CMEE Masters: Computing Coursework Assessment

Assignment Objectives: To work on a series of computing/programming exercises and problems in a coherent, modular, reproducible workflow under version control.

Note that:

- *The overall assessment will typically have significantly lesser marks than a simple weighted average of each week's points because the overall assessment is based on not just the "Computing Coursework Assessment Criteria", but also the the "Marking Criteria for Exams, Essays and Coursework". Both sets of marking criteria are in the Assessment Appendix of the online TheMulQuaBio notes and git repository.*
- *In your 1:1 post-assessment feedback session, we will discuss where you gained or lost marks, and what you could have improved further. To the extent possible, please come with questions about specific scripts based upon the overall and weekly feedback you have received. This may require you to compare your code with the solution code in many cases.*

Student's Name: Uva Fung

1 Specific feedback

1.1 The Good (what you did well!)

1. Found all the core CMEE weekly directories in your parent directory.
2. Your code and organisation are generally neat and logically structured (with one exception – see below).
3. Your Git repo size when I checked week 7 was about 8 MB – nicely compact! This suggests you correctly suppressed unnecessary files from version control, and did not commit excessively. It could also mean that you did not commit enough, and/or somehow along the the way lost parts of your git history – but we don't check these possibilities!
4. You have included both overall and week-specific readme files. These are comprehensive and well-organised, and you have included things languages used and version numbers (though the installation instructions for things like python and git were perhaps a tad unnecessary!) Also check out this resource: `https://github.com/jehna/readme-best-practices`. As you become a seasoned programmer, you will learn to make the readme file descriptions even more informative yet succinct.
5. You have generally made a reasonable effort to produce modular Python code, which is good Pythonic practise!
6. Very good job with the coding overall. Reasonably commented and only one real error (see below). Well done also on remembering all the docstrings.
7. Your Groupwork practicals were all in order, and your group did well in collaborating on it. More feedback on this in the 1:1 sessions.

1.2 The Bad (errors, missing files, etc)

1. Your `align_seqs.py` has a rather strange structure, with the main() function defined at the top and not really doing anything, while the actual logic of the program is outside. This is not really the intended purpose of main(), which should contain code that you want the script to run when called directly from the command line.

2. `Florida_warming.R` throws an error since you have mis-spelled the data file KeyWestAnnualMeanTemperature.RData as KeyWestAnnualMeantemperature.RData (the T in temperature is capitalised).

1.3 The Ugly (niggling issues like commenting, cosmetics, complexity of code, etc)

1. In your readmes you included some note to the language and version numbers requirements, but could stand to include dependencies like packages used as well. Also check out this resource: `https://github.com/jehna/readme-best-practices`. As you become a seasoned programmer, you will learn to make the readme file descriptions even more informative yet succinct.

2. You had a .gitignore to control which files were under version control, which is good, though you might also have opted to make week-specific exclusions. You will likely find this useful: `https://www.gitignore.io`.

2 Overall Assessment

Overall a very good job. Aside from the minor error with the data, the only thing is the strange strange structure of your `align_seqs.py`. However, you have structured things well elsewhere, so perhaps that was just an early dalliance with main() and modularisation that you did not end up editing later on? Otherwise, very good work. Your code is well documented, and runs nearly error-free. Well done!

Provisional Mark: 76%

Signed: Alexander Kier Christensen & Samraat Pawar

March 23, 2022