**School of Computer Science Engineering and Technology**

Course- BTech Type- Elective

Course Code- CSET335L Course Name-Deep Learning

Year- 2023 Semester- Even

**Lab Assignment 6 – Imbalanced Dataset Classification**

This week’s lab is focused on handling an imbalanced dataset problem. You can choose the following dataset, or you can choose one by yourself:

<http://archive.ics.uci.edu/ml/datasets/breast+cancer>

The algorithms that you must implement are as follows:

Oversampling:

* RandomSampling
* SMOTE
* SMOTENC
* SMOTEN
* ADASYN
* BorderlineSMOTE
* KMeansSMOTE
* SVMSMOTE

Undersampling:

* NearMiss
* NeighbourhoodCleaningRule
* OneSidedSelection
* RandomUnderSampler
* TomekLinks

You can choose any deep-learning architecture.

NOTE: During lab you have to show the result of two algorithms each from Oversampling and Undersampling.

You can take the help of the imblearn python library. You can take the help of the following:

https://imbalanced-learn.org/stable/references/generated/imblearn.over\_sampling.SMOTE.html

https://colab.research.google.com/drive/1NdpGfICdHG64Sdrj7Wp69-L5QGWmBMb-#scrollTo=ZCexVcw9U\_eB