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

1. **Multiple Linear Regression (R2 Value)= 0.9358**

**2. Support Vector machine**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S. No** | **HYPER PARAMETER** | **LINEAR (R VALUE)** | **RBF** | **POLY** | **SIGMOID** |
| **1** | **C=10** | -0.0396 | -0.05680 | -0.0536 | -0.0547 |
| **2** | **C=100** | 0.1064 | -0.0507 | -0.0198 | -0.03045 |
| **3** | **C=500** | 0.5928 | -0.02432 | 0.1146 | 0.0705 |
| **4** | **C=1000** | 0.7802 | 0.00676 | 0.2661 | 0.1850 |

1. **DECISION TREE**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No** | **CRITERION** | **MAX FEATURES** | **SPLITTER** | **R2 VALUE** |
| **1** | **Squared\_error** | **None** | **best** | 0.8965 |
| **2** | **Squared\_error** | **Sqrt** | **Best** | 0.1795 |
| **3** | **Squared\_error** | **Log2** | **Best** | 0.5619 |
| **4** | **Squared\_error** | **max\_depth=2** | **Best** | 0.7820 |
| **5** | **Squared\_error** | **Float(max\_features=0.5)** | **best** | 0.7290 |
| **6** | **Squared\_error** | **None** | **random** | 0.6892 |
| **7** | **Squared\_error** | **sqrt** | **Random** | 0.8570 |
| **8** | **Squared\_error** | **Log2** | **Random** | 0.8897 |
| **9** | **Squared\_error** | **Max\_depth** | **Random** | 0.5722 |
| **10** | **Squared\_error** | **Max\_features=0.5** | **random** | 0.3950 |

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