Readme for L&H's Obs Data Analyzer
Readme version: 1.0
Corresponding program version: 1.0

Announcement

This project is released under GPLv3[1]. We publish and allow anyone to use this code. We don't promise all the function will always work well. Before using it, it's recommended to know how it works and read the following manual.

Introduction

This is an easy program designed to analysis and standardize observation data with polynomial regressions.

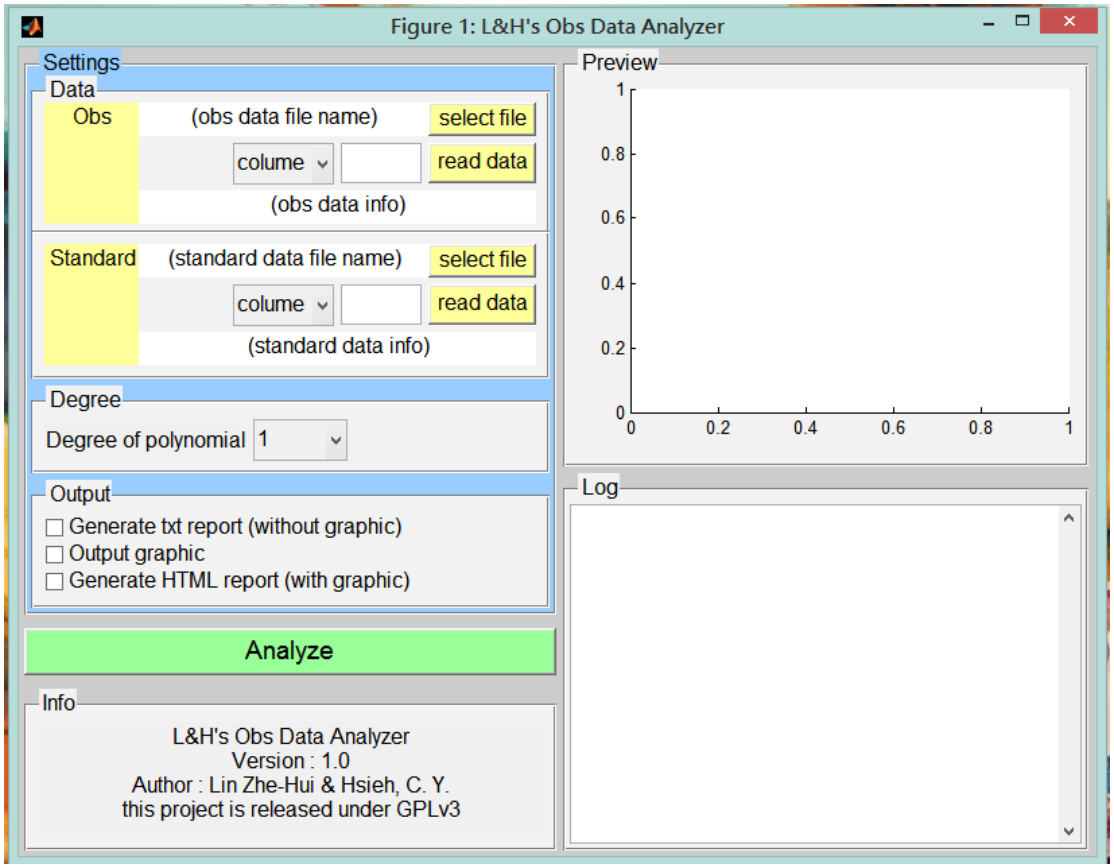
Feature

1. Use polynomial regressions to analysis observation data. And you can choice the degree which you want to analyze.
2. Do some useful statistical analysis for both the data before standardizing and after standardizing to help you judge the effect.
3. Output not only text and graphics but also combine both into an easy-to-read and graceful HTML file.
4. Flexible input data system, you can input data which separate with space or something else and save data in column vectors or row vectors.

[1] A Quick Guide to GPLv3 - http://www.gnu.org/licenses/quick-guide-gplv3.html

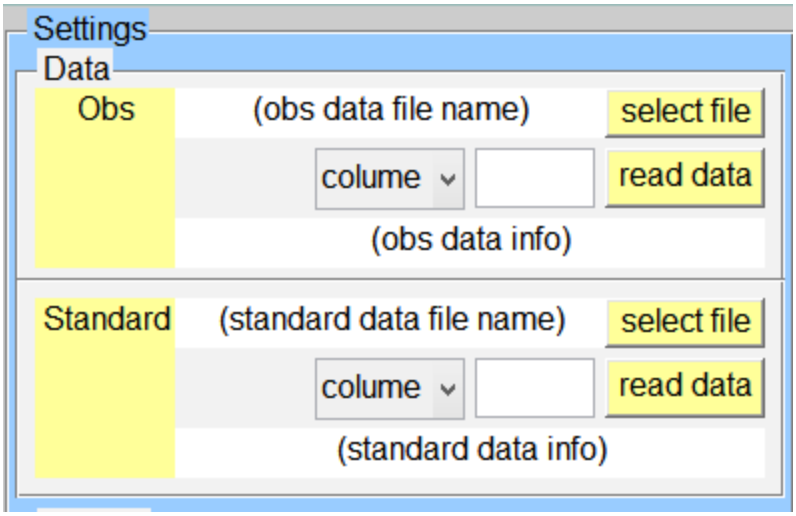
User Guide – how to use?

The whole GUI

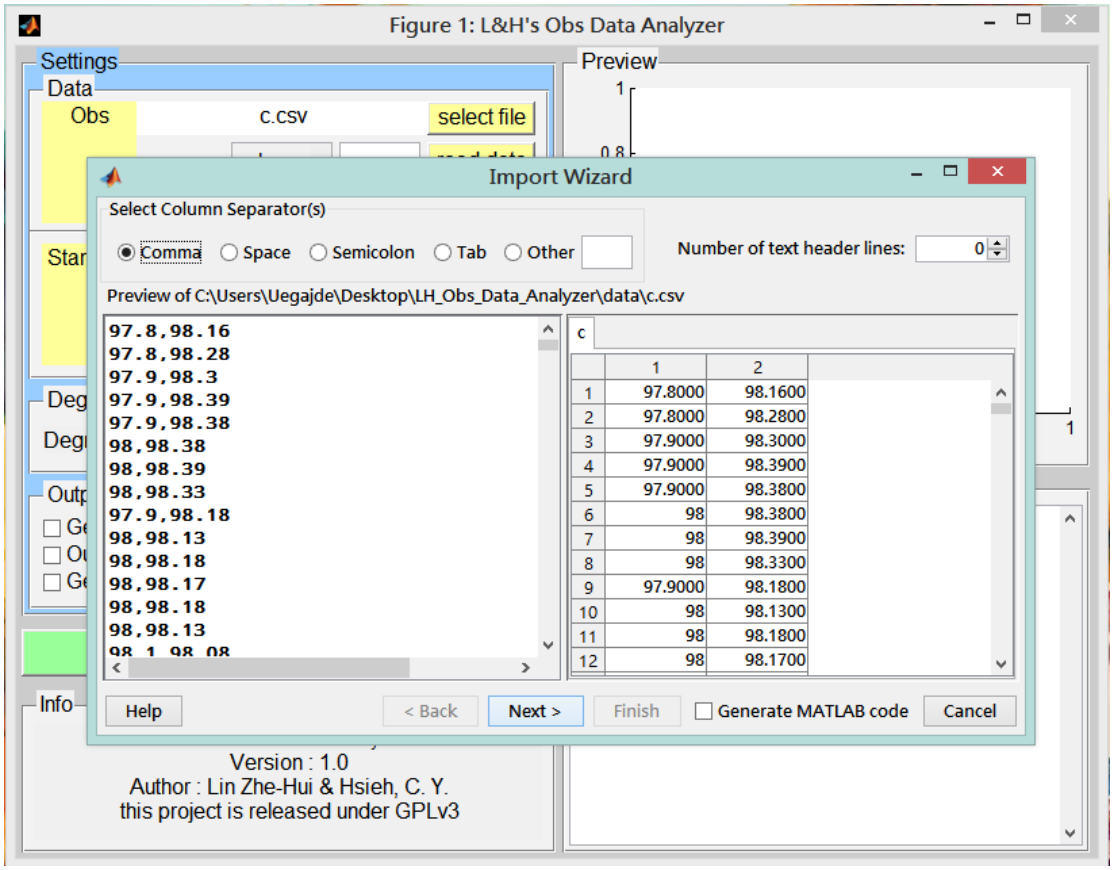


Step1. Import file

Click “select file” and select the file.

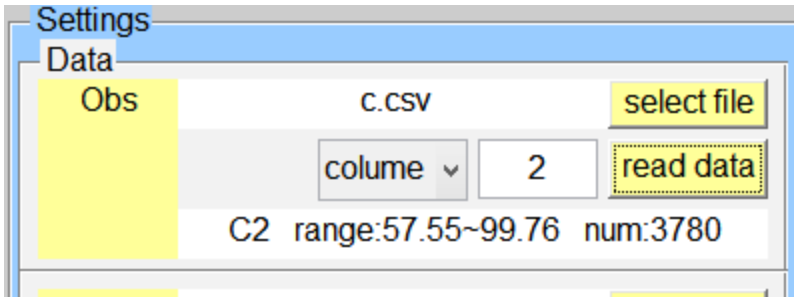


Then the in-build “Import Wizard” will popup. You can set how to read the file (format, header lines and so on).

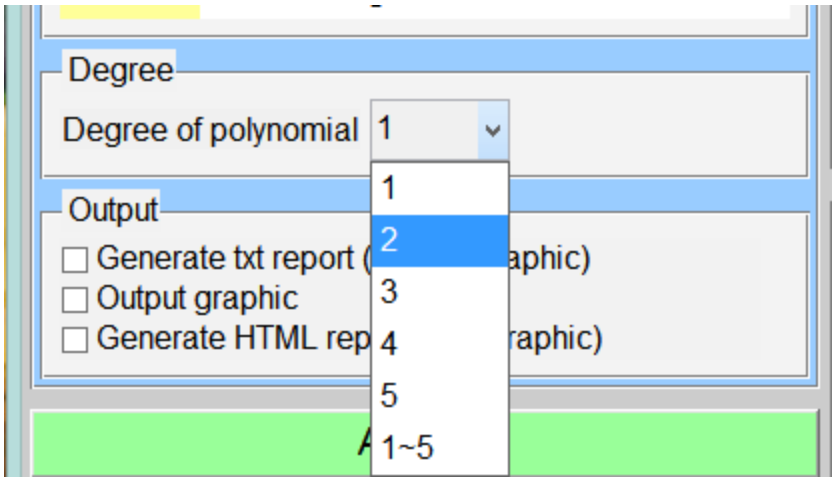


Step2. Select data range

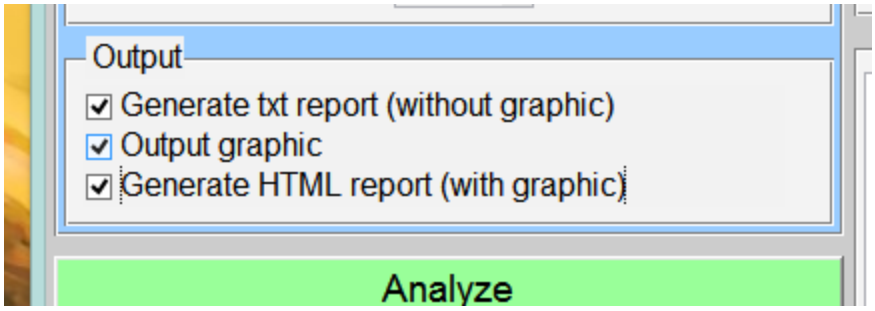
Choice “Column” or “Row” according to the data format you inputted. And in the box on the left side of “read data”, input which line of data you want to use. Then click “read data”. If all the things is right, it will show the information about the data you choice.



Step3. Choice polynomial degree

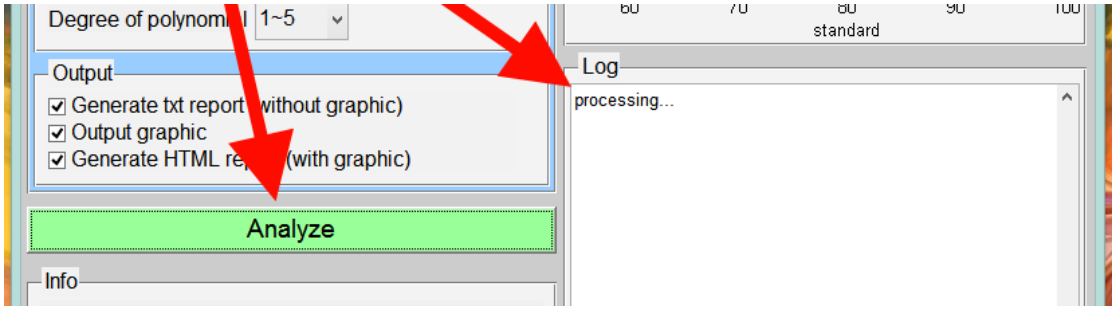


Step4. Choice output options



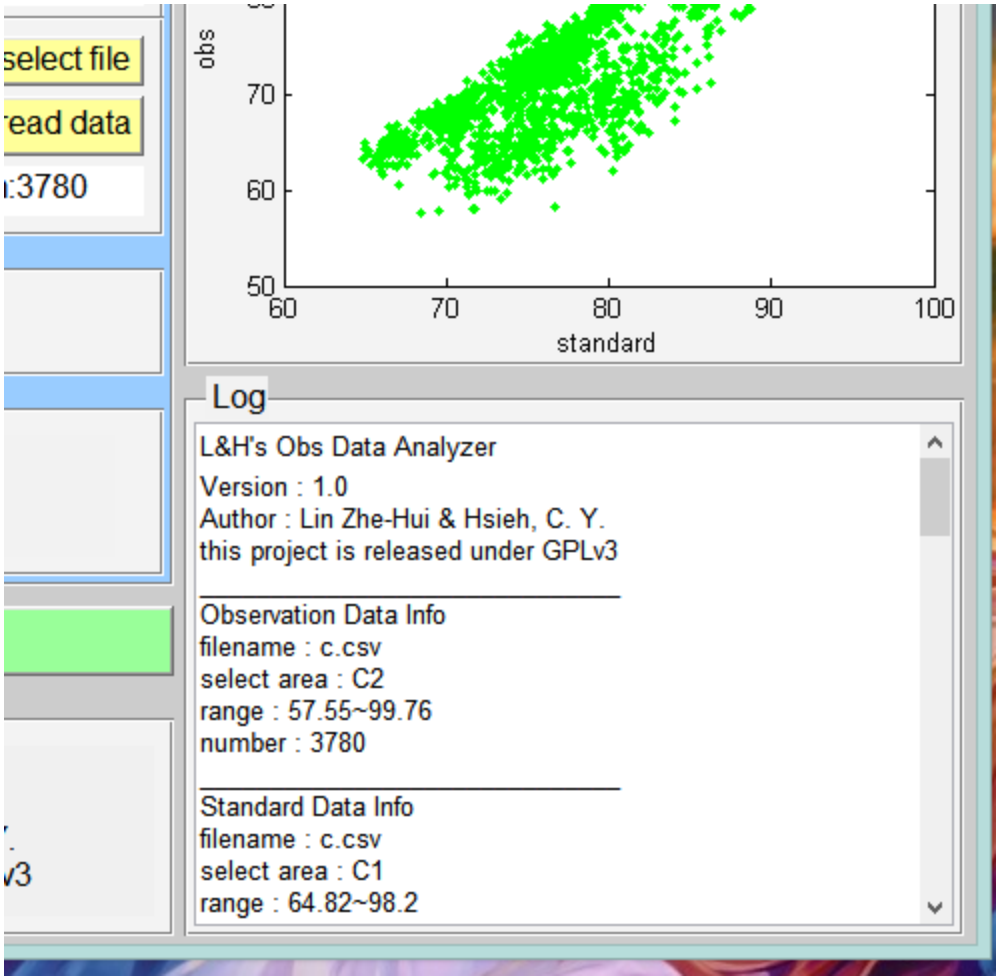
Step5. Click the “Analyze” button

Everything is ready. Now click the “Analyze” button. You will see “Log” area show “processing…”.



Step6. See the analysis report

When the analysis is done, “Log” will show the analysis report.
If you choice any output option, files will save in the “report” folder.



Notice

1. DO NOT delete “report”, “html_includes”, “plot” the three folder and anything in “html_includes”.
2. Higher degree polynomial regression is more unstable (in the calculate progress, we have to inverse a matrix. and in higher degree the matrix is easy to be singular.)
3. Pay attention to the value range of the data you inputted. Because polynomial regressions is not suitable to use for extrapolation, out of the range may be miserable. It’s recommended not to standardize a new observation value which is out of the range. What data you input to analyze decide the effective range.

Get updates

All the updates will be submit to GitHub.

Link: https://github.com/uegajde/LH_Obs_Data_Analyzer/

Compatibility

It's workable on

- Matlab 2010b
- Matlab 2013b

It's not workable on

- Matlab 2015a (There is a problem about AX)
- Octave 4.0

It's welcome to report the compatibility on other version or help us improve it. :)

Contact author

Lin Zhe-Hui

Email: uegajde@gmail.com

Hsieh, C. Y.

Email: katie1594@gmail.com