**Final Project Rubrics**

**Stat 021 Fall 2020**

**Swarthmore College**

**Option 1** (4-5 pages total - excluding references)

1. Informative introduction (worth 20 points)
   1. Should be between 1-2 pages (**not** including plots or tables).
   2. Must demonstrate an understanding of the main research question(s).
   3. Must provide a brief literature review of relevant publications.
2. Thoughtful analysis and reflection on the methodology (worth 30 points)
   1. Should be between 2-3 pages (including plots and tables).
   2. Clearly communicate the main ideas and technical statistical methods used in the main paper.
   3. Relate the statistical methods to the topics we covered in class.
   4. Discuss the appropriateness of various necessary assumptions.
3. Statistical discussion and critique (worth 20 points)
   1. Should be about 1 page long (**not** including plots or tables).
   2. Present relevant statistical questions that may be a natural extension of the work.
   3. Critique the results of the statistical analysis providing evidence of statistical reasoning.
4. References (worth 30 points)
   1. Must be cited appropriately throughout the paper. (I will use turnitin to check for plagiarism, which I consider to be any exact or nearly exact copying of text from other sources that are not cited.)
   2. Each reference must be cited in a way that anyone can find the source.
   3. Must be cited alphabetically.

**Option 2** (3 - 4 pages total - excluding references)

1. Introduction and background (worth 20 points)
   1. Should be 1-2 pages (**not** including plots or tables).
   2. Clearly state the statistical research question(s).
   3. Provide a relevant background information and brief literature review.
2. Analysis: methods and results (worth 30 points)
   1. Should be between 2-3 pages (including plots and tables).
   2. Provide a clear explanation of the data. Identify the observational units and the variables of interest and include any information you can on how the data was obtained.
   3. Clearly communicate the technical statistical methods used.
   4. Thoroughly discuss the appropriateness of various necessary assumptions for the statistical methods you used.
   5. Clearly communicate the results and conclusions from your statistical analysis.
3. Discussion and critique (worth 20 points)
   1. Should be at least ½ page long (including plots and tables).
   2. Must demonstrate critical thinking.
   3. Must provide evidence of statistical thought.
4. References (worth 30 points)
   1. Must be cited appropriately throughout the paper. (I will use turnitin to check for plagiarism, which I consider to be any exact or nearly exact copying of text from other sources that are not cited.)
   2. Each reference must be cited in a way that anyone can find the source.
   3. Must be cited alphabetically.

**Option 3** (4-5 pages total - excluding references)

1. Informative introduction (worth 20 points)
   1. Should be 1-2 pages (**not** including plots or tables).
   2. Must provide a brief survey of the presenter’s statistical (or data science oriented) work.
   3. Provide a brief literature review on modern, related research.
2. Thoughtful summary of the presentation (worth 30 points)
   1. Should be 1-2 pages (**not** including plots or tables).
   2. Summarize the contents of the talk you attended.
   3. Must demonstrate an understanding of the statistical concepts relevant to the talk.
   4. Think creatively about how the topics in the talk could relate to anything we discussed in class this semester.
3. Critical discussion and reflection (worth 20 points)
   1. Should be 1-2 pages long (**not** including plots or tables).
   2. Presenting relevant statistical questions that you are curious about or that you see as a natural extension of this work.
   3. Must demonstrate critical thinking and show evidence of statistical thought.
4. References (worth 30 points)
   1. Must be cited appropriately throughout the paper. (I will use turnitin to check for plagiarism, which I consider to be any exact or nearly exact copying of text from other sources that are not cited.)
   2. Each reference must be cited in a way that anyone can find the source.
   3. Must be cited alphabetically.