**Machine Learning Regression Methods & R² Values**

1. **Multiple Linear Regression (**R2 value**=0.934615)**
2. **Support Vector Machine (SVM) – *R* values for different kernels**

**Best SVM R² value (linear kernel, C=3000):0.8601**

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| **S.NO** | **HYPER**  **PARAMETER** | **LINEAR**  **(**R value**)** | **RBF(NON LINEAR**  **(**r value) | **POLY**  **(**r value**)** | **SIGMOID**  **(**r value**)** |
| **1** | **C=10** | **-8844.138** | **-362198.508** | **-190735.4** | **-363515.3** |
| **2** | **C=100** | **-89.043** | **-36009.964** | **-1845.06** | **-3655.52** |
| **3** | **C=500** | **-0.968** | **-1420.705** | **-68.312** | **-149.93** |
| **4** | **C=1000** | **0.4782** | **-436.132** | **-13.656** | **-33.2721** |
| **5** | **C=2000** | **0.8083** | **-102.829** | **-2.4828** | **-5.6090** |
| **6** | **C=3000** | **0.8601** | **-42.232** | **-0.4256** | **-0.999** |

1. **Decision Tree Regression Results**

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| **SL.NO** | **Criterion** | **Max Features** | **Splitter** | **R Value** |
| 1 | MSE | None | best | 0.88636 |
| 2 | MSE | None | random | 0.82377 |
| 3 | MSE | sqrt | best | 0.633677 |
| 4 | MSE | sqrt | random | 0.74598 |
| 5 | MSE | log2 | best | 0.43719 |
| 6 | MSE | log2 | random | 0.75577 |
| 7 | MAE | None | best | 0.94848 |
| 8 | MAE | None | random | 0.89051 |
| 9 | MAE | sqrt | best | 0.66577 |
| 10 | MAE | sqrt | random | 0.64981 |
| 11 | MAE | log2 | best | 0.80732 |
| 12 | MAE | log2 | random | -1.1289 |
| 13 | friedman\_mse | None | best | 0.85539 |
| 14 | friedman\_mse | None | random | 0.94619 |
| 15 | friedman\_mse | sqrt | best | 0.66042 |
| 16 | friedman\_mse | sqrt | random | 0.80369 |
| 17 | friedman\_mse | log2 | best | 0.76253 |
| 18 | friedman\_mse | log2 | random | 0.73215 |