Lesson 02: Charts and Graphs

References

- Black, Chapter 2 Charts and Graphs (pp. 15-34)
- Kabakoff, Chapter 2.5 Useful Functions (pp. 43-44), Chapter 6 Basic Graphs (pp. 117-136)
- Davies, Chapter 14 Basic Data Visualization (pp. 298-308)
- Stowell, Chapter 8 Creating Plots (pp. 99-117)

Data set: home_prices.csv

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.
   a) Construct a histogram for PRICE. Describe the distribution shape.
   b) Construct a histogram for TAX. Describe the distribution shape.
   c) Construct a scatterplot displaying TAX versus PRICE. Is there a relationship?
   d) Construct a stem-and-leaf plot for TAX using stem().
   e) Use the par() and mfrow() or mfcol() functions to construct a multi-plot figure of two rows and one column showing the histograms for PRICE and TAX.
2) For the following exercises use hist() and, within hist(), *breaks*.
   a) Construct a histogram for PRICE starting the first class at 1300 with a class width of 600.
   b) Construct a histogram for TAX starting the first class at 500 with a class width of 500.