CHAPTER 7 – Tests of relationships

For this chapter, use the Salaries.csv file.

**Correlations**

Using the Salaries.csv file, we want to find the correlations between the years since the respondents completed their PhDs, their years in service and their salaries. Interpret the results. Which pairings are strongly correlated and which are not? Do the correlations appear to be significant? Use the *Spearman* test for this example.

**Simple Linear Regression**

Fit a linear model that predicts a professor’s salary given his or her years in service.

**Multiple Regression**

Fit a multiple linear regression model that predicts a professor’s salary using his or her years since earning a PhD, years in service, and gender. Analyze to see if the assumptions were satisfied and perform the necessary corrections if not.