

May 24, 2021 Joint Methods & CI Working Group Call

Attendees: David LeBauer, Jake Zwart, Matthew Brouli, Carl Boettiger, Jody Peters, Rob Kooper

Regrets: Ethan White, Abby Lewis

Agenda/Notes:

1. Poll for CI/Methods calls in June-August. Make sure your timezone is selected. Jody will schedule the calls later this week, so take time today or tomorrow to fill out the poll.
 - a. If you are interested in participating in the Forecasting Standards call, make sure to fill out that poll too.
2. [NEON Ecological Forecast Challenge](#) CI Update
 - a. Things are going well! No updates. Stays up more than it comes down.
 - b. Standards pre-print was submitted to bioarchive on Friday. Also did Zenooda archive of EFI Standards package. Quinn did archive of bookdown for the Forecast Challenge. Have or will have DOIs for those. Jody will add the DOIs to the publications page as they come in.
3. Uncertainty Quantification & Propagation, Modeling & Stats Task View
 - a. Use the [Task View 1 on Reproducible Workflows](#) as a guide
 - i. Bayesian tools treat tools as a black box, but it isn't necessarily one. Need a little text to update that. Mike has a note to do that
 - ii. David's comment about Machine learning - people want the numbers, don't care as much about the underlying science. Scientist collaborating with ML people. ML don't want to put an entire time series of weather in model, want to figure out what are the key things that are predictive and include that in the model. It is all about dimensionality reduction. Can reduce by having scientists come in and say what info is most relevant. An argument for guidance for using certain predictors rather than throwing the whole kitchen sink in. Jake will add to that paragraph
 - iii. Table at the bottom
 1. Need to finish OpenDA type of
 - a. OpenDA has acronyms that are not defined. enSR? DudEnSR? Need to define the acronyms
 - b. Add a footnot for those acronyms for OpenDA
 - c. Need to either add footnotes or add them in the text up above.
 - d. DUD – “doesn't use derivatives”
 - b. Final review - is it ready to post online??
 - i. Jake receiving final comments from USGS review this week. Jake will add those updates to the document and let Jodi know when it's ready to go on EFI website

- c. Author List - with the Reproducible Forecasting workflow we put Jake and Alexey first because they
 - d. Bookdown or wordpress?
 - i. Bookdown can be downloaded and shows version updates
 - ii. Bookdown is hosted on GitHub so will always be accessible
 - iii. Carl helped Quinn set up the DNS for the Challenge and can help with this
 - 1. project.ecoforecast.org/ repository name
 - iv. When we get both Task Views updated to Bookdown, update the EFI Task Views page so it no longer references the Google form for making updates. With Bookdown changes/updates can be suggested with as pull requests or issues
4. Visualization/Decision Support Tools, User Interface Task View
- a. Develop outline and tasks
 - b. Social science working group created bibliography for best practices of forecasting visualization
 - c. With Uncertainty Task View wrapping up - should ping people who have put their names down to see who/what interest is in leading/working on
 - d. Division - have people on the calls who are good with the concepts, but not with the tools.
 - e. On next call - could go through brainstorming the outline and then the Social Science group could be good at providing input on the concepts as compared to providing in the tools.
 - f. Next call - work on outline to structure that.
 - i. Nudge Denis to see if he is available for that next call
5. Data Ingest, Cleaning, Management
- a. Placeholder until we are further along with the other Task Views or have an identified leader for this
 - b. Jake too busy to lead in the next few months
6. Forecasting Workflow Updates
- a. Look through the final steps of the Workflow to identify what is covered in the Forecast Challenge and what will be good to keep in mind as a need for the future
 - b. Very early on the goal was to unify the null models for the NEON Forecast Challenge so they were similar and provided good examples. Phenology was chosen first because it was starting soon
 - c. Have this as a document to provide the education meeting in June so when people discuss what we need to teach forecasters we have a point of reference.
 - d. As the Task View starts wrapping up, then we can use this to help with gap analysis. Take this document and line it up with the Task Views once they are done to look to see where there are major gaps left.

- e. Something that can be added of value to this would be to have an example forecast, so it will be clear to a new team where they can plug their model in.
- f. Another thing to think about as a working group now that we have a number of operational forecasts (particularly with the phenology group as a start) - have them get together to compare workflows. Could start with a subset of the phenology group so they can compare across workflows. See where there is consensus on the major steps. The conceptual steps are laid out. For NEON Challenge a lot of this is done on the backend (e.g., targets, visualization, scoring). So if we get the Phenology group together then will only need to get through half of this since the NEON Challenge has other parts covered. So would be able to show the process for the Forecast Challenge. Then when you take the workflow and move it to a new forecast, getting the data and doing the data ingest will cause more work for people who are creating the forecasts.
- g. Jody will cross link what has been done in the Task Views on the Forecasting Workflow