

BI 586 2021 Homework Assignment 1 (15 points total, 15% of grade each)
Community Ecological Genomics: Analysis of metabarcoding data

Assignment: In a group of 2-3 students, choose a data analysis project of your choice based on the projects announced in class. Undergraduate and graduate students should be spread evenly across groups to share knowledge.

Part 1: Code, Rmarkdown, and Interpretation (10 points total, 10% of grade)

Format: All bioinformatics should be documented using RMarkdown and handed in via Github.

Be sure to include the following in the RMarkdown document:

Introduction (1 pt): At the top of the document, include a title, list of authors, and an introduction to the project. This introduction should be a brief overview of what you did and why, including the data you analyzed, methods you chose, and brief summary of findings.

Version control (0.5 pt): At the top of the RMarkdown document, include what version of R you are working in and the versions of all packages

Data analysis/methods (4 pts): Include detailed annotations at each step of the data analysis, meaning informative comments that summarize and justify the step below. Within these sections of the document, additionally justify parameters used or reasoning behind methods you chose as necessary.

Figures (3 pts): Include all *final* (including appropriate axis labels, legend, caption etc.) figures generated throughout the analysis.

Reference database (1 pt): Include justification for the reference database that you chose to map your sequence to, along with the appropriate citation.

Conclusion (0.5 pt): Include a couple of sentences at the end of the document summarizing the findings of the analysis.

Assignments are due at 5pm on March 4, 2021 via email to daviessw@gmail.com

Part 2: Presentation of research (5 points, 5% of grade) Occur on Zoom Mar 4th 9-10:45am
A. Presentation /2

- Effective and creative presentation of material /1
- All group members participated equally /1

B. Knowledge /3

- Knowledge of analyses performed /2
- Interpretation of results /1

Peer grades are also due by 5pm emailed to daviessw@gmail.com
Please grade each of your groupmates out of 100% based on effort towards assignment