

STAT512 Final Project Requirements

The final project is due by **Tuesday 5/14 by midnight**.

Students need to provide data for their project. The analysis for the project needs to focus on a topic from the course: multiple regression, logistic regression, factorial ANOVA or mixed models. Note that all of these topics include at least 2 predictor variables.

The write-up should be 5 pages or less and written in the same style as a journal article, but with more detail and focus on the analysis. I do not expect the graphs to be “publication quality”, but they should be clearly labeled. As a rule, a graph should only be included in a paper if you have something to say about it.

There will be at least 1 project work day before the project is due. Further details TBD. It is in your own best interest to have your project reviewed by at least one other student before submitting.

Project Elements/Grading (20 pts total)

Note: The project should focus on just a single response variable. Running the same analysis for multiple response variables will not earn additional credit.

Introduction (2 pts)

- Background
- Identify research questions (1 or 2)

Data Description (2 pts)

- Identify observational/experimental units
- Number of observations
- Response and predictor variables
- Identify each variable as continuous or categorical (with levels)
- Further details of design

Summary statistics and/or graphics (3 pts)

- Typically done before formal model fitting

Analysis (5 pts)

- Description/discussion of analysis
- Give enough detail that someone else could recreate your results
- OK to try different things
- Justify any choices that you made as part of the analysis
- Discuss model assumptions (You would not include diagnostic plots in a published article, but consider including them for the project.)

Results and Conclusions (4 pts)

Presentation of results

Type 3 ANOVA table and/or table of estimated coefficients

Other results as appropriate

Interpretation and discussion (even if nothing is significant!)

Respond to your research questions

Overall Style (2 pts)

5 pages or less (including graphs but not R code or references)

Complete sentences and correct grammar

R code should NOT be included in main body of the report

While some tables and results can be “copied” from R output, the reader should not have to sift through superfluous output.

R code (2 pts)

Congruency of R code vs written description