1.**Mulitple Linear regression**-R2 score=0.93

2.**Support vector Regression-**Hyper Tuning parameter comparison for R2 score

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **sno** | **C value** | **Kernel=Linear** | **Kernel=rbf(default)** | **Kernel=sigmoid** | **Kernel=poly** |
| 1 | 10 | -0.0396449 | -0.05680759 | -0.0547195 | -0.053667 |
| 2 | 100 | 0.10646819 | -0.0507260 | -0.030453 | -0.01980213 |
| 3 | 500 | 0.5928977 | -0.0243233 | 0.0705721 | 0.1146848 |
| 4 | 1000 | 0.7802839 | 0.00676834 | 0.1850686 | 0.2661637 |
| 5 | 1500 | 0.8568553 | 0.037760490 | 0.2949049 | 0.387513 |
| 6 | 5000 | 0.900376 | 0.212428 | 0.730656263 | 0.793655 |

R2 score=0.90 for SVR -Linear and c=5000

3.**Decision Tree**

HyperParameters are:

Criterion=*{“squared\_error”, “friedman\_mse”, “absolute\_error”, “poisson”} and default=”squared\_error”*

Splitter=*{“best”, “random”} default=”best”*

**0.93883827**

|  |  |  |  |
| --- | --- | --- | --- |
| **sno** | **criterion** | **splitter** | **R2 score** |
| 1. | *squared\_error* | best | 0.88276555 |
| 2. | *squared\_error* | random | 0.4347965 |
| 3. | *friedman\_mse* | best | 0.9072531 |
| 4. | *friedman\_mse* | random | 0.920746171 |
| 5. | *absolute\_error* | best | 0.96236524 |
| 6. | *absolute\_error* | random | 0.9279106 |
| 7. | *poisson* | best | 0.92069289 |
| 8. | *poisson* | random | 0.9345846876 |