|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **Parameters** | **Machine leaning model pipelines** | **Precision** | **Recall** | **F1- Score** | **Accuracy** |
| MR  MS  AR  AS  DF  FG  LVEF | TFIDF+(SMOTE+ENN)+stratified 5-fold CV (linear SVM) | 100±0 | 100±0 | 100±0 | 100±0 |
| TFIDF+(SMOTE+ENN)+stratified 5-fold CV (RF) | 100±0 | 100±0 | 100±0 | 100±0 |
| TFIDF+(SMOTE+ENN)+stratified 5-fold CV(XGBoost) | 100±0 | 100±0 | 100±0 | 100±0 |

Performance of machine learning models to classify the severities of Mitral Regurgitation (MR), Mitral Stenosis (MS), Aortic Regurgitation (AS), Aortic Stenosis (AS),Left Ventricular Diastolic Function(DF), Flow gradient across Aortic Stenosis (FG) and Left Ventricular Ejection Fraction (LVEF) on the echo validation dataset (N=28,035). TFIDF: term frequency inverse document frequency, SMOTE: synthetic minority oversampling technique, ENN: edited nearest neighbours, CV:cross validation, XGBoost: extreme gradient boosting, SVM:support vector machines, RF:random forest. Precision,recall,F1-score and accuracy are provided as mean±standard deviation.