Problem Set 8

Due: 5/11

Computer Exercise

1. Please load the data set `Wage` from the package `ISLR`. Suppose we want to fit the variable of interest `wage` on a single predictor `age`, using polynomial regression.

   (a) Please use 10-fold CV to determine the optimal degree (from 1 to 10) for the polynomial to fit our data.

   (b) Please draw the scatter plot with the polynomial regression line with the optimal degree you just find.

2. Continue with question (1), instead of a polynomial function, suppose now we wish to fit a piecewise constant function.

   (a) Please use 10-fold CV to determine the optimal cutpoints (from 1 to 15) for the piecewise constant function to fit our data.

   (b) Please draw the scatter plot with the piecewise regression line with the optimal cutpoints you just find.