# CPSC 8810 Deep Learning Homework 02 – Video Caption Generation

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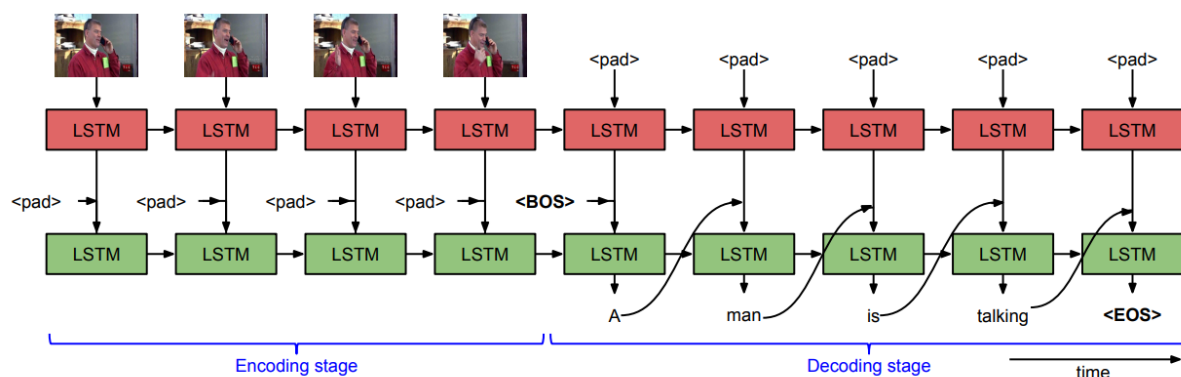
**Major: Automotive Engineering**

- **Dataset tree:**

```
├──────MLDS_hw2_1_data
        ├────── bleu_eval.py
        ├────── sample_output_testset.txt
        ├────── testing_data/
            ├───── feat/ #100 files, .npy
            ├───── video/ #100 files, .avi
                └────── id.txt
        ├────── testing_label.json
        ├────── training_data/
            ├────── feat/ #1450 files, .npy
            ├────── video/ #1450 files, .avi
        │            └────── id.txt
        └────── training_label.json
```

- **Network model:**

The network structure is similar as the one used in the paper:

- **Parameters:**

The parameters used in this project:

| LSTM dimension | 256 |
|---|---|
| Validation batch size | 100 |
| Number of frames | 80 |
| Maximal caption length | 50 |
| Forget bias (in the red blocks) | 1.0 |
| Forget bias (in the green blocks) | 1.0 |
| Dropout probability | 0.5 |

| Learning rate | 0.001 |
|---|---|
| Number of epochs | 100 |
| Batch size | 256 |

The data directories I used for this project are shown below:

| Data directory | '/home/lingyis/DLhw2/MLDS_hw2_1_data' |
|---|---|
| Test data directory | '/home/lingyis/DLhw2/MLDS_hw2_1_data/testing_data' |
| The saved model directory | 'save_model/' |

Schedule sampling is used in this model, and the sampling probability is 0.6.

The final bleu score for this model:



We can see the bleu score is about 0.7.

For running the shell:

Please run:

Hw2_seq2seq.sh _ _ _

- _ _ _ here represent the data directory, the test data directory, and the name of the output(.txt)

How to run the training:

Run: python model_train.py


How to get the bleu score:

Go to the data set file.

Run: python bleu_eval_origin.py home/lingyis/DLhw2/final_output.txt


How to run the testing:

Run python model_test.py