| Components | Questions | Author Checklist | Author Notes | Reviewer Checklist | Reviewer Notes | Author Response |
|---|---|---|---|---|---|---|
| Project Organization | Is my folder structure logical? Suggestions for best practices for R/GitHub | ☑ | GJAMDATA, R and out folders to separate data, code, and outputs | ☑ | Well organized and documented | Thank you |
| | Is my code in numbered files to indicate the order they should be run? | ☑ | Numbered 0 to 9. Any files with the same number can be run independently | ☑ | All scripts are numbered, in right order, and documented. deprecated folder is not mentioned in the readme, but i assume it will be removed eventually anyways. | Deprecated folder removed from github |
| | Are raw data, code, and intermediate outputs separated? | ☑ | Raw code within X and Y subdirectories in GJAMDATA and GJAMDATA/Withheld for Validation. Processed data is outside X and Y subdirectories in the GJAMDATA folder | ☑ | Code and data match the file structure and are separated | Nothing to change |
| | Are all inputs and outputs of a script clearly indicated at the beginning and end of the code? | ☑ | Inputs are called via read.csv() or load() at the beginning and everything is saved via save() or save.image() | ☑ | outputs for 4.Reduce.R and 4.Reduce_ecosystem.R are labeled as GJAMDATA/processed_xydata_2.RData | README changed to reflect correct step from which processed data are loaded |
| | Does file and folder naming complement the workflow? | ☑ | See above | ☑ | readable and organized | Thank you |
| | Include information about the project - use Abby's doc as a way to organize. This information includes the project overview, hypotheses tested, analyses you want reviewed, project stage | ☑ | See Project Overview - GJAMI - AW-CK.docx | ☑ | | Nothing to change |
| Project and input metadata | Is all the code available on Github? | ☑ | All code from inputs provided by Ian to production figures and statistics is in the repository | ☑ | Able to fully complete analysis with inputs and code in the repository | Nothing to change |
| | If code is ready to be submitted, is the repository public? | ☑ | Yes | ☑ | Repository is public! | Nothing to change |
| | Have I provided information about the packages used in the code within the scripts? | ☑ | All packages are called using the packagename::function() format | ☑ | consistent package conventions | Nothing to change |
| | Have I provided metadata for the raw data? | ☑ | Raw data are described in the README under 1.Process.R | ☑ | yes, well documented | Thank you |
| | Are all data in a publicly available data respository? If the data is not in a public repository, see points 1) and 2) below. | ☑ | All data are available in the github repository. This is not best practice but I'm not sure if there's a better option since this is output of a different repository? | ☑ | im not sure what else to do, but this does definitely work | Nothing to change |
| | 1) Are data that will be published when the manuscript is published shared with the reviewer? If not, see below. | ☐ | NA | ☐ | | NA |
| | 2) If data are sensitive in nature with no plan of publication, is simulated data provided to the reviewer? | ☐ | NA | ☐ | | NA |
| | Can someone other than the code creator or project participants understand (and access) the workflow and content of the data? | ☑ | The sequence of code to run and explanations of data are all included in the README | ☑ | yes, works very well and is both well documented and intuitive | Thank you |
| | Is a README provided and does it include the following 5 points of information? See Readme template and best practices | ☑ | Yes | ☑ | great README, has minor typos | Spell check completed on README |
| | 1) the data contents and intermediate outputs? | ☑ | Data inputs are described in 1.Process.R and 2.Process_OOS.R. Intermediate outputs are described in the Inputs and Outputs sections of the README for each script | ☑ | yes, output for 4.Process.R and 4.Process_ecosystem.R does not match the README | Comments and code updated to make the outputs clearer |
| | 2) which licenses did you pick? | ☑ | MIT License | ☑ | | Nothing to change |
| | 3) did you include descriptions of each file, including scripts and any other files in the repository? | ☑ | Yes | ☑ | descriptions and everything match | Nothing to change |
| | 4) versions of external packages used and software? | ☑ | Yes | ☑ | in README! | Nothing to change |
| | 5) Have I provided the dimensions of the intermediate products? | ☑ | Yes | ☑ | dimensions match | Nothing to change |
| Code Readability | Is my code understandable? Are there comments or an associated markdown document? | ☑ | Yes. Comments in each script | ☑ | well commented | Thank you |
| | Are there comments describing each code chunk or line? | ☑ | Yes | ☑ | yes | Nothing to change |
| | Is the code logically broken up into sections or into seprate files? | ☑ | Yes | ☑ | yes, each step of the process makes sense | Nothing to change |
| | Does each file of my code have a brief explanation at the top? | ☑ | yes | ☑ | yes | Nothing to change |
| | Does my code have a consistent style? | ☑ | I think so? | ☑ | maintains consistent conventions and structure, so i think so | Nothing to change |
| | Is the use of external packages clearly documented? | ☑ | yes | ☑ | yes, called consistently each time, documented in the README | Nothing to change |
| Output Reproducibility | Can the written results be reproduced using the provided code and data? | ☑ | yes. See manuscript. Ian is responsible for the writing | ☑ | yes, figures and summary statistics are reproduced, model matches paper description | Nothing to change |
| | Can an external reviewer run through the code without having to manipulate it? | ☑ | Yes. Don't re-run 6.Run. Outputs given | ☑ | yes, only have to manipulate when selecting the model and data in the analysis section | This is inevitable, unless different versions of the scripts were written. I believe this method is more intuitive, but it does require the user to pay attention to the choices made at the beginning of the script |
| | Are computationally intensive outputs provided to the reviewer? | ☑ | yes. Don't re-run 6.Run. Outputs given. Also, outputs given for 9. Predict_OOS_conditional.R if you just don't run the loop. Skip and load data after | ☑ | yes, see author notes | Any changes documented in ck_review.Rmd |
| | Can the results be reproduced and can the figures be replicated? | ☑ | yes | ☑ | yes, figures made in 8.Visualize.R match paper and interpretations | Nothing to change |
| | Is there a clear link between code and output? | ☑ | yes | ☑ | yes | Nothing to change |
| | Have I withheld data for out-of-sample prediction? What are the results? | ☑ | yes. see step 9 | ☑ | yes, able to reproduce the oos prediction and analysis | Nothing to change |
| | What tests have you done (e.g., unit tests)? | ☐ | I still don't know what this means. no | ☐ | n/a | NA |
| | What tests have you undertaken to ensure output reproducibility? List in the author notes. What tests should another person do to ensure output reproducibility? | ☑ | I ran everything on two computers. I checked inputs and outputs of each file | ☑ | worked great for me! | Nothing to change |
| Methodological Consistency | Do the statistical methods I describe in writing match what I have coded? | ☑ | yes. see mianuscript. I mostly wrote methods related to the model | ☑ | description of implementation and analysis in the methods section is great and matches well, gets at the key points of covariate sensitivity and residual correlation, oos prediction and comparison is documented and matches the output from the analysis. the results and discussion explain the covariate sensitivity and the residual negative correlation, and the results match the output of the analysis. im not sure what makes the oos prediction including covariance better, as the only comparison is also model output. The high residual negative correlation is definitely an interesting result, and the interpretation and discussion is compelling. | Thank you! The prediction with residual covariance is better because the prediction accuracy is higher, according to a comparison between out-of-sample data and model predictions. This is likely because the residual covariance represents processes not included as covariates in the model, which evidently are important to include for accurate prediction. Future iterations of the manuscript text will better reflect this interpretation. |
| | Are there explanations for methodological (coding and statistical) choices made in comments or markdown? | ☑ | yes | ☑ | yes, hypotheses match the statistical methodology employed and conclusions reached | Nothing to change |