**To find the R2 value using following the Machine learning Regression algorithm for same dataset:**

**1.Multiple Linear Regression r2 Score = 0.9358**

**2.Support Vector Machine:**

|  |  |  |  |  |  |
| --- | --- | --- | --- | --- | --- |
| **S.No** | **Hyper Parameter** | **Linear**  **R2 score** | **RBF(Non linear) R2Score** | **POLY**  **R2 Score** | **SIGMOID**  **R2 Score** |
| **1** | C 1.0 | -0.05569 | -0.05741 | -0.05710 | -0.05720 |
| **2** | C 10 | -0.03964 | -0.05680 | -0.0536 | -0.05471 |
| **3** | C 100 | 0.10646 | -0.05072 | -0.01980 | -0.03045 |
| **4** | **C 1000** | **0.78028** | 0.00676 | 0.26616 | 0.18506 |

The **R² value is 0.7865** for the **SVM algorithm** using the hyper parameter settings: **C= 100** and **kernel=linear**.

This indicates that approximately **78.65%** of the variance in the target variable is explained by the model with these settings.