January 12, 2023 Education Working Group Call

Attendees: Dexter Howard, Alyssa Willson, Cazimir Kowalski, Abby Lewis, Jody Peters, Olivia Tabares

Agenda/Notes:

1. Applications are open June 21-23, 2023 EFI Unconference at NEON HQ in Boulder, CO Save the Date. **Applications are due February 1**
    a. Goal: Bringing People Together to Do Forecasting: Training, Technology, Theory, and Translation
        i. Participants will work together to produce products they want to work on. Examples are (but not limited to): getting a forecast up and running, developing teaching materials, finalizing tutorials, refining or creating tools, analyzing forecasts for a manuscript, and/or developing visualizations.
        ii. The event will also include a poster session for attendees to present their research.
    b. Travel funds within the US are available
    c. Space is limited to 50 people.
    d. Specifically, for this group - if the group can come up with a task that can be worked on during the meeting that would be great. Right now, the application to attend is due on Feb 1. But the nominations of project ideas is not due at that time. So the group will have more time to think about specific project ideas to propose.

2. Updates or Requests for Input
    a. Ethics in Forecasting Project Updates
        i. Authorship guidelines
        ii. Updates on writing
        iii. Jason has a conversation scheduled with Georgia so will follow up with the group after that
        iv. Olivia has added text.
        v. Acknowledge how different stakeholders think.
        vi. Expect this manuscript will be submitted by the June meeting. But each section of the manuscript provides a nugget that can be built off and broadened out. Depth and breadth - dive into any of the datasets and develop a shiny example. Or provide more examples - could go with ideas brainstormed previously or come up with new ideas
        vii. Next steps
            ● Marine fisheries and conflicts of interests sections are getting towards a good spot

- For the teaching component that Olivia was working on she was thinking about bioethics extra readings. Bioethics and biodiveristy. There are bioethics about working with people but not much about bioethics about ecosystems. She is continuing to work on compile those resources
- This is somethign the whole team could work on.
- **Homework task** - create bullet point list of additional resourecs for the Notes to Faculty section
- Other task - re-reading the first module - it is ready for feedback and edits. Where is the format that Abby used in the first module which didn't end up working for other modules. Big picture feedback.
- Found that the emphasis of each section in each module varies.
- Fisheries section - do we have the tuna example?
  - Think it might be in the Hobday paper. This one: http://www.cmar.csiro.au/gab-forecasts/
- Dexter and Olivia will continue to work on figure set 2.
- Everyone to review figure set 1
- Everyone to look for bioethics references to put in the Notes to Faculty section.
  b. Recap from Jason about his forecasting class
    i. Caz took the class and Alyssa was the informal TA
    ii. Enrollment involved undergrads with a mix of students with a lot of familiarity with forecasting or programming and those who did not
       - Some people were frustrated because they wanted to do more, others felt it was too much
    iii. Followed the topics in Mike's book and used the Foreasting Challenge - had a lot of support from Mike, Quinn, and Carl as well. Want this to be generally useful so as things come up they were committed to helping.
    iv. Jason to send the syllabus to Olivia
    v. Caz enjoyed the synthesis of theory and application that both came in together in the lectures.
    vi. Like the Challenge but had technical hiccups at points
       - Learning GitHub, R, R packages and working through those issues
       - Documentation around the Challenge was sometimes hard to
       - Looking for random walk forecast with JAGS - no R code documentation to give a walk through in that form up and running
       - More examples of kinds of forecasts to emulate and build off of
    vii. Delayed gratification issue - so much to learn before creating a forecast.
       - Another option would be to start off with a full example of a forecast. You'll learn JAGS later, but this is how we integrate the posterior, so when people are thinking about partitioning

uncertainty and Bayesian models then they know how they get plugged in because they see that early.

       viii. There are exercises that go along with concepts in the lectures. Rmd and text that explain exercises and then places to insert your own code. Would like to more tightly couple the exercises with the Forecasting Challenge. Some exercises were from the Challenge and some were not

c. Macrosystems EDDIE
d. Other potential updates
       i. Gerbrand updates
       ii. Anna - Forecasting, Prediction, Projection Vocabulary Manuscript
       iii. Antoinette's learning goals and concepts
e. Is anyone teaching a forecasting or data science class this semester?
f. Jason has a new grant from the Alfred P. Sloan Foundation to support education efforts and increase equitable pathways in STEM. This grant builds off the collaborations between University of New Mexico, Gallup, Cal Poly Humboldt, Notre Dame and the University of Minnesota that was previously funded by Sloan
       i. Will have a postdoc whose job will be to focus on co-developing educational modules for data science and forecasting for topics that are of interest to faculty and students at institutions with large minority populations.