**Below Are The r2\_scores Calculated For Different Regression ML Models with 50 Startups Data**

1. **Multiple Linear Regression**--> r2\_score = 0.934 -- >it implies 93% accuracy in prediction of our test data

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| **S.NO** | **Hyper Parameter “C”** | **If Kernel = ‘rbf’**  **r2\_score** | **If Kernel=’linear’**  **r2\_score** | **Kernel=’poly’**  **r2\_score** | **Kernel = ‘sigmoid’**  **r2\_score** |
| 1 | C= 1.0 | 0.371 | - 0.055 | -0.057 | - 0.057 |
| 2 | C= 10.0 | -0.056 | - 0.039 | -0.053 | - 0.054 |
| 3 | C = 100 | -0.050 | 0.106 | -0.019 | -0.030 |
| 4 | C = 1000 | 0.006 | 0.780 | 0.266 | 0.185 |
| 5 | C= 2000 | 0.067 | 0.867 | 0.481 | 0.397 |
| 6 | C= 10000 | 0.371 | 0.923 | 0.812 | 0.853 |
| 7 | C= 0.1 | -0.057 | -0.051 | -0.057 | - 0.057 |
| 8 | C=0.01 | -0.057 | -0.057 | -0.057 | - 0.057 |
| 9 | C=0.0001 | -0.057 | -0.057 | -0.057 | - 0.057 |
| **10** | **C = 100000** | **0.708** | **0.930** | **0.40** | **-0.843** |

1. **SVM(Support Vector Machine)**--->Best r2\_score = 0.930---> it implies 16 percent max accuracy
2. **Decision Tree - Regressor**--->Best r2\_score = 0.958---> it implies 95.8 percent max accuracy

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| **S.NO** | ****criterion**** | ****splitter**** | ****max\_features**** | **r2\_score** |
| 1 | *squared\_error* | *best* | None | 0.882 |
| 2 | *squared\_error* | *best* | auto | 0.908 |
| 3 | *squared\_error* | *best* | sqrt | 0.633 |
| 4 | *squared\_error* | *best* | log2 | 0.698 |
| 5 | *squared\_error* | *random* | auto | 0.886 |
| 6 | *squared\_error* | *random* | sqrt | 0.553 |
| 7 | *squared\_error* | *random* | log2 | 0.049 |
| 8 | *friedman\_mse* | *best* | auto | 0.893 |
| 9 | *friedman\_mse* | *best* | sqrt | 0.625 |
| 10 | *friedman\_mse* | *best* | log2 | 0.302 |
| **11** | ***friedman\_mse*** | ***random*** | **auto** | **0.958** |
| 12 | *friedman\_mse* | *random* | sqrt | 0.218 |
| 13 | *friedman\_mse* | *random* | log2 | 0.354 |
| 14 | *absolute\_error* | *best* | None | 0.921 |
| 15 | *absolute\_error* | *best* | auto | 0.928 |
| 16 | *absolute\_error* | *best* | sqrt | 0.503 |
| 17 | *absolute\_error* | *best* | log2 | 0.426 |
| 18 | *absolute\_error* | *random* | auto | 0.893 |
| 19 | *absolute\_error* | *random* | sqrt | 0.750 |
| 20 | *absolute\_error* | *random* | log2 | 0.482 |
| 21 | *friedman\_mse* | *random* | None | 0.716 |
| 22 | *friedman\_mse* | *best* | None | 0.923 |
| 23 | *absolute\_error* | *random* | None | 0.547 |
| 24 | *squared\_error* | *random* | None | 0.846 |
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