Gradient Boosting Trees

Intuitively:

- Gradient boosting is a method for iteratively building a complex model T by adding simple models.

- Each new simple model added to the ensemble compensates for the weaknesses of the current ensemble:

  ‣ each simple model $T^{(i)}$ we add to our ensemble model T, models the errors of T

  ‣ Thus, with each addition of $T^{(i)}$, the residual is reduced

Gradient Boosting Trees

Original Data and First Tree Fit