

# Random Forest Intuition

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# Ensemble Learning

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STEP 1: Pick at random  $K$  data points from the Training set.



STEP 2: Build the Decision Tree associated to these  $K$  data points.



STEP 3: Choose the number  $N_{tree}$  of trees you want to build and repeat STEPS 1 & 2



STEP 4: For a new data point, make each one of your  $N_{tree}$  trees predict the value of  $Y$  to for the data point in question, and assign the new data point the average across all of the predicted  $Y$  values.

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Imagine you are in the birthday and the game is to count down all of the balloons inside the apartment. One way of approving to this is to ask other kid's number and calculate the average of them. Or calculate the median of them.