User Feedback for UI Prototype

**Overview**

This document provides the categorization of the user interface prototype feedback provided by peers and others. User feedback is necessary for the design of a prototype, because it will help provide the developers with ideas on how to efficiently code the project. This feedback also lets the developer get a general feel on how users will navigate through the interface and the specific way the client wants the program to look. Feedback is also useful to ensure that the developers and client are on the same page after gathering requirements and previous documentation.

**Feedback List**

This is the list of feedback received from the users of our project. The list is categorized by screenshots of the low-fidelity user interface design, described as “pages”. The list is then sub-categorized by users, which include the client at NTSG, classmates/peers, and the professor of the class. The team is planning on implementing most of the suggested feedback into the project, because the feedback will allow for a smoother user experience during the calibration process. The only feedback that may not be implemented would be the “Pages to be added” section since there may be time constraints for coding the user interface.

General (All Pages):

* Class:
  + Make back buttons (so the program does not feel strictly linear)
  + Display definitions and what the value is being calculated with/for when clicking on any term
* Professor Reimer:
  + Back OR exit options

Read in Config File Page (Page 4):

* Class:
  + Only accept HDF5 file type for input, and throw error when not, on the Configuration File Page
* Professor Reimer:
  + Have a place to write the output filename in ‘Read in Config’ page

Plant Functional Type (PFT) Selection Page (Page 5):

* Client:
  + PFTs used in calibration should be indicated in the configuration file and/or the structure of the input datasets (e.g., flux tower dataset will have a dominant PFT column and PFT-by-share-of-1km-pixels columns).
* Professor Reimer:
  + Dynamically change image for which PFT is selected

Selecting Outliers from a List and Display Subset of Smoothed Outliers Pages (Pages 6-7):

* Client:
  + Instead of listing outliers for GPP and RECO, it would be more informative to show histograms of the distributions before and after outlier removal, along with the total number of outliers removed. Changing "Number of Days" to "Window Size" will also improve generality.
* Class:
  + Change the re-smoothing type from a string input to a drop-down menu option in the Selecting Outliers Page
* Professor Reimer:
  + Clicking outliers to remove them in ‘Outliers’ Page or a box to include/exclude
  + Add a choose which GPP/RECO outliers to include or ignore
  + Include log of previously removed outliers and report (potential notes for client)

Choosing Parameters to Optimize GPP and RECO Pages (Page 10):

* Class:
  + Create a ‘Choose/Select All’ button for both Parameter Pages and potentially a ‘Clear All’ to then select one (one needs to be selected to proceed)
  + For GPP and RECO Parameter Pages, say “upper bound” and “lower bound” instead of “max” and “min”

Choosing Hyperparameters for RECO optimization Page (Page 12):

* Professor Reimer:
  + Put a slider bar and text box for Prh and Pk

Pages to be added:

* Client:
  + Ending Page will show fit statistics such as Pearson’s r value and RMSE for GPP, RECO, and NEE (see updated document from client)
* Class:
  + Create a progress bar, since the calibration process may take a couple hours to run

**Acknowledgement**

The team members hereby indicate by their signatures below that they have read and agree with the specifications of this document.

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