User Manual

For python executable “Scatter Table”

Background: The goal of this tool is to output a scatter table within excel based on two different variables such as Hs and Tp. It will then provide each with bins of 1 on the axis and 0.25 and 0.5 on the y axis, with the values between 0 and 5 provided at the 0.25 y axis bin. The data will be entered using a csv file containing a column for the date/time (must be in the first column), a column for the first variable data, and a column for the second variable data. These two other columns do not need to be in order of 2 and 3 within the csv file.

Scatter Table: The scatter table will compare two variables to each other with the values given in a percentage. The total percentage and cumulative of each row and column will be provided as well. A heatmap ranging from light blue to dark blue has been overlayed to help identify the differences within the data. The table will adjust the number of bins to fit all the different values within the data. Certain monthly ranges can be investigated too. This can be helpful if not all data over a year wants to be analyzed.

Inputs: The inputs are as follows:

1. Column header with the first chosen variable to investigate
2. Column header for the second chosen variable to investigate
3. Start month and end month (optional)

Outputs

1. Scatter Table Output.xlsx

Instructions

1. Download Scatter_Table.exe application from SharePoint folder
2. Click to open executable. Note: It may take 30 seconds or longer for the first output window to open.
3. In the first window, browse for specified csv file that has one column for date/time and then click next.
4. In the second window, choose the first column you wish to investigate
5. Select the next column to investigate
6. Choose yes or no to investigate a certain monthly range. If yes, then fill in the start month and end month. The end month will be included in the calculation. Default is no.
7. Click “plot”
8. At the end the scatter table plot will be opened as an excel file. This excel file will be saved in the same directory as the executable file. Note, if you would like to keep this file it is recommended to rename it as they will be overwritten if the code is ran again.
9. Code is now finished and can be ran again with the same or different variables.

Troubleshooting

- A common error may be that the wrong row is being used for the headers. In this case open the excel sheet and delete any rows before the correct header row.
- Make sure that there is only one row for the headers. If there are more than one, delete the other lines and combine them so that there is only one row for headers
- **The singular date/time column must be in the first row.** This is extremely important otherwise the code will not work
- If there is still a date/time issue, try rearranging the time data so that the day comes first.
- If the table is not be generated correctly in excel, make sure that excel is using a period for the decimal place rather than a comma.
- Smaller files will run quicker, if there are speed issues, try deleting columns that are not needed or try using less years.