

# STA130H1S – Fall 2022

## Module 8 Tutorial Handout

### Today's agenda (5 min):

- Q&A/vocabulary list
- Group Presentation
- Work on final project

### This Week's Vocab (15-20 min) :

- Linear relationship
- Approximately linear
- Non-linear
- Correlation
- Slope
- Intercept
- (Simple) linear regression
- Regression model
- Parameter
- Regression coefficients
- Fitted regression line
- Explanatory/independent variable
- Dependent variable
- Measure of model fit
- Coefficient of determination
- Error
- Residual
- Least-squares
- Least-squares estimator
- Root mean square error
- Prediction error
- Multiple linear regression
- Overfitting

### Group Presentation (50 min) :

*I will post the following material on Quercus in advance for students to access*

Prior to starting the activity, you must review the videos on Plagiarism and Hedging. These videos go over the 6 most common types of plagiarism and how to avoid them.

Once you have watched the video, please read the following article: Ross *et al.* (2022) “Women are Credited Less in Science than are Men”. This article is available in Module 8 on quercus (link: [https://q.utoronto.ca/courses/253019/pages/m8-problem-set-8-paper?module\\_item\\_id=3512104](https://q.utoronto.ca/courses/253019/pages/m8-problem-set-8-paper?module_item_id=3512104) ) and the paper online <https://www.nature.com/articles/s41586-022-04966-w>. (If you don't yet know how to get access to a journal article through UT library, it's a good time to ask for help from your TA or your peers.)

Once you have watched the videos and read the article, you will prepare a 10-min group presentation providing a summary of the above study. Make sure you explain the following, at a minimum:

- Objective: What are the authors interested in studying? Why is it important to conduct this study?
- Methods: What type of study design is used? Who are the participants? What statistical tests are used?
- Results: What are the main findings of the study? Make sure you support any statements with facts (e.g. proportions, p-values, etc.), and present the results in the context of the study.
- Conclusions: What are the most important take away messages to you? Are there any important limitations or future directions?