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LSTM Homehelper Chatbot

REVIEW	HISTORY

Meets Specifications

Congratulations
You finished the project. Good luck with your future projects.

Implement a LSTM neural network for text generation

✓ **The encoder hidden state is accepted successfully into the decoder.**

Well done, you have implemented the model as two layers. The encoder consists of two layers: an embedding layer and an LSTM layer. The outputs of the LSTM layer is passed in the encoder's forward function.

✓ **Decoder successfully turns the target string and encoder hidden state into an output.**

Well done, The decoder module consists of an embedding layer, an LSTM, and a linear output layer.

✓ **The Seq2Seq can be called individually to instantiate the encoder and decoder models. The model can accept inputs for the encoder/decoder and produce a valid output.**

Well done, The Seq2Seq model is a composite of the encoder and decoder modules. The Seq2Seq model's forward function discards the encoder outputs and retrieve the target inputs.

Train the LSTM neural network parameters.

✓ **Select an appropriate optimizer and loss function.**

Well done selecting cross entropy loss and Adam optimizer.

✓ **Turn the sentence (source, target) training data into index vectors that are appropriate for the embedding layers of the model.**

You properly used the pre-trained embeddings and properly indexed the embedding layer's words with the Gensim W2V model.

✓ **Print the epoch and loss from the training loop.**

Well done.

```
         Val. Loss: 1.408 |  Val. PPL:    4.087
Training...
Evaluating...
Epoch: 16 | Time: 0m 13s
        Train Loss: 1.754 | Train PPL:    5.776
         Val. Loss: 1.919 |  Val. PPL:    6.812
Training...
Evaluating...
Epoch: 17 | Time: 0m 14s
        Train Loss: 1.666 | Train PPL:    5.293
         Val. Loss: 1.692 |  Val. PPL:    5.431
Training...
Evaluating...
Epoch: 18 | Time: 0m 14s
        Train Loss: 1.447 | Train PPL:    4.249
         Val. Loss: 1.675 |  Val. PPL:    5.339
Training...
Evaluating...
Epoch: 19 | Time: 0m 13s
        Train Loss: 1.995 | Train PPL:    7.352
         Val. Loss: 2.092 |  Val. PPL:    8.103
Training...
Evaluating...
Epoch: 20 | Time: 0m 15s
        Train Loss: 1.648 | Train PPL:    5.196
         Val. Loss: 1.829 |  Val. PPL:    6.229
```

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