

Marking rubric for POSTER group deliverable for the STAT 540 final project

Introduction	Outstanding (A+)	Very good (A)	Adequate (A-)	Needs work (B)	Inadequate (\leq C)
<p>“Identify a biological question of interest and a relevant dataset.”</p> <p>“Clarity of the problem statement, data description ...”</p> <p>[1] Bio question</p> <p>[2] Dataset</p> <p>[3] Connection between the two</p>	<p>[1] Biological context/ question is stated clearly; a non-specialist can grasp the basic question.</p> <p>[2] Judicious use of facts and figures conveys the nature, scale, and complexity of the dataset.</p> <p>[3] Relevance of the dataset to the question is well established.</p>	<p>Weakness in just one area but introduction still works fairly well (see descriptions below)</p> <p>[1] Biological problem statement is rote, minimal, or stated for a specialist audience.</p> <p>[2] Some key details about the data omitted or no introductory figures or figures are hard to understand. Difficult to imagine what the data set actually “looks” like.</p> <p>[3] Hard to see how an analysis of this data is going to give an answer to that question.</p>	<p>Weakness in two areas but introduction is adequate (see descriptions below).</p>	<p>Some effort at introduction is detectable, but reader has substantial gaps in understanding what’s being investigated, how, and why.</p>	<p>No genuine effort to introduce the problem and the data and establish interest.</p>

Comments:

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Statistical analysis	Outstanding (A+)	Very good (A)	Adequate (A-)	Needs work (B)	Inadequate (\leq C)
<p>“Develop and apply a statistical approach that allows you to use the dataset to answer the question.”</p> <p>“Demonstrate understanding of the statistical concepts and methods”</p> <p>“a substantial statistical component”</p> <p>“Suitability of the methodology, quality of the execution”</p>	<p>A clear translation of the biological question into a statistical inference problem. Appropriate use of concepts, vocabulary, notation.</p> <p>Explicit links between observed data and the presence/absence or magnitude of the biological phenomenon of interest.</p> <p>Appropriate attention to experimental design (or lack thereof), variability and large-scale testing issues.</p> <p>Effective use of figures to overlay data and statistical models or results.</p>	<p>Analytical work very sound and well motivated but there is weakness in 1 or 2 aspects highlighted to the left.</p>	<p>Analytical work is basically competent but there is one serious problem area (see examples below).</p>	<p>The approach holds some promise but there are two or more serious problems (see examples below).</p>	<p>The approach is fundamentally flawed.</p>
			<p>Weak connection to a statistical model or inference problem, e.g. approach described as a series of data manipulations or simply invokes the name of a statistical test (where more detail is needed) or gives a “naked p-value”.</p> <p>Connection between model and the bio question is underdeveloped or flawed.</p> <p>Not clear how big observed effects are relative to “typical” variability or to non-biological experimental factors.</p> <p>Not clear if the result is truly compelling due to inadequate attention to some relevant performance measure.</p>		

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Quality of presentation	Outstanding (A+)	Very good (A)	Adequate (A-)	Needs work (B)	Inadequate (\leq C)
	<p>Account is enjoyable to read; complete but avoids unnecessary detail.</p> <p>Well organized; e.g. using sections.</p> <p>Each point / concept / figure follows logically from the previous.</p> <p>The figures arise as the natural support for the story and are appropriately referenced, described, and interpreted.</p> <p>English is polished, concise, and clear. Practically no grammar or spelling mistakes. Easy to “mark up” with corrections.</p>	<p>Minor presentation problem(s).</p> <p>A few spelling and grammatical errors, but ideas are presented clearly. Some corrections are easy to make, but some require re-writing whole sentences.</p>	<p>Overall organization, flow, integration is adequate but there is at least one noticeable ‘negative’, for example:</p> <ul style="list-style-type: none"> • obvious unanswered question • major piece of information missing • creates doubt/ confusion in reader • appears to contradict itself <p>Readable, but some mistakes reduce the clarity of presentation. Difficult to “mark up”, would require rewording entire passages.</p>	<p>Substantial problems with organization, flow, completeness.</p> <p>Unclear how reader should transfer attention between prose and figures / tables.</p> <p>Reader is forced to decode the figures & tables -- what they show, why they are interesting / relevant, but it's possible.</p> <p>Marginally readable. No evidence of proof reading / spell-checking. Problems are profound and numerous; impossible to correct with “mark up”.</p>	<p>Reader cannot make sense of the work.</p> <p>Organization is weak or absent.</p> <p>Major points / concepts/ figures hard to identify.</p> <p>Even with considerable effort, reader can't understand the story, which is maddening.</p> <p>Not readable.</p>

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Scientific maturity	Outstanding (A+)	Very good (A)	Adequate (A-)	Needs work (B)	Inadequate (\leq C)
<p>“aim to provide a critical appraisal ...”</p> <p>“handle the competing pressures to "get it right" and "get it done"”</p> <p>“to identify ... issues and discuss them critically, without becoming paralyzed”</p>	<p>The “take home message” is clear.</p> <p>Affirms the expected and highlights the unexpected.</p> <p>Group tried different approaches, created different visualizations, etc. Final result demonstrates thought, care, editing down, curating.</p> <p>Mature discussion of compromises, trade-offs, strengths & weaknesses, etc.</p>	<p>Close to A+, i.e. the underlying work supports that mark, but the discussion and presentation somewhat underdeveloped or naive.</p>	<p>Can detect modest efforts to explore multiple solutions, carry out critical analysis, and identify next steps or issues. But this process is not well documented or some rather obvious next steps are unexplored or obvious observations are left unmentioned.</p>	<p>Group has done the bare minimum.</p> <p>Poster barely goes beyond a basic factual description; little evidence of critical thought.</p> <p>Group let something rather simple hamper them.</p>	<p>Report does not contain any relevant observations, ideas for improvement, etc.</p> <p>Lack of intellectual engagement is obvious.</p>

Comments: