

1. Write an R function that takes two vectors, y and \hat{y} and returns the RMSE.

Questions 2 : 4 are all from the text. I have provided more specific directions. These directions supplement and clarify. They do not replace the questions in the text.

2. Complete exercise 3.1 in the text.
 - (a) Display two meaningful, interesting histograms. Create a visualization of the correlation matrix. The function `corrplot` is very useful here.
 - (b) Use `apply` to compute the skewness of each predictor.
 - (c) Perform at least one Box-Cox transformation and plot 2 histograms: one of the pre-transformed data and one of the post-transformed data.
3. Complete exercise 3.2 in the text.
 - (a) Make use of the `apply` function. Also, remove any features with degenerate distributions.
 - (b) Find the percent of missing data for each of the classes.
 - (c) Implement the strategy you develop and produce a data set with no missing values.
4. Complete exercise 3.3 in the text.
 - (a) Just do what it says.
 - (b) Also, remove any features with degenerate distributions.
 - (c) Perform PCA on the data and decide how many principal components to keep.