Home Work 4, due Sunday, Dec. 8, 2019

Code a Sequence Text Classifier as follows:

Use fastai and the Encoder class from the Seq2Seq Translation with the pretrained word embedding in the Lecture 8 files.

Instead of sending the hidden output to a Decoder, send it through a fully connected layer (with a couple or more linear layers with ReLUs and maybe some dropout layers) that outputs a 2-dimensional tensor.

If you use several layers in the encoder, you have to concatenate the hidden outputs from each layer before it is sent to the fully connected layer.

Train it on the movie review file (which you can download using fastai)

```
1 from fastai.text import *
2 from fastai import *
```

executed in 2.82s, finished 14:16:48 2019-11-19

```
1 path = untar_data(URLs.IMDB)
2 path.ls()
```

Turn the data set into a DataBunch using

```
data_clf = (TextList.from_folder(path)
             .split_by_folder(valid='test')
             .label_from_folder(classes=['neg', 'pos'])
             .databunch(bs=32, num_workers=1))
```

Make a Learner object using this databunch an your model

Train your model with the test set as validation and use metrics = accuracy in your Learner object.

Try a couple of different architectures for the fully connected layer and see how good accuracy on the test set you can get.

Unless you have an Invidia GPU with lots of video memory run this on Google Colab