## **Implement SGD from Scratch**

Write a code from scratch to train logistic regression for the data given in the link below using stochastic gradient descent. Set the batch size to 1, learning rate to 0.001 and the number of iterations to 1000. The dataset is for binary classification task. Split the data into 90% and 10% sets, where 10% set is the test set. Compare the performance of your implementation to that of logistic regression available in sklearn/other python library.

Data link: <a href="https://archive.ics.uci.edu/ml/datasets/Cervical+Cancer+Behavior+Risk">https://archive.ics.uci.edu/ml/datasets/Cervical+Cancer+Behavior+Risk</a>.

You need to submit the following files in your moodle account. Put all the files in a folder, zip it and then upload in moodle.

- 1. The code file.
- 2. Result file(.txt format).

The result file must have the accuracy your implementation on the test set.

Deadline: 7<sup>th</sup> February, 2022 (11.55 pm IST)