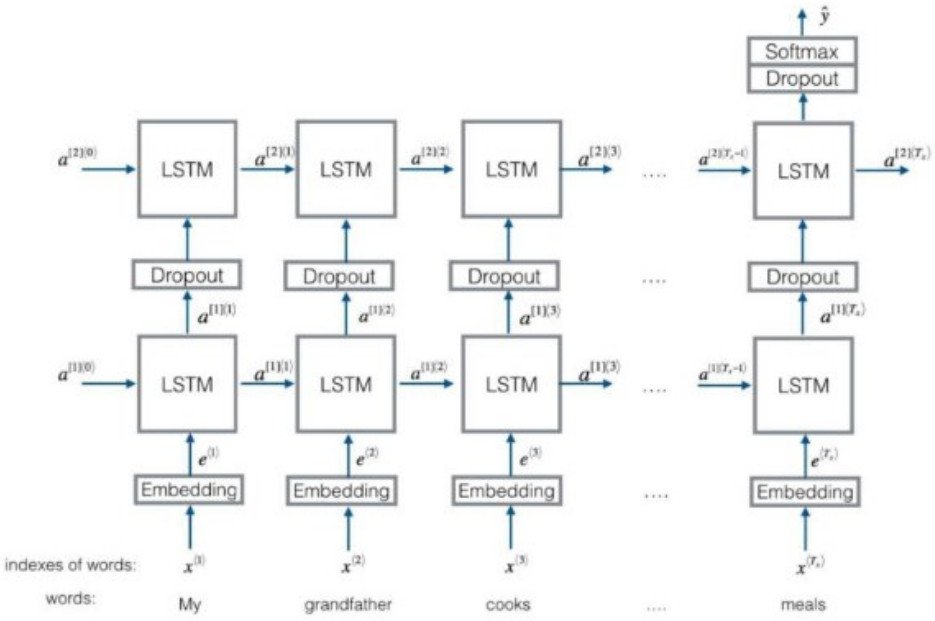
HW5 Report

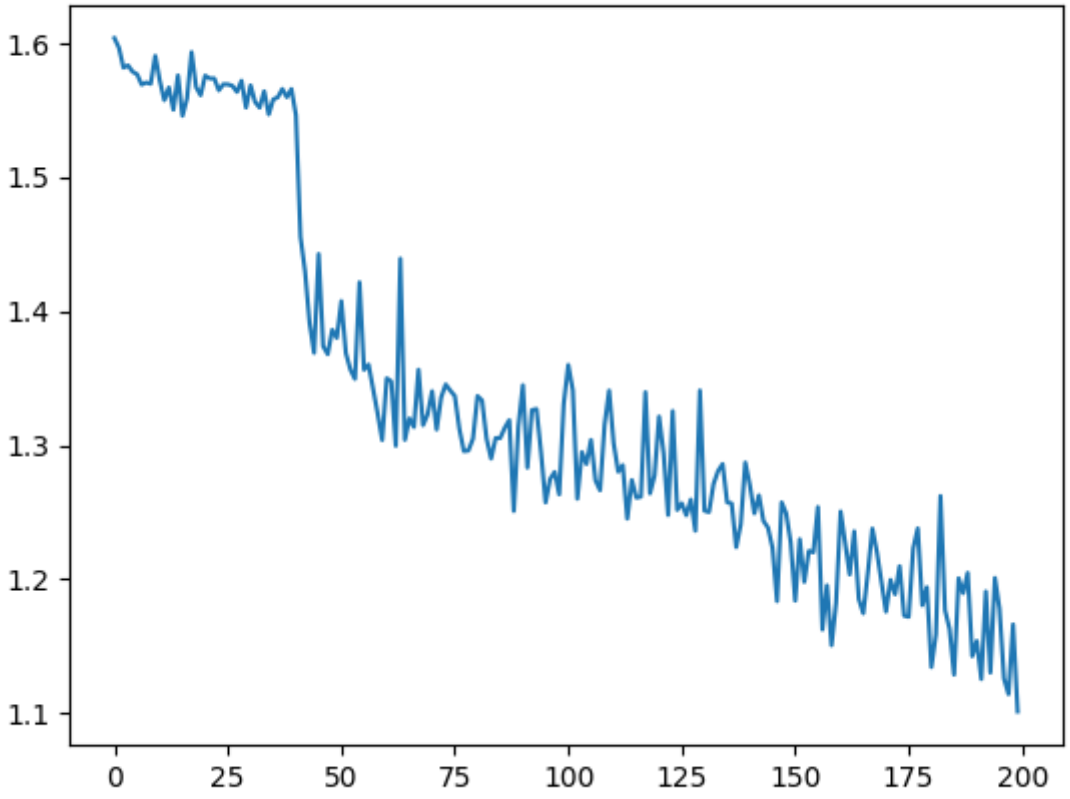
Architecture



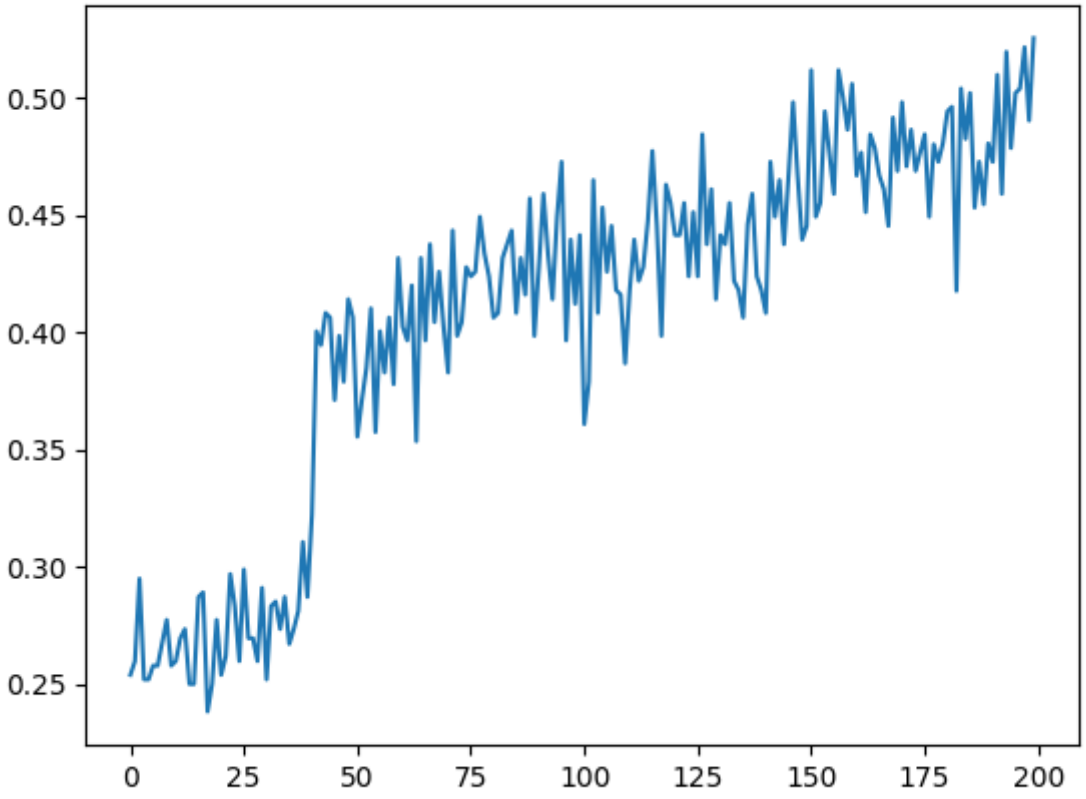
After embedding, data passes through 2 LSTM layers (bidirectional) and the get out of the last LSTM forwarding output into a FCLayer.

Records

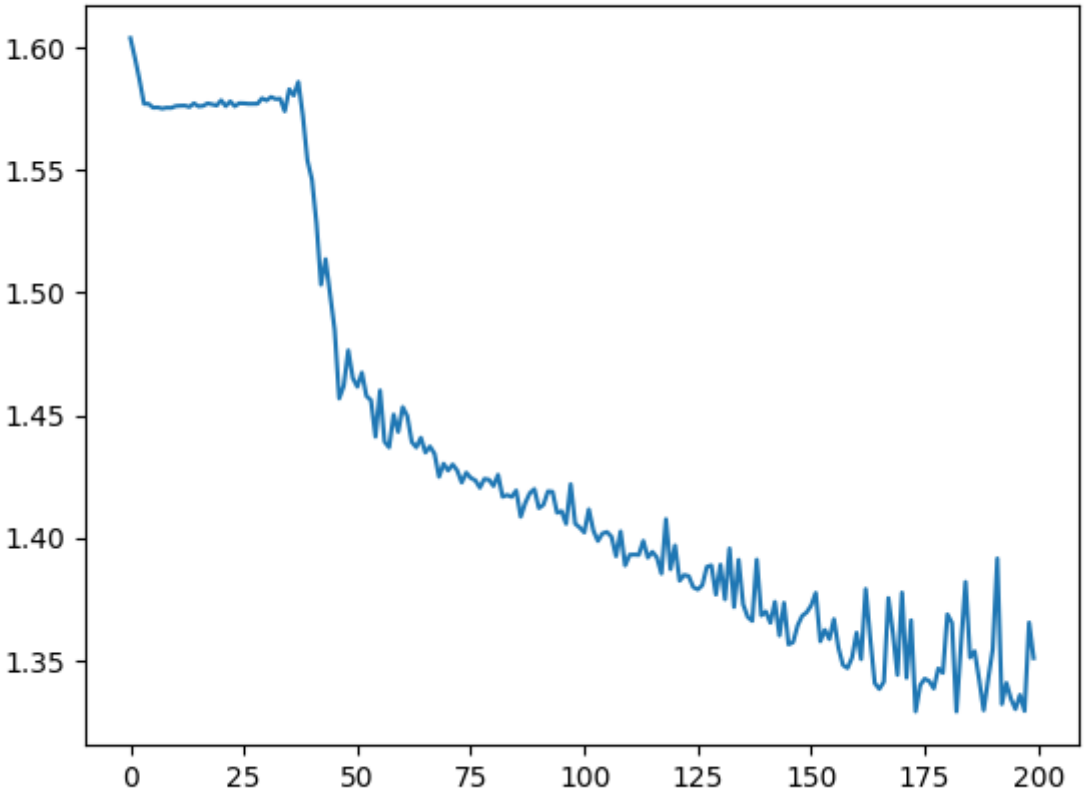
Training Performance



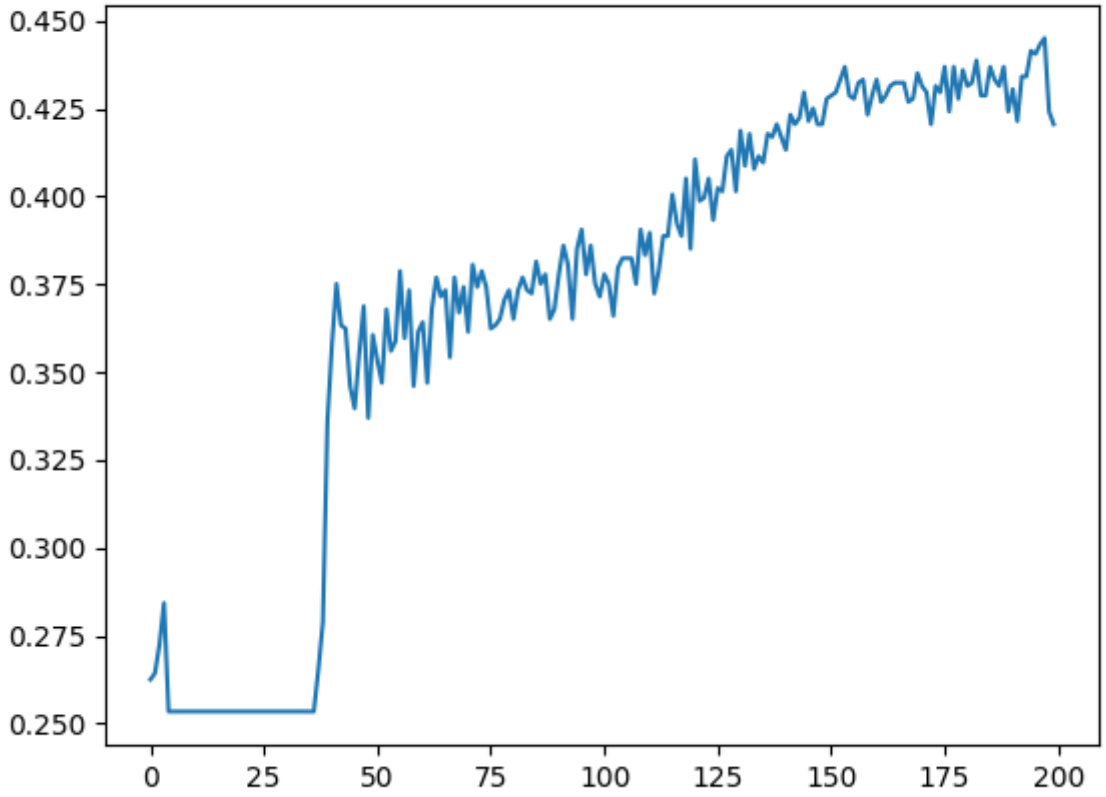
training loss



training accuracy



validation loss



validation accuracy

LAST VALIDATION LOSS	LAST VALIDATION ACCURACY
1.351	42.05%

Test result

TEST LOSS	TEST ACCURACY
1.318	43.35%

Hyperparameters

```
# hyperparameters
    learning_rate = 0.0001
    num_epochs = 200
    batch_size = 512
    lbd = 0.0001
    dropout = 0.5
    n_layers = 2

    EMBEDDING_DIM = 300
    HIDDEN_DIM = 128
    OUTPUT_DIM = 5
    BIDIRECTIONAL = True
```

In the plots, though it's generally converging, the bouncing is seriously violently (even less smooth in the beginning). I enlarged batch_size and decreased learning rate, and used Adam as optimizer to make it go more smoothly. But still, as the data set is limited, that's hardly to avoid.