

**SUPPLEMENTARY TABLE 1
CLASSIFICATION PARAMETERS**

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Pycaret Modules

Setup:

remove_multicollinearity=True
multicollinearity_threshold= 0.95
feature_selection=True
feature_interaction=True
fix_imbalance=True
K-fold=10 (default)
Compare_models=Classifiers
Create_model
Evaluate_model

Pycaret Classifiers Tested:

Ada Boost Classifier
CatBoost Classifier
Decision Tree Classifier
Extra Trees Classifier
Extreme Gradient Boosting
Gaussian Process Classifier
Gradient Boosting Classifier
K Nearest Neighbour
Light Gradient Boosting
Linear Discriminant Analysis
Logistic Regression
Multi Level Perceptron
Naives Bayes
Quadratic Discriminant Analysis
Random Forest Classifier
Ridge Classifier
SVM – Linear Kernel
SVM – Radial Kernel

JMP14.2

General Regression
Multinomial Logistic Regression
Adaptive elastic net, penalty for colinearity
K-fold=10
Repeat with active effects until no parameters are dropped

Bayesia Lab 9.0

Discretization Bin =2, Perturbed Tree*
Supervised Learning = Tree Augmented Naïve Bayes*
Kulback-Leibler Divergence
Resampling K Fold =10
*Empirically Determined by Minimal Descriptive Length