**R-square result base on the difference hyperparameter tuning applied on SVM and Decision tree Algorithms**

**Support Vector Machine**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl no.** | **C** | **Kernel** | **gama** | **R2 score** |
| 1 | 500 | linear | 0.1 | 0.5928977 |
| 2 | 1000 | poly | 0.1 | -0.0105603 |
| 3 | 1500 | rbf | 0.1 | 0.0696302926 |
| 4 | 3000 | sigmoid | 0.1 | 0.34736 |
| 5 | 13000 | sigmoid | 0.1 | 0.8247372195065548 |

**Decision Tree**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| **Sl no.** | **Criterion** | ***splitter*** | **Max\_features** | **R value** |
| 1 | ***squared\_error*** | best | log2 | 0.429736735499439 |
| 2 | ***squared\_error*** | best | ***sqrt*** | 0.19548945293041653 |
| 3 | ***squared\_error*** | random | ***sqrt*** | 0.8968774170227326 |
| 4 | ***friedman\_mse*** | random | ***sqrt*** | -0.3754250541975621 |
| 5 | ***friedman\_mse*** | best | ***sqrt*** | 0.8183521430536839 |
| 6 | ***friedman\_mse*** | random | ***Log2*** | 0.2496118956104767 |
| 7 | ***absolute\_error*** | best | log2 | 0.9557769273393263 |
| 8 | ***poisson*** | random | ***sqrt*** | 0.9033163234395801 |
| 9 | ***poisson*** | best | ***Log2*** | 0.46792809684698544 |
| 10 | ***default*** |  |  | 0.9764409182568788 |