Tutorial 8 Solutions

Simple Linear Regression Transformation

There is an experimental windmill that an engineer is developing to generate electricity. They collect data on the direct current flow output from the windmill and the wind speed corresponding to the output.

Use the WindPower dataset (WindPower.csv) to explore the dependence of current flow on wind speed. Investigate a systematic method to determine if a linear model is the appropriate model to analyze the effect of x on the outcome of y. Explore transforming the variables to find an appropriate linear model.

1) Investigate the data. Should we transform the data? If yes, why?

2) Transform the data and present the model. Is it more appropriate for OLS, why?