

Appendix 1. Classification methods used

Abbreviation	Python Code	Ensemble Method
ETC1	Extra Trees Classifier(Entropy)	Bagging
ETC2	Extra Trees Classifier(Gini)	Bagging
RF1	Random Forest Classifier(Entropy)	Bagging
RF2	Random Forest Classifier(Gini)	Bagging
BKNN	Bagging Classifier + K-Neighbors Classifier	Bagging
BLR	Bagging Classifier +Logistic Regression	Bagging
BSVC	Bagging Classifier + Support Vector Machines	Bagging
BGNB	Bagging Classifier + Gaussian Naïve Bayes	Bagging
BRF1	Bagging Classifier +Random Forest Classifier(Gini)	Bagging
BRF2	Bagging Classifier + Random Forest Classifier(Entropy)	Bagging
ALR	AdaBoost Classifier + Logistic Regression	Boosting
ASVC	AdaBoost Classifier + Support Vector Machines	Boosting
AGNB	AdaBoost Classifier +Gaussian Naïve Bayes	Boosting
ARF1	AdaBoostClassifier + Random Forest Classifier (Gini)	Boosting
ARF2	AdaBoost Classifier + Random Forest Classifier(Entropy)	Boosting
XGB1	XGBClassifier(gbtree)	Boosting
XGB2	XGBClassifier(gblinear)	Boosting
GBC	Gradient Boosting Classifier	Boosting
HGB	HistGradient Boosting Classifier	Boosting
ST1	RandomForestClassifier(Entropy)+ RandomForestClassifier(Gini)+Decision Tree Classifier Meta Classifier = ExtraTreesClassifier	Stacking
ST2	K-NeighborsClassifier+Gaussian Naïve Bayes+ DecisionTree Classifier Meta Classifier = Random Forest Classifier(Gini)	Stacking
ST3	Logistic Regression+ Support Vector Machines + Gaussian Naïve Bayes Meta Classifier = Random Forest Classifier (Entropy)	Stacking
ST4	Logistic Regression+ Support Vector Machines + K-Neighbors Meta Classifier == DecisionTree Classifier	Stacking