CPLN 671/MUSA 500 - Fall 2018

Instructions for Homework Assignments

You will have several homework assignments that will present some urban problem, and ask you to use the methods that we have covered in class to tackle it. Your submission for each of these assignments should be a *short report*, complete with Introduction, Methods (containing tables and figures where appropriate), Results, and Discussion sections. Learning how to write these reports is one of the key aims of this course and ESE 502 next semester, and will give you experience presenting statistical methods and interpreting results in a clear and coherent manner. These skills will certainly serve you well in the future.

Format

The report for each problem should have the following sections:

- *Introduction*, where you:
  - Describe the problem and the goal of the analysis you're about to do
  - Give background information about the problem, *briefly* state why it is important and describe some prior research done on the topic - for example, do a Google/Wikipedia search on the topic

- *Methods*, where you
  - Clearly state the method you're using
  - Report and *explain* the formulas and methods you use.
  - If applicable, give a justification for why these methods are used as opposed to other methods. For example, why are you calculating a large sample confidence interval as opposed to an interval based on a normal population distribution? Why are you doing an independent samples t-test as opposed to a paired t-test? Why are you using a log-transformed dependent variable as opposed to the original untransformed variable in the regression analysis?

- *Results*, where you report and interpret all the results, using tables or graphs if and where appropriate

- *Conclusion or Discussion*, where you
  - Comment on the findings and their implications
  - If more than one method is used, compare the results and discuss why these results are similar or different
  - If applicable, state whether the findings are consistent with your expectations (based on previous research)

Additional Pointers

- Assignments should be in MS Word (preferred) or PDF format and e-mailed to me on or before the due date.
- Assignments that do not follow the format above and simply solve the problem without a write-up *will not be accepted*

- Your formulas should use the SAME font and formatting as the rest of the write-up, and should be typed up using equation editor (or another, more advanced equation editor, such as LaTeX). That is, the formatting of the formulas should not be different than the formatting of the text.

  For example:

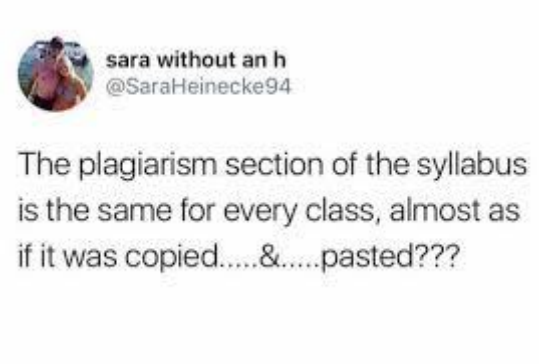
The sample mean $\bar{X}$ is a point estimator of the population mean μ. Furthermore, when you standardize the sample mean $\bar{X}$, by subtracting its expected value $\mu_{\bar{X}} = \mu_X$ and dividing the difference by its standard deviation $\sigma_{\bar{X}} = \sigma_X/\sqrt{n}$, the resulting quantity, shown in Equation 1 below, $$\frac{\bar{X} - \mu_{\bar{X}}}{\sigma_X/\sqrt{n}} \quad (1)$$ will have a *Z* distribution.	OK
The sample mean $\bar{X}$ is a point estimator of the population mean μ. Furthermore, when you standardize the sample mean X, by subtracting its expected value μX = μX and dividing by its standard deviation σX = σX/√n, the resulting quantity, (X - μX)/(σX/√n) will have a Z distribution.	Not OK

- Your submission should be presented such that a person of reasonable intelligence who is not familiar with the topic at hand is able to read it and understand the problem, the methods that you used, the results that you obtained, and the implications of the results
- Your descriptions of the methods should be *concise and precise*
- The methods and results would be the most important section of your report
- Check your report before you hand it in. Make sure that your definitions are accurate, and your formulas are typed in correctly, *and that each term is defined*.
- The introduction and the conclusion sections should be one or two paragraphs each
- Your report should flow well, similar to an article in an academic journal or a technical report, which will have sections and subsections that are all inter-related, and that are presented in a sensible sequential order
- Check your spelling and grammar
- Follow specific instructions on each assignment

Working with Others

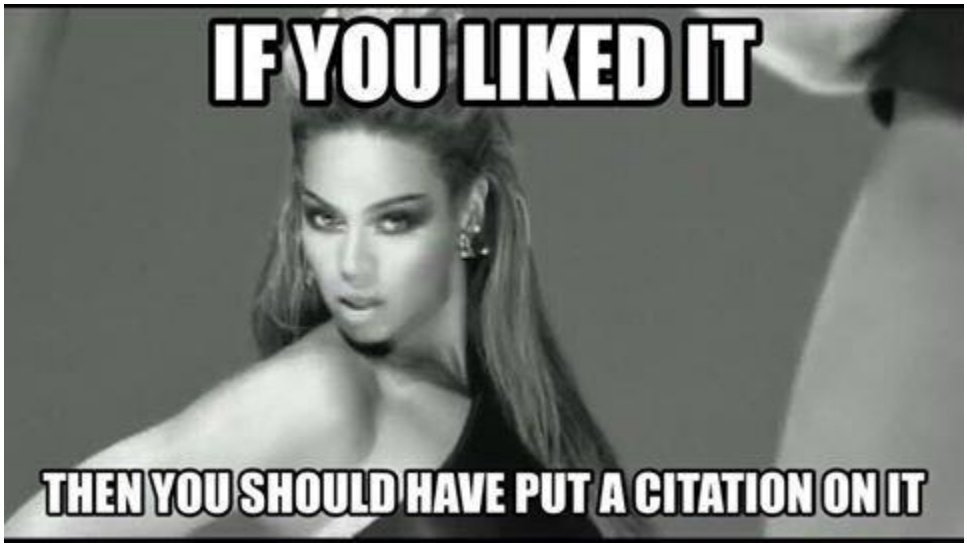
- You are expected to work with two other students on a submission. Teammates will receive the same grade.
- You are allowed and even encouraged to discuss the problems with your classmates. For example, you are welcome to speak with a classmate about the methods you plan to use, or ask a classmate to proofread your submission before you hand it in.

- That said, it is expected that all students adhere strictly to the University's Code of Academic Integrity, which may be found here: https://provost.upenn.edu/policies/pennbook/2013/02/13/code-of-academic-integrity.



Referencing Outside Materials

- It is mandatory to cite any sources you use for your reports.
  - Simply copying and pasting material from another source is not acceptable and is considered a violation of the University's Code of Academic Integrity. You are required to paraphrase the material sufficiently (unless it's a short direct citation), and to provide a reference.
- References do not need to be in any particular format. I encourage students to use footnotes or endnotes.
  - I do not expect that you cite my lecture notes in your reports; however, please cite any of the supplementary materials that I provide you with that you use in your reports (text books, articles, software manuals, etc.)
  - If you use material from a website, you're welcome to use the Google Chrome extension www.citethisforme.com, which generates a citation for any webpage with a single click.
  - For journal articles, provide author name(s), year of publication, title of the article and name of the journal (if you want, you may also provide journal volume, issue and page numbers of the article).
  - For books, simply provide the author name(s), year of publication, title of the book, and any relevant chapter.



(Image Source: https://www.facebook.com/academicssay/photos/a.1499246890297103.1073741829.14526152382936602/1837272306494558/?type=3&theater. See what I did there?)

Grading and Resubmissions

- Your assignments will be graded on a 100 point scale.
- If you receive a grade below 80 on an assignment, you may redo it and resubmit it, applying and following the comments and suggestions that I give you. Please see the syllabus for additional information.
- If I feel that your assignment is unacceptable, instead of grading it, I will point to what needs fixing and will ask you to redo it. I may ask you to meet with me as well, so that we can talk about the improvements that you should make to your reports.

Sample Assignment

- A sample assignment for ESE 502 is posted on Tony Smith's website. This is the format that you are expected to follow for the rest of this course and next semester. The assignment and answer may be found at: http://www.seas.upenn.edu/~ese502/#homework

Source: www.causeweb.org

Disclaimer: Comics are for your entertainment only. But writing well always helps!