CS571-Name Entity Recognition

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10 April 2019

1 Introduction

The task is to develop a deep learning model that takes each sentence and do name entity recognition for each token. The model is bi-lstm model.[2] [1]

2 RNN Structure

2.1 Input

Padding the sentence to maximum sentence length: 113 Embedding dimension: 50 The input size is (batchsize, 113, 50)

2.2 BiLSTM

Used Keras BiLSTM module Bidirectional(LSTM(...))

2.3 Output

The final layer is a TimeDistributed dense layer with parameter 17 (the total classes of Name entities). The activation function for this layer is softmax.

3 Result

After running 20 epochs, the final model achieved an F1 SCORE of 93.07% on the training dataset and 90.68% on the developing dataset.

References

[1] Huang, Z., Xu, W., and Yu, K. Bidirectional lstm-crf models for sequence tagging. *arXiv preprint arXiv:1508.01991* (2015).

[2] Kim, Y. Convolutional neural networks for sentence classification. *arXiv preprint arXiv:1408.5882* (2014).