- Another measure is computed from permuting OOB samples: For each tree T_b in the forest, calculate the prediction error (MSE for regression) based on OOB samples. Then the same is done after permuting the jth predictor in the OOB samples. The difference between the two (before and after permutation) is then averaged over all trees, and further normalized by the corresponding standard deviation[a].

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[a]If the standard deviation of the differences is equal to 0 for a variable, then the division is not applied.

Boosting Trees

- Boost the performance of a set of weak regression trees by cleverly combing them.

- Forward stagewise additive modeling: consider an additive model,

$$F(x) = f_1(x) + f_2(x) + \cdots + f_{T-1}(x) + f_T(x).$$

It is difficult to solve for all f_t's. Instead we solve it using a forward stagewise greedy algorithm.