

This first assignment is designed to make you aware that knowledge of statistics is important for you to be able to understand the literature in your own field. In addition, it will make it easier for me to find applied examples of statistics that are interesting 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 scientific article in the biological sciences that (1) you think is interesting, and (2) uses statistics. Please select an article carefully, as you will refer to it again in future homework assignments. 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 is to provide me with data about yourself that I will use both to get to know you better and for examples in class.

1. Locate an article in a scientific journal that is interesting to you and that uses statistics. Make copies for yourself and for me (staple the pages). Use a paper clip to attach a 3 by 5 card with your name, major, year in school, phone number, and e-mail address to the article.
2. Briefly describe the method of data collection. If the authors make comparisons between groups, are the groups determined by an observed characteristic (such as sex) or by an experimental procedure (such as random assignment to different treatment regimes)?
3. What is one scientific question that your article addresses?
4. What results (if any) does the article include regarding the scientific question?
5. Select one graph from the article (if it has one). Describe the included variables. What does the graph show?
6. Identify a variable that is measured by the authors. What are the units of measurement? Is the variable summarized with a statistic? If so, what is the value of the statistic?
7. Identify a method of statistical analysis used by the authors and report a given result.
8. Send an e-mail message to larget@stat.wisc.edu with the subject line "Stat 371 Survey". The message should be in the following format.

Name: Bret Larget

Discussion section: Mon 1pm

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major      year  sibs sibRank milesHome milesLiveNow hoursSleep bloodType sex height
mathematics senior 4   1     5         5           6.5       0+      M   70
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Use your own name and discussion section. Put the categories on a single line and your responses on the following single line with spaces between responses. This format will make it easier for me to create a file that can be read into R. The details for each item are described here.

major Your major in school, such as 'genetics', 'zoology', or 'biology'.

year Your year in school (freshman, sophomore, junior, senior, graduate).

sibs How many siblings do you have, including yourself? Use your own definition of whom you consider to be a sibling.

sibRank What is your birth order among the siblings counted above? Use 1 for the oldest, 2 for the second oldest, etcetera.

milesHome How far is 'home' from campus in miles? Define home to be where you grew up, for the most part. Be as accurate as you can to the nearest mile — estimate if necessary.

milesLiveNow How far is the CSSC building from where you live now in miles? Be as accurate as you can to the nearest mile — estimate if necessary.

hoursSleep How many hours of sleep to you get each night, on average?

bloodType What is your bloodtype?

sex M or F.

height What is your height in inches?