June 24, 2020 Education Working Group Call

Attendees: Anna Sjodin, Alyssa Willson, Jody Peters, Jason McLachlan, Laura Super, Gretchen Stokes

Agenda/Notes:

1. Update from Anna and Gretchen about the forecasting vs prediction survey/manuscript
   a. Working on the outline and putting word counts on using the journal requirements.
   b. Frontiers in Ecology and the Environment is the target journal. Questions and Concepts section
   c. Have grad student co-authors ready for writing assignments
   d. Anna met with the Theory Working Group who has been thinking about vocab words. Good group to bring back the survey data to consult on how to define the words. All kinds of disciplines and people who responded to the survey have many different definitions. From survey - people have identified that including measurements of uncertainty with the predictions/forecast is important
   e. Want to get the manuscript drafted before fall semester since we expect that time will get busy
   f. When are we okay to close the survey?
      i. Currently have 101 responses. Mostly from ecological forecasters. 1 criminologist, 1 sports forecaster
      ii. Check in with Diversity group to see if there are other specific people to target for broader than ecological forecasters, call out to social scientists and business, as well as meteorologists
      iii. Lots of forecasting done in business. Laura has put papers in the shared drive related to business. There are lots of different definitions in business and there has been a call for a concise definition
      iv. Keep the survey open a little longer
      v. Anna/Gretchen finding ways to create a network figure. Clumping analysis that produces an exemplar - put the words in, the algorithm clumps words, and produces an exemplar.
         ● Research weaving paper in TRENDS (Laura will send the citation and is happy to help with this type of analysis; Research weaving https://www.sciencedirect.com/science/article/abs/pii/S0169534718302787
         Trends in Ecology & Evolution Volume 34, Issue 3, March 2019, Pages 224-238
         ● One idea - because we have a large response from ecological forecasting - see how the other disciplines fit within the forecasting definitions

g. Who else wants to participate in writing?
   i. Anna/Gretchen to work more on the figures - want to get a draft done next week.
   ii. They will send out the outline highlighting sections where input is needed
   iii. They will send figures to Theory group through Slack or email listserv to get feedback before the Theory's next call in a month
   iv. Conceptual figure with a pyramid of the forecasting process is drafted. Novel figure that builds on Mike et al's conceptual figure and the RCN proposal figure by showing a sequential process.
      ● Does the pyramid shape imply that the Decision making point at the top is smaller or less needed? We want to be clear that it doesn't get easier or less important, btu also like how it shows that the decision making is apex. Think that this can be clearly conveyed in the text and figure caption. This pyramid figure ties in nicely with the analyses as well.

2. Update from Alyssa - grad student efforts to compile resources for undergrad education
   a. Alyssa is leading small group working on undergrad forecasting resources
      i. For this summer focus on collating existing resources in forecasting and how to make resources that promote equity and diversity in undergrad classrooms - how to engage with multiple perspectives.
      ii. Want to work with the larger EFI group to make sure we aren't missing any resources. Here is the survey: https://docs.google.com/forms/d/e/1FAIpQLSdIbf-aCHYeASNWpc1u1c6pwQ-wXJIHYOjBYjxruCCIzFGGoA/viewform
      iii. Spread this to other EFI groups to get input

3. Next year the RCN focus and meeting will be on Education. Want to think about where we want to be by next summer so we can get rolling.
   a. Want to have a discussion about what we want the focus to be in preparation for this meeting
      i. Groups to focus on - grad students, underrepresented groups, managers/decision makers
      ii. On next call Jason will provide input to help us think through how to help set us up for the meeting and the following year
      iii. DEI Book group - the role that privilege applies to applying attending undergrad

4. Recap from NEFI Summer Course -
   a. Are ticks a good topic to use as a starting example to work through for the broader community?
   b. Lessons learned

5. Steps Discussed on May 27 Call to prep a concrete example

a. Decide on the topic - got to have a good story that can make a prediction but with something that doesn't have so much data that it is overwhelming
      i. Ticks (placeholder from May 27 call)
      ii. Aquatic instruments (chl-a) and ticks will be highlighted in the NEFI course
      iii. Lots of expertise at VT on aquatic, Shannon and John have tick expertise
   b. Trailer Video that explains why people care about the topic, what is the problem, how do we get the data, etc
      i. If we go ticks, put together trailer video work with folks at Carey
   c. What is the code - we'll add a repo to the eco4cast GitHub group
   d. What do we need to annotate/make videos
6. Ticks could be good.
   a. The ideal thing is that you learn something from the forecast.
   b. It is nice if the example has some counterintuitive results. I wouldn't have learned that if I didn't have the forecast.
   c. Uncertainty blows up when you make the prediction. For people who do standard regression they think big confidence intervals are bad.
   d. If there was a decision about something and you can go one of both ways and if the forecasting helps you see that way #1 is better than way #2.
   e. Would be more successful if we can hit a number of these
7. CI/Methods Working Group is also wanting to provide a concrete example but focused on the forecasting workflow and showing how to put it into a docker. If we can combine efforts that would be good.
8. Continue to think through if ticks is a good way to or if another topic would be better to go with.
9. Want to have modular videos that are useful at the undergrad level, the grad level, and for a professional manager.
   a. The modules provide a sequential flow, but people can drop in wherever they are interested in the process
10. Check with Shannon/John - how well does a tick forecast hit the major needs highlighted above.