|  |  |  |
| --- | --- | --- |
| Filename | KNN | Accuracy |
| att | 1 | 0.9775 |
|  | 3 | 0.9275 |
|  | 5 | 0.96 |
|  | 7 | 0.8325 |
|  | 9 | 0.8025 |
| iris | 1 | 0.96 |
|  | 3 | 0.9666666666666667 |
|  | 5 | 0.9666666666666667 |
|  | 7 | 0.96 |
|  | 9 | 0.9733333333333334 |
| fertility | 1 | 0.82 |
|  | 3 | 0.83 |
|  | 5 | 0.84 |
|  | 7 | 0.87 |
|  | 9 | 0.88 |

Code flow:

1. Take filename.
2. Take k value for KNN.
3. LoadDataset
   1. Takes row data from file.
   2. Randomizes dataset.
   3. Spilt by kfold=5.
   4. Returns Classes and Partitioned Data
4. setDatasets:
   1. Divides into training and testing datasets.
   2. Returns the same.
5. getNeighbors:
   1. Computes the distance of each testing data to the training set.
   2. Uses Euclidean distance.
   3. Returns sorted distance
6. kNN:
   1. Uses the training Set, test Set, neighbors, classes.
   2. Creates Confusion Matrix.
   3. Calls to Computes Precisions.
   4. Calls to print Matrix
7. printMatrix:
   1. prints matrix
   2. getAccuracy
8. getAccuracy:
   1. prints Accuracy
9. getprecision:
   1. Caluclates precision\_recall\_fscore .