1. **Sit at the feet of the master.** Read Edward Tufte's *The Visual Display of Quantitative Information* now. Consider reading all his books and the voluminous discussions on his website. When you make a graph, ask yourself: What would Tufte do? These notes are basically my distilled wisdom derived from my tutelage under the master.

2. **Use graphs to learn, not regressions.** Graphs are higher resolution data reporting devices than regressions. That means you can see more with graphs. Use graphs to diagnose and identify problems with data, to discover and acquaint yourself with outliers. Use regressions to generate confidence intervals and point estimates to summarize graphs.

3. **Identify the message.** Graphs are not only a better way for you to learn; they are also a better way for others to learn *from you*. Refine your graph to communicate the essential message you want the rest of us to receive. Show as much data as possible, subject to the constraint that you retain and elevate the message. Sometimes that message even works as the graph's title! Contributions to knowledge are convex—people only remember one idea from a paper (at best). That idea better be in a graph.

4. **Data is your hero.** The purpose of a graph is to present data to convey meaning. The data should be center stage in this presentation. Minimize chartjunk. Make gridlines less bold than data lines. Make connecting data lines less bold than actual data points. Embrace small multiples with fixed axes to make a large number of comparisons fit into a small space.

5. **Iterate relentlessly.** People grossly misallocate time in writing a paper. They spend months to get that perfect point estimate and standard error in a regression table, and just an afternoon on the one or two figures in the paper. Set aside time just to look at your graphs critically and identify how to improve them. Don't forget that width and height are mutable.

6. **Use colors and shapes deliberately.** Thoughtfully applied colors and shapes efficiently communicate connections and contrasts between data series and across graphs. Thoughtlessly applied colors and shapes can confuse, mislead, and frustrate. Don't forget color-blind and black-and-white readers.

7. **Label your axes.** Use precise language to describe the variables in the graph and their units of measurement. Remember your readers are not in your brain. Avoid twin y-axes. Your software can't read your mind; choose axis ranges deliberately to support the message you want to communicate.

8. **Put text on graphs.** Avoid legends if you can. Label series directly on the graph. Instead of having a separate regression table, put the point estimate and standard error in the graph.

9. **Master the art of binscatter.** Most of economics research can be reduced to a series of bivariate relationships. Binscatters therefore provide a flexible and fast approach to exploring most of economics. Acquaint yourself with the limitations of binscatters so you know what they cannot show.

10. **Graphs are useful in theory.** If you do not have a clear, concise graph that illustrates the central mechanism in your model, you (probably) do not have a clear, precise understanding of the central mechanism in your model.

11. **Graphs help make every slide a money slide.** Try to use a graph in every slide. This way, your slides will complement and not substitute for what you're saying. Overlay necessary text. Delete unnecessary text. Presentation slides filled with words, tables of numbers, or numerous equations are distracting and boring. They disengage the audience and therefore communicate poorly.