Multivariate Statistical Methods Lab 4

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Question 1: Canonical correlation analysis by utilizing suitable software

Look at the data described in Exercise 10.16 of Johnson, Wichern. You may find it in the file P10-16.DAT. The data for 46 patients are summarized in a covariance matrix, which will be analyzed in R. Read through the description of the different R packages and functions so you may chose the must suitable one for the analysis. Supplement with own code where necessary

Here I write the code to process preliminary the data

```
link <- "C:/Users/Carles/Desktop/MasterStatistics-MachineLearning/Master_subjects/Multivariate_Statisti
# link='~/LIU/Semester3/P2/MVS/L1/T1-9.dat'
data <- read.table(link)
```

(a)Test at the 5% level if there is any association between the groups of variables

b) How many pairs of canonical variates are significant?

c) Interpret the "significant" squared canonical correlations. Tip: Read section "Canonical Correlations as Generalizations of Other Correlation Coefficients".

d) Interpret the canonical variates by using the coefficients and suitable correlations.

e) Are the "significant" canonical variates good summary measures of the respective data sets? Tip: Read section "Proportions of Explained Sample Variance".

f) Give your opinion on the success of this canonical correlation analysis.