For CD

AUC

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **cbo** | **totalMethodsQty** | **nosi** | **parenthesizedExpsQty** | **mathOperationsQty** | **maxNestedBlocksQty** | **anonymousClassesQty** | **modifiers** |
| Decision Tree （CART） | 0.5610 | 0.5142 | 0.6259 | 0.5551 | 0.5941 | 0.5346 | 0.6632 | 0.5374 |
| Random Forest | 0.5826 | 0.5754 | 0.6533 | 0.6001 | 0.4609 | 0.5535 | 0.6607 | 0.6083 |
| LogisticRegression\_liblinear | 0.7248 | 0.6980 | 0.7112 | 0.6875 | 0.6769 | 0.6634 | 0.6869 | 0.7215 |
| Naïve\_bayes\_GaussianNB | 0.5605 | 0.6834 | 0.5668 | 0.4768 | 0.5568 | 0.6516 | 0.6868 | 0.6179 |
| XGBoost | 0.6214 | 0.6105 | 0.6576 | 0.6495 | 0.6039 | 0.6117 | 0.6905 | 0.6847 |
| AdaBoost | 0.6431 | 0.6575 | 0.6878 | 0.6505 | 0.5934 | 0.5862 | 0.6775 | 0.7041 |
| KNN | 0.7230 | 0.7024 | 0.7080 | 0.6812 | 0.6767 | 0.6611 | 0.6890 | 0.7285 |

|  |  |  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- | --- | --- |
|  | **nof** | **nom** | **fanin** | **fanout** | **ca** | **ce** | **I** | **D** |
| Decision Tree （CART） | 0.6743 | 0.6396 | 0.5547 | 0.6248 | 0.7042 | 0.6032 | 0.6414 | 0.6684 |
| Random Forest | 0.6981 | 0.6710 | 0.6360 | 0.6881 | 0.7283 | 0.6198 | 0.6700 | 0.7130 |
| LogisticRegression\_liblinear | 0.7225 | 0.7113 | 0.7935 | 0.7317 | 0.7779 | 0.6824 | 0.6736 | 0.7011 |
| Naïve\_bayes\_GaussianNB | 0.6139 | 0.7010 | 0.6463 | 0.6314 | 0.7658 | 0.6698 | 0.6872 | 0.7004 |
| XGBoost | 0.7302 | 0.7028 | 0.7356 | 0.7019 | 0.7735 | 0.6296 | 0.6985 | 0.7312 |
| AdaBoost | 0.7081 | 0.7021 | 0.7115 | 0.7128 | 0.7581 | 0.6170 | 0.6783 | 0.7221 |
| KNN | 0.7410 | 0.7359 | 0.7920 | 0.7259 | 0.7881 | 0.6884 | 0.6960 | 0.7065 |