**SVM Classifier**

I will be using R Package named **E1071** which contains our **SVM classifier**.

**Final Output**

|  |  |
| --- | --- |
| **Kernel** | **Accuracy** |
| Default | 72.98701 % |
| Linear | 73.50649 % |
| Polynomial | 73.37662 % |
| Radial | 75.45455 % |
| Sigmoid | 71.03896 % |

**Using Default Kernel**

|  |  |
| --- | --- |
| **Experiment** | **Accuracy** |
| 1 | 74.02597 % |
| 2 | 74.02597 % |
| 3 | 71.42857 % |
| 4 | 76.62338 % |
| 5 | 70.12987 % |
| 6 | 68.83117 % |
| 7 | 76.62338 % |
| 8 | 72.72727 % |
| 9 | 72.72727 % |
| 10 | 72.72727 % |

Overall Accuracy =72.98701 %

**Using Linear Kernel**

|  |  |
| --- | --- |
| **Experiment** | **Accuracy** |
| 1 | 81.81818 % |
| 2 | 70.12987 % |
| 3 | 70.12987 % |
| 4 | 74.02597 % |
| 5 | 80.51948 % |
| 6 | 71.42857 % |
| 7 | 79.22078 % |
| 8 | 64.93506% |
| 9 | 68.83117 % |
| 10 | 74.02597 % |

Overall Accuracy =73.50649 %

**Using Polynomial Kernel**

|  |  |
| --- | --- |
| **Experiment** | **Accuracy** |
| 1 | 64.93506 % |
| 2 | 67.53247 % |
| 3 | 72.72727 % |
| 4 | 67.53247 % |
| 5 | 74.02597 % |
| 6 | 75.32468 % |
| 7 | 71.42857 % |
| 8 | 80.51948% |
| 9 | 90.90909 % |
| 10 | 68.83117 % |

Overall Accuracy =73.37662 %

**Using Radial Kernel**

|  |  |
| --- | --- |
| **Experiment** | **Accuracy** |
| 1 | 76.62338 % |
| 2 | 70.12987 % |
| 3 | 76.62338 % |
| 4 | 79.22078 % |
| 5 | 67.53247 % |
| 6 | 72.72727 % |
| 7 | 79.22078 % |
| 8 | 81.81818 % |
| 9 | 81.81818 % |
| 10 | 68.83117 % |

Overall Accuracy =75.45455 %

**Using Sigmoid Kernel**

|  |  |
| --- | --- |
| **Experiment** | **Accuracy** |
| 1 | 63.63636 % |
| 2 | 68.83117 % |
| 3 | 71.42857 % |
| 4 | 70.12987 % |
| 5 | 75.32468 % |
| 6 | 68.83117 % |
| 7 | 75.32468 % |
| 8 | 79.22078 % |
| 9 | 68.83117 % |
| 10 | 68.83117 % |

Overall Accuracy =71.03896 %