**Data Set Randomizer User manual**

**What to Enter in Text Boxes**

When using the Dataset Randomizer (DSR) you need to enter numbers into following text boxes: Number of Data Points, Max, Min, Bin Width, Standard Deviation 1, Standard Deviation 2, Mean 1, Mean 2, and equation values. Note that these text boxes must be filled out for the program to be functional and must only contain numerical values. If the user were to enter anything else, it would reset all the textbox and so the user needs to re-enter all values on that tab. To set the title of the graph and excel sheets the user must enter the desired title and heading for each at the top of the tabs. Also, if you don’t need a certain field in the current data set type, simply set that field to 0.

**What to entering in Specific Text boxes**

**Max and Min**

For these text boxes, you want to enter the Max and min data that could be generated.

**Bin Width**

This field decides how much data points can be generated in a given range. For example between the ranges of 10-20, the bin width would decide how many points will fit within that range.

**Standard Deviation 1**

This field decides the amount of spread of data points from the mean and is used to generate a random normal and bimodal data set.

**Standard Deviation 2**

This field decides the amount of spread of data points from the second mean and is used to generate a bimodal data set.

**Mean 1**

The field decides what the average is between the data points and is used to generate random normal and bimodal data sets.

**Mean 2**

This text box determines what the average is another selection of the data set and is used to generate a bimodal dataset.

**Equation Values**

These values are the a, b, c, d values of the equation selected by the user and these values are used to generate values based on the type of relation selected.

Headings of the Graph, tables and excel sheet

These fields are located at the top of the window and you simply enter the titles or Headings you want for the graphs, tables, and excel sheet.

**Buttons**

**Generate variable one button**

When all the text fields are filled under the variable one tab this button would generate a table and a graph containing the data points generated.

**Generate Variable Two button**

When variable one data points are generated and the text fields in variable two tab are filled out then it will generate the variable two values. This will generate a 2 column table along with a graph in the middle of the screen.

**Export one Variable to excel**

After finishing generating one variable data points, this button will make a new excel file with the following title, headings, and data points.

**Export Two Variable to excel**

After finishing generating two variable data points, this button will make a new excel file with the following title, headings, and data points.

**Type of data set**

These buttons will allow the user to select what type of data set they want to be generated. When selecting a specific data type it will disable the current button selected and unable all others.

Uniform normal is a data set type that allows the user to generate an equal amount of data points in all the bins.

Random normal is a data set type that allows the user to generate data points so when graph it’ll look like a bell curve.

Bimodal is a data set type that allows the user to generate data points so when graph it’ll look like two bell curves.

**Type of equation**

These buttons will allow the user to select what type of equation the point will be generated after.

Linear will generate values in the shape of a line.

Quadratic will generate values in the shape of an arch.

Exponent will generate values that increase exponentially.

**Noise Percent Slider**

Use the following slider to determine the amount of spread of the data points from the line of best fit.

**Extra things to Note**

When using the exponent equation type if the variable one values are too large the values will cap out messing up the data points. Also, if the b values are too large it will result in the same error.