

September 26, 2019 Methods & Tools Working Group Call

Attendees: Rich Fulford, Jake Zwart, Mike Dietze, Jody Peters, Elise Zipkin

Agenda and Notes

- From the August 21 call
 - Short term: Here is the Google doc for the Task View [LINK REMOVED]:
 - Homework for folks to fill in some of the details of known packages/tools and do some research on what else is out there?
 - Share that we're doing this with CI group to contribute to collaboratively
 - Poll some of the forecast teams about what they're actively using right now
 - Draft figure
 - Mid term (by RCN next summer):
 - Best practices?
 - Definitions / semantics (e.g. what's the difference between forecasting and projection?)
 - Identification of gaps in tools and methods
 - What is an achievable REU forecasting project (10 week, undergrad)?
 - Build out more of the tool awareness materials
 - Long term: Are there long-term things we'd like to be working towards?
 - Homework
 - Discuss on Slack, summarize on next Agenda Doc

Notes:

- Core short term goal. Developing list of resources used by the community as this will be useful for people joining the community and for other to see what other folks are using.
 - Mike added Categories to the Task View doc
 - People should add resources that they know about that fit in these categories
- Medium term goal - where are the gaps. Where do we need tools or where are there tools, but they are not easy to use
 - **Check with CI to see about collaborating on this list.**
 - From notes from last CI call - looks like they would be willing to join forces
- The Group worked to fill out an initial list of resources on the Task View doc
 - When going through these resources also think about if there are other web pages with good summaries so we don't need to re-write it/reinvent the tool
 - **Check with Melissa about the User Interface resources**
 - Think about who will know about Reproducibility tools? CI group? There are hundreds of tools out there? What ones are people using? What should be followed up on? **Survey to see what tools people use**
- **Next Steps**
 - Follow up with the rest of the folks on this Working Group to add resources they are aware of

- Draft Figure to organize these resources around
- Medium/longer Term Goals
 - Best practices - a heavier lift than we are ready to go into right now
 - Definitions - Anna and Gretchen from the Education/DEI group looked at how folks have been using forecasting terms. This will be good to bring in.
 - Need to spend more time going through tools before identifying gaps
 - Think about for the REU/RCN forecasting challenge - if someone new wanted to participate in forecasting competition, where will they hit a wall with a steep learning curve, writing code from scratch, deal with the list of 257 workflow tools to figure out what to use and how to use it
- Are there longer term things we want to be working towards?
 - Homework for next time
 - Mike: Intersection between CI/Methods & Tools. Call with EFI & NCEAS about putting a forecasting/ecological modeling, reproducibility mid-scale CI proposal together. Matt Jones asked - what would the stack look like, what technologies? Ask NSF to support NCEAS working group/workshop proposal to develop roadmap/strategic plan statement of what is needed. Build on what we have started with the Task View doc and get into what the technologies are available, what are the unmet needs, and where are the bottlenecks? Have generic workflow (here are the components that go in) and this will allow others to plug into the workflow. Lay out the needs of the community. Be clear about standards and protocols involved
 - PEcAn has become large and sprawling. Has become hard for folks outside of PEcAn development team to drop modules in. Need a master plan on how it all works so others can figure out how to make updates they need
 - There doesn't need to be 1 technical solution. But if there is a common ground or enough people are building tools that are interoperable with others.
 - Long term goal **interoperability**
- **Agenda for next call?**
 - Send task view to rest of M&T as well as CI group before CI group meets next Tuesday
 - Mixing of infrastructure and methods is this discussion. Where is a good fit for broad approach discussions such as ensemble modeling vs. trend analysis of big data?