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Octave Plotter Report

Chart, line chart

Description automatically generatedBy using Octave to plot a function I decided to use the slope function y = 2x + 5 as previously used it in my Java program. Figure 1 shows the original graph that I generated with 100 x values. I noticed that the larger the dataset gets then the lines of each graph would be more clustered and difficult to understand. The title is labelled as Original Linear Graph and the x and y axis are labeled x and y respectively.

Figure 1

The salter function will take each y value and either add or subtract a random integer 1 to 15. The graph generated is shown in Figure 2 with each value spiking up or down. Playing around with this function, I added another random integer to further randomize the values. The second random number has a much higher bound at 65 instead of a low 15. The graph generated is shown in Figure 3. This looks to be a better representation of what salting the dataset does.

Chart

Description automatically generated

Figure 2

Chart, scatter chart

Description automatically generated

Figure 3

Chart, line chart, scatter chart

Description automatically generated

Figure 4

The smoother function uses the rolling average of 3 values and adds it to the dataset to be plotted. Figure 4 shows the graph that was generated with the line more resembling the original in Figure 1. I used the function subplot to have all the graphs on screen when running the script on Octave. The result is shown in Figure 5.

Chart, line chart

Description automatically generated

Figure 5