Week 2 Tasks

Tasks

1. Examine the relationship between teaching score and age in the `evals` data set. What is the value of the correlation coefficient? How would you interpret this verbally? Finally, produce a scatterplot of teaching score and age.

2. Perform a formal analysis of the relationship between teaching score and age by fitting a simple linear regression model. Superimpose your best-fitting line onto your scatterplot from Task 2.

3. Assess the model assumptions from Task 2 by plotting the residuals against the explanatory variable and fitted values, respectively. Also, plot a histogram of the residuals to assess whether they are normally distributed.

4. Perform the same analysis we did on life expectancy from the `gapminder` data set in 2007. However, subset the data for the year 1997. Are there any differences in the results across this 10 year period?

5. Return to the `Credit` data set and fit a multiple regression model with `Balance` as the outcome variable, and `Income` and `Age` as the explanatory variables, respectively. Assess the assumptions of the multiple regression model.