

Final Assignment: Micro Paper Data Analysis

Objective:

Submit a "micro paper" (< 1000 words, at least 2 figures/tables, excluding citations) that includes analyses of a dataset you have access to, employing at least one of the methodologies discussed during this course. The potential data sources include:

1. Your personal data collection
2. Existing data from your laboratory
3. A previously published dataset from any research group

Submission Requirements:

- **Title:** Concise and informative, not exceeding 12 words.
- **Author(s):** You and any other relevant contributors.
- **Introduction:** Briefly provide essential background with appropriate citations (formatted according to your field's standards).
- **Methods:** Outline the basic methodology, ensuring clarity about dataset variables (columns) and observations (rows).
- **Results + Discussion:** Describe the findings of your analyses. As this section merges both results and discussion, it can encompass interpretations and context in comparison to prior work. Ensure figures are sequentially referenced (e.g., Fig. 1a precedes Fig. 1b).
- **Formatting:** The Introduction and Results/Discussion sections should adopt a 2 column format.
- **Figures:**
 - Minimum width: 3.5 inches or 7 inches (single or double column width, respectively).
 - Text size should range between 6 and the main document font size.
 - Multipanel figures are recommended.
 - Utilize space efficiently, ensuring clarity.
 - Employ a colorblind friendly palette.
 - Each figure should have a clear and concise legend.
 - Supplementary figures (e.g., diagnostic plots) are permissible and should follow the References section. Reference these in the text as Fig S1, S2, etc.
 - Submit individual PDF files for each figure alongside the primary document.
- **References:** Format according to your chosen "target journal" standards. This section is excluded from the word count.
- **Accompanying R Script:** This should detail the analyses and include informative code annotations. Reference this file as a "Supplementary File" within the methods section.

Suggestions:

- Employ the ``pdf()`` and ``dev.off()`` techniques for figure generation.
 - `ggplot2` R package for figure making
 - Use Paperpile or Zotero integrated with Google Docs for citations.
 - Begin identifying potential datasets early on in the process.
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