

# CS 461 | Artificial Intelligence

## Assignment # 3

### (Double Weightage)

### Sec. A, B, C, D and E

**Due Date: 10<sup>th</sup> June 2021**

Using a multi-class dataset selected from the UCI machine learning repository implement the following:

- i) K nearest neighbor for varying values of K
- ii) K-mean clustering for varying values of K
- iii) For K-mean clustering also measure the clustering quality using Davies Bouldin index
- iv) Visualization of data after clustering
- v) Show the results using accuracy, precision, recall and F1-score.
- vi) Write a report for this assignment and mention all the steps.

*Please note that you need to implement the algorithms yourself, use of any external libraries is not allowed.*

Marks distribution is shown in the following table:

Task	Marks
Implementation of KNN	3
Implementation of K means Clustering	3
Davies Bouldin index	3
Data Visualization	3
Evaluation metrics	3
Report + Demo	5
Total	20