# Final Project Rubric

There are five major areas to the final project:

1. Data Analysis
2. Graphical Presentation
3. Written Description
4. Organization and Clarity
5. Coding

## Data Analysis

A strong (A) data analysis will use at least two of the four algorithms (conditional means, regression, logistic regression, k-means clustering) that we discussed in class. The data analysis will include a measure of model fit and will describe which characeristics are closely related to the outcome. The analysis will include cross-validation, which will be correctly exectued and described.

An acceptable data analysis will include two algorithms, but there may be some mistakes or inaccuracies in how the results are presented. A cross-validation will be included, but may not be correctly done.

A weak data analysis will not use two algorithms, or will use them inappropriately. It will either not include a measure of model fit, or will misuse a measure of model fit. It will incorrectly describe relationships with predictors or not describe them at all. It will not include cross-validation or the cross-validation will be done incorrectly.

## Graphical Presentation

A strong (A) final project will include nicely labeled, easy to understand graphics that describe exactly what is happening with the patterns in the data. The graphics will be complex, showing lots of numbers. The response could include (but doesn't have to include) interactive graphics.

An acceptable (B) final project will include graphics, but these may not be easy to read or may not be sufficiently detailed.

A weak (C) final project will include graphics that are poorly labeled and don't make much sense.

## Written Description

A strong (A) final project will include a 1500-2000 word description that is easily understandable by an interested layperson. Assume that your audience is your boss-- not me. It will be much easier to write this if you have a perspective.

An acceptable (B) final project will be written pretty well, but technical details may be poorly described or not described at all, and sentences will be hard to follow.

A weak (C) final project will be poorly written, with many mistakes regarding both the analysis and good writing practices.

## Organization, Clarity, Formatting

A strong (A) paper will have a .Rmd file that generates a very nicely formatted document, suitable for professional presentation. What kind of report would you want to give to a supervisor? That's what I want back from you. The orgnaization should be very clear and easy to understand.

An acceptable (B) paper will have some formatting problems and may not look very nice.

A weak (C) paper will include code chunks, poor formatting, and will just be messy. ## Coding

A strong (A) paper will have code that can generate results from the raw data in an easy to understand way. The code will be commented and will run on my computer without me having to tweak it in any way. (Easy test is to knit the document, with all related files in same directory)

An acceptable (B) paper will have code that is relatively clear, but has some problems, and may not be commented in a way that makes sense.

A weak (C) paper will have code that is messy, hard to understand and not commented. It will not run on my computer, and cannot be easily debugged.