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: 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/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'weight:0', TensorShape([Dimension(300), Dimension(5)]), 1500)

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

total PARAM 678,305

---done vars---

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

DEV accuracy on epoch 1/10 in train step 506 = 48.8438%

Class turkey : (2852/4422) -> accuracy: 64.4957%

Class germany: (1253/4405) -> accuracy: 28.4449%

Class russia : (2971/4506) -> accuracy: 65.9343%

Class us : (2601/4495) -> accuracy: 57.8643%

Class france : (1264/4572) -> accuracy: 27.6465%

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

INFO:root: Best accuracy 48.8438% at epoch 1/10 (10941/22400)

DEV accuracy on epoch 1/10 in train step 1009 = 52.5000%

Class turkey : (2419/4422) -> accuracy: 54.7038%

Class germany: (1783/4405) -> accuracy: 40.4767%

Class russia : (3156/4506) -> accuracy: 70.0399%

Class us : (2644/4495) -> accuracy: 58.8209%

Class france : (1758/4572) -> accuracy: 38.4514%

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

INFO:root: Best accuracy 52.5000% at epoch 1/10 (11760/22400)

Epoch run time: 00:15:06

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Epoch: 2/10 ---- best so far on epoch 1: acc=52.5000%

DEV accuracy on epoch 2/10 in train step 506 = 54.7545%

Class turkey : (3133/4422) -> accuracy: 70.8503%

Class germany: (1577/4405) -> accuracy: 35.8002%

Class russia : (3074/4506) -> accuracy: 68.2202%

Class us : (2144/4495) -> accuracy: 47.6974%

Class france : (2337/4572) -> accuracy: 51.1155%

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

INFO:root: Best accuracy 54.7545% at epoch 2/10 (12265/22400)

DEV accuracy on epoch 2/10 in train step 1009 = 55.1161%

Class turkey : (2700/4422) -> accuracy: 61.0583%

Class germany: (1836/4405) -> accuracy: 41.6799%

Class russia : (3051/4506) -> accuracy: 67.7097%

Class us : (2955/4495) -> accuracy: 65.7397%

Class france : (1804/4572) -> accuracy: 39.4576%

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

INFO:root: Best accuracy 55.1161% at epoch 2/10 (12346/22400)

Epoch run time: 00:14:57

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Epoch: 3/10 ---- best so far on epoch 2: acc=55.1161%

DEV accuracy on epoch 3/10 in train step 506 = 57.0938%

Class turkey : (3065/4422) -> accuracy: 69.3125%

Class germany: (1954/4405) -> accuracy: 44.3587%

Class russia : (3037/4506) -> accuracy: 67.3990%

Class us : (2282/4495) -> accuracy: 50.7675%

Class france : (2451/4572) -> accuracy: 53.6089%

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

INFO:root: Best accuracy 57.0938% at epoch 3/10 (12789/22400)

DEV accuracy on epoch 3/10 in train step 1009 = 56.8170%

Class turkey : (2688/4422) -> accuracy: 60.7870%

Class germany: (1981/4405) -> accuracy: 44.9716%

Class russia : (3129/4506) -> accuracy: 69.4407%

Class us : (2860/4495) -> accuracy: 63.6263%

Class france : (2069/4572) -> accuracy: 45.2537%

Epoch run time: 00:15:26

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Epoch: 4/10 ---- best so far on epoch 3: acc=57.0938%

DEV accuracy on epoch 4/10 in train step 506 = 57.7098%

Class turkey : (3071/4422) -> accuracy: 69.4482%

Class germany: (2044/4405) -> accuracy: 46.4018%

Class russia : (2905/4506) -> accuracy: 64.4696%

Class us : (2340/4495) -> accuracy: 52.0578%

Class france : (2567/4572) -> accuracy: 56.1461%

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

INFO:root: Best accuracy 57.7098% at epoch 4/10 (12927/22400)

DEV accuracy on epoch 4/10 in train step 1009 = 57.5625%

Class turkey : (2867/4422) -> accuracy: 64.8349%

Class germany: (2067/4405) -> accuracy: 46.9240%

Class russia : (2984/4506) -> accuracy: 66.2228%

Class us : (2798/4495) -> accuracy: 62.2469%

Class france : (2178/4572) -> accuracy: 47.6378%

Epoch run time: 00:16:48

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Epoch: 5/10 ---- best so far on epoch 4: acc=57.7098%

DEV accuracy on epoch 5/10 in train step 506 = 57.6607%

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

Class germany: (1987/4405) -> accuracy: 45.1078%

Class russia : (2802/4506) -> accuracy: 62.1838%

Class us : (2524/4495) -> accuracy: 56.1513%

Class france : (2557/4572) -> accuracy: 55.9274%

DEV accuracy on epoch 5/10 in train step 1009 = 57.5625%

Class turkey : (2684/4422) -> accuracy: 60.6965%

Class germany: (2018/4405) -> accuracy: 45.8116%

Class russia : (3097/4506) -> accuracy: 68.7306%

Class us : (2751/4495) -> accuracy: 61.2013%

Class france : (2344/4572) -> accuracy: 51.2686%

Epoch run time: 00:14:48

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Epoch: 6/10 ---- best so far on epoch 4: acc=57.7098%

DEV accuracy on epoch 6/10 in train step 506 = 56.8438%

Class turkey : (2939/4422) -> accuracy: 66.4631%

Class germany: (2101/4405) -> accuracy: 47.6958%

Class russia : (2613/4506) -> accuracy: 57.9893%

Class us : (2509/4495) -> accuracy: 55.8176%

Class france : (2571/4572) -> accuracy: 56.2336%

DEV accuracy on epoch 6/10 in train step 1009 = 57.2545%

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

Class germany: (1949/4405) -> accuracy: 44.2452%

Class russia : (3091/4506) -> accuracy: 68.5974%

Class us : (2784/4495) -> accuracy: 61.9355%

Class france : (2343/4572) -> accuracy: 51.2467%

Epoch run time: 00:14:48

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Epoch: 7/10 ---- best so far on epoch 4: acc=57.7098%

DEV accuracy on epoch 7/10 in train step 506 = 56.5000%

Class turkey : (2893/4422) -> accuracy: 65.4229%

Class germany: (1982/4405) -> accuracy: 44.9943%

Class russia : (2560/4506) -> accuracy: 56.8131%

Class us : (2593/4495) -> accuracy: 57.6863%

Class france : (2628/4572) -> accuracy: 57.4803%

DEV accuracy on epoch 7/10 in train step 1009 = 56.9955%

Class turkey : (2735/4422) -> accuracy: 61.8498%

Class germany: (1881/4405) -> accuracy: 42.7015%

Class russia : (3195/4506) -> accuracy: 70.9055%

Class us : (2623/4495) -> accuracy: 58.3537%

Class france : (2333/4572) -> accuracy: 51.0280%

Epoch run time: 00:14:48

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

Epoch: 8/10 ---- best so far on epoch 4: acc=57.7098%

DEV accuracy on epoch 8/10 in train step 506 = 55.8795%

Class turkey : (2964/4422) -> accuracy: 67.0285%

Class germany: (1960/4405) -> accuracy: 44.4949%

Class russia : (2428/4506) -> accuracy: 53.8837%

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

Class france : (2538/4572) -> accuracy: 55.5118%

DEV accuracy on epoch 8/10 in train step 1009 = 56.8214%

Class turkey : (2890/4422) -> accuracy: 65.3550%

Class germany: (1889/4405) -> accuracy: 42.8831%

Class russia : (3113/4506) -> accuracy: 69.0857%

Class us : (2594/4495) -> accuracy: 57.7086%

Class france : (2242/4572) -> accuracy: 49.0376%

Epoch run time: 00:14:49

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

Epoch: 9/10 ---- best so far on epoch 4: acc=57.7098%

DEV accuracy on epoch 9/10 in train step 506 = 55.6741%

Class turkey : (2941/4422) -> accuracy: 66.5084%

Class germany: (1959/4405) -> accuracy: 44.4722%

Class russia : (2511/4506) -> accuracy: 55.7257%

Class us : (2629/4495) -> accuracy: 58.4872%

Class france : (2431/4572) -> accuracy: 53.1715%

DEV accuracy on epoch 9/10 in train step 1009 = 56.5000%

Class turkey : (3065/4422) -> accuracy: 69.3125%

Class germany: (1999/4405) -> accuracy: 45.3802%

Class russia : (3024/4506) -> accuracy: 67.1105%

Class us : (2328/4495) -> accuracy: 51.7909%

Class france : (2240/4572) -> accuracy: 48.9939%

Epoch run time: 00:14:48

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Epoch: 10/10 ---- best so far on epoch 4: acc=57.7098%

DEV accuracy on epoch 10/10 in train step 506 = 55.5357%

Class turkey : (2906/4422) -> accuracy: 65.7169%

Class germany: (1980/4405) -> accuracy: 44.9489%

Class russia : (2825/4506) -> accuracy: 62.6942%

Class us : (2589/4495) -> accuracy: 57.5973%

Class france : (2140/4572) -> accuracy: 46.8066%

DEV accuracy on epoch 10/10 in train step 1009 = 56.1384%

Class turkey : (2967/4422) -> accuracy: 67.0963%

Class germany: (2013/4405) -> accuracy: 45.6981%

Class russia : (2969/4506) -> accuracy: 65.8899%

Class us : (2290/4495) -> accuracy: 50.9455%

Class france : (2336/4572) -> accuracy: 51.0936%

Epoch run time: 00:14:48

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

\*\*\*Training is complete. Best accuracy 57.7098% 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 - (14247/25000) -> accuracy: 56.9880%

Class turkey : (3440/4971) -> accuracy: 69.2014%

Class germany: (2344/5035) -> accuracy: 46.5541%

Class russia : (3187/5020) -> accuracy: 63.4861%

Class us : (2588/4954) -> accuracy: 52.2406%

Class france : (2688/5020) -> accuracy: 53.5458%

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.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 57.7098214286

testing acc 56.988

Time(HH:MM:SS): 02:33:44

Leaving function \_\_main\_\_