Challenge homepage: <https://www.drivendata.org/competitions/64/hateful-memes/page/205/>

Dataset: <https://www.drivendata.org/competitions/64/hateful-memes/data/>

a binary classification problem with multimodal input data consisting of the meme image itself (the image mode) and a string representing the text in the meme image (the text mode).

Given a meme id, meme image file, and a string representing the text in the meme image, your trained model should output the probability that the meme is hateful.

**Dataset features**

Separate meme images and text extractions. Use meme id to match them.

Meme images are in the data/img folder. Different .json files contains the information of (id, image number, label, text).

train.jsonl: training set

dev\_seen.jsonl/dev\_unseen.jsonl: validation set

test\_seen.jsonl/test\_unseen.jsonl: test set

visualize the distribution of hateful memes (label 1) and non-hateful memes (label 0)

**performance metric**

1. AUC ROC: Area Under the Curve of the Receiver Operating Characteristic. The metric measures how well your binary classifier discriminates between the classes as its decision threshold is varied.

[sklearn.metrics.roc\_auc\_score](https://scikit-learn.org/stable/modules/generated/sklearn.metrics.roc_auc_score.html).

<https://medium.com/greyatom/lets-learn-about-auc-roc-curve-4a94b4d88152>

1. Accuracy: given by the ratio of correct predictions to the total number of predictions made

**Installation of MMF and dependencies**

Create an environment for MMF first, then install torch and torchvision first.

pip install torch==1.6.0 torchvision==0.7.0 -f <https://download.pytorch.org/whl/torch_stable.html>

the version of torch and torchvision matter, Python version can be 3.7 or 3.8

then follow MMF installation: <https://mmf.sh/docs>

convert zip file to MMF format:

mmf\_convert\_hm --zip\_file="H:\OMSCS\7643 Deep Learning\Facebook-Hateful-Memes-Challenge\data\XjiOc5ycDBRRNwbhRlgH.zip" --password=EWryfbZyNviilcDF --bypass\_checksum 1

error fix: https://www.cnblogs.com/Swalllow/p/11711750.html