ADL Project - Hate Speech Detection

1 Description

This project suggestion is part of conferences in which we took part, there are two projects fairly similar one is with the HASOC data and one with OffensEval.

You chose which one you want to take part on. The conferences instructions are here:
HASOC conference
OffensEval conference

2 Notes for the datasets

- Only the Olid dataset has been already preprocessed by changing users names to @User and punctuation has been removed.
- The other two sets are unmodified, I just thought you may want to test your implementation in a clean set first before going to the others.
- Since these files are from several conferences where we have participated we have developed a couple of models, if you are interested in following this project I will put our code soon to get an idea if you are lost, if not you can start with out it.

All the files are in canvas in the following link:
Download Link:

Dataset

Citation HASOC:

- Thomas Mandl :- University of Hildesheim, Germany
- Sandip Modha :- DA-IICT, Gandhinagar, India
- Chintak Mandlia :- infoAnalytica Consulting Pvt. Ltd.
- Daksh Patel :- Dalhousie University, Halifax, Canada
- Aditya Patel :- Dalhousie University, Halifax, Canada
- Mohana Dave :- LDRP-ITR, Gandhinagar, India

Citation OffensEval:

@inproceedingsOffensEval, title = SemEval-2020 Task 12: Multilingual Offensive Language Identification in Social Media (OffensEval 2020), author = Zampieri, Marcos and Nakov, Preslav and Rosenthal, Sara and Atanasova, Pepa and Karadzhov, Georgi and Mubarak, Hamdy and Derczynski, Leon and Pitenis, Zeses and Çöltekin, Çağrı, booktitle = Proceedings of SemEval, year = 2020

3 Task

The task here is to create a network to separate the offensive tweets from the non-offensive ones. The competitions have more task but only the first was done, if you would like to do all go ahead.

The accuracy we got in the tasks was around 85% see if you match it or surpass it.

You can try any network architecture you want be it a CNN, LSTM, BiLSTM, GRU or combination of all!

In order to work on this project, any deep learning libraries and frameworks can be used. however followings are the suggestions:

- PyTorch
- Tensorflow
- Keras

Following tools can be used to visualize the results and other insights of experiments:

- TensorBoard
- Weights & Biases

NOTE - Before getting started make sure you have the required packages installed along with a suitable IDE you want to work on. Also if your computer doesn't supports these installations, you can also work on either DGX Cluster (A seprate request required) or Google Colab. Here Google provides computational capacity (to some extent) for running deep learning codes. These are same as Jupyter Notebooks.

4 Deliverables

Following are the deliverables of project for each group:

1. Project source code, trained model, and evaluation script on test set on GitHub repository. The link of GitHub repository needs to share and refer during presentation.
2. 10 Minutes Project Presentation (4 to 5 slides) which typically includes methods, implementation, results, and learning outcome.