R square values for different parameters passed to the model

Parameter Combination Used r square value

|  |  |  |  |
| --- | --- | --- | --- |
| Parameter Name | Parameter Value | R2 value for the parameter | Parameter description |
| Kernel | linear | 0.8950779234313312 | SVM utilizes kernel functions to map the input data points into a higher-dimensional space where the separation between the two classes becomes easier  Liner kernel is used when the data is roughly linearly separable |
| kernel | poly | -0.0571 | Poly is used when the data has a complicated curved border |
| Kernel | Rbf | -0.0571 | Rbf transforms messy data into a new space where it is easier to draw a line to separate datasets based on a criteria. How close or far data points are from each other using a math formula that acts like a bubble aroung |
| Kernel | Sigmoid | -0.057209358534722865 | Used takes any number and squashes it into a range between 0 and 1 used in non linear models used for probabilities or decisions. S shaped curve |
| Kernel | Precomputed |  | Precomputed input for the kernel for example like a cheat sheet. The form of matrix. No R value generated |
| Kernel  gamma | Rbf  Auto | -0.057209358534722865 | Gamma auto means 1/no of features. Does not look at the data values. Eg price of apartment based of 4 categories then these 4 categories are used in auto mode ¼.this can result in overfill or underfit of the model |
| Kernel  Gamma | Sigmoid  auto | -0.057209358534722865 |  |
| Kernel  Gamma | Poly  auto | -0.05710387514922144 |  |
| Kernel  gamma | Rbf  scale | -0.05710387514922144 | Scale means how much range the features values are spread.   |  | | --- | | Number of features × variance |  |  | | --- | |  | |
| Kernel  Gamma | Sigmoid  Scale | -0.05710387514922144 |  |
| Kernel  Gamma | Poly  scale | -0.05710387514922144 |  |
| Kernel  Coef0 | Poly/Sigmoid  5 | -0.030868472005616487 |  |