

Assignment Instructions: Critically Evaluating Scientific Writing**Paper Reviews, due Thursday**

You will analyze several of the (anonymous) projects completed from a Masters Data Analysis Exam a number of years back. For each paper, write at least two paragraphs critiquing the paper. Also, rank the papers (1, 2, 3, etc.) from strongest to weakest. Base your analysis of each paper on the following criteria:

- Accuracy: Are there any mathematical errors in the paper? Is everything correct? Are all statements true?
- Clarity: Does the paper read well? Can you understand it easily? Are there paragraphs that are hard to figure out?
- Logic: Do the data and the calculations support the conclusions drawn by the author?
- Organization: Is the paper properly organized or is it jumbled?
- Scope: Is there more that could have been done with the data? Are there other things that the author did not think to do or to calculate?
- Figures and Tables: Are they clear? Do they make sense? Do they show patterns fairly obviously or do you have to stare at them and figure them out? Are they well interpreted in the text?

Please be polite and constructive in your criticism. If possible, make suggestions for how the papers could be improved and how problems could be fixed. On the other hand, your analysis must explain and justify your ranking. So if you rank a paper last, you must state your reasons for giving it such a poor ranking. Do not be afraid to be seriously critical: your reviews and rankings will have no impact on anyone's grade, and the original author will not be given copies of these rankings. In these rankings do not compare the papers with each other. Instead take the papers one at a time, pointing out the strengths and weaknesses of each paper in turn. More than anything else, be specific with both your compliments and your criticism. Nothing is more useless than a vague criticism like "overall things probably should have been more clear." Instead say things like "The first paragraph of the results section is very difficult to understand", then explain why.

Be specific in citing relevant parts of the text, provide specific examples from the text, and make specific recommendations.

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Committee Evaluation and Reports, done in class

Bring your DAR reviews to class, at which time you will discuss your critiques with a group of students that evaluated the same papers. **You will have 50 minutes of discussion time.**

Recommend 25 minutes Plan to spend half of your group discussion time listing the strengths and weaknesses of each paper reviewed. As part of the discussion, keep note of agreements and disagreements among group members. At the conclusion of this discussion, compare your rankings with each other, discuss any disagreements, and form a consensus rank of the papers.

Recommend 20 minutes In the latter half of the group discussion time, compose a report responding to the following queries based on the strengths/weaknesses list your group put together.

1. What is the greatest strength of each paper?
2. For each paper, what is one change you would recommend to most improve the paper?
3. List your committee (hopefully consensus!) ranking.
4. What was the most serious disagreement your group had? Explain both sides of the disagreement.
5. What did your group agree upon the most quickly? Explain why.
6. What was the most common problem that you found in these papers?
7. What advice would you give to our class for our next data analysis report writing project?

Recommend 5 minutes Prepare to present a summary of your report to the class. Each committee will make such a presentation to the class following this group evaluation period.

General Recommendations Suggestions as you organize your committee discussion.

- During the first half of your group discussion, aim to respond to the first three queries (1-3) above.
- During the latter half of your group discussion, the last four queries (4-7) may be addressed from your discussion in the first half of the discussion time about the papers' strengths/weaknesses.
- Assign one group member to serve as note-taker. This person can start composing (on the computer) the report with responses to the first two queries during the group discussion of the papers' strengths/weaknesses, and then type responses as your group works through the remaining queries during the latter half of your group discussion.

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Each committee will submit to the class Canvas site a report in response to each of the 7 queries above. The report must be concise and well-written, presenting a clear argument and discussion in full sentences. You are welcome to use any word processing software (L^AT_EX, Word, etc.). *Please submit a pdf report.* Your committee will also be asked to present a summary of this report to the class following the group evaluation period.

Deliverables by end of class

Submitted to Canvas before the start of class, from each student (pdf file):

- Critique of each paper (at least one paragraph each)
- Ranking of papers from strongest to weakest

Submitted at the end of class, from each committee:

- Consensus ranking of papers from strongest to weakest
- Committee review report
- Present summary of report to the class
- The first two bulleted items will be submitted as a pdf file to Canvas. The third bulleted item is an oral presentation.