

PRE-PROCESSING

AND TRAINING

MODEL TRAINING

Binary Multi class Classification Supervised Clustering Feature Reduction Unsupervised **Anomaly Detection** Reinforcement Learning 17 Built-in algorithms Linear Model (Y=MX) Marketplace BYOC Framework Containers W (new) = W(old) + LR * Gradient Batch RMSProp One flaw of this approach is our test result, depends on the way we have selected the " validation set". Plus we do not use all data for Hold-out Validation Split data to "training" and "validation" training. To fix the problem of Hold-out validation, we split the data into k-folds (k parts). Then the model is trained by k-1 fold (for training) and Then we shift this process k times to get a At the end we have k performance, we " new fold for test and get a new performance K-fold Cross Validation (KFCV) 1 fold for validation average" the performance results When we use KFCV, we want to make sure there is the same percentage of target class in each fold. For example, if the target is balance Bias/Variance during training gender and we have 80% female in the target, we want to make sure each fold has that distribution Leave One Out Cross Validation (LOOCV)

This is where k=n We use shuffling to improve generalization and remove the orders in sorted data Mapping Regression to (0-1) \equiv Sigmoid Differentiable RMSE ≡

Hold-out is used to avoid overfitting (/Bias)

K is the number of splits on training data set plus the number of tests we perform