Documenting Plotting, Salting, and Smoothing

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As part of our final project, we were assigned to create three different versions of a plotter, salter, and smoother. The first version we were able to write the program using java using any function of our choosing. I decided to go with a classic exponential function. I created a Plotter class, Salter class, and a Smoother Class. I created a method called plotExponentioalFunction, which did exactly what you’d expect considering the name. It would create a new CSV file and then write the data points into the file. The Salter class included a try block create a new CSV file and then it salted the data of the exponential function and recorded the salted data to the new CSV file. The Smoother class applied a moving average to smooth the salted data points and outputted the data to a CSV. I then used the CVV files to create an excel workbook with all the data. I created a graph for the plotted data, the salted data, and the smoothed data.

A graph with a line

Description automatically generatedThe second part of the plotter, salter, smoother assignment was to learn MATLAB using online tutorials, and write .m files to plot, salt, and smooth data. I created an account on matlabacademy,nathworks.com using my Stockton credentials. I used the online basic version of MATLAB. I really enjoyed the MATLAB allowed me to view a graph as soon as I hit run! I Used a max value of 12 so the graphs I made in excel would look similar to the ones created in MATLAB. I even found out that. I chose to use the function

A graph with a line going up

Description automatically generated

A graph with a line

Description automatically generated

Works Cited

“Fig.” *Save Figure to Specific File Format - MATLAB*, www.mathworks.com/help/matlab/ref/saveas.html. Accessed 14 Dec. 2023.

“Tutorial1: Introduction to Matlab for Beginners - Workspace; Current Folder; Command Window.” *YouTube*, YouTube, 18 June 2016, www.youtube.com/watch?v=agUQxT0rnXY.

“Tutorial2: Introduction to Matlab for Beginners - Create/Save/Edit .M Files!” *YouTube*, YouTube, 20 June 2016, www.youtube.com/watch?v=8K9NlTJJlmQ.

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