

## STA 440 Report Rubric

### **Format and Presentation (6 points):**

- (2 points) The writing is well organized, concise and clear and adheres to the stated constraints.
- (2 points) The report makes consistent, clear and correct use of notation; its connections to the data are evident to the reader.
- (2 points) Display equations, tables and figures in both the main text and appendix are readable, numbered/labeled and are described and/or referenced in the main text. Display tables and figures include clear and concise captions.

### **Content (14 points). The report includes descriptions of:**

- (1 point) The background of the problem and the motivation and goals of the analysis.
- (2 points) The data, including insights from the exploratory analysis that are relevant to the model-based analysis.
- (3 points) The rationale for the model. The structure of the (sampling) model is justified based on the exploratory analysis, study design, structural constraints and/or *a priori* considerations. Prior distributions and their hyper-parameters are justified if a Bayesian approach is taken.
- (2 points) Model implementation details. How was/were the model(s) fit? Were adequate diagnostics reported; were these correctly interpreted and heeded.
- (1 point) Model evaluation steps and reporting of appropriate goodness-of-fit metrics.
- (3 points) The modeling results. Each analysis question, objective and/or goal is addressed. The description is clearly tied to the data and application area objectives; the results are correctly interpreted.
- (1 point) Shortcomings of the analysis. Provide model criticisms, (future) directions for improvement.
- (1 point) Overall conclusions. A short concluding paragraph highlighting key points.

**Total: 20 points**