



ESPECIFICAÇÕES DO PROJETO

Generate TV Scripts**All Required Files and Tests**

CRITÉRIO	ATENDEU ÀS ESPECIFICAÇÕES
All project files are included in the submission	The project submission contains the project notebook, called "dlnd_tv_script_generation.ipynb".
All unit tests in the project have passed	All the unit tests in project have passed.

Pre-processing Data

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The function <code>create_lookup_tables</code> is implemented	<p>The function <code>create_lookup_tables</code> create two dictionaries:</p> <ul style="list-style-type: none"> Dictionary to go from the words to an id, we'll call <code>vocab_to_int</code> Dictionary to go from the id to word, we'll call <code>int_to_vocab</code> <p>The function <code>create_lookup_tables</code> return these dictionaries as a tuple (<code>vocab_to_int</code>, <code>int_to_vocab</code>).</p>
A special token dictionary is created	The function <code>token_lookup</code> returns a dict that can correctly tokenizes the provided symbols.

Batching Data

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Data is broken into sequences	The function <code>batch_data</code> breaks up word id's into the appropriate sequence lengths, such that only complete sequence lengths are constructed.
Data is created using TensorDataset	In the function <code>batch_data</code> , data is converted into Tensors and formatted with TensorDataset.
Data is batched correctly.	Finally, <code>batch_data</code> returns a DataLoader for the batched training data.

Build the RNN

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An RNN class has been defined	The RNN class has complete <code>__init__</code> , <code>forward</code> , and <code>init_hidden</code> functions.
The RNN includes at least one LSTM (or GRU) and fully-connected layer.	The RNN must include an LSTM or GRU and at least one fully-connected layer. The LSTM/GRU should be correctly initialized, where relevant.

RNN Training

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Reasonable hyperparameters are selected for training	<ul style="list-style-type: none"> • Enough epochs to get near a minimum in the training loss, no real upper limit on this. Just need to make sure the training loss is low and not improving much with more training. • Batch size is large enough to train efficiently, but small enough to fit the data in memory. No real “best” value here, depends on GPU memory usually. • Embedding dimension, significantly smaller than the size of the vocabulary, if you choose to use word embeddings • Hidden dimension (number of units in the hidden layers of the RNN) is large enough to fit the data well. Again, no real “best” value. • n_layers (number of layers in a GRU/LSTM) is between 1-3. • The sequence length (seq_length) here should be about the size of the length of sentences you want to look at before you generate the next word. • The learning rate shouldn't be too large because the training algorithm won't converge. But needs to be large enough that training doesn't take forever.

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The model shows improvement during training	The printed loss should decrease during training. The loss should reach a value lower than 3.5.
Question about hyperparameter choices is answered.	There is a provided answer that justifies choices about model size, sequence length, and other parameters.

Generate TV Script

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The generator code generates a script	<p>The generated script can vary in length, and should look structurally similar to the TV script in the dataset.</p> <p>It doesn't have to be grammatically correct or make sense.</p>

Sugestões para Fazer o Seu Projeto se Destacar!

- Use validation data to choose the best model
 - Initialize your model weights, especially the weights of the embedded layer to encourage model convergence
 - Use topk sampling to generate new words
 - Check out the "Advanced projects" section in the project overview to take this work even further!
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