

## Homework #3: Class Project

The class project represents 50% of the final grade. Students will work in teams of up to 3 people, and teams will submit three different reports during the semester. Teams must choose a data set (it could be a survey, but not necessarily), formulate research questions, and answer them through data description. It could be any dataset, but a minimum of 1,000 observations are needed. Specific instructions for each report can be found below. Rubrics will be posted during the semester.

### **Report #1: Beginning the investigation (20%)**

**Due date:** April 15<sup>th</sup> (soft)

**Submission format:** .txt, .wordx, .word, or .pdf. Only one page.

**Team name:**

**Team members:**

Title of survey/data:

Link to survey/data:

Brief description of the survey design (no more than one paragraph):

Questions you want to investigate:

- 1.
- 2.
- 3.

Description of the variables you plan to use to address these questions:

### **Report #2: Data preparation and preliminary analysis (30%)**

**Due date:** May 19<sup>th</sup> (soft)

**Submission format:** .wordx, .word, or .pdf. Very simple report. Just answer the questions. Do not include index, introduction, conclusions, etc. Max 10 pages.

**Team name:**

**Team members:**

**Survey/data name:**

### **Data preparation**

Describe the steps you took to prepare your data for analysis. This preparation may include the following:

- give variables informative names.
- code for non-response.
- transform quality variables into factors.
- drop unnecessary variables.
- set up design variables and describe the design to survey package.

### **Summary statistics**

Provide summary statistics for the relevant variables that you plan to study in your investigation of the questions listed in your first report. Make sure that these statistics appropriately incorporate the survey design (if applies).

### **Graphical displays**

Make two graphical displays related to your investigation. These plots should take into account the survey design (if applies). They may be scatter plots, boxplots, histograms, etc.

## **Report #3: Final presentation (50%)**

**Due date:** June 22<sup>nd</sup> (**hard**)

**Submission format:** .ppt, .pptx, or .pdf.

Each team will have 20 minutes to present their investigation in class. They will also answer questions from the audience. You must submit to Canvas your presentation file by June 22<sup>nd</sup>. Teams' presentations will be scheduled for June 23<sup>rd</sup> and June 28<sup>th</sup>. An external jury will give a special prize for the best presentation.