May 12, 2022 Joint Methods & CI Working Group Call

Attendees: Matt Brousil, Leah Johnson, Ben Toh, Jody Peters
Regrets: Libby Mohr, Jake Zwart, Mike Dietze

Agenda/Notes:

1. Poll to find a time for calls in June to August. Ignore the dates and focus on the day/time options and make sure your time zone is selected.

2. Matt's pre-recorded presentation for the Conference
    a. Less than 5 minute recording that needs to be sent in by May 18
    b. Jody will look for visuals to send
    c. Focus on the task views and potential upcoming activities (gap filling, data ingest, cleaning and management task view, helping with the dashboard for the NEON forecasting challenge)

3. Visualization/Decision Support Tools, User Interface Task View
    a. Link to the New Copy of the Doc
    b. Link to the Previous Copy of the Doc
    c. Uncertainty Quantification & Propagation, Modeling & Stats and Workflow Task Views to use as Reference: https://projects.ecoforecast.org/taskviews/
    d. Notes for remaining updates and needs to finish the Task View:
        i. Figure 1 - check the license. Reproduction of educational purposes is kosher. Check the license through PNAS
        ii. Put all the tables at the end and hyperlink to them
        iii. Have examples for the static visuals from Libby that Jody will add over the next month
            1. Have 10-12 plots with example code base on NEON example
        iv. Ben will work on highl-level reactive section pros and cons
        v. Spatial visuals - there is a CDC link to the visual examples at the end of this section. In that link there are examples of each of the types of visuals. We can think about adding for these types of visuals using the NEON Challenge later. Don't need to do this before the Task View goes live.
    e. Need to update the text description about mapbox
    f. Jody will work on updating the text and adding figures to the Rmd in the GitHub task view repo and the bookdown page then send it out to the group for review before advertising it widely to the EFI community

4. Discussion of ideas of activities:
    a. Of the 3 ideas that have been put forth for the group to work on, what are people most interested in?

        i.   Matt likes the Data Ingest Task view. Has experience working with grad students on this at WSU. Gaps #2,

        ii.   Leah - Gap filling is appealing. Will be on sabbatical starting this weekend. Shifting to forecasting for research. Spending time thinking about gaps would be useful to prep for sabbatical

        iii.   Ben - Gap filling is of interest.

5. Ideas for Next Activities That Have Been Brought up Before
   a. Data Ingest, Cleaning, and Management Task View
   b. Idea from Carl and Quinn
      i. Quinn and I were talking about how we'd love to start engaging this WG more directly with methods/CI in the neon4cast challenge. In particular, now that we have a decent pipeline for gathering in forecasts and publishing scores, there's a lot to be explored with visualization. The current flexdashboard is maybe an example of this (https://projects.ecoforecast.org/neon4cast-dashboard/phenology), it shows a range of possible visualizations and summaries but is kinda all-over-the-place, probably few people visiting the site can make much sense of it. For an audience that knows ggplot and wants to learn/practice more advanced tools like interactive visualizations and dashboard layouts, this could be a good entry point. It would also be fun to get more folks engaged with the data coming out of the challenge, and using visualization to explore interesting questions about forecast horizons performance according to different metrics, visualizing uncertainty, etc etc.
      ii. We could get people started in creating simple interactive dashboards with minimal R code showing an overall team rankings or a single forecast of a single team. I imagine then that WG members might work individually or in groups to generate some visualizations, and/or critique and tweak existing visuals (and supporting text!) so we slowly move towards dashboards that really tell a story about these forecasts.
      iii. Anyway, just wanted to bounce the idea off you. I don't want to derail the ongoing work of the group, and maybe this idea is terribly impractical, as you know I'm prone to being carried away with impractical ideas!
   c. Mike's prompt: Discuss next steps beyond the current task views (2 done, 1 in progress, 1 on deck). In particular, I think we've completed enough of the task views that we could have some useful discussions about identifying gaps and bottlenecks in current methods and tools and ways we might think about moving forward on identifying and addressing those (e.g. surveys, workshops, hackathons, group projects, virtual panels / webinars, etc). This is also motivated by some recent interagency (NOAA, NASA, CDC) roundtables

that EFI has been sponsoring where standards and community CI are emerging as priority items for the federal agencies (caveat, that doesn't mean there's any funds). It is also relevant to the next round of the EFI NEON challenge and the upcoming EFI2022 "all-hands" conference

6. NEON Ecological Forecast Challenge CI Update - no updates on today's call.

   i.