
H2O.ai

Option 1: Separate Validation Set

- If you have “enough” data and plan to do some model tuning, you should really partition your data into three parts — Training, Validation and Test sets.
- There is **no general rule** for how you should partition the data and it will depend on how strong the signal in your data is, but an example could be: 50% Train, 25% Validation and 25% Test.

- The validation set is used **strictly for model tuning** (via validation of models with different parameters) and the test set is used to make a final estimate of the generalization error.

Training Set vs. Validation Set vs. Test Set

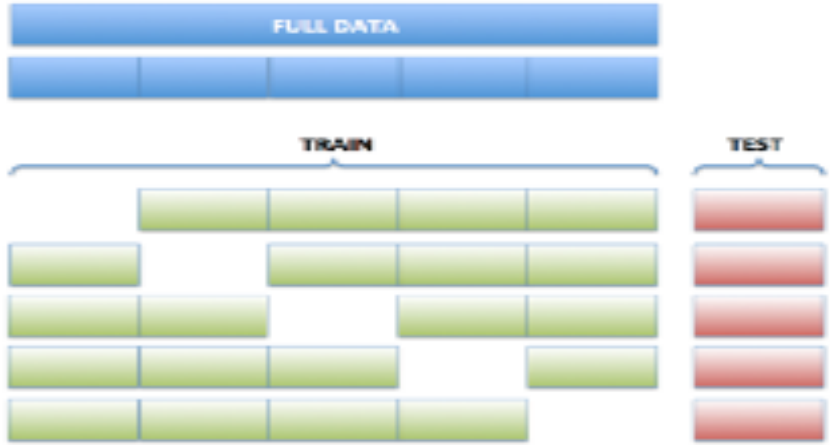
Validation is for Model Tuning


Train
Validation
Test

Option 2: Cross-Validation

Training Set vs. Test Set

- Partition the original data (randomly) into a training set and a test set. (e.g. 70/30)
- Train a model using the training set and evaluate performance (a single time) on the test set.



K-fold Cross-validation

- Train and test K models using separate folds.
- Average the model performance over the K test sets.
- Report cross-validated metrics.

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