Progress Report 3

For this progress report, please include the following in an .Rmd file (<u>knit this to either html or pdf and submit the knit file</u>). Only **ONE group member** needs to submit this report. Please upload it to the LMS under Progress Report 2. Make sure you list all group members in the header of your report.

Introductory section(s):

1. Introduction/foundation/beginning of your report (note: some of these are the same asks from PR#2. Some of your text may be the same as PR#2; however, as you work through the data, you also likely have updates/edits to make). You should write this section in a way that tells a story that makes sense/leads to your study.
   a. Introduction.
   b. Foundational literature that grounds this work in something real (I do not need a full-blown literature review, but something to show that your work is not coming out of left field).
   c. Your main research question(s). Remember – we are focused on PREDICTION for this class.
   d. Why this is an interesting/relevant question? This needs to be interesting/relevant to an audience beyond just your group. How will this work inform the field?
      i. Note that elements a through d don't need to be in this order and may be interwoven for your project. Write it in a way that flows and makes sense.

For this progress report start interspersing your visuals (i.e., code) with your report text. Your final product is a <u>report</u> – NOT a collection of random plots/analyses. Work on that flow for this product. I also want you to practice HIDING the code (and warnings/messages) from this output. See the models on the course website for a reminder on how to do this. Your analytical section should include:

1. A univariate graphic showing your dependent variable (or, if you are analyzing multiple DVs/models, a univariate graphic for each).
2. Descriptive visuals/summaries of your key independent variables (these can be numeric summaries or plots – whatever tells the story best in your team's opinion).
   a. You might also want to start introducing bivariate/multivariate comparisons here (plots, conditional means, correlations)
3. Regression analysis (linear or logistic/classification)
   a. You MUST include the full table of results AND appropriate model "fit" statistics (e.g., RMSE and R^2 or sensitivity/specificity and AUC.
   b. Don't forget to write up your results in your report (what does the table show you?)
   c. You might also want to include graphics that highlight some of the salient results from your analyses.

Final written portion:

4. Your group's planned next steps (hint hint: you should be thinking about model validation in the coming weeks).