colors you get.

Also, use the `classify.m` file in MATLAB to do the discriminant analysis on the iris data (think as input, `load fisheriris`, unless you want to do a lot of inputting yourself). Also, comment on what you can get in SYSTAT that doesn't seem to come with MATLAB when you do a discriminant analysis.

III. Do a K-means analysis in SYSTAT for the Iris data (3 groups); also, do this in MATLAB for 10 random starts and see what happens.

IV. Go get yourself a proximity matrix from Michael Lee's web site (and one you will want to be interested in for your final "takehome")

Input this into SYSTAT "by hand" (e.g., type = dissimilarity) and do three analyses: a two-dimensional multidimensional scaling; a complete-

link hierarchical cluster analysis; a Tversky-Corter additive tree representation. Compare what the three tell you about your data. Are they "consistent"?