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)

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(400), Dimension(200)]), 80000)

(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(400), Dimension(100)]), 40000)

(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/fw/multi\_rnn\_cell/cell\_3/gru\_cell/gates/kernel:0', TensorShape([Dimension(200), Dimension(200)]), 40000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_3/gru\_cell/gates/bias:0', TensorShape([Dimension(200)]), 200)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_3/gru\_cell/candidate/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_3/gru\_cell/candidate/bias:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_4/gru\_cell/gates/kernel:0', TensorShape([Dimension(200), Dimension(200)]), 40000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_4/gru\_cell/gates/bias:0', TensorShape([Dimension(200)]), 200)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_4/gru\_cell/candidate/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

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(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(400), Dimension(100)]), 40000)

(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'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_3/gru\_cell/gates/kernel:0', TensorShape([Dimension(200), Dimension(200)]), 40000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_3/gru\_cell/gates/bias:0', TensorShape([Dimension(200)]), 200)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_3/gru\_cell/candidate/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_3/gru\_cell/candidate/bias:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_4/gru\_cell/gates/kernel:0', TensorShape([Dimension(200), Dimension(200)]), 40000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_4/gru\_cell/gates/bias:0', TensorShape([Dimension(200)]), 200)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_4/gru\_cell/candidate/kernel:0', TensorShape([Dimension(200), Dimension(100)]), 20000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_4/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 724,005

---done vars---

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

DEV accuracy on epoch 1/10 in train step 1012 = 50.8133%

Class turkey : (6170/9025) -> accuracy: 68.3657%

Class germany: (4289/8906) -> accuracy: 48.1585%

Class russia : (5651/9026) -> accuracy: 62.6080%

Class us : (4198/9085) -> accuracy: 46.2080%

Class france : (2558/8958) -> accuracy: 28.5555%

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

INFO:root: Best accuracy 50.8133% at epoch 1/10 (22866/45000)

DEV accuracy on epoch 1/10 in train step 2022 = 53.1978%

Class turkey : (5366/9025) -> accuracy: 59.4571%

Class germany: (4701/8906) -> accuracy: 52.7846%

Class russia : (4859/9026) -> accuracy: 53.8334%

Class us : (4707/9085) -> accuracy: 51.8107%

Class france : (4306/8958) -> accuracy: 48.0688%

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

INFO:root: Best accuracy 53.1978% at epoch 1/10 (23939/45000)

Epoch run time: 01:00:48

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Epoch: 2/10 ---- best so far on epoch 1: acc=53.1978%

DEV accuracy on epoch 2/10 in train step 1012 = 54.5556%

Class turkey : (5810/9025) -> accuracy: 64.3767%

Class germany: (4164/8906) -> accuracy: 46.7550%

Class russia : (5595/9026) -> accuracy: 61.9876%

Class us : (4987/9085) -> accuracy: 54.8927%

Class france : (3994/8958) -> accuracy: 44.5858%

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

INFO:root: Best accuracy 54.5556% at epoch 2/10 (24550/45000)

DEV accuracy on epoch 2/10 in train step 2022 = 54.8867%

Class turkey : (5270/9025) -> accuracy: 58.3934%

Class germany: (4752/8906) -> accuracy: 53.3573%

Class russia : (5483/9026) -> accuracy: 60.7467%

Class us : (4347/9085) -> accuracy: 47.8481%

Class france : (4847/8958) -> accuracy: 54.1081%

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

INFO:root: Best accuracy 54.8867% at epoch 2/10 (24699/45000)

Epoch run time: 01:03:45

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Epoch: 3/10 ---- best so far on epoch 2: acc=54.8867%

DEV accuracy on epoch 3/10 in train step 1012 = 55.4356%

Class turkey : (6208/9025) -> accuracy: 68.7867%

Class germany: (4424/8906) -> accuracy: 49.6744%

Class russia : (5583/9026) -> accuracy: 61.8546%

Class us : (4895/9085) -> accuracy: 53.8800%

Class france : (3836/8958) -> accuracy: 42.8221%

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

INFO:root: Best accuracy 55.4356% at epoch 3/10 (24946/45000)

DEV accuracy on epoch 3/10 in train step 2022 = 55.6111%

Class turkey : (5377/9025) -> accuracy: 59.5789%

Class germany: (4697/8906) -> accuracy: 52.7397%

Class russia : (5439/9026) -> accuracy: 60.2593%

Class us : (4664/9085) -> accuracy: 51.3374%

Class france : (4848/8958) -> accuracy: 54.1192%

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

INFO:root: Best accuracy 55.6111% at epoch 3/10 (25025/45000)

Epoch run time: 01:01:22

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Epoch: 4/10 ---- best so far on epoch 3: acc=55.6111%

DEV accuracy on epoch 4/10 in train step 1012 = 56.1111%

Class turkey : (6188/9025) -> accuracy: 68.5651%

Class germany: (4772/8906) -> accuracy: 53.5819%

Class russia : (5327/9026) -> accuracy: 59.0184%

Class us : (4591/9085) -> accuracy: 50.5338%

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

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

INFO:root: Best accuracy 56.1111% at epoch 4/10 (25250/45000)

DEV accuracy on epoch 4/10 in train step 2022 = 55.9089%

Class turkey : (5397/9025) -> accuracy: 59.8006%

Class germany: (4570/8906) -> accuracy: 51.3137%

Class russia : (5693/9026) -> accuracy: 63.0733%

Class us : (4525/9085) -> accuracy: 49.8074%

Class france : (4974/8958) -> accuracy: 55.5258%

Epoch run time: 01:00:26

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Epoch: 5/10 ---- best so far on epoch 4: acc=56.1111%

DEV accuracy on epoch 5/10 in train step 1012 = 56.0222%

Class turkey : (6436/9025) -> accuracy: 71.3130%

Class germany: (4226/8906) -> accuracy: 47.4512%

Class russia : (5228/9026) -> accuracy: 57.9216%

Class us : (4532/9085) -> accuracy: 49.8844%

Class france : (4788/8958) -> accuracy: 53.4494%

DEV accuracy on epoch 5/10 in train step 2022 = 56.3378%

Class turkey : (5361/9025) -> accuracy: 59.4017%

Class germany: (4650/8906) -> accuracy: 52.2120%

Class russia : (5788/9026) -> accuracy: 64.1259%

Class us : (4708/9085) -> accuracy: 51.8217%

Class france : (4845/8958) -> accuracy: 54.0857%

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

INFO:root: Best accuracy 56.3378% at epoch 5/10 (25352/45000)

Epoch run time: 01:00:22

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Epoch: 6/10 ---- best so far on epoch 5: acc=56.3378%

DEV accuracy on epoch 6/10 in train step 1012 = 56.3022%

Class turkey : (6433/9025) -> accuracy: 71.2798%

Class germany: (4712/8906) -> accuracy: 52.9082%

Class russia : (5135/9026) -> accuracy: 56.8912%

Class us : (4465/9085) -> accuracy: 49.1469%

Class france : (4591/8958) -> accuracy: 51.2503%

DEV accuracy on epoch 6/10 in train step 2022 = 56.6978%

Class turkey : (5658/9025) -> accuracy: 62.6925%

Class germany: (4617/8906) -> accuracy: 51.8415%

Class russia : (5845/9026) -> accuracy: 64.7574%

Class us : (4765/9085) -> accuracy: 52.4491%

Class france : (4629/8958) -> accuracy: 51.6745%

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

INFO:root: Best accuracy 56.6978% at epoch 6/10 (25514/45000)

Epoch run time: 01:00:19

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Epoch: 7/10 ---- best so far on epoch 6: acc=56.6978%

DEV accuracy on epoch 7/10 in train step 1012 = 56.5467%

Class turkey : (5959/9025) -> accuracy: 66.0277%

Class germany: (4871/8906) -> accuracy: 54.6935%

Class russia : (5321/9026) -> accuracy: 58.9519%

Class us : (4616/9085) -> accuracy: 50.8090%

Class france : (4679/8958) -> accuracy: 52.2326%

DEV accuracy on epoch 7/10 in train step 2022 = 56.4844%

Class turkey : (5582/9025) -> accuracy: 61.8504%

Class germany: (4613/8906) -> accuracy: 51.7965%

Class russia : (6054/9026) -> accuracy: 67.0729%

Class us : (4886/9085) -> accuracy: 53.7810%

Class france : (4283/8958) -> accuracy: 47.8120%

Epoch run time: 01:00:15

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Epoch: 8/10 ---- best so far on epoch 6: acc=56.6978%

DEV accuracy on epoch 8/10 in train step 1012 = 56.7444%

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

Class germany: (4394/8906) -> accuracy: 49.3375%

Class russia : (5629/9026) -> accuracy: 62.3643%

Class us : (4886/9085) -> accuracy: 53.7810%

Class france : (4613/8958) -> accuracy: 51.4959%

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

INFO:root: Best accuracy 56.7444% at epoch 8/10 (25535/45000)

DEV accuracy on epoch 8/10 in train step 2022 = 56.4156%

Class turkey : (5494/9025) -> accuracy: 60.8753%

Class germany: (4812/8906) -> accuracy: 54.0310%

Class russia : (5938/9026) -> accuracy: 65.7877%

Class us : (4687/9085) -> accuracy: 51.5905%

Class france : (4456/8958) -> accuracy: 49.7432%

Epoch run time: 01:00:19

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

Epoch: 9/10 ---- best so far on epoch 8: acc=56.7444%

DEV accuracy on epoch 9/10 in train step 1012 = 56.5311%

Class turkey : (6194/9025) -> accuracy: 68.6316%

Class germany: (4560/8906) -> accuracy: 51.2014%

Class russia : (5322/9026) -> accuracy: 58.9630%

Class us : (4962/9085) -> accuracy: 54.6175%

Class france : (4401/8958) -> accuracy: 49.1293%

DEV accuracy on epoch 9/10 in train step 2022 = 56.1178%

Class turkey : (5162/9025) -> accuracy: 57.1967%

Class germany: (5132/8906) -> accuracy: 57.6241%

Class russia : (6004/9026) -> accuracy: 66.5189%

Class us : (4646/9085) -> accuracy: 51.1392%

Class france : (4309/8958) -> accuracy: 48.1023%

Epoch run time: 01:00:15

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

Epoch: 10/10 ---- best so far on epoch 8: acc=56.7444%

DEV accuracy on epoch 10/10 in train step 1012 = 54.9711%

Class turkey : (5576/9025) -> accuracy: 61.7839%

Class germany: (4563/8906) -> accuracy: 51.2351%

Class russia : (5318/9026) -> accuracy: 58.9187%

Class us : (5126/9085) -> accuracy: 56.4227%

Class france : (4154/8958) -> accuracy: 46.3720%

DEV accuracy on epoch 10/10 in train step 2022 = 55.9067%

Class turkey : (5341/9025) -> accuracy: 59.1801%

Class germany: (5117/8906) -> accuracy: 57.4556%

Class russia : (5546/9026) -> accuracy: 61.4447%

Class us : (5212/9085) -> accuracy: 57.3693%

Class france : (3942/8958) -> accuracy: 44.0054%

Epoch run time: 01:00:16

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\*\*\*Training is complete. Best accuracy 56.7444% at epoch 8/10

\*\*\*Testing...

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

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

Accuracy on test set - (28253/50000) -> accuracy: 56.5060%

Class turkey : (6549/9957) -> accuracy: 65.7728%

Class germany: (4835/9905) -> accuracy: 48.8137%

Class russia : (6405/10046) -> accuracy: 63.7567%

Class us : (5277/10019) -> accuracy: 52.6699%

Class france : (5187/10073) -> accuracy: 51.4941%

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=8 is 56.7444

testing acc 56.5060

Time(HH:MM:SS): 10:12:51

Leaving function \_\_main\_\_