Guide to Using JMP in Stat 101

This instruction sheet gives you some of the basic commands and instructions for using the statistical computing package JMP in Stat 101. JMP is available in computer labs across campus, including 0113 Pearson and 205 Carver. If your favorite lab on campus does not have JMP, please ask them to install it. You may install JMP free of charge on your own computer by downloading a copy Information Technologies. If you do not have a fast enough connection or run into other difficulties, you should go to the Solution Center in Durham.

1. Entering a Data Set into JMP by hand.

   For some assignments and the project, you will need to enter your data into JMP by hand. To enter your data in JMP, first start JMP and click **File – New – Data Table**. To enter the first variable, double-click on the cell in the table named Column 1. Enter a name for the first variable and enter the values in the cells below. JMP automatically assumes that you will be entering numerical (quantitative) data. Check when you finish that you have the same number of rows in your table as you have values for your variable. To enter additional variables, click on the red triangle next to the word **Columns …** and select **New Column**. Enter a name for the variable and click **OK**. Enter the values for this variable in the table in the cells below the variable name. Repeat this process until you have entered all variables in your data set.

2. Opening/Downloading a data set from the main course webpage.

   Several homework assignments throughout the semester require you to use JMP to help you analyze a data set. To save you time, some of these data sets will be made available to you the web. To download a data set, go to the your section's course web page.

   Under the appropriate homework assignment you will find links to the data set. In many browsers, left clicking on the JMP file will give you the option of either opening the JMP file or saving it to a disk. Opening the file is the easiest thing to do as it automatically opens JMP and places the data in a spreadsheet. If this does not work, you will have to right click on the JMP file and "Save Link As" or "Save Target As" or "Save Link Target As." In the window that appears, select the location on the computer's hard drive of a disk where you would like to save the file. Make sure you remember where you saved the file. Then, click on **Save**. This is the only way to go if you have a Mac.

   There are two methods for opening a saved file in JMP. One option is to locate the file on the computer's hard drive or disk and double click on the file name. The other option is to start JMP, click **File – Open**, locate the file on the computer's hard drive or a disk, select the file and click **Open**.

3. Obtaining Histograms, Stem-and-Leaf Displays and Descriptive Statistics.

   Select Analyze – **Distribution** from the JMP menu. Under Select Columns, highlight by clicking on the variable name you would like to analyze. Click on the **Y, Columns** button. If you would like to look at more than one variable, repeat this step by highlighting the variable name and then the **Y, Columns** button. When you are finished entering variable names, click **OK**.

   You will need to change the content and appearance of the output window that appears. Click on the red triangle next to each variable name and select the following options.

   a) Display Options – Horizontal Layout
   b) Histogram Options – Count Axis
   c) Stem and Leaf

4. Obtaining Scatter diagrams and Regression coefficients.

   To look at the relationship between two variables, select **Analyze – Fit Y by X** from the JMP menu. Select the response variable and click the **Y, Response** button. Select the explanatory variable and click the **X, Factor** button. Then click **OK**.

   An output window will appear with a scatter plot of the two variables. To obtain the least squares regression line, click on the red triangle next to the words **Bivariate Fit …** and select **Fit Line**. The least squares regression line will be added to the scatter plot and the regression equation and diagnostics added to the output window. To add a residual plot to the output window, click on the red triangle next to **Linear Fit** and select **Plot Residuals**.

5. Printing Output

   To print any output window, click **File – Print** from the JMP menu. In the window that appears, select the printer and click **OK**.

6. Saving Output

   Because the output window is a dynamic window, it cannot be saved directly. In order to save information in the output window you first have to make a static copy of it. To do this, highlight the output window then click **Edit – Journal** from the JMP menu. Every time you do this, more output is added to the journal. To save the journal, click **File – Save As** from the JMP menu. For **Save as type:** select **RTF Files (*.RTF)**. Enter a name for the file and click **Save**. You can edit RTF files using Microsoft Word. You can also **Edit – Copy/Paste** JMP output into a Word document or RTF file.