Handout: Problem Set #5
PREDICT 401: Introduction to Statistical Analysis

For this problem set, use the "Employee data" dataset provided to you.

1. In this problem, we will address whether an employee's salary is related to the length of previous experience?

    a. Using SPSS, create a scatterplot with salary on the vertical axis and length of previous experience on the horizontal axis. Does this graph tell you anything about the relationship?

    b. What is the Pearson's correlation between these two variables?

    c. Run a regression of "salary" as the dependent variable on "length of experience" as the independent variable. That is, use SPSS to find alpha and beta in the equation below:

$$Salary = \alpha + \beta * experience + \varepsilon$$

    d. So, what's really going on here?

2. What is the relationship between salary and years of education? Use the same tools and processes as described in problem 1.

3. Given your answers to problems 1 and 2 above, does prior experience cause a person to earn less money at this company? Does more education cause a person to earn more money?