Instructions for Interim Write-Up (STAT222)

The outline below is the standard scientific way to produce a technical document. (i.e., many scientific journals and organizations generally adhere to this general format for publication). Pls make sure that you consider each sub-bullet; however, please do not use sub-bullets in the text, but obviously try to write complete paragraphs/sentences.

Expected length of document (~1 to 1.5 spaced) is to be approximately ~4 pages for the interim write-up, and about 5-10 pages for the final version. You can insert Figures either online or in an Appendix.

Outline/Sections of your document
1. Problem Description:
   a) High level problem description
   b) Brief data description
   c) Questions (in plain English) of interest, including motivation and relevance to a particular scientific discipline, business/industry, not for profit, public policy, etc.

2. Data description
   a) Who originally collected the data and for what purpose? How was it collected?
   b) What are the variables of interest? Size of data set?
   c) Explanation of important variables, including their hypothesized relationship to the question(s) in 1.
   d) A couple/few of side-by-side plots to showcase the data. Some summary/descriptive stats on important variables and their relationship to 1.

3. Methods
   a) Notation for relevant variables, allowing intelligent and clear communication of problem formulation in mathematical terminology.
   b) Translation of questions in 1 into statistical or machine learning `statement' (and/or model). What is that model? (eg, if logistic regression, then write the model out using the notation introduced in part a..)_
   c) What quantity in the proposed model analysis specifically answers the questions?

4. Results (obviously preliminary at this point)
   a) Include only summary level output tables, parameter estimates, etc.), and i.e. stick very detailed output, e.g. ANOVA tables in an Appendix.
   b) Results need to be described/discussed in relation to questions and methodology. Make sure the analyses support the questions asked in 1.

5. Conclusions
   a) Brief summary of results.
   b) Challenges going forward in terms of completing the problem.