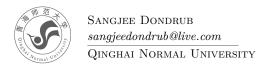
APRIL 9, 2020

Text Generation with RNNs

Homework Assignment by prof.Huaque



Contents

1	Github	1
2	Environment	1
3	Data	1
4	Models	2
5	Train and evaluate	2

1 Github

https://github.com/sangjeedondrub/text-gen-homework

2 Environment

```
1 || pip install --upgrade tensorflow
1 || import tensorflow as tf
2 ||
3 || print(tf.__version__)
```

3 Data

```
1 || head -n 10 lu-drub-gong-gyan.txt
```

Total number of lines

 $1 \mid\mid$ wc -l lu-drub-gong-gyan.txt

918 lu-drub-gong-gyan.txt

Table 1. As Character	•
Total number of characters	81674
Total vocab	65
Total Patterns	81664

Table 2. As Syllable

Total number of syllables	21755
Total vocab	1189
Totoal pattern	21752

4 Models

Character model

Layer (type)	Outp	ut Sha	pe	Param #
embedding_1 (Embedding)	(64,	None,	256)	16640
gru_1 (GRU)	(64,	None,	1024)	3938304
dense_1 (Dense) Total params: 4,021,569	(64,	None,	65)	66625
Trainable params: 4,021,569 Non-trainable params: 0				

Syllable model

Layer (type)	Output Shape	Param #
embedding_4 (Embedding)	(1, None, 256)	304384
gru_4 (GRU)	(1, None, 1024)	3938304
dense_4 (Dense) Total params: 5,461,413	(1, None, 1189)	1218725
Trainable params: 5,461,413 Non-trainable params: 0		

5 Train and evaluate

1 \parallel git clone https://github.com/sangjeedondrub/text-gen-homework --depth=1 2 \parallel cd text-gen-homework

Train character-level model

1 || python text-gen.py

Train and evaluate syllable-level model

1 $\mid\mid$ python text-gen.py --use_syllable

The evaluation results will be saved to sample.syllable.txt and sample.char.txt files