

What I want to see for the web server:

Essential features:

1. Self-contained and easy to maintain: not affected by python upgrading, or complicated library dependence.
2. Open source, if people want to download the source code. So, everything we write needs to have codes. No black boxes.
3. Modular: New data analysis functions can be added into new modules. The first version needs to include the following major functions:
 - a. Simply plot the given set of X-Y data with name/marker/line/color/axis range/log scale of choice:
 - a. Two most used options: 1) scattered lines, 2) scattered column graphs with error bars and simple statistical analysis such as ANOVA, Student t-test (with text report of the statistical results).
 - b. Fitting direct binding data (and then graph the results), using a set of initial parameters given by users from the screen. User can choose to fix a parameter.
 - c. Fitting competition binding data (and then graph the results)
 - d. Analyze a set of actin polymerization data (and then graph the results)
4. Input: x-y paired columns. 1) by uploading a pure text file (with data set name as a separator), or 2) by copy/paste into an input box (can have data set name as a separator), or 3) by uploading a CSV file (like Excel file), with data set name on top of each X values.
5. After the program read the data, it can add more data until user leave the browser or clear up the session.
6. User can click a button to swap the x and y values for all data sets in the session.
7. Ability to handle multiple data sets: Each data set should have a data name given by user (and changeable by user on the screen). Use a separator to identify multiple data sets.
8. The program can choose to overlay the graphs for different data sets (within one module), define the marker/color from the screen for the data sets, and **then write them out to a PDF format that is fully editable in Adobe Illustrator.**
9. No command line is needed. Everything is by mouse clicking (except for some simple name typing).
10. Can be used across different browsers, although Chrome can be preferred.
11. Output: there should be multiple options for output of the analysis results: 1) full text report of the analysis process, 2) abbreviated text report of the analysis process, 3) generated graphs in PDF format fully editable in Adobe Illustrator.
12. In the back, we should have a simple way to track user activity (user IP and traffic).

Wish features:

13. Sessions (: For each function module, the user will be in a session until the user clear up the session. Each session should have a task name and user email address (and temporary password) to track the session. Each session can be stored for up to 1 week,

and the results can be downloaded as text and PDF file (see below for output). Each user can only see their own sessions/tasks.

14. User registration and management.