Assignment 2

Foundations of Machine Learning (CS564)

Department of CSE, IIT Patna

(Read all the instructions carefully and adhere to them.)

Date: 24-August-2021 Deadline: 1-September-2021

Instructions:

1. Markings will be based on the correctness and soundness of the outputs.
2. Marks will be deducted in case of plagiarism.
3. Proper indentation and appropriate comments (if necessary) are mandatory.
4. You should zip all the required files and name the zip file as:

roll_no_of.zip , eg. 1501cs11.zip.

5. Upload your assignment (the zip file) in the following link:

https://www.dropbox.com/request/rxJPENUpsMxYaC11yyFT

6. Do not use the existing library for DBSCAN.

For any queries regarding this assignment contact:

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Question:

There are two parameters in the DBSCAN algorithm:

a. Eps: radius length

b. minPts: minimum number of points required to form a cluster

1. Implement DBSCAN algorithm and find number of clusters formed for eps = 2 and minPts = 5
2. For any one cluster, show its core point and border points.

Dataset:

1. “Diabetes.arff” file contains the dataset.
2. Each row has 9 comma-separated values where the first 8 values represent a single data point (8 dim vector values). Ignore the 9th value.