BIOINF 545 / BIOSTAT 646 Group Project Written Report - 2020
Due: April 21 at 11:59pm

Remember: Everyone in the group must perform some of the analysis.

Structure of project report:
- Title, Authors
- Abstract (<=300 words)
- Introduction (1-2 pages)
- Methods   (3-4 pages)
- Results (3-4 pages, cannot cite data not shown)
- Discussion (1-2 pages)
- Acknowledgements
- Project contributions from each person
- References

- Length & format (8-12 pages for Introduction, Methods, Results, and Discussion)
    – Title page, abstract, figures, tables, acknowledgments and contributions and references do not count toward the page total
    – 1 ½ spaced
    – Size 11 font, Arial
    – Regular 1" page margins
- Statements of existing knowledge that are not general knowledge should be cited
- If someone outside of class helped with the project please include them in the Acknowledgements
- Figures & Tables
    – May have up to 6 Tables and/or Figures
    – All Figures must have a Figure Legend; Tables can have titles and footnotes if necessary
    – Each figure or table should be placed in the report close to the place where it's described in the text.

Guidelines for writing each section

- Overall writing and presentation
    – Writing is grammatically correct and as clear as possible
    – Text is concise, not repetitive
- Title page
    – Title describes the work
    – List all authors and affiliations
- Abstract (<=300 words):
    – State question of interest/hypothesis
    – Include number of samples/ replicates and type of sample
    – Include type of data (eg, ChIP-seq, RNA-seq, ATAC-seq)
    – Describe the main method(s) used for data analysis
    – Describe the main results
    – Include a summary statement of what was learned

- Introduction:
    - Describe current state of knowledge on the question
    - Give motivation for question of interest
    - Include adequate references
    - State question(s) of interest at the end of the Introduction
- Methods:
    - Give enough details that the analysis could be repeated
    - Reference papers describing the methods used
    - Describe the source of data and give the appropriate link or accession numbers if publicly available
- Results:
    - Describe characteristics of the samples, if known (include a table if appropriate) and QC stats of the data
    - Provide descriptive information about the experiment
    - Describe the results of each analysis
    - If sequencing, provide read depth, range of number of reads or Mb or Gb sequenced per sample
- Discussion:
    - Don't simply summarize the results
    - Put results in context of other work
    - Provide further interpretation of the results
    - Explain what you would do differently if you started over
    - Suggest future work (work that you would do if you had more time)
    - Describe any limitations of the study
- Tables
    - Columns and rows are clearly labeled
    - Easy to read
    - Only has data that is relevant to the point being made
    - Table Legend has table name
    - Table legend contains all footnotes and any needed explanation of column or row headers
- Figures
    - All plot axes have word labels (not the variable names used in the analysis)
    - Are easy to interpret
    - Symbols, plots and text are all large enough to read as printed
    - Legend describes the figure content so that can understand what is on the plot without reference to the text
    - Axis for bar plots should start at zero
    - Be careful to not over-plot, which obscures the density of the date, if using a scatter plot. To prevent this, use an alpha value so points are semi-transparent, which allows one to see the level of overlap between points.
- Acknowledgements
    - Acknowledge students outside of your group or people outside of class who have helped with the project or who have provided data (if not publicly available)
- Project contributions

- – Briefly describe each person's specific contribution to the project in terms of:
    - Analysis performed
    - Writing, report preparation
- References
  - – Consistent style that includes the titles