|  |  |
| --- | --- |
| R\_score | Kernel |
| -0.0884 | Rbf(default) |
|  |  |
| -0.0642 | poly |
| -0.111 | ***linear*** |
| -0.089 | ***sigmoid*** |
|  |  |

**SVM Hypertune parameter - Kernel,C**

|  |  |  |
| --- | --- | --- |
| R\_score | Kernel | C |
| -0.0895 | Rbf(default) | 0.1 |
| -0.0884 |  | 1 |
| -0.0819 |  | 10 |
| -0.12480 |  | 100 |
| -0.1174 |  | 1000 |
| -0.08625 | ***Poly*** | 0.1 |
| -0.06429 |  | 1 |
| -0.0931 |  | 10 |
| -0.0997 |  | 100 |
| -0.055 |  | 1000 |
| -0.1220 | ***linear*** | 0.1 |
| -0.1116 |  | 1 |
| -0.0016 |  | 10 |
| 0.5432 |  | 100 |
| 0.63403 |  | 1000 |
| -0.0897 | ***sigmoid*** | 0.1 |
| -0.0899 |  | 1 |
| -0.0907 |  | 10 |
| -0.118 |  | 100 |
| -1.6659 |  | 1000 |

**SVM Hypertune parameter - Kernel,C,gamma**

|  |  |  |  |
| --- | --- | --- | --- |
| R\_score | Kernel | C | Gamma |
| -0.08957 | rbf | 0.1 | scale |
| -0.0884 |  | 1 |  |
| -0.0819 |  | 10 |  |
| -0.124 |  | 100 |  |
| -0.1174 |  | 1000 |  |
| 0.86298 | ***Poly*** | 0.1 | auto |
| **0.8654548** | **poly** | **1** |  |
| 0.86510 |  | 10 |  |
| 0.6490 |  | 100 |  |
| -17.982 |  | 1000 |  |
| -0.0897 | sigmoid | 0.1 | scale |
| -0.0899 |  | 1 |  |
| -0.09078 |  | 10 |  |
| -0.11814 |  | 100 |  |
| -1.665908 |  | 1000 |  |

**SVM Hypertune parameter - Kernel,c,degree**

|  |  |  |  |
| --- | --- | --- | --- |
| R\_score | Kernel | C | degree |
| -0.08625 | poly | 0.1 | 3 |
| -0.06429 |  | 1 |  |
| -0.09311 |  | 10 |  |
| -0.099761 |  | 100 |  |
| -0.0555 |  | 1000 |  |

**Decission Tree Parameter (R\_score = 0.689962)**

**DT Hypertune parameter - criterion,splitter**

|  |  |  |
| --- | --- | --- |
| R\_score | **criterion** | **splitter** |
| 0.6899 | ***squared\_error*** | ***Best(default param)*** |
| 0.74953 | ***squared\_error*** | ***random*** |
| 0.68512 | ***friedman\_mse*** | ***Best(default param)*** |
| 0.6958 | ***friedman\_mse*** | ***random*** |
| 0.65568 | ***absolute\_error*** | ***Best(default param)*** |
| 0.72429 | ***absolute\_error*** | ***random*** |
| 0.7298742 | ***poisson*** | ***Best(default param)*** |
| 0.709470 | ***poisson*** | ***random*** |

**DT Hypertune parameter - criterion,splitter,min\_samples\_leaf,min\_samples\_split**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| R\_score | **criterion** | **splitter** | **min\_samples\_leaf** | **min\_samples\_split** |
| 0.69896 | ***squared\_error*** | ***random*** | **1** | **2** |
| 0.69179 | ***friedman\_mse*** | ***Best(default param)*** | **1** | **2** |
| 0.7156 | ***absolute\_error*** | ***random*** | **1** | **2** |
| **0.86766** | ***poisson*** | ***Best(default param)*** | **0.1** | **0.2** |

**Random Forest (R\_score = 0.8569 )**

**Random Forest Hypertune parameter -**

|  |  |  |  |
| --- | --- | --- | --- |
| R\_score | **n\_estimators** | criterion | **min\_samples\_split** |
| 0.85280 | 50 | ***squared\_error*** | 2 |
| 0.86484 | 20 | ***absolute\_error*** | 0.1 |
| 0.85578 | 100 | ***friedman\_mse*** | 2 |
| **0.8715** | **40** | **poisson** | **1** |