**Exercise 1: Histograms and tab plots**

Open the datafile, NatNeighCrimeStudy.dta.

1. Create a histogram of the tract-level poverty rate (variable name: T\_POVRTY).
2. Insert the normal curve over the histogram
3. Change the numeric representation on the Y-axis to “percent”
4. Add appropriate titles to the overall graph and the x axis and y axis. Also, add a note that states the source of this data.

Open the datafile, TimePollPubSchools.dta

1. Create a histogram of the question, “What grade would you give your child’s school” (variable name: Q11). Be sure to tell Stata that this is a categorical variable.
2. Format this graph so that the axes have proper titles and labels. Also, add an appropriate title to the overall graph that goes onto two lines. Add a note stating the source of the data.
3. Create a tabplot that compares responses on the questions, “Do you think that schools today should spend more on vocational education” (variable name: Q33) and “Did you complete high school” (variable name: Q17). As always, make sure you review descriptive ahead of time and make any necessary changes to the variables.

**Exercise 2: The Twoway Family**

Open the datafile, NatNeighCrimeStudy.dta.

1. Create a basic twoway scatterplot that compares the city unemployment rate (C\_UNEMP) to the percent secondary sector low-wage jobs (C\_SSLOW)
2. Generate the same scatterplot, but this time, divide the plot by the dummy variable indicating whether the city is located in the south or not (C\_SOUTH)
3. Change the color of the symbol that you use in this scatter plot
4. Change the type of symbol you use to a marker of your choice
5. Notice in your scatterplot that is broken down by C\_SOUTH that there is an outlier in the upper right hand corner of the “Not South” graph. Add the city name label to this marker.
6. Review the options available under “help twoway\_options” and change one aspect of your graph using an option that we haven’t already reviewed

**Exercise 3: Line Graphs and Profile Plots**

Use the online dataset, “sp500.dta” (type “webuse sp500.dta”)

\*This dataset tracks the S&P 500 stock index during 2001

1. Create a line graph that looks at trading volume (volume) overtime (date)
2. Now, create a line graph that has separate lines for the high (high) and low (low) prices overtime (date)
3. Change the “high” line to dotted and change the color

Use the dataset, NatNeighCrimeStudy.dta.

1. Create a categorical variable that breaks one of the available variables into quartiles. Select a variable that is of interest to you.
2. Now, create a profile plot that compares four continuous variables broken down by your new dummy variable
3. Save your graph so that it can be imported into word processing software.