

Assignment 3

By:

Ritvik Aryan Kalra

2019115002

Language Model

The following are the average perplexities of the europarl-corpus Train and Test set

- Train - 40.62940070361628
- Test - 49.392521925038764

The summary of the model is as follows:

```
RNN(  
  (embedding_layer): Embedding(9107, 128)  
  (lstm): LSTM(128, 128, num_layers=3, dropout=0.2)  
  (fc): Linear(in_features=128, out_features=9107, bias=True)  
)
```

Machine Translation

The following are the corpus *bleu_scores* of the Train and Test set of the ted-talks corpus

- Train - 0.03670928606579841
- Test - 0.03098522378317546

The summary of the model used is as follows:

```
Seq2Seq(  
  (encoder): Encoder(  
    (dropout): Dropout(p=0.5, inplace=False)  
    (embedding_layer): Embedding(13211, 16)  
    (lstm): LSTM(16, 128, num_layers=2, dropout=0.5)  
  )  
  (decoder): Decoder(  
    (embedding_layer): Embedding(16269, 16)
```

```
(lstm): LSTM(16, 128, num_layers=2, dropout=0.5)
(linear): Linear(in_features=128, out_features=16269, bias=True)
(dropout): Dropout(p=0.5, inplace=False)
)
)
```