* Bagging is a special case of random forests under which case?

Bagging is s special case of random forests if we have just one predictor variable.

* What are the hyperparameters we can control for random forests?

The hyperparameters we can control are the number of predictors to use for the forests in each case.

* Suppose you have the following paired data of (x,y): (1,2), (1,5), (2,0). Which of the following are valid bootstrapped data sets? Why/why not?
  1. (1,0), (1,2), (1,5)
  2. (1,2), (2,0)
  3. (1,2), (1,2), (1,5)

2 and 3 are valid data sets.

* For each of the above valid bootstapped data sets, which observations are out-of-bag (OOB)?

For the 2nd data set (1,5) is out of bag. For the 3rd dataset (2,0) is out of bag.

* You make a random forest consisting of four trees. You obtain a new observation of predictors, and would like to predict the response. What would your prediction be in the following cases?
  1. Regression: your trees make the following four predictions: 1,1,3,3.

It would be mean of 1,1,3,3 = 2

* 1. Classification: your trees make the following four predictions: “A”, “A”, “B”, “C”.

It would be A as A has the highest number of votes