GEN 220 Project Report Template

The purpose of the Report is provide me with information to assess your knowledge that you gained in the class and mastery of programming, computation, and data analysis. I anticipate a ~ 4-5 page report including figures and tables. If you write specific python or bash or other code, please include it in github and if useful you can describe the specific steps you implemented in the code, in the methods section.

The structure of your report should be as follows to give an Introduction, Methods, Results, and Discussion.

Format of the report can be as PDF or Markdoc in the gihub or submitted separately to me. You can also write this in google docs. Whatever you feel most comfortable in.s

Introduction

Explain the question you are attempting to address. Why is this interesting to do. Or what part of this could you explain as interesting.

Describe the data you will be processing. Where did it come from, how was it collected - either in the laboratory and what was the intention of the experiments, but also

Methods

Explain the code you wrote or tools you used to achieve your solutions.

Include a link to the github repository. If you developed multiple scripts or steps to solve your problem, provide a explanation of what these are.

This can be a long section if you explain analysis you did, code you had to write or any challenges or assumptions

Results

Provide a summary of what you found, this could be a table, some plots, summary of what was accomplished or can be summarized.

If you have raw results from your analyses and they fit in github - deposit them there. remember github cannot take large files > ~50Mb so it is best to either have the files compressed or to host them in another place. I do not need raw BAM/SAM or fastq files in the repository. If you downloaded public data to run the analysis then the whole project should be reproducible from your code.

You can or should include PDFs or figures and tables (TSV or CSV files) in the github repository if that make sense.

Discussion

What did your project uncover regarding the question(s) you set out to answer? This should match in some way the questions outlined in the Introduction. If you could not achieve all your objectives, please describe the ones you could and give a update on what you would continue on if you had more time or could solve any roadblocks.

Describe and pitfalls, things that didn't work. If you had more time describe other ways you would commplete or expand the project.

References

Helpful to list as citations the methods/tools you used. I reccomend paperpile but any simple citations are fine.