Entering function \_\_main\_\_

Embedding tokens size=400001

File name 5way\_tur\_ger\_rus\_fra\_usa100K\_25-150. Total data size is 500000

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: 405000, x\_dev: 45000, x\_test: 50000

y\_train: 405000, y\_dev: 45000, y\_test: 50000

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

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

data(after embedding) shape: (200, 150, 300)

gru\_forward\_cell units: 100

gru\_forward\_cell2 units: 100

multi\_forward\_cell: 2 cells

gru\_backward\_cell units: 100

gru\_backward\_cell2 units: 100

multi\_backward\_cell: 2 cells

---vars name and shapes---

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/kernel:0', TensorShape([Dimension(400), Dimension(300)]), 120000)

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

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/gru\_cell/gates/kernel:0', TensorShape([Dimension(400), Dimension(200)]), 80000)

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

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/gru\_cell/candidate/kernel:0', TensorShape([Dimension(400), Dimension(100)]), 40000)

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

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/attention/attn\_w:0', TensorShape([Dimension(1), Dimension(1), Dimension(100), Dimension(100)]), 10000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/attention/attn\_v:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/attention/kernel:0', TensorShape([Dimension(100), Dimension(100)]), 10000)

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

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/attn\_output\_projection/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/attn\_output\_projection/bias:0', TensorShape([Dimension(100)]), 100)

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

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

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

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

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

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

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/attention\_cell\_wrapper/attention/attn\_w:0', TensorShape([Dimension(1), Dimension(1), Dimension(100), Dimension(100)]), 10000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/attention\_cell\_wrapper/attention/attn\_v:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/attention\_cell\_wrapper/attention/kernel:0', TensorShape([Dimension(100), Dimension(100)]), 10000)

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

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/attention\_cell\_wrapper/attn\_output\_projection/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/attention\_cell\_wrapper/attn\_output\_projection/bias:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/kernel:0', TensorShape([Dimension(400), Dimension(300)]), 120000)

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

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

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/gru\_cell/candidate/kernel:0', TensorShape([Dimension(400), Dimension(100)]), 40000)

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

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/attention/attn\_w:0', TensorShape([Dimension(1), Dimension(1), Dimension(100), Dimension(100)]), 10000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/attention/attn\_v:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/attention/kernel:0', TensorShape([Dimension(100), Dimension(100)]), 10000)

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

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/attn\_output\_projection/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/attention\_cell\_wrapper/attn\_output\_projection/bias:0', TensorShape([Dimension(100)]), 100)

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

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

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

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

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

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

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/attention\_cell\_wrapper/attention/attn\_w:0', TensorShape([Dimension(1), Dimension(1), Dimension(100), Dimension(100)]), 10000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/attention\_cell\_wrapper/attention/attn\_v:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/attention\_cell\_wrapper/attention/kernel:0', TensorShape([Dimension(100), Dimension(100)]), 10000)

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

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/attention\_cell\_wrapper/attn\_output\_projection/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/attention\_cell\_wrapper/attn\_output\_projection/bias:0', TensorShape([Dimension(100)]), 100)

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

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

total PARAM 804,205

---done vars---

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

DEV accuracy on epoch 1/10 in train step 1012 = 43.6556%

Class turkey : (3798/9025) -> accuracy: 42.0831%

Class germany: (3171/8906) -> accuracy: 35.6052%

Class russia : (5193/9026) -> accuracy: 57.5338%

Class us : (5340/9085) -> accuracy: 58.7782%

Class france : (2143/8958) -> accuracy: 23.9228%

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

INFO:root: Best accuracy 43.6556% at epoch 1/10 (19645/45000)

DEV accuracy on epoch 1/10 in train step 2022 = 50.2778%

Class turkey : (5501/9025) -> accuracy: 60.9529%

Class germany: (3971/8906) -> accuracy: 44.5879%

Class russia : (4985/9026) -> accuracy: 55.2293%

Class us : (3957/9085) -> accuracy: 43.5553%

Class france : (4211/8958) -> accuracy: 47.0083%

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

INFO:root: Best accuracy 50.2778% at epoch 1/10 (22625/45000)

Epoch run time: 01:13:31

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Epoch: 2/10 ---- best so far on epoch 1: acc=50.2778%

DEV accuracy on epoch 2/10 in train step 1012 = 52.6311%

Class turkey : (6013/9025) -> accuracy: 66.6260%

Class germany: (4280/8906) -> accuracy: 48.0575%

Class russia : (5674/9026) -> accuracy: 62.8628%

Class us : (4401/9085) -> accuracy: 48.4425%

Class france : (3316/8958) -> accuracy: 37.0172%

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

INFO:root: Best accuracy 52.6311% at epoch 2/10 (23684/45000)

DEV accuracy on epoch 2/10 in train step 2022 = 53.7800%

Class turkey : (5319/9025) -> accuracy: 58.9363%

Class germany: (4687/8906) -> accuracy: 52.6274%

Class russia : (5083/9026) -> accuracy: 56.3151%

Class us : (5070/9085) -> accuracy: 55.8063%

Class france : (4042/8958) -> accuracy: 45.1217%

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

INFO:root: Best accuracy 53.7800% at epoch 2/10 (24201/45000)

Epoch run time: 01:12:42

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Epoch: 3/10 ---- best so far on epoch 2: acc=53.7800%

DEV accuracy on epoch 3/10 in train step 1012 = 54.4956%

Class turkey : (6287/9025) -> accuracy: 69.6620%

Class germany: (4510/8906) -> accuracy: 50.6400%

Class russia : (5558/9026) -> accuracy: 61.5777%

Class us : (4268/9085) -> accuracy: 46.9785%

Class france : (3900/8958) -> accuracy: 43.5365%

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

INFO:root: Best accuracy 54.4956% at epoch 3/10 (24523/45000)

DEV accuracy on epoch 3/10 in train step 2022 = 54.6511%

Class turkey : (5330/9025) -> accuracy: 59.0582%

Class germany: (4750/8906) -> accuracy: 53.3348%

Class russia : (5264/9026) -> accuracy: 58.3204%

Class us : (4877/9085) -> accuracy: 53.6819%

Class france : (4372/8958) -> accuracy: 48.8055%

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

INFO:root: Best accuracy 54.6511% at epoch 3/10 (24593/45000)

Epoch run time: 01:13:25

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Epoch: 4/10 ---- best so far on epoch 3: acc=54.6511%

DEV accuracy on epoch 4/10 in train step 1012 = 21.6867%

Class turkey : (1436/9025) -> accuracy: 15.9114%

Class germany: (2925/8906) -> accuracy: 32.8430%

Class russia : (428/9026) -> accuracy: 4.7419%

Class us : (3776/9085) -> accuracy: 41.5630%

Class france : (1194/8958) -> accuracy: 13.3289%

DEV accuracy on epoch 4/10 in train step 2022 = 24.4556%

Class turkey : (4126/9025) -> accuracy: 45.7175%

Class germany: (2123/8906) -> accuracy: 23.8379%

Class russia : (1240/9026) -> accuracy: 13.7381%

Class us : (3337/9085) -> accuracy: 36.7309%

Class france : (179/8958) -> accuracy: 1.9982%

Epoch run time: 01:13:03

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Epoch: 5/10 ---- best so far on epoch 3: acc=54.6511%

DEV accuracy on epoch 5/10 in train step 1012 = 26.1000%

Class turkey : (6504/9025) -> accuracy: 72.0665%

Class germany: (1915/8906) -> accuracy: 21.5024%

Class russia : (452/9026) -> accuracy: 5.0078%

Class us : (1411/9085) -> accuracy: 15.5311%

Class france : (1463/8958) -> accuracy: 16.3318%

DEV accuracy on epoch 5/10 in train step 2022 = 30.7644%

Class turkey : (5016/9025) -> accuracy: 55.5789%

Class germany: (3738/8906) -> accuracy: 41.9717%

Class russia : (2381/9026) -> accuracy: 26.3793%

Class us : (546/9085) -> accuracy: 6.0099%

Class france : (2163/8958) -> accuracy: 24.1460%

Epoch run time: 01:12:57

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Epoch: 6/10 ---- best so far on epoch 3: acc=54.6511%

DEV accuracy on epoch 6/10 in train step 1012 = 32.6244%

Class turkey : (3696/9025) -> accuracy: 40.9529%

Class germany: (3867/8906) -> accuracy: 43.4202%

Class russia : (4190/9026) -> accuracy: 46.4214%

Class us : (790/9085) -> accuracy: 8.6957%

Class france : (2138/8958) -> accuracy: 23.8669%

DEV accuracy on epoch 6/10 in train step 2022 = 33.9200%

Class turkey : (4410/9025) -> accuracy: 48.8643%

Class germany: (4096/8906) -> accuracy: 45.9915%

Class russia : (3912/9026) -> accuracy: 43.3415%

Class us : (1236/9085) -> accuracy: 13.6048%

Class france : (1610/8958) -> accuracy: 17.9728%

Epoch run time: 01:12:28

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Epoch: 7/10 ---- best so far on epoch 3: acc=54.6511%

DEV accuracy on epoch 7/10 in train step 1012 = 34.2978%

Class turkey : (5776/9025) -> accuracy: 64.0000%

Class germany: (2121/8906) -> accuracy: 23.8154%

Class russia : (3430/9026) -> accuracy: 38.0013%

Class us : (1864/9085) -> accuracy: 20.5173%

Class france : (2243/8958) -> accuracy: 25.0391%

DEV accuracy on epoch 7/10 in train step 2022 = 37.4378%

Class turkey : (4327/9025) -> accuracy: 47.9446%

Class germany: (3260/8906) -> accuracy: 36.6045%

Class russia : (4513/9026) -> accuracy: 50.0000%

Class us : (2416/9085) -> accuracy: 26.5933%

Class france : (2331/8958) -> accuracy: 26.0214%

Epoch run time: 01:12:27

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Epoch: 8/10 ---- best so far on epoch 3: acc=54.6511%

DEV accuracy on epoch 8/10 in train step 1012 = 36.9733%

Class turkey : (3472/9025) -> accuracy: 38.4709%

Class germany: (1799/8906) -> accuracy: 20.1999%

Class russia : (5162/9026) -> accuracy: 57.1903%

Class us : (3019/9085) -> accuracy: 33.2306%

Class france : (3186/8958) -> accuracy: 35.5660%

DEV accuracy on epoch 8/10 in train step 2022 = 38.6467%

Class turkey : (5546/9025) -> accuracy: 61.4515%

Class germany: (4129/8906) -> accuracy: 46.3620%

Class russia : (3797/9026) -> accuracy: 42.0674%

Class us : (1766/9085) -> accuracy: 19.4386%

Class france : (2153/8958) -> accuracy: 24.0344%

Epoch run time: 01:12:27

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Epoch: 9/10 ---- best so far on epoch 3: acc=54.6511%

DEV accuracy on epoch 9/10 in train step 1012 = 39.1978%

Class turkey : (4885/9025) -> accuracy: 54.1274%

Class germany: (2684/8906) -> accuracy: 30.1370%

Class russia : (4889/9026) -> accuracy: 54.1657%

Class us : (3392/9085) -> accuracy: 37.3363%

Class france : (1789/8958) -> accuracy: 19.9710%

DEV accuracy on epoch 9/10 in train step 2022 = 40.5733%

Class turkey : (4861/9025) -> accuracy: 53.8615%

Class germany: (3849/8906) -> accuracy: 43.2181%

Class russia : (3667/9026) -> accuracy: 40.6271%

Class us : (3479/9085) -> accuracy: 38.2939%

Class france : (2402/8958) -> accuracy: 26.8140%

Epoch run time: 01:12:26

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Epoch: 10/10 ---- best so far on epoch 3: acc=54.6511%

DEV accuracy on epoch 10/10 in train step 1012 = 39.2578%

Class turkey : (4733/9025) -> accuracy: 52.4432%

Class germany: (1892/8906) -> accuracy: 21.2441%

Class russia : (4715/9026) -> accuracy: 52.2380%

Class us : (4715/9085) -> accuracy: 51.8987%

Class france : (1611/8958) -> accuracy: 17.9839%

DEV accuracy on epoch 10/10 in train step 2022 = 41.4222%

Class turkey : (4096/9025) -> accuracy: 45.3850%

Class germany: (4557/8906) -> accuracy: 51.1678%

Class russia : (4132/9026) -> accuracy: 45.7789%

Class us : (2998/9085) -> accuracy: 32.9994%

Class france : (2857/8958) -> accuracy: 31.8933%

Epoch run time: 01:12:27

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\*\*\*Training is complete. Best accuracy 54.6511% at epoch 3/10

\*\*\*Testing...

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

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

Accuracy on test set - (27324/50000) -> accuracy: 54.6480%

Class turkey : (5804/9957) -> accuracy: 58.2906%

Class germany: (5228/9905) -> accuracy: 52.7814%

Class russia : (5934/10046) -> accuracy: 59.0683%

Class us : (5342/10019) -> accuracy: 53.3187%

Class france : (5016/10073) -> accuracy: 49.7965%

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

data:

DATA\_FILE\_PATH is ../input/5way\_tur\_ger\_rus\_fra\_usa100K\_25-150.txt

MINIMUM\_ROW\_LENGTH is 25

MAXIMUM\_ROW\_LENGTH is 150

COUNT\_WORD is 20

lines\_per\_class is 100000

number of classes is 5

Total data size is 500000

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 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=3 is 54.6511

testing acc 54.6480

Time(HH:MM:SS): 12:12:51

Leaving function \_\_main\_\_