**Multiple Linear Regression:** r2 Value = 0.8676

**Support Vector Machine:**

|  |  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- | --- |
| **S.no** | **Hyper Parameter** | **Linear** (r value) | **RBF** (r value) | **POLY** (r value) | **SGMOID** (r value) | **Precomputed** (r value) |
| 1 | C=0.10 | -939.37 | -0.05 | -6.7 | -0.05 |  |
| 2 | C=0.01 | -6.7 | -0.05 | -6.7 | -0.05 |  |
| 3 | C=0.001 | 0.14 | -0.05 | -6.7 | -0.05 |  |
| 4 | C=1 | -96630.8 | -0.05 | -6.7 | -0.05 |  |

**Decision Tree:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.no** | **CRITERION** | **MAX FEATURES** | **SPLITTER** | **R VALUE** |
| 1 | *squared\_error (mse)* | *auto* | *best* | 0.78 |
| 2 | *squared\_error* | *sqrt* | *best* | 0.15 |
| 3 | *squared\_error* | *log2* | *best* | -0.11 |
| 4 | *squared\_error* | *auto* | *random* | 0.68 |
| 5 | *squared\_error* | *sqrt* | *random* | 0.82 |
| 6 | *squared\_error* | *log2* | *random* | 0.84 |
| 7 | *friedman\_mse* | *auto* | *best* | 0.77 |
| 8 | *friedman\_mse* | *sqrt* | *best* | 0.37 |
| 9 | *friedman\_mse* | *log2* | *best* | 0.66 |
| 10 | *friedman\_mse* | *auto* | *random* | 0.37 |
| 11 | *friedman\_mse* | *sqrt* | *random* | 0.13 |
| 12 | *friedman\_mse* | *log2* | *random* | -1.17 |
| 13 | *absolute\_error (mae)* | *auto* | *best* | 0.76 |
| 14 | *absolute\_error* | *sqrt* | *best* | 0.55 |
| 15 | *absolute\_error* | *log2* | *best* | 0.22 |
| 16 | *absolute\_error* | *auto* | *random* | 0.65 |
| 17 | *absolute\_error* | *sqrt* | *random* | -0.65 |
| 18 | *absolute\_error* | *log2* | *random* | -0.33 |
| 19 | *poisson* | *auto* | *best* | 0.71 |
| 20 | *poisson* | *sqrt* | *best* | 0.44 |
| 21 | *poisson* | *log2* | *best* | -0.01 |
| 22 | *poisson* | *auto* | *random* | 0.31 |
| 23 | *poisson* | *sqrt* | *random* | 0.04 |
| 24 | *poisson* | *log2* | *random* | 0.61 |

