|  | **Description** | | **Value** | | | |
| --- | --- | --- | --- | --- | --- | --- |
| **0** | Session id | | 123 | | | |
| **1** | Target | | target | | | |
| **2** | Target type | | Regression | | | |
| **3** | Original data shape | | (37, 11) | | | |
| **4** | Transformed data shape | | (37, 11) | | | |
| **5** | Transformed train set shape | | (29, 11) | | | |
| **6** | Transformed test set shape | | (8, 11) | | | |
| **7** | Numeric features | | 10 | | | |
| **8** | Preprocess | | True | | | |
| **9** | Imputation type | | simple | | | |
| **10** | Numeric imputation | | mean | | | |
| **11** | Categorical imputation | | mode | | | |
| **12** | Transformation | | True | | | |
| **13** | Transformation method | | yeo-johnson | | | |
| **14** | Normalize | | True | | | |
| **15** | Normalize method | | zscore | | | |
| **16** | Fold Generator | | KFold | | | |
| **17** | Fold Number | | 10 | | | |
| **18** | CPU Jobs | | -1 | | | |
| **19** | Use GPU | | False | | | |
| **20** | Log Experiment | | False | | | |
| **21** | Experiment Name | | reg-default-name | | | |
| **22** | USI | | 6f13 | | | |
|  | **Model** | **MAE** | | **MSE** | **RMSE** | **R2** | | **RMSLE** | **MAPE** | **TT (Sec)** |
| **ada** | AdaBoost Regressor | 0.1474 | | 0.0778 | 0.1841 | -4.4267 | | 0.0463 | 0.0539 | 0.0360 |
| **gbr** | Gradient Boosting Regressor | 0.1756 | | 0.0861 | 0.2165 | -14.2100 | | 0.0563 | 0.0631 | 0.0240 |
| **lr** | Linear Regression | 0.1341 | | 0.0460 | 0.1695 | -15.5032 | | 0.0407 | 0.0437 | 0.0150 |
| **dt** | Decision Tree Regressor | 0.1990 | | 0.1441 | 0.2597 | -18.6845 | | 0.0707 | 0.0719 | 0.0170 |
| **huber** | Huber Regressor | 0.1283 | | 0.0417 | 0.1690 | -31.4913 | | 0.0403 | 0.0418 | 0.0190 |
| **et** | Extra Trees Regressor | 0.1485 | | 0.0583 | 0.1831 | -43.9106 | | 0.0461 | 0.0524 | 0.0450 |
| **rf** | Random Forest Regressor | 0.1589 | | 0.0705 | 0.1952 | -51.2091 | | 0.0493 | 0.0564 | 0.0530 |
| **ridge** | Ridge Regression | 0.1817 | | 0.0826 | 0.2341 | -57.7394 | | 0.0563 | 0.0611 | 0.0180 |
| **omp** | Orthogonal Matching Pursuit | 0.1565 | | 0.0545 | 0.1955 | -61.0631 | | 0.0463 | 0.0509 | 0.0180 |
| **br** | Bayesian Ridge | 0.1412 | | 0.0447 | 0.1718 | -62.0530 | | 0.0418 | 0.0465 | 0.0160 |
| **par** | Passive Aggressive Regressor | 0.1850 | | 0.0862 | 0.2345 | -71.2660 | | 0.0561 | 0.0618 | 0.0200 |
| **lightgbm** | Light Gradient Boosting Machine | 0.3192 | | 0.1807 | 0.3772 | -115.4883 | | 0.0905 | 0.1064 | 0.0500 |
| **lasso** | Lasso Regression | 0.3192 | | 0.1807 | 0.3772 | -115.4885 | | 0.0905 | 0.1064 | 0.0180 |
| **en** | Elastic Net | 0.3192 | | 0.1807 | 0.3772 | -115.4885 | | 0.0905 | 0.1064 | 0.0190 |
| **llar** | Lasso Least Angle Regression | 0.3192 | | 0.1807 | 0.3772 | -115.4885 | | 0.0905 | 0.1064 | 0.0160 |
| **dummy** | Dummy Regressor | 0.3192 | | 0.1807 | 0.3772 | -115.4885 | | 0.0905 | 0.1064 | 0.0170 |
| **xgboost** | Extreme Gradient Boosting | 0.1785 | | 0.0902 | 0.2144 | -121.6795 | | 0.0535 | 0.0633 | 0.0240 |
| **catboost** | CatBoost Regressor | 0.1891 | | 0.0876 | 0.2363 | -150.1131 | | 0.0584 | 0.0658 | 0.3040 |
| **lar** | Least Angle Regression | 0.6282 | | 4.5787 | 0.9009 | -162.7483 | | 0.1296 | 0.2771 | 0.0160 |
| **knn** | K Neighbors Regressor | 0.2094 | | 0.0941 | 0.2570 | -245.2227 | | 0.0631 | 0.0715 | 0.0180 |

|  | **MAE** | **MSE** | **RMSE** | **R2** | **RMSLE** | **MAPE** |
| --- | --- | --- | --- | --- | --- | --- |
| **Fold** |  |  |  |  |  |  |
| **0** | 0.0535 | 0.0056 | 0.0748 | -0.8910 | 0.0160 | 0.0144 |
| **1** | 0.5855 | 0.6483 | 0.8051 | -0.0845 | 0.2264 | 0.2776 |
| **2** | 0.2226 | 0.0534 | 0.2311 | -0.2286 | 0.0548 | 0.0689 |
| **3** | 0.1380 | 0.0287 | 0.1693 | 0.8151 | 0.0428 | 0.0463 |
| **4** | 0.1304 | 0.0242 | 0.1555 | 0.8324 | 0.0395 | 0.0441 |
| **5** | 0.0264 | 0.0011 | 0.0327 | -47.2604 | 0.0077 | 0.0081 |
| **6** | 0.0470 | 0.0030 | 0.0546 | 0.7601 | 0.0114 | 0.0125 |
| **7** | 0.0586 | 0.0049 | 0.0698 | -1.2584 | 0.0151 | 0.0161 |
| **8** | 0.1450 | 0.0431 | 0.2077 | 0.4612 | 0.0471 | 0.0441 |
| **9** | 0.1180 | 0.0144 | 0.1198 | -7.9730 | 0.0254 | 0.0313 |
| **Mean** | 0.1525 | 0.0827 | 0.1920 | -5.4827 | 0.0486 | 0.0563 |
| **Std** | 0.1549 | 0.1893 | 0.2139 | 14.1460 | 0.0613 | 0.0760 |

Fitting 10 folds for each of 10 candidates, totalling 100 fits

Original model was better than the tuned model, hence it will be returned. NOTE: The display metrics are for the tuned model (not the original one).

Result (1.1) Result(1.2) Result(2.1) Tuition Relation Extracurricular \

0 3.29 2.96 2.76 0 0 0

Social media Exam\_study\_time Study without exam AVG prediction\_label

0 5 6 0 3.0 3.0