**To find following the machine learning regression method using in r2 value:**

1. **MULTIPLE LINEAR REGRESSION (R2 value)=** 0.9358680970044478
2. **SUPPORT VECTOR MACHINE:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **SNO** | **HYPER PARAMETER** | **LINEAR**  **(R VALUE)** | **RBF (NON LINEAR)(R VALUE)** | **POLY (R VALUE)** | **SIGMOID (R VALUE)** |
| 1 | C10 | -0.0259 | -0.0565 | -0.0516 | -0.0534 |
| 2 | C100 | 0.2280 | -0.0476 | -0.0004 | -0.0173 |
| 3 | C500 | 0.8342 | -0.0090 | 0.2062 | 0.1320 |
| 4 | C1000 | 0.9574 | 0.0353 | 0.4194 | 0.2953 |
| 5 | C2000 | 0.9785 | 0.1225 | 0.6657 | 0.5744 |
| 6 | C3000 | 0.9894 | 0.2033 | 0.7790 | 0.7500 |

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **SL.NO** | **CRITERION** | **MAX FEATURES** | **SPLITTER** | **R VALUE** |
| 1 | squared\_error | auto | best | 0.9122 |
| 2 | squared\_error | auto | random | 0.9033 |
| 3 | squared\_error | sqrt | best | 0.5550 |
| 4 | squared\_error | sqrt | random | 0.6174 |
| 5 | squared\_error | log2 | best | -0.2109 |
| 6 | squared\_error | log2 | random | -0.2282 |
| 7 | friedman\_mse | auto | best | 0.9176 |
| 8 | friedman\_mse | auto | random | 0.9412 |
| 9 | friedman\_mse | sqrt | best | -1.0533 |
| 10 | friedman\_mse | sqrt | random | -0.2901 |
| 11 | friedman\_mse | log2 | best | 0.1200 |
| 12 | friedman\_mse | log2 | random | -1.3175 |
| 13 | absolute\_error | auto | best | 0.9599 |
| 14 | absolute\_error | auto | random | 0.9554 |
| 15 | absolute\_error | sqrt | best | 0.2287 |
| 16 | absolute\_error | sqrt | random | 0.6637 |
| 17 | absolute\_error | log2 | best | -0.0398 |
| 18 | absolute\_error | log2 | random | 0.4444 |

1. **DECISION TREE**