For Cyclic Dependency

Raw Dataset

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Accuracy | Recall | F1 | Auc | Mcc |
| Decision Tree （CART） | 0.6634 | 0.5464 | 0.5338 | 0.6361 | 0.3662 |
| Random Forest | 0.6482 | 0.3089 | 0.3682 | 0.7097 | 0.3608 |
| LogisticRegression\_liblinear | 0.6538 | 0.5018 | 0.4774 | 0.6442 | 0.4175 |
| LogisticRegression\_lbfgs | 0.6612 | 0.5429 | 0.5092 | 0.6560 | 0.3545 |
| LogisticRegression\_newton-cg | 0.6672 | 0.5143 | 0.4949 | 0.6611 | 0.4347 |
| LogisticRegression\_sag | 0.4476 | 0.4125 | 0.3446 | 0.3855 | 0.4347 |
| LogisticRegression\_saga | 0.4563 | 0.5017 | 0.3870 | 0.4120 | 0.4347 |
| SVM\_SVC\_linear | 0.6754 | 0.5160 | 0.3927 | 0.6885 | 0.3370 |
| SVM\_SVC\_poly | 0.6533 | 0.4821 | 0.4847 | 0.6680 | 0.3916 |
| Naïve\_bayes\_GaussianNB | 0.6989 | 0.3250 | 0.4286 | 0.7312 | 0.4009 |
| Naïve\_bayes\_BernoulliNB | 0.6943 | 0.6500 | 0.5875 | 0.7445 | 0.3387 |
| XGBoost | 0.6966 | 0.5714 | 0.5652 | 0.7451 | 0.4549 |
| AdaBoost | 0.6614 | 0.4768 | 0.4793 | 0.7185 | 0.4218 |
| KNN | 0.6316 | 0.3910 | 0.4273 | 0.6507 | 0.2648 |

PCA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Accuracy | Recall | F1 | Auc | Mcc |
| Decision Tree （CART） | 0.7256 | 0.6518 | 0.6186 | 0.7371 | 0.4678 |
| Random Forest | 0.7213 | 0.5446 | 0.5556 | 0.7216 | 0.4564 |
| LogisticRegression\_liblinear | 0.7202 | 0.5482 | 0.4916 | 0.7528 | 0.5004 |
| LogisticRegression\_lbfgs | 0.7204 | 0.5453 | 0.5772 | 0.7417 | 0.4776 |
| LogisticRegression\_newton-cg | 0.7204 | 0.5143 | 0.4773 | 0.7417 | 0.4830 |
| LogisticRegression\_sag | 0.7204 | 0.5143 | 0.4773 | 0.7417 | 0.4830 |
| LogisticRegression\_saga | 0.7117 | 0.5357 | 0.4252 | 0.7528 | 0.5303 |
| SVM\_SVC\_linear | 0.7111 | 0.2696 | 0.3445 | 0.8202 | 0.4070 |
| SVM\_SVC\_poly | 0.6986 | 0.1821 | 0.2622 | 0.7580 | 0.3223 |
| Naïve\_bayes\_GaussianNB | 0.7111 | 0.5607 | 0.5689 | 0.7528 | 0.4666 |
| Naïve\_bayes\_BernoulliNB | 0.7258 | 0.5089 | 0.5653 | 0.7365 | 0.5089 |
| XGBoost | 0.7453 | 0.5957 | 0.6142 | 0.7981 | 0.4955 |
| AdaBoost | 0.7389 | 0.6357 | 0.6256 | 0.7680 | 0.4885 |
| KNN | 0.6760 | 0.5054 | 0.5141 | 0.6949 | 0.4678 |

F16

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Accuracy | Recall | F1 | Auc | Mcc |
| Decision Tree （CART） | 0.7697 | 0.7411 | 0.6616 | 0.8157 | 0.4281 |
| Random Forest | 0.7405 | 0.6429 | 0.6218 | 0.7575 | 0.4014 |
| LogisticRegression\_liblinear | 0.7374 | 0.5929 | 0.5121 | 0.7411 | 0.4963 |
| LogisticRegression\_lbfgs | 0.7515 | 0.5661 | 0.5027 | 0.7939 | 0.4911 |
| LogisticRegression\_newton-cg | 0.7376 | 0.5250 | 0.4936 | 0.7412 | 0.4565 |
| LogisticRegression\_sag | 0.7340 | 0.5875 | 0.5848 | 0.7935 | 0.4338 |
| LogisticRegression\_saga | 0.7340 | 0.5875 | 0.5848 | 0.7935 | 0.4984 |
| SVM\_SVC\_linear | 0.7284 | 0.3482 | 0.4212 | 0.7041 | 0.3768 |
| SVM\_SVC\_poly | 0.7370 | 0.3589 | 0.4373 | 0.7624 | 0.3922 |
| Naïve\_bayes\_GaussianNB | 0.7328 | 0.3482 | 0.4403 | 0.7972 | 0.4266 |
| Naïve\_bayes\_BernoulliNB | 0.7819 | 0.6482 | 0.7238 | 0.8791 | 0.4154 |
| XGBoost | 0.7795 | 0.9462 | 0.6743 | 0.8124 | 0.5216 |
| AdaBoost | 0.7559 | 0.6875 | 0.6672 | 0.8317 | 0.5925 |
| KNN | 0.7349 | 0.7000 | 0.5748 | 0.7458 | 0.5677 |