

This first assignment is designed to make you aware that regression analysis is important in applications of interest to you. The main part of this assignment is to send you to the library (or to send you to an electronic journal) in search of a published article in a field of interest to you that (1) you think is interesting, and (2) uses regression. From the web and an on-campus browser, you have access to many electronic journals. Begin at the web page of the University Library (<http://www.library.wisc.edu/>) and follow links [Journals, Magazines and Newspapers]:[Electronic Journal List]. Alternatively, you can go to the current periodicals section of your departmental library.

The second part of the assignment asks you to read the article you have chosen and to answer various questions. This will serve as a review for those of you have not taken a statistics course in a while as well as to preview important statistics concepts that I will emphasize this semester. Please answer the following questions with complete sentences. Each response should be understandable when read alone. Recall from the syllabus that I expect you to turn in homework that is neatly typed (although you may hand write in mathematical symbols or small corrections).

1. Locate an article in a scientific journal that is interesting to you and that uses regression. Make copies for yourself and for me. Please staple the pages of the article and write your name on it. What is the title of the article and where was it published? Who are the authors?
2. What are the experimental or observational units of the study? Was randomization used in selecting individuals to be included in the analysis? Was randomization used to place individuals into groups?
3. What variables are measured on each individual? Which of these variables are quantitative and which are categorical? Which variable(s) is a response variable and which are explanatory variables?
4. Select one statistical inference made in the article. Report the authors conclusion and the statistical method on which it is based. Report a direct quote where the authors interpret the result of the statistical inference. In light of how the data was collected and the information in Display 1.5 on page 9 of your textbook, do you think that the interpretation the authors provide is justifiable?
5. Select one graph from the article (if it has one). Describe the included variables. What does the graph show?
6. Do the authors describe a process of model selection? If so, briefly report what they do.
7. Do the authors describe a process of checking goodness-of-fit for their regression model? If so, briefly report what they do.
8. Read the first three chapters of the textbook. Write out brief answers to the Conceptual Exercises at the end of each chapter. Compare your responses with those given by the authors a few pages later. You do not need to turn in anything for this question.