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D:\python\python.exe D:/pyCharmWorkspace/ukg2vec/src/nnet.py
config: C:\Users\dryan\.keras\keras.json
backend: tensorflow  was changed into theano.
in the source file: d:\python\Lib\site-packages\keraackend\load_backend.py
Using Theano backend.
WARNING (theano.tensor.blas): Using NumPy C-API based implementation for BLAS functions.
embedding vectors: 15036 with dim = 128
Embeddings loaded.
X_train without neg samples: 221865
y_train without neg samples: 221865
Entities num: 15000
Relations num: 36
Sentences num: 54837
Valid total num: 221865
Training positive samples loaded.
Negative samples num: 221865
X_train num: 443730
y_train num: 443730
Train samples are ready!
X_test: 19293
y_test: 19293
Testing positive samples loaded.
Model: "fast_ukge"
_____
Layer (type)                 Output Shape              Param #
=================================================================
lstm_1 (LSTM)                (None, 128)               131584
_____
dense_1 (Dense)              (None, 1)                 129
=================================================================
Total params: 131,713
Trainable params: 131,713
Non-trainable params: 0
_____
Begin training .... ...
X_train shape: (443730, 3, 128)
y_train shape: (443730,)
Train on 394475 samples, validate on 49255 samples
Epoch 1/100
 - 319s - loss: 0.0852 - mean_absolute_error: 0.2450 - val_loss: 0.1090 - val_mean_absolute_error: 0.275
Epoch 2/100
 - 352s - loss: 0.0748 - mean_absolute_error: 0.2203 - val_loss: 0.0865 - val_mean_absolute_error: 0.236
Epoch 3/100
 - 280s - loss: 0.0719 - mean_absolute_error: 0.2130 - val_loss: 0.1081 - val_mean_absolute_error: 0.264
Epoch 4/100
 - 280s - loss: 0.0704 - mean_absolute_error: 0.2089 - val_loss: 0.0923 - val_mean_absolute_error: 0.232
Epoch 5/100
 - 273s - loss: 0.0693 - mean_absolute_error: 0.2060 - val_loss: 0.1001 - val_mean_absolute_error: 0.245
Epoch 6/100
 - 224s - loss: 0.0684 - mean_absolute_error: 0.2035 - val_loss: 0.0891 - val_mean_absolute_error: 0.227
Epoch 7/100
 - 222s - loss: 0.0676 - mean_absolute_error: 0.2015 - val_loss: 0.0988 - val_mean_absolute_error: 0.240
Epoch 8/100
 - 226s - loss: 0.0668 - mean_absolute_error: 0.1996 - val_loss: 0.0959 - val_mean_absolute_error: 0.235
Epoch 9/100
 - 222s - loss: 0.0662 - mean_absolute_error: 0.1981 - val_loss: 0.0800 - val_mean_absolute_error: 0.209
Epoch 10/100
 - 223s - loss: 0.0657 - mean_absolute_error: 0.1965 - val_loss: 0.0833 - val_mean_absolute_error: 0.213
Epoch 11/100
 - 219s - loss: 0.0652 - mean_absolute_error: 0.1953 - val_loss: 0.1047 - val_mean_absolute_error: 0.244
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Epoch 12/100
 - 220s - loss: 0.0647 - mean_absolute_error: 0.1941 - val_loss: 0.0900 - val_mean_absolute_error: 0.222
Epoch 13/100
 - 217s - loss: 0.0642 - mean_absolute_error: 0.1929 - val_loss: 0.0857 - val_mean_absolute_error: 0.212
Epoch 14/100
 - 216s - loss: 0.0638 - mean_absolute_error: 0.1918 - val_loss: 0.0871 - val_mean_absolute_error: 0.214
Epoch 15/100
 - 217s - loss: 0.0633 - mean_absolute_error: 0.1908 - val_loss: 0.0984 - val_mean_absolute_error: 0.229
Epoch 16/100
 - 218s - loss: 0.0629 - mean_absolute_error: 0.1898 - val_loss: 0.0944 - val_mean_absolute_error: 0.225
Epoch 17/100
 - 216s - loss: 0.0625 - mean_absolute_error: 0.1888 - val_loss: 0.0900 - val_mean_absolute_error: 0.215
Epoch 18/100
 - 218s - loss: 0.0621 - mean_absolute_error: 0.1878 - val_loss: 0.0944 - val_mean_absolute_error: 0.222
Epoch 19/100
 - 216s - loss: 0.0617 - mean_absolute_error: 0.1869 - val_loss: 0.1100 - val_mean_absolute_error: 0.243
Epoch 00019: early stopping
Train FINISHED.
Time consumed(s): 4638.585356712341
Evaluate results:
 MSE, MAE = [0.07715831663659774, 0.2133597433567047]

Process finished with exit code 0
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