For Unstable Dependency

Raw Dataset

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Accuracy | Recall | F1 | Auc | Mcc |
| Decision Tree （CART） | 0.8606 | 0.6433 | 0.6888 | 0.7862 | 0.4784 |
| Random Forest | 0.7789 | 0.3800 | 0.3975 | 0.7804 | 0.4144 |
| LogisticRegression\_liblinear | 0.7706 | 0.5000 | 0.4950 | 0.7041 | 0.2760 |
| LogisticRegression\_lbfgs | 0.7529 | 0.5000 | 0.4701 | 0.7168 | 0.2377 |
| LogisticRegression\_newton-cg | 0.7566 | 0.4800 | 0.4674 | 0.7004 | 0.2611 |
| LogisticRegression\_sag | 0.6544 | 0.2400 | 0.2154 | 0.4990 | -0.0060 |
| LogisticRegression\_saga | 0.6633 | 0.1800 | 0.1803 | 0.4580 | -0.0485 |
| SVM\_SVC\_linear | 0.7475 | 0.5333 | 0.4996 | 0.6824 | 0.2833 |
| SVM\_SVC\_poly | 0.7429 | 0.3233 | 0.3520 | 0.6856 | 0.1799 |
| Naïve\_bayes\_GaussianNB | 0.7620 | 0.3567 | 0.3719 | 0.7701 | 0.1667 |
| Naïve\_bayes\_BernoulliNB | 0.6904 | 0.5300 | 0.4550 | 0.7522 | 0.1889 |
| XGBoost | 0.8695 | 0.6833 | 0.7163 | 0.8750 | 0.5111 |
| AdaBoost | 0.8248 | 0.5367 | 0.5778 | 0.7557 | 0.5004 |
| KNN | 0.6997 | 0.1833 | 0.2133 | 0.6649 | 0.0539 |

PCA

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Accuracy | Recall | F1 | Auc | Mcc |
| Decision Tree （CART） | 0.8470 | 0.7000 | 0.6687 | 0.8111 | 0.5078 |
| Random Forest | 0.8331 | 0.6733 | 0.6398 | 0.8563 | 0.5255 |
| LogisticRegression\_liblinear | 0.8563 | 0.6267 | 0.6536 | 0.8764 | 0.5102 |
| LogisticRegression\_lbfgs | 0.8606 | 0.6500 | 0.6586 | 0.8811 | 0.4961 |
| LogisticRegression\_newton-cg | 0.8606 | 0.6500 | 0.6586 | 0.8811 | 0.4960 |
| LogisticRegression\_sag | 0.8606 | 0.6500 | 0.6586 | 0.8811 | 0.5302 |
| LogisticRegression\_saga | 0.8563 | 0.6233 | 0.6643 | 0.8841 | 0.4803 |
| SVM\_SVC\_linear | 0.8379 | 0.5900 | 0.6330 | 0.8690 | 0.5997 |
| SVM\_SVC\_poly | 0.8337 | 0.4600 | 0.5338 | 0.8212 | 0.3636 |
| Naïve\_bayes\_GaussianNB | 0.8199 | 0.4900 | 0.5634 | 0.8723 | 0.6080 |
| Naïve\_bayes\_BernoulliNB | 0.8248 | 0.4800 | 0.5465 | 0.8098 | 0.4179 |
| XGBoost | 0.8374 | 0.6300 | 0.6472 | 0.8450 | 0.6471 |
| AdaBoost | 0.8383 | 0.5900 | 0.5968 | 0.8414 | 0.5677 |
| KNN | 0.8428 | 0.6467 | 0.6650 | 0.8700 | 0.5006 |

F15

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
|  | Accuracy | Recall | F1 | Auc | Mcc |
| Decision Tree （CART） | 0.8877 | 0.8867 | 0.7349 | 0.8761 | 0.6458 |
| Random Forest | 0.8521 | 0.6633 | 0.6883 | 0.8658 | 0.5720 |
| LogisticRegression\_liblinear | 0.8614 | 0.6267 | 0.6841 | 0.8803 | 0.6040 |
| LogisticRegression\_lbfgs | 0.8838 | 0.7067 | 0.7451 | 0.9000 | 0.6099 |
| LogisticRegression\_newton-cg | 0.8614 | 0.6267 | 0.6841 | 0.8803 | 0.6040 |
| LogisticRegression\_sag | 0.8161 | 0.8967 | 0.6200 | 0.7855 | 0.5176 |
| LogisticRegression\_saga | 0.8209 | 0.8967 | 0.6256 | 0.7836 | 0.5168 |
| SVM\_SVC\_linear | 0.8382 | 0.5700 | 0.6155 | 0.8537 | 0.5241 |
| SVM\_SVC\_poly | 0.8339 | 0.4600 | 0.5360 | 0.8559 | 0.2939 |
| Naïve\_bayes\_GaussianNB | 0.8517 | 0.7367 | 0.7189 | 0.8973 | 0.6182 |
| Naïve\_bayes\_BernoulliNB | 0.8699 | 0.7800 | 0.7179 | 0.8866 | 0.6689 |
| XGBoost | 0.8827 | 0.6800 | 0.7267 | 0.8717 | 0.6830 |
| AdaBoost | 0.8738 | 0.8267 | 0.7198 | 0.8862 | 0.5909 |
| KNN | 0.8468 | 0.6933 | 0.6856 | 0.8538 | 0.5672 |