Entering function \_\_main\_\_

Embedding tokens size=400001

File name 2way\_rus\_usa\_v2\_25-150. Total data size is 100000

Our 2 labels to index dictionary ={u'russia': 0, u'us': 1}

Our 2 index to labels dictionary ={0: u'russia', 1: u'us'}

x\_train: 81000, x\_dev: 9000, x\_test: 10000

y\_train: 81000, y\_dev: 9000, y\_test: 10000

input\_data\_x\_batch shape: (200, 150)

input\_labels\_batch shape: (200, 2)

gru\_forward\_cell units: 150

gru\_backward\_cell units: 150

---vars name and shapes---

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/kernel:0', TensorShape([Dimension(450), Dimension(300)]), 135000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/bias:0', TensorShape([Dimension(300)]), 300)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/kernel:0', TensorShape([Dimension(450), Dimension(150)]), 67500)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/kernel:0', TensorShape([Dimension(300), Dimension(300)]), 90000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/bias:0', TensorShape([Dimension(300)]), 300)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/kernel:0', TensorShape([Dimension(300), Dimension(150)]), 45000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_2/gru\_cell/gates/kernel:0', TensorShape([Dimension(300), Dimension(300)]), 90000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_2/gru\_cell/gates/bias:0', TensorShape([Dimension(300)]), 300)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_2/gru\_cell/candidate/kernel:0', TensorShape([Dimension(300), Dimension(150)]), 45000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_2/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_3/gru\_cell/gates/kernel:0', TensorShape([Dimension(300), Dimension(300)]), 90000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_3/gru\_cell/gates/bias:0', TensorShape([Dimension(300)]), 300)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_3/gru\_cell/candidate/kernel:0', TensorShape([Dimension(300), Dimension(150)]), 45000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_3/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/kernel:0', TensorShape([Dimension(450), Dimension(300)]), 135000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/bias:0', TensorShape([Dimension(300)]), 300)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/kernel:0', TensorShape([Dimension(450), Dimension(150)]), 67500)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/kernel:0', TensorShape([Dimension(300), Dimension(300)]), 90000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/bias:0', TensorShape([Dimension(300)]), 300)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/kernel:0', TensorShape([Dimension(300), Dimension(150)]), 45000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_2/gru\_cell/gates/kernel:0', TensorShape([Dimension(300), Dimension(300)]), 90000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_2/gru\_cell/gates/bias:0', TensorShape([Dimension(300)]), 300)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_2/gru\_cell/candidate/kernel:0', TensorShape([Dimension(300), Dimension(150)]), 45000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_2/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_3/gru\_cell/gates/kernel:0', TensorShape([Dimension(300), Dimension(300)]), 90000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_3/gru\_cell/gates/bias:0', TensorShape([Dimension(300)]), 300)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_3/gru\_cell/candidate/kernel:0', TensorShape([Dimension(300), Dimension(150)]), 45000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_3/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'weight:0', TensorShape([Dimension(300), Dimension(2)]), 600)

(u'bias:0', TensorShape([Dimension(2)]), 2)

total PARAM 1,219,202

---done vars---

Epoch: 1/10 ---- best so far on epoch 0: acc=0.0000%

DEV accuracy on epoch 1/10 in train step 402 = 75.0444%

Class russia: (3734/4525) -> accuracy: 82.5193%

Class us : (3020/4475) -> accuracy: 67.4860%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 1

INFO:root: Best accuracy 75.0444% at epoch 1/10 (6754/9000)

Epoch run time: 00:11:37

###################################################################################################

Epoch: 2/10 ---- best so far on epoch 1: acc=75.0444%

DEV accuracy on epoch 2/10 in train step 202 = 77.5556%

Class russia: (3261/4525) -> accuracy: 72.0663%

Class us : (3719/4475) -> accuracy: 83.1061%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 2

INFO:root: Best accuracy 77.5556% at epoch 2/10 (6980/9000)

DEV accuracy on epoch 2/10 in train step 402 = 78.5111%

Class russia: (3683/4525) -> accuracy: 81.3923%

Class us : (3383/4475) -> accuracy: 75.5978%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 2

INFO:root: Best accuracy 78.5111% at epoch 2/10 (7066/9000)

Epoch run time: 00:11:23

###################################################################################################

Epoch: 3/10 ---- best so far on epoch 2: acc=78.5111%

DEV accuracy on epoch 3/10 in train step 202 = 80.0444%

Class russia: (3567/4525) -> accuracy: 78.8287%

Class us : (3637/4475) -> accuracy: 81.2737%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 3

INFO:root: Best accuracy 80.0444% at epoch 3/10 (7204/9000)

DEV accuracy on epoch 3/10 in train step 402 = 80.0333%

Class russia: (3682/4525) -> accuracy: 81.3702%

Class us : (3521/4475) -> accuracy: 78.6816%

Epoch run time: 00:11:21

###################################################################################################

Epoch: 4/10 ---- best so far on epoch 3: acc=80.0444%

DEV accuracy on epoch 4/10 in train step 202 = 80.8000%

Class russia: (3529/4525) -> accuracy: 77.9890%

Class us : (3743/4475) -> accuracy: 83.6425%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 4

INFO:root: Best accuracy 80.8000% at epoch 4/10 (7272/9000)

DEV accuracy on epoch 4/10 in train step 402 = 80.7333%

Class russia: (3701/4525) -> accuracy: 81.7901%

Class us : (3565/4475) -> accuracy: 79.6648%

Epoch run time: 00:11:21

###################################################################################################

Epoch: 5/10 ---- best so far on epoch 4: acc=80.8000%

DEV accuracy on epoch 5/10 in train step 202 = 80.5556%

Class russia: (3360/4525) -> accuracy: 74.2541%

Class us : (3890/4475) -> accuracy: 86.9274%

DEV accuracy on epoch 5/10 in train step 402 = 80.3333%

Class russia: (3804/4525) -> accuracy: 84.0663%

Class us : (3426/4475) -> accuracy: 76.5587%

Epoch run time: 00:11:18

###################################################################################################

Epoch: 6/10 ---- best so far on epoch 4: acc=80.8000%

DEV accuracy on epoch 6/10 in train step 202 = 79.9000%

Class russia: (3174/4525) -> accuracy: 70.1436%

Class us : (4017/4475) -> accuracy: 89.7654%

DEV accuracy on epoch 6/10 in train step 402 = 80.6000%

Class russia: (3607/4525) -> accuracy: 79.7127%

Class us : (3647/4475) -> accuracy: 81.4972%

Epoch run time: 00:11:17

###################################################################################################

Epoch: 7/10 ---- best so far on epoch 4: acc=80.8000%

DEV accuracy on epoch 7/10 in train step 202 = 80.0222%

Class russia: (3170/4525) -> accuracy: 70.0552%

Class us : (4032/4475) -> accuracy: 90.1006%

DEV accuracy on epoch 7/10 in train step 402 = 79.8556%

Class russia: (3513/4525) -> accuracy: 77.6354%

Class us : (3674/4475) -> accuracy: 82.1006%

Epoch run time: 00:11:17

###################################################################################################

Epoch: 8/10 ---- best so far on epoch 4: acc=80.8000%

DEV accuracy on epoch 8/10 in train step 202 = 79.9111%

Class russia: (3802/4525) -> accuracy: 84.0221%

Class us : (3390/4475) -> accuracy: 75.7542%

DEV accuracy on epoch 8/10 in train step 402 = 79.2667%

Class russia: (3861/4525) -> accuracy: 85.3260%

Class us : (3273/4475) -> accuracy: 73.1397%

Epoch run time: 00:11:17

###################################################################################################

Epoch: 9/10 ---- best so far on epoch 4: acc=80.8000%

DEV accuracy on epoch 9/10 in train step 202 = 80.7556%

Class russia: (3495/4525) -> accuracy: 77.2376%

Class us : (3773/4475) -> accuracy: 84.3128%

DEV accuracy on epoch 9/10 in train step 402 = 79.6333%

Class russia: (3686/4525) -> accuracy: 81.4586%

Class us : (3481/4475) -> accuracy: 77.7877%

Epoch run time: 00:11:16

###################################################################################################

Epoch: 10/10 ---- best so far on epoch 4: acc=80.8000%

DEV accuracy on epoch 10/10 in train step 202 = 80.3889%

Class russia: (3418/4525) -> accuracy: 75.5359%

Class us : (3817/4475) -> accuracy: 85.2961%

DEV accuracy on epoch 10/10 in train step 402 = 79.9889%

Class russia: (3585/4525) -> accuracy: 79.2265%

Class us : (3614/4475) -> accuracy: 80.7598%

Epoch run time: 00:11:14

###################################################################################################

\*\*\*Training is complete. Best accuracy 80.8000% at epoch 4/10

\*\*\*Testing...

INFO:tensorflow:Restoring parameters from ../model\_temp/model.ckpt

INFO:tensorflow:Restoring parameters from ../model\_temp/model.ckpt

Accuracy on test set - (8090/10000) -> accuracy: 80.9000%

Class russia: (3894/4979) -> accuracy: 78.2085%

Class us : (4196/5021) -> accuracy: 83.5690%

End summary ----------------------

data:

DATA\_FILE\_PATH is ../input/2way\_rus\_usa\_v2\_25-150.txt

MINIMUM\_ROW\_LENGTH is 25

MAXIMUM\_ROW\_LENGTH is 150

COUNT\_WORD is 20

lines\_per\_class is 50000

number of classes is 2

Total data size is 100000

embedding:

EMB\_FILE\_PATH ../input/glove.6B.300d.txt

EMB\_DIM 300

EMB\_WORDS\_COUNT 400001

run config:

EPOCHS 10

evaluating on dev data 2 times per epoch

KEEP\_PROB 0.5

BATCH\_SIZE 200

LSTM\_HIDDEN\_UNITS 150

LSTM\_CELL\_TYPE GRU

optimizer is adamOptimizer - learn rate: 0.001

model:

USE\_TMP\_FOLDER True

mdl\_path ../model\_temp/model.ckpt

results:

best training acc at epoch=4 is 80.8

testing acc 80.9

Time(HH:MM:SS): 01:55:39

Leaving function \_\_main\_\_