CSE 4238 - Soft Computing Lab
Assignment # 03

Course Instructor: Sanzana Karim Lora

There are two parts in this assignment-

I. Coding Part
II. Report Writing Part

Here, each part contains individual marks.

Problem Definition:

You have been assigned to solve a text classification problem using the model described in section 2. Find the accuracy, precision, recall and F1 score for your model. Also show a confusion matrix and make predictions. You can use any kind of word embedding technique.

I. Coding Part

1) Dataset

Find your dataset of your task according to the following table. You will get a csv file. Keep 20% data for testing. You can also keep 20% data for validation *[Optional]*.

Criteria	Download Link
Last 3 digit of your ID%3 = 0	Dataset 1
Last 3 digit of your ID%3 = 1	Dataset 2
Last 3 digit of your ID%3 = 2	Dataset 3

2) Model Creation

Find the model of your task according to the following table. Moreover, you can add dropout layers if you wish. By fulfilling the given condition, you can build your model according to your wish(that means, you can select the number of dense layers/fully connected layers of your choice). Remember that your approaches and results ***must not be the same with others.***

Criteria	Model	Conditions
(Last 3 digit of your ID + your dataset number)%5 = 0	CNN	More than 2 convolutional layers
(Last 3 digit of your ID + your dataset number)%5 = 1	LSTM	Stacked with more than 2 recurrent layers
(Last 3 digit of your ID + your dataset number)%5 = 2	Bidirectional LSTM	Stacked with more than 2 recurrent layers
(Last 3 digit of your ID + your dataset number)%5 = 3	RNN	Stacked with more than 2 recurrent layers
(Last 3 digit of your ID + your dataset number)%5 = 4	Bidirectional RNN	Stacked with more than 2 recurrent layers

II. Report Writing Part

01. Add a cover page.
02. Make necessary tables and graphs/charts to show your result and discuss them.
03. Upload your code in Github and share the link in your report.

Notes:

1. The report doesn't have any page limit.
2. Use any formatting tool latex/word/google doc to prepare your report.

Additional Guidelines:

- ★ Use Google Colaboratory to complete the coding part.
- ★ Use the Pytorch/Tensorflow/Keras library for implementation.
- ★ Write the report by following the instructions of the Report Writing Part.
- ★ Submit the report as pdf format by renaming it with your ID. *Example: 170104000.pdf*

★ Submit your codes as ipynb format by renaming it with your ID. *Example: 170104000.ipynb.*

★ Keep patience if it takes longer training time.

★ Submission deadline : **11: 59 PM, 25 September, 2021. Assignment deadline will not be extended.**

★ **All of your assigned tasks must be unique. Plagiarism is strictly prohibited and punishable.**