PART – III SUPPORT VECTOR MACHINE CLASSIFIER

DATASET – PIMA DATASET
PACKAGE – {e1701}

FORMULA

```
svm(x, y = NULL, scale = TRUE, type = NULL, kernel
="radial", degree = 3,cost = 1)
```

RESULTS

(1) When **Default Kernel** is taken

Experiment	Accuracy(%)
1	80.51948
2	79.22078
3	83.11688
4	80.51948
5	77.92208
6	71.42857
7	83.11688
8	80.51948
9	71.42857
10	67.53247
AVG	**77.532467**

OVERALL ACCURACY with Default Kernel = 77.532467%

(2) When **OTHER KERNELS** were taken

KERNEL	AVG. ACCURACY OF 10 EXPERIMENTS (%)
LINEAR	74.285716
POLYNOMIAL	73.285714
RADIAL	74.805194
SIGMOID	66.753247

APPENDIX

Average accuracy of all 10 experiments for each kernel

Kernel - Linear

Experiment	Accuracy(%)
1	75.32468
2	70.12987
3	76.62338
4	72.72727
5	75.32468
6	76.62338
7	77.92208
8	77.92208
9	75.32468
10	64.93506
AVG	74.285716

Kernel - Polynomial

Experiment	Accuracy(%)
1	71.42857
2	76.62338
3	63.63636
4	71.42857
5	79.22078
6	74.02597
7	76.62338
8	79.22078
9	72.72727
10	77.92208
AVG	73.285714

Kernel - Radial

Experiment	Accuracy(%)
1	77.92208
2	74.02597
3	71.42857
4	75.32468
5	81.81818
6	74.02597
7	71.42857
8	68.83117
9	79.22078
10	74.02597
AVG	74.805194

Kernel -Sigmoid

Experiment	Accuracy(%)
1	74.02597
2	51.94805
3	70.12987
4	62.33766
5	67.53247
6	67.53247
7	68.83117
8	68.83117

9	61.03896
10	75.32468
AVG	66.753247