Recurrent Neural Networks
Homework #2
Due: 2025/4/13

- **Overview:**

  In this assignment, you're challenged to build two machine learning models that predict **whether a given tweet is about a real disaster or not**. If so, predict a 1. If not, predict a 0.

  You can refer to the following URL for a better understanding of the task content. (Kaggle)

  URL: https://www.kaggle.com/competitions/nlp-getting-started/overview

- **What to do:**

  1. Write a prediction model based on LSTM and another one based on GRU. Sample codes are given for the LSTM model. For the GRU model, you need to implement it by yourself.
  2. **Compare the performance between LSTM and GRU**, such as training performance, training speed, memory usage, etc., and create a report.
  3. One day before the deadline, testing data will be announced on the E3 platform for you to download. You need to run your two models to **create a csv file of the predicted results** in the order of the IDs in the testing data. The sample format for the csv file is shown as follows:

  ■ Testing data:

id	keyword	location	text
0			Just happened a terrible car crash
2			Heard about #earthquake is different cities, stay safe everyone.

  ■ The contents of the prediction:

ID	LSTM	GRU
0	0	0
2	0	1

  4. Upload the report (.pdf) , the prediction file, and all program files (.ipynb) to Github.
  5. Use your Github URL as the answer to the homework.

- **Assignment Evaluation:**

  1. Code (30%)
  2. Model performance (e.g., accuracy) (40%)
  3. Report (include model performance comparison) (30%)