Honours Multivariate Analysis
Continuous Assessment 5

Instructions:

- You will be divided into groups for this assessment. Only 1 submission per group is required.

- Your **.pdf** report may be compiled using any software you like (Rmarkdown, LaTeX, MSWord, etc.), as long as the presentation is neat.

- Do NOT paste R output verbatim, this will be penalised. If you want to include R output, typeset it properly or present it in a table.

- To help the reader easily assimilate the information, round values to a small number of decimal places (unless there is a reason for expressing a more exact value).

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1. Once again consider the Egyptian skull data from CA1, given in `CA1.csv`. Construct 95% individual t, simultaneous T^2, and Bonferroni confidence intervals for the means in period 1. Present a summary of the results (in any way you choose), then briefly compare and interpret.

2. Weight measurements were recorded for 14 individuals committed to a diet over 4 weeks – the initial measurement and 4 subsequent weekly measurements. These data are available in the file `CA5.txt`. We now wish to test whether the diet has any effect on weight across the entire study by testing for equality of the group's mean weight at each time point. Apply the appropriate hypothesis test, report your findings, and draw a conclusion on the efficacy of the diet.