Entering function \_\_main\_\_

Embedding tokens size=400001

File name 5way\_tur\_ger\_rus\_fra\_usa25-150. Total data size is 250000

Our 5 labels to index dictionary ={u'turkey': 3, u'germany': 1, u'russia': 2, u'us': 4, u'france': 0}

Our 5 index to labels dictionary ={0: u'france', 1: u'germany', 2: u'russia', 3: u'turkey', 4: u'us'}

x\_train: 202500, x\_dev: 22500, x\_test: 25000

y\_train: 202500, y\_dev: 22500, y\_test: 25000

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

input\_labels\_batch shape: (200, 5)

gru\_forward\_cell units: 100

gru\_backward\_cell units: 100

---vars name and shapes---

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/kernel:0', TensorShape([Dimension(150), Dimension(200)]), 30000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/bias:0', TensorShape([Dimension(200)]), 200)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/kernel:0', TensorShape([Dimension(150), Dimension(100)]), 15000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/bias:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/kernel:0', TensorShape([Dimension(200), Dimension(200)]), 40000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/bias:0', TensorShape([Dimension(200)]), 200)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/bias:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_2/gru\_cell/gates/kernel:0', TensorShape([Dimension(200), Dimension(200)]), 40000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_2/gru\_cell/gates/bias:0', TensorShape([Dimension(200)]), 200)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_2/gru\_cell/candidate/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_2/gru\_cell/candidate/bias:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/kernel:0', TensorShape([Dimension(150), Dimension(200)]), 30000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/bias:0', TensorShape([Dimension(200)]), 200)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/kernel:0', TensorShape([Dimension(150), Dimension(100)]), 15000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/bias:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/kernel:0', TensorShape([Dimension(200), Dimension(200)]), 40000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/bias:0', TensorShape([Dimension(200)]), 200)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/bias:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_2/gru\_cell/gates/kernel:0', TensorShape([Dimension(200), Dimension(200)]), 40000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_2/gru\_cell/gates/bias:0', TensorShape([Dimension(200)]), 200)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_2/gru\_cell/candidate/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_2/gru\_cell/candidate/bias:0', TensorShape([Dimension(100)]), 100)

(u'weight:0', TensorShape([Dimension(200), Dimension(5)]), 1000)

(u'bias:0', TensorShape([Dimension(5)]), 5)

total PARAM 332,805

---done vars---

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

DEV accuracy on epoch 1/10 in train step 1009 = 20.1161%

Class turkey : (0/4422) -> accuracy: 0.0000%

Class germany: (0/4405) -> accuracy: 0.0000%

Class russia : (4506/4506) -> accuracy: 100.0000%

Class us : (0/4495) -> accuracy: 0.0000%

Class france : (0/4572) -> accuracy: 0.0000%

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

INFO:root: Best accuracy 20.1161% at epoch 1/10 (4506/22400)

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

Epoch: 2/10 ---- best so far on epoch 1: acc=20.1161%

DEV accuracy on epoch 2/10 in train step 506 = 19.7411%

Class turkey : (4422/4422) -> accuracy: 100.0000%

Class germany: (0/4405) -> accuracy: 0.0000%

Class russia : (0/4506) -> accuracy: 0.0000%

Class us : (0/4495) -> accuracy: 0.0000%

Class france : (0/4572) -> accuracy: 0.0000%

DEV accuracy on epoch 2/10 in train step 1009 = 20.0670%

Class turkey : (0/4422) -> accuracy: 0.0000%

Class germany: (0/4405) -> accuracy: 0.0000%

Class russia : (0/4506) -> accuracy: 0.0000%

Class us : (4495/4495) -> accuracy: 100.0000%

Class france : (0/4572) -> accuracy: 0.0000%

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

Epoch: 3/10 ---- best so far on epoch 1: acc=20.1161%

DEV accuracy on epoch 3/10 in train step 506 = 33.2946%

Class turkey : (1557/4422) -> accuracy: 35.2103%

Class germany: (1/4405) -> accuracy: 0.0227%

Class russia : (2809/4506) -> accuracy: 62.3391%

Class us : (2959/4495) -> accuracy: 65.8287%

Class france : (132/4572) -> accuracy: 2.8871%

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

INFO:root: Best accuracy 33.2946% at epoch 3/10 (7458/22400)

DEV accuracy on epoch 3/10 in train step 1009 = 47.3973%

Class turkey : (2279/4422) -> accuracy: 51.5378%

Class germany: (1327/4405) -> accuracy: 30.1249%

Class russia : (3063/4506) -> accuracy: 67.9760%

Class us : (2595/4495) -> accuracy: 57.7308%

Class france : (1353/4572) -> accuracy: 29.5932%

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

INFO:root: Best accuracy 47.3973% at epoch 3/10 (10617/22400)

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

Epoch: 4/10 ---- best so far on epoch 3: acc=47.3973%

DEV accuracy on epoch 4/10 in train step 506 = 50.2589%

Class turkey : (3092/4422) -> accuracy: 69.9231%

Class germany: (1524/4405) -> accuracy: 34.5970%

Class russia : (2477/4506) -> accuracy: 54.9711%

Class us : (2264/4495) -> accuracy: 50.3671%

Class france : (1901/4572) -> accuracy: 41.5792%

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

INFO:root: Best accuracy 50.2589% at epoch 4/10 (11258/22400)

DEV accuracy on epoch 4/10 in train step 1009 = 51.0045%

Class turkey : (2475/4422) -> accuracy: 55.9701%

Class germany: (1587/4405) -> accuracy: 36.0272%

Class russia : (3015/4506) -> accuracy: 66.9108%

Class us : (2639/4495) -> accuracy: 58.7097%

Class france : (1709/4572) -> accuracy: 37.3797%

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

INFO:root: Best accuracy 51.0045% at epoch 4/10 (11425/22400)

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

Epoch: 5/10 ---- best so far on epoch 4: acc=51.0045%

DEV accuracy on epoch 5/10 in train step 506 = 51.7321%

Class turkey : (3199/4422) -> accuracy: 72.3428%

Class germany: (1627/4405) -> accuracy: 36.9353%

Class russia : (2509/4506) -> accuracy: 55.6813%

Class us : (2339/4495) -> accuracy: 52.0356%

Class france : (1914/4572) -> accuracy: 41.8635%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 5

INFO:root: Best accuracy 51.7321% at epoch 5/10 (11588/22400)

DEV accuracy on epoch 5/10 in train step 1009 = 52.2679%

Class turkey : (2658/4422) -> accuracy: 60.1085%

Class germany: (1782/4405) -> accuracy: 40.4540%

Class russia : (2946/4506) -> accuracy: 65.3795%

Class us : (2489/4495) -> accuracy: 55.3726%

Class france : (1833/4572) -> accuracy: 40.0919%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 5

INFO:root: Best accuracy 52.2679% at epoch 5/10 (11708/22400)

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

Epoch: 6/10 ---- best so far on epoch 5: acc=52.2679%

DEV accuracy on epoch 6/10 in train step 506 = 52.7634%

Class turkey : (3076/4422) -> accuracy: 69.5613%

Class germany: (1718/4405) -> accuracy: 39.0011%

Class russia : (2585/4506) -> accuracy: 57.3680%

Class us : (2450/4495) -> accuracy: 54.5050%

Class france : (1990/4572) -> accuracy: 43.5258%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 6

INFO:root: Best accuracy 52.7634% at epoch 6/10 (11819/22400)

DEV accuracy on epoch 6/10 in train step 1009 = 52.8929%

Class turkey : (2773/4422) -> accuracy: 62.7092%

Class germany: (1855/4405) -> accuracy: 42.1112%

Class russia : (2966/4506) -> accuracy: 65.8233%

Class us : (2402/4495) -> accuracy: 53.4372%

Class france : (1852/4572) -> accuracy: 40.5074%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 6

INFO:root: Best accuracy 52.8929% at epoch 6/10 (11848/22400)

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

Epoch: 7/10 ---- best so far on epoch 6: acc=52.8929%

DEV accuracy on epoch 7/10 in train step 506 = 53.0446%

Class turkey : (3142/4422) -> accuracy: 71.0538%

Class germany: (1695/4405) -> accuracy: 38.4790%

Class russia : (2582/4506) -> accuracy: 57.3014%

Class us : (2470/4495) -> accuracy: 54.9499%

Class france : (1993/4572) -> accuracy: 43.5914%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 7

INFO:root: Best accuracy 53.0446% at epoch 7/10 (11882/22400)

DEV accuracy on epoch 7/10 in train step 1009 = 53.4152%

Class turkey : (2780/4422) -> accuracy: 62.8675%

Class germany: (1794/4405) -> accuracy: 40.7264%

Class russia : (3016/4506) -> accuracy: 66.9330%

Class us : (2474/4495) -> accuracy: 55.0389%

Class france : (1901/4572) -> accuracy: 41.5792%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 7

INFO:root: Best accuracy 53.4152% at epoch 7/10 (11965/22400)

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

Epoch: 8/10 ---- best so far on epoch 7: acc=53.4152%

DEV accuracy on epoch 8/10 in train step 506 = 53.2768%

Class turkey : (3046/4422) -> accuracy: 68.8829%

Class germany: (1647/4405) -> accuracy: 37.3893%

Class russia : (2584/4506) -> accuracy: 57.3458%

Class us : (2620/4495) -> accuracy: 58.2870%

Class france : (2037/4572) -> accuracy: 44.5538%

DEV accuracy on epoch 8/10 in train step 1009 = 53.9911%

Class turkey : (2769/4422) -> accuracy: 62.6187%

Class germany: (1994/4405) -> accuracy: 45.2667%

Class russia : (3006/4506) -> accuracy: 66.7111%

Class us : (2421/4495) -> accuracy: 53.8598%

Class france : (1904/4572) -> accuracy: 41.6448%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 8

INFO:root: Best accuracy 53.9911% at epoch 8/10 (12094/22400)

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

Epoch: 9/10 ---- best so far on epoch 8: acc=53.9911%

DEV accuracy on epoch 9/10 in train step 506 = 53.6027%

Class turkey : (3028/4422) -> accuracy: 68.4758%

Class germany: (1761/4405) -> accuracy: 39.9773%

Class russia : (2601/4506) -> accuracy: 57.7230%

Class us : (2627/4495) -> accuracy: 58.4427%

Class france : (1990/4572) -> accuracy: 43.5258%

DEV accuracy on epoch 9/10 in train step 1009 = 54.0089%

Class turkey : (2686/4422) -> accuracy: 60.7417%

Class germany: (1893/4405) -> accuracy: 42.9739%

Class russia : (3086/4506) -> accuracy: 68.4865%

Class us : (2396/4495) -> accuracy: 53.3037%

Class france : (2037/4572) -> accuracy: 44.5538%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 9

INFO:root: Best accuracy 54.0089% at epoch 9/10 (12098/22400)

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

Epoch: 10/10 ---- best so far on epoch 9: acc=54.0089%

DEV accuracy on epoch 10/10 in train step 506 = 53.6205%

Class turkey : (3101/4422) -> accuracy: 70.1266%

Class germany: (1748/4405) -> accuracy: 39.6822%

Class russia : (2543/4506) -> accuracy: 56.4359%

Class us : (2541/4495) -> accuracy: 56.5295%

Class france : (2078/4572) -> accuracy: 45.4506%

DEV accuracy on epoch 10/10 in train step 1009 = 54.2143%

Class turkey : (2789/4422) -> accuracy: 63.0710%

Class germany: (1937/4405) -> accuracy: 43.9728%

Class russia : (2946/4506) -> accuracy: 65.3795%

Class us : (2441/4495) -> accuracy: 54.3048%

Class france : (2031/4572) -> accuracy: 44.4226%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 10

INFO:root: Best accuracy 54.2143% at epoch 10/10 (12144/22400)

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

\*\*\*Training is complete. Best accuracy 54.2143% at epoch 10/10

\*\*\*Testing...

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

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

Accuracy on test set - (13467/25000) -> accuracy: 53.8680%

Class turkey : (3138/4971) -> accuracy: 63.1261%

Class germany: (2180/5035) -> accuracy: 43.2969%

Class russia : (3291/5020) -> accuracy: 65.5578%

Class us : (2675/4954) -> accuracy: 53.9968%

Class france : (2183/5020) -> accuracy: 43.4861%

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

data:

DATA\_FILE\_PATH is ../input/5way\_tur\_ger\_rus\_fra\_usa25-150.txt

MINIMUM\_ROW\_LENGTH is 25

MAXIMUM\_ROW\_LENGTH is 150

COUNT\_WORD is 20

lines\_per\_class is 50000

number of classes is 5

Total data size is 250000

embedding:

EMB\_FILE\_PATH ../input/glove.6B.50d.txt

EMB\_DIM 50

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 100

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=10 is 54.2142857143

testing acc 53.868

Time(HH:MM:SS): 02:49:30

Leaving function \_\_main\_\_