CSC4093: Neural Networks and Deep Learning (2023/24)
Programming Assignment 02 : LSTMs
Due Date: 10/06/2025|11.59 pm

[This assignment carries 8% of the total grade.]

In this assignment, your task is to create sequence model/recurrent neural network models for classifying tweets provided in the dataset as “personal health mentions” or “non-personal health mentions”.

Data Set:
The dataset comprises tweets from individuals discussing their health conditions or general health topics. These tweets are labelled as either **personal health mentions (1)** or **non-personal health mentions (0)**.

Model:
You may create **1) LSTM** and **2) Bi-LSTM**. You may choose a suitable embedding technique.
It is suggested that the best-performing model be obtained through hyperparameter tuning and other ML/DL techniques.

Sample Code:
You can refer to the sample code of the model for classifying IMDB movie reviews using LSTM.

Languages and Frameworks:
You may refer to sample code for classifying IMDB movie reviews using LSTM.

Deliverables:
1. Python scripts (.ipynb or .py) and screenshots of the outputs.
2. A document (report) containing the following.
    a. Performance comparison (e.g., accuracy and loss) table/plots of the two models.
    b. Discussion on the performance of the two models.