To find the following the machine learning regression using in r2 value

1. Multiple Linear Regression : 0.9359
2. Support Vector Machine :

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| --- | --- | --- | --- | --- | --- |
| **S.No** | **HyperParameter** | **Linear (R2 Value)** | **RBF(Non Linear) (R2 Value)** | **Poly (R2 Value)** | **Sigmoid (R2 Value)** |
| 1 | c= 0.1 | 0.9198 | -0.1257 | -0.1247 | -0.1257 |
| 2 | c= 1 | 0.8753 | -0.1254 | -0.1258 | -0.1258 |
| 3 | c=10 | 0.2398 | -0.122 | -0.0595 | -0.126 |

1. Decision Tree

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **S.No** | **Criterion** | **Max Features** | **Splitter** | **R2 Value** |
| 1 | ***squared\_error*** | auto | random | ***0.9394*** |
| 2 | ***squared\_error*** | ***sqrt*** | random | ***0.8625*** |
| 3 | ***squared\_error*** | ***log2*** | random | ***-0.0761*** |
| 4 | ***squared\_error*** | auto | best | ***0.8749*** |
| 5 | ***squared\_error*** | ***sqrt*** | best | ***-1.0213*** |
| 6 | ***squared\_error*** | ***log2*** | best | ***0.8216*** |
| 7 | ***friedman\_mse*** | auto | random | ***0.8659*** |
| 8 | ***friedman\_mse*** | ***sqrt*** | random | ***0.5908*** |
| 9 | ***friedman\_mse*** | ***log2*** | random | ***0.5924*** |
| 10 | ***friedman\_mse*** | auto | best | ***0.89*** |
| 11 | ***friedman\_mse*** | ***sqrt*** | best | ***0.2746*** |
| 12 | ***friedman\_mse*** | ***log2*** | best | ***0.6985*** |
| 13 | ***absolute\_error*** | auto | random | ***0.8733*** |
| 14 | ***absolute\_error*** | ***sqrt*** | random | ***0.6126*** |
| 15 | ***absolute\_error*** | ***log2*** | random | ***0.6475*** |
| 16 | ***absolute\_error*** | auto | best | ***0.9162*** |
| 17 | ***absolute\_error*** | ***sqrt*** | best | ***0.8719*** |
| 18 | ***absolute\_error*** | ***log2*** | best | ***0.63*** |
| 19 | ***poisson*** | auto | random | ***0.7732*** |
| 20 | ***poisson*** | ***sqrt*** | random | ***-0.453*** |
| 21 | ***poisson*** | ***log2*** | random | ***0.8769*** |
| 22 | ***poisson*** | auto | best | ***0.9059*** |
| 23 | ***poisson*** | ***sqrt*** | best | ***0.4763*** |
| 24 | ***poisson*** | ***log2*** | best | ***0.4253*** |