DMDW Lab - 6

**Aim**: Create Placement.arff file to identify the students who are eligible for placements using KNN

**Theory:**

K-nearest neighbors (KNN) algorithm is a type of supervised ML algorithm which can be used for both classification as well as regression predictive problems. However, it is mainly used for classification predictive problems in industry. The following two properties would define KNN well −

* Lazy learning algorithm − KNN is a lazy learning algorithm because it does not have a specialized training phase and uses all the data for training while classification.
* Non-parametric learning algorithm − KNN is also a non-parametric learning algorithm because it doesn’t assume anything about the underlying data.

Advantages:

* KNN- is a supervised and non-parametric algorithm.
* K-NN is an instance-based learning algorithm.

Disadvantages:

Apart from some advantages, this easy-to-implement algorithm has some cons as well. Some are defined below:

* K-NN is a lazy learning algorithm.
* It doesn’t perform well for problems with high dimensionality problems. So the curse of dimensionality underlies here as well.
* This algorithm is slower to evaluate and needs to store the whole training data. Therefore, it might be computationally expensive as well.

OUTPUT:







