**R Lesson 2 - Charts & Graphs**

**References:**  
Black - Chapter 2 Charts and Graphs (pp. 52-96)  
Verzani Chapter 2 Univariate Data (pp. 71-74)  
Lander Chapter 15 Basic Statistics (pp. 187-189)  
Stowell Chapter 8 Creating Plots (pp. 99-117)

**Data Set:** [home\_prices.csvView in a new window](https://canvas.northwestern.edu/courses/38799/files/2178709/download?wrap=1)

**Description:** This data file is derived from a random sample of home resale records maintained by realtors. There are 117 observations and eight variables:

1. PRICE = Selling price ($hundreds)
2. SQFT = Square feet of living space
3. YEAR = Year of construction (year)
4. BATHS = Number of bathrooms
5. FEATS = Number out of 11 features (dishwasher, refrigerator, microwave, disposal, washer, intercom, skylight(s), compactor, dryer, handicap fit, cable TV access)
6. NBR = Located in northeast sector of city (YES) or not (NO)
7. CORNER = Corner location (YES) or not (NO)
8. TAX = Annual taxes ($)

**Exercises:**

1. For the following exercises use hist(), plot(), boxplot() and par() functions supplied by R.
2. Construct a histogram for PRICE. Describe the distribution shape.
3. Construct a histogram for TAX. Describe the distribution shape.
4. Construct a scatterplot displaying TAX versus PRICE. Is there a relationship?
5. Construct a stem-and-leaf plot for TAX using stem(). To aid in the interpretation of the plot, define X= TAX/100. Round X to one digit using round() and plot stem(X). Then try it directly on TAX and compare the results.
6. Use the par() and mfrow() or mfcol() functions to construct a window with two rows and one column showing the histograms for PRICE and TAX.
7. For the following exercises use hist() and, within hist(), breaks().
8. Construct a histogram for PRICE starting the first class at 1300 ($hundreds) with a class width of 600 ($hundreds).
9. Construct a histogram for TAX starting the first classat $500with a class width of $500.

**Running into Trouble?** Check out these solutions to help guide you along.

* [Lesson\_02\_Solutions.pdfPreview the documentView in a new window](https://canvas.northwestern.edu/courses/38799/files/2178787/download?wrap=1)
* [Lesson\_02\_Code\_Solution.rView in a new window](https://canvas.northwestern.edu/courses/38799/files/2178807/download?wrap=1)