NLP Assignment 1 – Story Generation

Description

For this assignment, you have to generate a Harry Potter-liked stories using deep learning model. We provide you corpus of Harry Potter series. Given a sequence of words, you have to train a model to predict the next word. Finish your story by calling the model repeatedly.

Open the assignment directory, you will find one assignment description file (.doc), training corpus and 3 text files. There are few words in each text files. You need to train a model using the training corpus, and to use the few words in the text files as prompt to finish stories. There should be at least **200** words (not character) in each story. We will grade your stories with following metrics:

* Meaningful sentences (2%)
* Meaningful context (3%)
* Non-repeated story: if your story consists of repeated sentences, it will get 0 point regardless of other metrics.

Text generation is still an unsolved problem in NLP. It’s difficult to generate a perfect story. We won’t grade your stories strictly.

Requirements

* **Python programming language only**
* You can use any machine learning library TensorFlow, Keras, Pytorch, etc.
* You can use snippets of code from open-source projects, tutorials, blogs, etc. Do not clone the entire projects directly. Try to implement a model by yourself.

Grading

* Completed Source Code (50%)
* Train your own word vector using [**gensim**](https://radimrehurek.com/gensim/models/word2vec.html) (25%)
* Generate human-readable short story (15%)
* Report (10%)

Submission Rule

Please pack up your **source code**, **3 stories** and **report** into a

.zip file named as *studentid\_hw1.zip*, and upload it to LMS. The following files must be included in your submission:

* Python source code .py (one or more).
* 3 generated story text files: stories generated by your model.
* requirements.txt: installed libraries in your Python environment. To create a requirements file, use:

*pip freeze > requirements.txt*

* report.pdf: assignment report. You can write anything you want.

Deadline: 2019/10/21

Example 1 (5 scores)

**Accepted:** meaningful sentences, meaningful context, non-repeated story

**mr. dursley might have been drifting into an uneasy sleep**

, but the cat on the wall outside was showing no sign of sleepiness . it was sitting as still as a statue , its eyes fixed unblinkingly on the far corner of privet drive . it did n't so much as quiver when a car door slammed on the next day . `` i do n't need to , of course , but one does miss it 's all worked for me . nobody in my family 's magic at all , it was ever such a surprise when i got my letter , but i was ever so pleased , of course , i mean , it 's the very best school of witchcraft there is , i 've heard -- i 've learned all our course books by heart , while you are here , your house will be something like your family within hogwarts . you 'll be just fine and i 'm famous , '' he said at last . `` all those people in the leaky cauldron , professor quirrell , mr. ollivander . . . but i do n't know anything about magic at all . how can they expect great things ?

Example 2 (5 scores)

**Accepted**: meaningful sentences, meaningful context, non-repeated story

**harry and hermione walked on the street**

of town , drills were driven out of his mind by something else . as he sat in the usual morning traffic jam , he could n't help noticing that there seemed to be a lot of strangely dressed people about . people in cloaks . mr. dursley could n't bear people who dressed in funny clothes -- the getups you saw on young people ! he supposed this was some stupid new fashion . he drummed his fingers on the steering wheel and his eyes fell on a huddle of these weirdos standing quite close by . they were whispering excitedly together . mr. dursley was enraged to see that a couple of them were n't young at all ; why , that man had to be older than he was , and wearing an emerald-green cloak ! the nerve of him ! but then it struck mr. dursley that this was probably some silly stunt -- these people were obviously collecting for something . . . yes , that would be it . the traffic moved on and a few minutes later , but uncle vernon did n't seem to hear her . exactly what he was looking

Example 3 (5 scores)

**Accepted:** meaningful sentences, meaningful context, non-repeated story

**hermione killed harry and**

ron were still at hogwarts the next day , looking tired but perfectly cheerful . indeed , by the next morning harry and ron thought that meeting the three-headed dog had been an excellent adventure , and they were quite keen to have another one . in the end the guard strode away , muttering about time wasters . harry was now trying hard not to panic . according to the large clock over the arrivals board , he had ten minutes left to get on the wrong side of him on their very first morning . filch found them trying to force their way through a door that unluckily turned out to be a bit of a joke . his classroom smelled strongly of garlic , which everyone said was to ward off a vampire he 'd met in romania and was afraid would be coming back to get him one of these days . his turban , he told them , had been given to him by an african prince as a thank-you for getting rid of a troublesome zombie , but they were n't sure they believed this story . for one thing , when seamus finnigan

Example4 (0%)

Unaccepted: non-repeated story

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