To find the following **Machine Learning Regression Method** using in r2 value

1. **Multiple Linear Regression** (R-Squared Value = 0.93%).

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.NO** | **HYPER PARAMETER** | **LINEAR**  **(r value)** | **RBF (NON-LINEAR)**  **(r value)** | **POLY**  **(r value)** | **SIGMOID**  **(r value)** |
| 1 | C10 | -0.039 | -0.056 | -0.053 | -0.054 |
| 2 | C100 | 0.109 | -0.047 | -0.019 | -0.029 |
| 3 | C500 | 0.642 | -0.010 | 0.111 | 0.075 |
| 4 | C1000 | 0.783 | 0.036 | 0.255 | 0.206 |
| 5 | C2000 | 0.861 | 0.122 | 0.498 | 0.435 |
| 6 | C3000 | 0.931 | 0.202 | 0.674 | 0.615 |

Where, RBF = Radial Bias Function.

The **SVM Regression** use R² Value(Linear and Hyper Parameter (C3000)) = 0.931

**3. DECISION TREE:**

|  |  |  |  |
| --- | --- | --- | --- |
| **S.NO** | **CRITERION** | **SPLITTER** | **R Value** |
| 1 | Firedman-mse | best | 0.90 |
| 2 | Friedman mse | Random | 0.92 |
| 3 | Squared error | best | 0.91 |
|  | Squared error | random | 0.85 |
| 4 | Absolute error | best | 0.95 |
|  | Absolute error | Random | 0.94 |
| 5 | Poisson | random | 0.91 |
| 6 | Passion | best | 0.92 |

The **Decision Tree** Regression use R² value [Absolute\_error, best] = 0.9533