

CSC 4740/6740 Data Mining

Assignment 6

Due Date: 11:59pm, 12/2/2022

Only the electronic version will be accepted. Please submit it through iCollege.

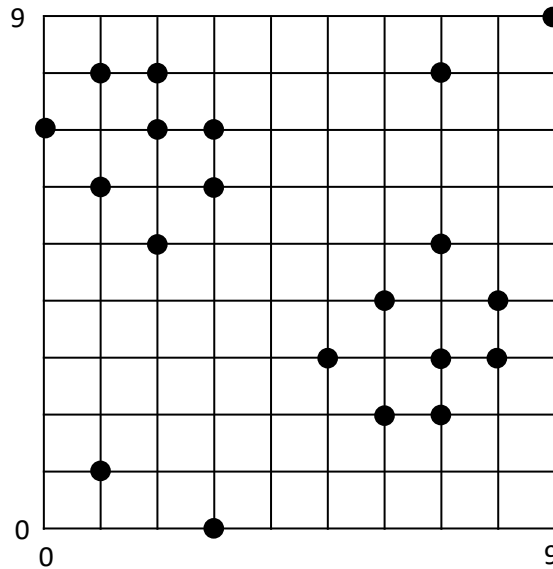


Figure 1. Dataset

1. (15 points) Please illustrate the  $k$ -means algorithm on the dataset in Figure 1.

**Solutions:**

2. (15 points) Please illustrate the  $k$ -medoid algorithm on the dataset in Figure 1.

**Solutions:**

3. (16 points) Please illustrate the AGNES algorithm on the dataset in Figure 1.

**Solutions:**

4. (18 points) Please illustrate the DBSCAN algorithm on the dataset in Figure 1.

**Solutions:**

5. (18 points) Please illustrate the OPTICS algorithm on the dataset in Figure 1.

**Solutions:**

6. (18 points) Please illustrate the spectral clustering algorithm on the dataset in Figure 1.

**Solutions:**