YUMI PLOT

Version 0.0. App User Guide

17 July 2024

1. Introduction

YUMI PLOT is a simple graphical user interface (GUI) application designed to help users create various types of plots from input data. The application supports bar plots, histograms, line plots, scatter plots, pie charts, and more advanced plots like quadratic, exponential, logarithmic, trigonometric, and cubic plots.

2. Launching the Application

You can download the plotting app at the website https://optimusgeo.com/resources/ and clicking where it says: "`Download a simple plotting app`". To launch the application in your PC, simply double-click on the downloaded `Plotter.exe` file.

3. User Interface

The main window of YUMI PLOT consists of several input fields and buttons for generating different types of plots as shown in Figure 1.
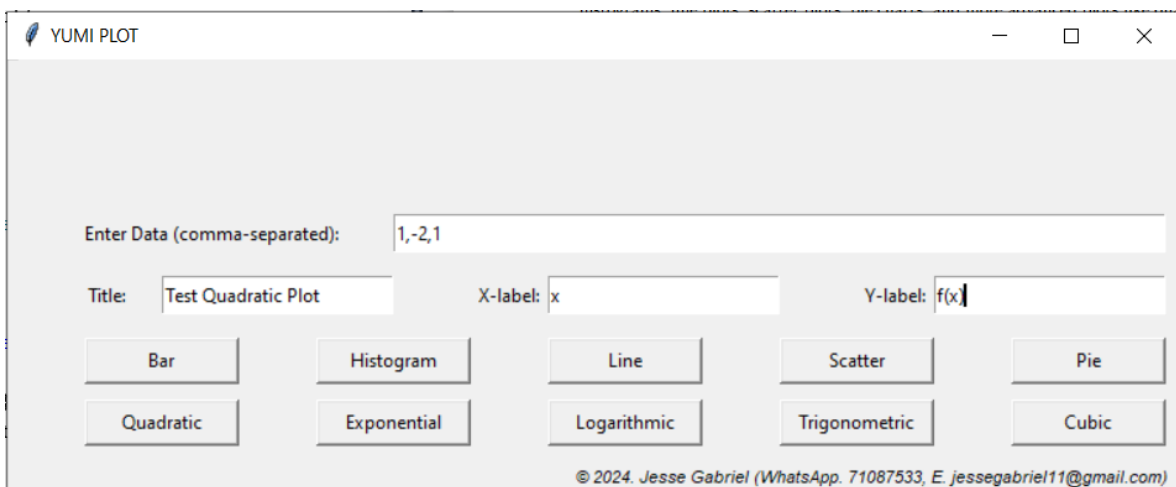

Figura 1: GUI for YUMI PLOT app

3.1. Input Fields

- **Enter Data:** This field accepts comma-separated numerical values that will be used for plotting.
- **Title:** This field allows you to set the title of the plot.
- **X-label:** This field allows you to set the label for the x-axis.
- **Y-label:** This field allows you to set the label for the y-axis.

3.2. Plot Buttons

The following buttons are available for generating different types of plots:

- **Bar:** Creates a bar plot using the input data.
- **Histogram:** Creates a histogram using the input data.
- **Line:** Creates a line plot using the input data.
- **Scatter:** Creates a scatter plot using the input data.
- **Pie:** Creates a pie chart using the input data.
- **Quadratic:** Creates a quadratic plot using three coefficients (a, b, c) for the equation $ax^2 + bx + c$.
- **Exponential:** Creates an exponential plot using two coefficients (a, b) for the equation ae^{bx}.
- **Logarithmic:** Creates a logarithmic plot using two coefficients (a, b) for the equation $a\log(bx)$.
- **Trigonometric:** Creates a trigonometric plot using three coefficients (a, b, c) for the equation $a\sin(bx + c)$.
- **Cubic:** Creates a cubic plot using four coefficients (a, b, c, d) for the equation $ax^3 + bx^2 + cx + d$.

4. Using the Application

4.1. Entering Data

1. In the "Enter Data"field, input your data as comma-separated numbers. For example, `1,2,3,4,5`.
2. Optionally, set the plot title, x-axis label, and y-axis label in the respective fields.

4.2. Creating a Plot

1. Click on the button corresponding to the type of plot you want to create.
2. The application will generate the plot based on your input data and display it in a new window.

4.3. Plotting Specific Functions

For quadratic, exponential, logarithmic, trigonometric, and cubic plots, enter the required coefficients as comma-separated numbers in the "Enter Data"field:

- **Quadratic:** Enter three coefficients for $ax^2 + bx + c$.

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- **Exponential:** Enter two coefficients for ae^{bx}.
- **Logarithmic:** Enter two coefficients for $a\log(bx)$.
- **Trigonometric:** Enter three coefficients for $a\sin(bx+c)$.
- **Cubic:** Enter four coefficients for $ax^3 + bx^2 + cx + d$.

5. Error Handling

If you enter invalid data or the wrong number of coefficients, an error message will appear. Make sure to follow the input guidelines:

- Data should be numerical and comma-separated.
- The correct number of coefficients must be provided for function-specific plots.

6. Examples

6.1. Creating a Bar Plot

1. Enter data: `2,3,4,5,6,8,9,12,14,6,7,8,9,9,6,5,4,3,2,2,2,1`.
2. Set the title: `Test Bar Plot`.
3. Set x-label: `xtest`.
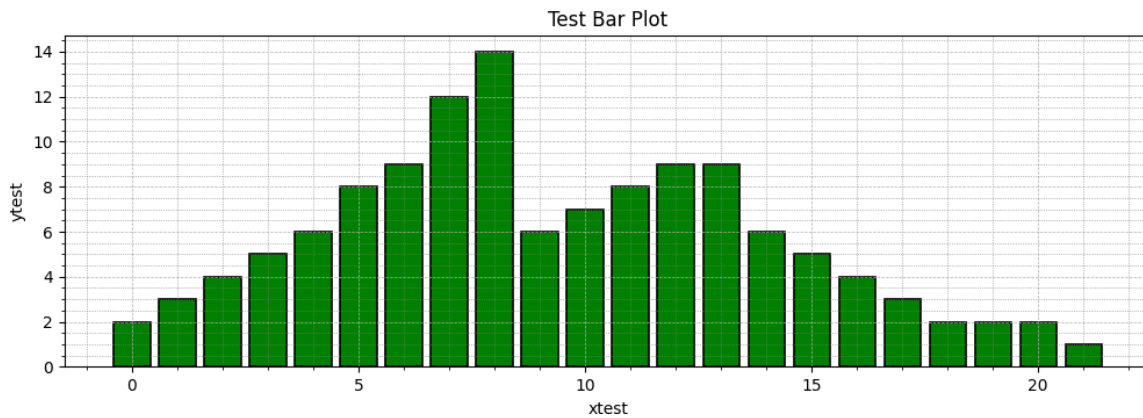4. Set y-label: `ytest`.
5. Click the **Bar** button.

Figura 2: Test Bar Plot

6.2. Creating a Quadratic Plot

1. Enter coefficients: `1,-2,1`.
2. Set the title: `Test Quadratic Plot`.
3. Set x-label: `x`.
4. Set y-label: `f(x)`.
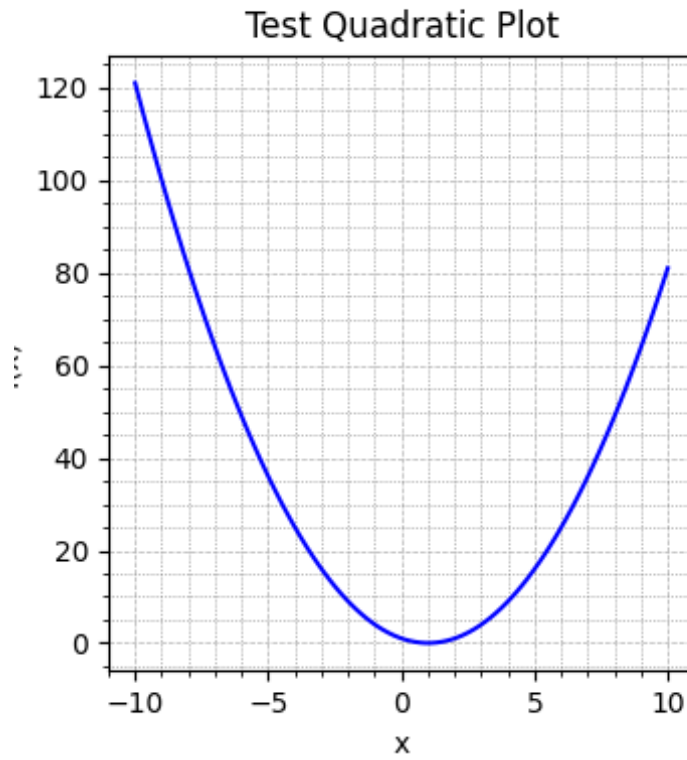5. Click the **Quadratic** button.

Figura 3: Test Quadratic Plot

7. More Plots

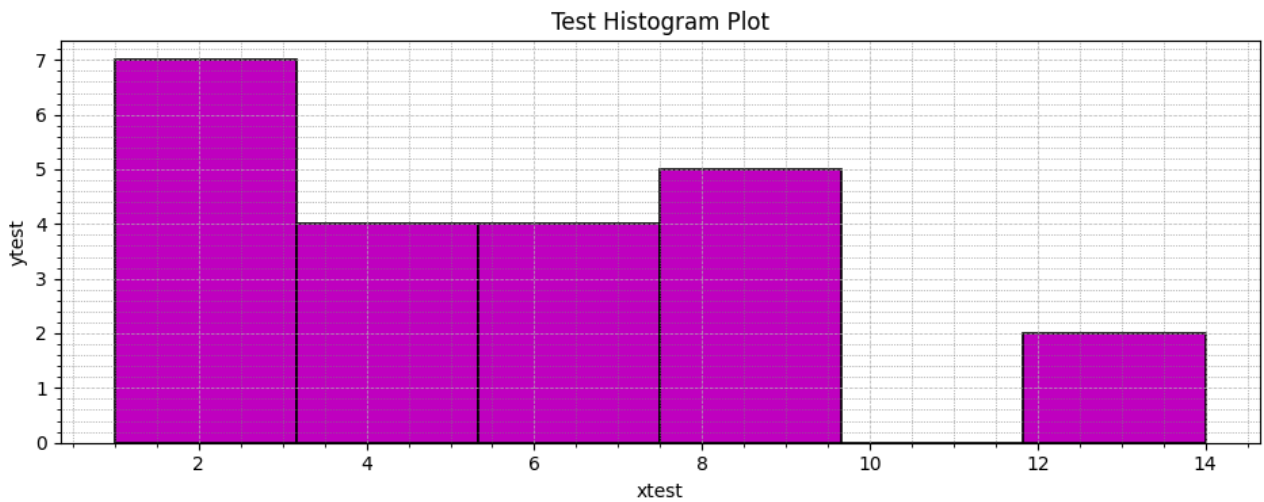Similar to the above example plots, you can generate different types of plots as shown below.

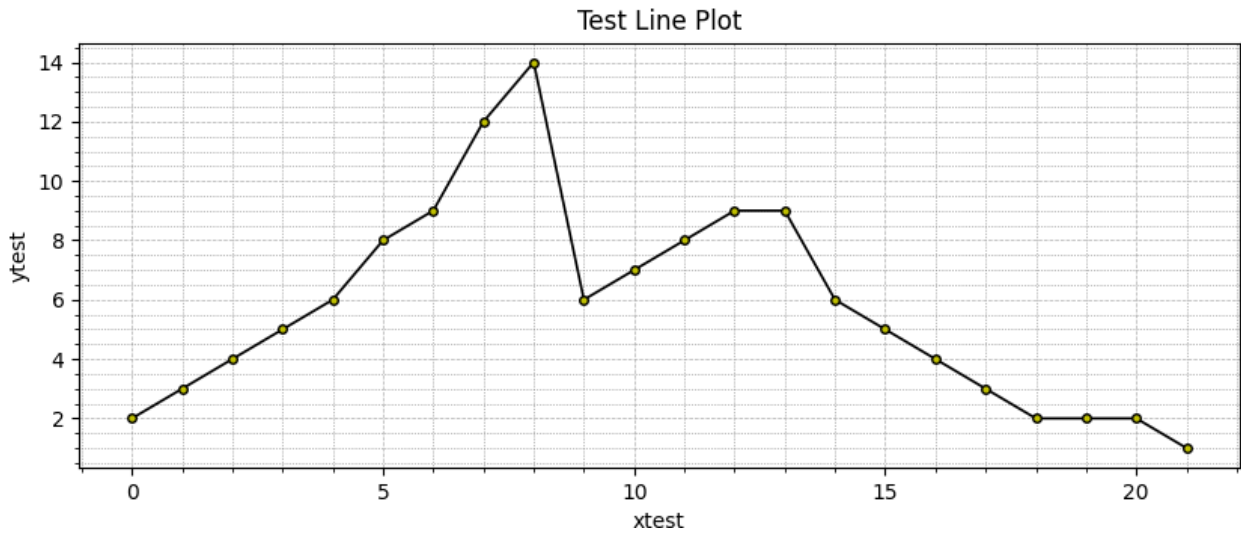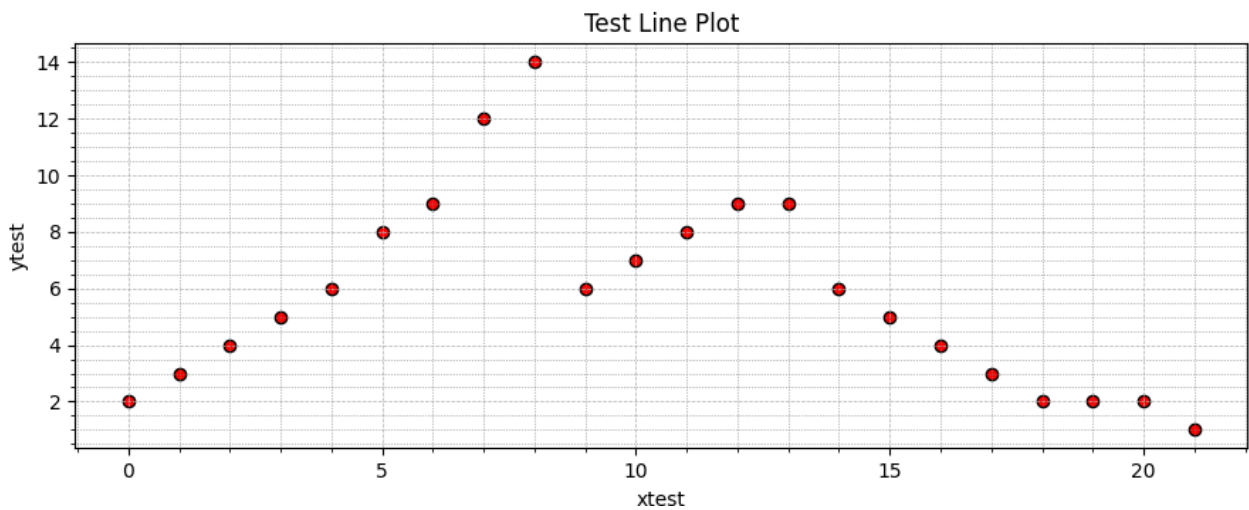Figura 4: Test Histogram Plot

Figura 5: Test Line Plot

Figura 6: Test Scatter Plot

8.   Conclusion

YUMI PLOT is a versatile tool for generating various types of plots. By following this user manual, you can easily create and customize plots to visualize your data effectively.

9.   Contact

If you have any trouble regarding this app or if you need the app to be further customized, contact Jesse Gabriel at E. jessegabriel11@gmail.com or WhatsApp 71087533.
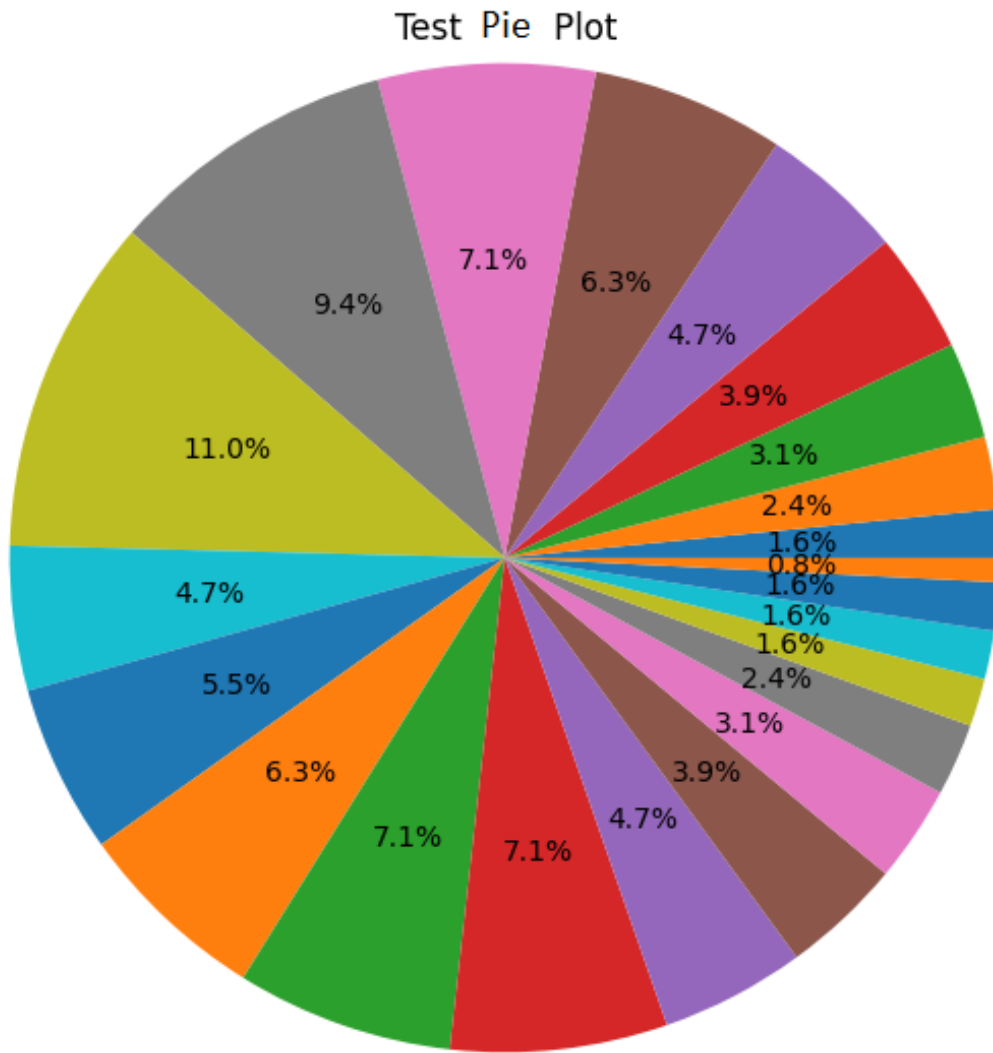
Figura 7: Test Pie Plot