Decision Tree :

If parameters are not passed then r\_score value is 0.92

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SL.NO** | **criterion** | **splitter** | **max\_features** | **R\_score** |
| 1 | squared\_error | Best | None | 0.9189 |
| 2 | squared\_error | Random | None | 0.7521 |
| 3 | squared\_error | Random | Sqrt | 0.4360 |
| 4 | squared\_error | Random | Log2 | -0.8267 |
| 5 | squared\_error | Best | Log2 | 0.7460 |
| 6 | squared\_error | Best | Sqrt | 0.6717 |
| 7 | friedman\_mse | Best | Sqrt | 0.7008 |
| 8 | friedman\_mse | Random | Sqrt | 0.8750 |
| 9 | friedman\_mse | Random | Log2 | 0.5561 |
| 10 | friedman\_mse | Best | Log2 | 0.3396 |
| 11 | friedman\_mse | Best | None | 0.9177 |
| 12 | friedman\_mse | Random | None | 0.8594 |
| 13 | absolute\_error | Random | None | 0.8259 |
| 14 | absolute\_error | Best | None | 0.9704 |
| 15 | absolute\_error | Best | Log2 | 0.7434 |
| 16 | absolute\_error | Random | Log2 | 0.8749 |
| 17 | absolute\_error | Random | Sqrt | 0.6981 |
| 18 | absolute\_error | Best | Sqrt | 0.9338 |
| 19 | Poisson | Best | Sqrt | 0.8063 |
| 20 | Poisson | Random | Sqrt | -0.8680 |
| 21 | Poisson | Random | Log2 | 0.5672 |
| 22 | Poisson | Best | Log2 | 0.8993 |
| 23 | Poisson | Best | None | 0.9260 |
| 24 | Poisson | Random | None | 0.5664 |

Among the above options “DecisionTreeRegressor(criterion="absolute\_error",splitter="best")” is the best model and r\_score value is 0.9704