**Regression:**

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| K | 1 | 2 | 5 | 10 |
| Uniform Kernal  MAE  RMSE | 5.25876608966  6.68010837796 | 4.63019242317  5.79234537817 | 4.24542440145  5.19345095748 | 4.13080598418  4.98647553411 |
| Inverse Distance Kernal | 5.25876608966  6.68010837796 | 4.63710735881  5.8094927086 | 4.22110687196  5.19940161055 | 4.09090954601  4.98048522909 |

The Best sigma value I got while doing regression on the validation data is 0.1

So using sigma = 0.1 , the RMSE on the Test data is

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| K | 1 | 2 | 5 | 10 |
| Gausion  RMSE | 6.68010837796 | 6.67918638491 | 6.67918638491 | 6.67918638491 |

**Classification**:

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| K | 1 | 2 | 5 | 10 |
| Uniform Kernal  MAE  RMSE | 5.00639669983  6.67585070124 | 5.07662985301  6.76923654333 | 5.08161666797  6.77617752221 | 5.08960601551  6.78700366212 |
| Inverse Distance Kernal | 4.99966058327  6.66816123818 | 5.08454087361  6.7805993856 | 5.08200830266  6.7743528554 | 5.09057204773  6.78865570806 |

The Best sigma value I got while doing regression on the validation data is 0.5

So using sigma = 0.5 , the RMSE on the Test data is

|  |  |  |  |  |
| --- | --- | --- | --- | --- |
| K | 1 | 2 | 5 | 10 |
| Gausion  RMSE | 6.67585070124 | 6.6720325133 | 6.67129483485 | 6.67129483485 |

Confusion Matrix is in “ConfusionMatrix.txt”