

To find 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(Nonlinear R value) | POLY (R value) | SIGMOID (value) |
|------|-----------------|----------------|------------------------|----------------|------------------|
| 1 | c10 | 0.5380 | -0.057 | 0.0253 | -0.057 |
| 2 | c100 | -107.97 | -0.030 | 0.465 | -0.058 |
| 3 | c200 | -468.644 | -0.001 | 0.578 | -0.060 |

The SVM Regression use R² value (Linear) and hyper parameter

(C10) = **0.5380**

3, Decision Tree regressor:

| SI.No | CRITERION | Splitter | R2 value |
|-------|----------------|----------|--------------|
| 1 | squared_error | best | 0.925 |
| 2 | squared_error | random | 0.861 |
| 3 | friedman_mse | best | 0.922 |
| 4 | friedman_mse | random | 0.920 |
| 5 | absolute_error | best | 0.951 |
| 6 | absolute_error | random | 0.194 |
| 7 | poisson | best | 0.916 |
| 8 | poisson | random | 0.936 |

The Decision Tree use R² value (absolute_error) and Splitter

(best) = **0.951**

