

Final Product Rubric

There are five major areas to the final product:

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

Data Analysis

The data analysis for a strong final product 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 characteristics are closely related to the outcome. The analysis will include cross-validation, which will be correctly executed and described.

The data analysis for an acceptable final product 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.

The data analysis for a weak final product 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 final product 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 final product will include graphics, but these may not be easy to read or may not be sufficiently detailed.

A weak final product will include graphics that are poorly labeled and don't make much sense.

Written Description

A strong final product will include a 1,500- to 2,000-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 final product 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 final product will be poorly written, with many mistakes regarding both the analysis and good writing practices.

Organization, Clarity, Formatting

A strong final product will have an .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 from you. The organization should be very clear and easy to understand.

An acceptable final product will have some formatting problems and may not look very nice.

A weak final product will include code chunks, poor formatting, and will just be messy.

Coding

A strong final product 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 final product will have code that is relatively clear but has some problems and may not be commented in a way that makes sense.

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