STAT 401 F FINAL PROJECT, FALL 2007

The focus of the project is to use statistical methods to answer a research question. It allows you to integrate much of what we have covered in this course. First check the web site to find out who are the people you are going to work with on this project. Then the four of you will need to find a data set and formulate a research question. The data set can be one published in a journal or on the internet, or it could come from your own research. No matter where the data comes from, you will need to acknowledge its source and be ready to make it available if requested.

Each group should email me a short description of the data and the proposed scientific question by Friday, November 9. A short abstract which will be posted on the web site is due to me by December 1-st.

Use the data and your statistical knowledge to answer the research question. The group should turn in a single write-up. Also, each member of a group should separately give me a slip of paper listing the other group members and their percent contribution (i.e. my partner XX did x% of the work). Write up your results as you would for a scientific paper. Your write-up should include: Introduction: what is the question (use the study description) Materials and Methods: how the data were collected (use the study description) and analyzed (major emphasis) Results: what you found out (major emphasis). Make sure your conclusions are appropriate for the study design. Discussion: omit this section. I do not expect a long introduction section, just a clear statement of the research question. The Methods section should be sufficiently detailed that I can understand your analysis. You should explain the process you used to choose the final analysis. If you tried more than one approach for the analysis, do not give me all the details for each rejected analysis, just say that you chose to .. .. .. because .. .. Then, give me the results from the analysis that you finally adopted. The Results section should be complete. Things that I will be looking for include:

1. A clear statement of the question.
2. A clear statement of the type of data (i.e. Chapter 1 considerations: randomized or observational experiment, random or convenience sample.)
3. A clear statement of the experimental unit and observational unit, if appropriate.
4. If appropriate, a statement of how you verified assumptions.
5. Why / how you chose your final analysis.
6. A clear statement of the conclusions of the analysis, including estimates and precision where appropriate.

The written report is due Friday Dec 7 in class. I imagine five double-spaced pages will be more than sufficient. Please include the relevant computer output as an appendix. Again, I do not need to see output for all the analyses you did. Give me the output that supports your results section.

Every group will give a short oral presentation at the end of the semester, most likely during the Final Exam two-hour assigned period (tentatively scheduled for December 12). Several of you will give their presentation on Friday, Dec 7. We will work on the schedule together later in the semester.

Please see me if you have any questions, about the problem, the data, or methods.