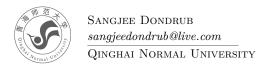
**APRIL 9, 2020** 

# **Text Generation with RNNs**

Homework Assignment by prof.Huaque



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#### 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 \mid\mid \mathsf{head} -n 10 lu-drub-gong-gyan.txt
```

```
चिन्नां अख्रेवः मतेः क्षेत्रस्यः म्याः व्याप्तः त्याः क्षेत्रस्य स्वाप्तः विद्याः स्वाप्तः स्वापतः स्वापतः
```

Total number of lines

,#+begin\_src sh :exports both :results output :dir ../ wc -l lu-drub-gong-gyan.txt #+end\_src

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