

IAT 432

Studio Preparation & In-class Exercise #4: Statistics.

You should read this over before class. The exercise is then to be done in pairs in class using the classroom PCs and Excel. Hand in one studio prep per pair labeled as below item 6.

READ: Your notes from lectures on controlled experiments and statistics.

You'll need a copy of the excel data file available on the web site under the readings for this week (file is named IAT432_SampleData.xls).

Note that the file contains TWO data sets. One on sheet 1 and one on sheet 2.

Recall: Independent variable = mouseboard layout (either phone pad or alphabetic)

Dependent variables (i) typing speed in char/minute (ii) number of errors

In class you will work in pairs to do the following for each data set:

1. Plot frequency distributions for values from Phone Pad and Alphabetic for each of the dependent variables (i) typing speed and (ii) number of errors – for both data sets (sheets 1, 2). You should plot both Phone Pad and Alphabetic results for each dependent variable in the same plot as shown in class. In this way you can compare the two plots. All together you will have 2 graphs each with 2 distributions for data set 1 and two plots each with two distributions for data set 2.
2. Calculate mean, median and mode for each phone pad and alphabetic layouts for each dependent variable (i) typing speed (ii) number of errors.
3. Calculate standard deviation for each mean as per sheets.
4. Calculate t-test for each pair of means as per sheets.
5. Answer questions 1,2,3.
6. Name your file: IAT432_prep4_LastName1_LastName2.xls and email to the TA for your session.