

To Find following the Machine regression method using in r2 score

1 Multiple Linear Regression - r2 Value 0.93586

2 Support Vector Machine:

| S.No. | Hyper Parameter | Linear | rbf | Poly | Sigmoid |
|-------|-----------------|-----------------|----------|----------|----------|
| 1 | C=10 | -0.03964 | -0.0568 | -0.05367 | -0.05471 |
| 2 | C=100 | 0.10646 | -0.05072 | -0.0198 | -0.03045 |
| 3 | C=500 | 0.59289 | -0.02432 | 0.11468 | 0.07057 |
| 4 | C=1000 | 0.78028 | 0.006768 | 0.26616 | 0.18506 |
| 5 | C=2000 | 0.87677 | 0.067515 | 0.481 | 0.39706 |
| 6 | C=3000 | 0.899567 | 0.12322 | 0.6837 | 0.59136 |

The SVM Regressor use R2 Value- Linear and Hyper Parameter[C=3000] **0.899567**

3 Decision - Tree

| S.No | Criterion | Splitter | R2 Score |
|------|----------------|----------|----------|
| 1 | DecisionTree() | | 0.9228 |
| 2 | Squared_error | best | 0.915039 |
| 3 | Squared_error | random | 0.73722 |
| 4 | friendman | best | 0.92846 |
| 5 | friendman | random | 0.87272 |
| 6 | absolute_error | best | 0.96913 |
| 7 | absolute_error | random | 0.76859 |
| 8 | poission | best | 0.92385 |
| 9 | poission | random | 0.9074 |

Decision tree R2 score 0.96913