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)

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(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/kernel:0', TensorShape([Dimension(400), Dimension(200)]), 80000)

(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)

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(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 = 51.2467%

Class turkey : (5586/9025) -> accuracy: 61.8947%

Class germany: (5141/8906) -> accuracy: 57.7251%

Class russia : (5125/9026) -> accuracy: 56.7804%

Class us : (3970/9085) -> accuracy: 43.6984%

Class france : (3239/8958) -> accuracy: 36.1576%

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

INFO:root: Best accuracy 51.2467% at epoch 1/10 (23061/45000)

DEV accuracy on epoch 1/10 in train step 2022 = 52.9267%

Class turkey : (5284/9025) -> accuracy: 58.5485%

Class germany: (4454/8906) -> accuracy: 50.0112%

Class russia : (4843/9026) -> accuracy: 53.6561%

Class us : (4720/9085) -> accuracy: 51.9538%

Class france : (4516/8958) -> accuracy: 50.4130%

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

INFO:root: Best accuracy 52.9267% at epoch 1/10 (23817/45000)

Epoch run time: 01:00:46

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Epoch: 2/10 ---- best so far on epoch 1: acc=52.9267%

DEV accuracy on epoch 2/10 in train step 1012 = 54.5422%

Class turkey : (6222/9025) -> accuracy: 68.9418%

Class germany: (4105/8906) -> accuracy: 46.0925%

Class russia : (5663/9026) -> accuracy: 62.7410%

Class us : (4945/9085) -> accuracy: 54.4304%

Class france : (3609/8958) -> accuracy: 40.2880%

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

INFO:root: Best accuracy 54.5422% at epoch 2/10 (24544/45000)

DEV accuracy on epoch 2/10 in train step 2022 = 55.0733%

Class turkey : (5338/9025) -> accuracy: 59.1468%

Class germany: (4365/8906) -> accuracy: 49.0119%

Class russia : (5497/9026) -> accuracy: 60.9018%

Class us : (4912/9085) -> accuracy: 54.0671%

Class france : (4671/8958) -> accuracy: 52.1433%

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

INFO:root: Best accuracy 55.0733% at epoch 2/10 (24783/45000)

Epoch run time: 01:00:29

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Epoch: 3/10 ---- best so far on epoch 2: acc=55.0733%

DEV accuracy on epoch 3/10 in train step 1012 = 55.8733%

Class turkey : (6306/9025) -> accuracy: 69.8726%

Class germany: (4190/8906) -> accuracy: 47.0469%

Class russia : (5610/9026) -> accuracy: 62.1538%

Class us : (4968/9085) -> accuracy: 54.6835%

Class france : (4069/8958) -> accuracy: 45.4231%

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

INFO:root: Best accuracy 55.8733% at epoch 3/10 (25143/45000)

DEV accuracy on epoch 3/10 in train step 2022 = 56.0356%

Class turkey : (5300/9025) -> accuracy: 58.7258%

Class germany: (4713/8906) -> accuracy: 52.9194%

Class russia : (5526/9026) -> accuracy: 61.2231%

Class us : (5014/9085) -> accuracy: 55.1899%

Class france : (4663/8958) -> accuracy: 52.0540%

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

INFO:root: Best accuracy 56.0356% at epoch 3/10 (25216/45000)

Epoch run time: 01:02:40

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Epoch: 4/10 ---- best so far on epoch 3: acc=56.0356%

DEV accuracy on epoch 4/10 in train step 1012 = 56.5244%

Class turkey : (6068/9025) -> accuracy: 67.2355%

Class germany: (4615/8906) -> accuracy: 51.8190%

Class russia : (5538/9026) -> accuracy: 61.3561%

Class us : (4736/9085) -> accuracy: 52.1299%

Class france : (4479/8958) -> accuracy: 50.0000%

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

INFO:root: Best accuracy 56.5244% at epoch 4/10 (25436/45000)

DEV accuracy on epoch 4/10 in train step 2022 = 56.5867%

Class turkey : (5222/9025) -> accuracy: 57.8615%

Class germany: (5001/8906) -> accuracy: 56.1532%

Class russia : (5698/9026) -> accuracy: 63.1287%

Class us : (4772/9085) -> accuracy: 52.5261%

Class france : (4771/8958) -> accuracy: 53.2597%

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

INFO:root: Best accuracy 56.5867% at epoch 4/10 (25464/45000)

Epoch run time: 01:01:25

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Epoch: 5/10 ---- best so far on epoch 4: acc=56.5867%

DEV accuracy on epoch 5/10 in train step 1012 = 56.7600%

Class turkey : (6067/9025) -> accuracy: 67.2244%

Class germany: (4498/8906) -> accuracy: 50.5053%

Class russia : (5574/9026) -> accuracy: 61.7549%

Class us : (4682/9085) -> accuracy: 51.5355%

Class france : (4721/8958) -> accuracy: 52.7015%

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

INFO:root: Best accuracy 56.7600% at epoch 5/10 (25542/45000)

DEV accuracy on epoch 5/10 in train step 2022 = 56.9378%

Class turkey : (5462/9025) -> accuracy: 60.5208%

Class germany: (5108/8906) -> accuracy: 57.3546%

Class russia : (5906/9026) -> accuracy: 65.4332%

Class us : (4636/9085) -> accuracy: 51.0292%

Class france : (4510/8958) -> accuracy: 50.3461%

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

INFO:root: Best accuracy 56.9378% at epoch 5/10 (25622/45000)

Epoch run time: 01:01:04

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Epoch: 6/10 ---- best so far on epoch 5: acc=56.9378%

DEV accuracy on epoch 6/10 in train step 1012 = 56.8622%

Class turkey : (6086/9025) -> accuracy: 67.4349%

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

Class russia : (5355/9026) -> accuracy: 59.3286%

Class us : (4931/9085) -> accuracy: 54.2763%

Class france : (4646/8958) -> accuracy: 51.8643%

DEV accuracy on epoch 6/10 in train step 2022 = 57.0444%

Class turkey : (5794/9025) -> accuracy: 64.1994%

Class germany: (5249/8906) -> accuracy: 58.9378%

Class russia : (5813/9026) -> accuracy: 64.4028%

Class us : (4523/9085) -> accuracy: 49.7854%

Class france : (4291/8958) -> accuracy: 47.9013%

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

INFO:root: Best accuracy 57.0444% at epoch 6/10 (25670/45000)

Epoch run time: 01:00:46

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Epoch: 7/10 ---- best so far on epoch 6: acc=57.0444%

DEV accuracy on epoch 7/10 in train step 1012 = 56.8156%

Class turkey : (5813/9025) -> accuracy: 64.4100%

Class germany: (4704/8906) -> accuracy: 52.8183%

Class russia : (5396/9026) -> accuracy: 59.7828%

Class us : (5076/9085) -> accuracy: 55.8723%

Class france : (4578/8958) -> accuracy: 51.1052%

DEV accuracy on epoch 7/10 in train step 2022 = 56.8600%

Class turkey : (6111/9025) -> accuracy: 67.7119%

Class germany: (5292/8906) -> accuracy: 59.4206%

Class russia : (5469/9026) -> accuracy: 60.5916%

Class us : (4455/9085) -> accuracy: 49.0369%

Class france : (4260/8958) -> accuracy: 47.5553%

Epoch run time: 01:00:17

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Epoch: 8/10 ---- best so far on epoch 6: acc=57.0444%

DEV accuracy on epoch 8/10 in train step 1012 = 56.7111%

Class turkey : (5770/9025) -> accuracy: 63.9335%

Class germany: (4594/8906) -> accuracy: 51.5832%

Class russia : (5541/9026) -> accuracy: 61.3893%

Class us : (5037/9085) -> accuracy: 55.4430%

Class france : (4578/8958) -> accuracy: 51.1052%

DEV accuracy on epoch 8/10 in train step 2022 = 55.5733%

Class turkey : (6363/9025) -> accuracy: 70.5042%

Class germany: (4389/8906) -> accuracy: 49.2814%

Class russia : (5179/9026) -> accuracy: 57.3787%

Class us : (4403/9085) -> accuracy: 48.4645%

Class france : (4674/8958) -> accuracy: 52.1768%

Epoch run time: 01:00:17

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Epoch: 9/10 ---- best so far on epoch 6: acc=57.0444%

DEV accuracy on epoch 9/10 in train step 1012 = 56.3533%

Class turkey : (5607/9025) -> accuracy: 62.1274%

Class germany: (4529/8906) -> accuracy: 50.8534%

Class russia : (5688/9026) -> accuracy: 63.0179%

Class us : (5082/9085) -> accuracy: 55.9384%

Class france : (4453/8958) -> accuracy: 49.7098%

DEV accuracy on epoch 9/10 in train step 2022 = 56.4911%

Class turkey : (5673/9025) -> accuracy: 62.8587%

Class germany: (5213/8906) -> accuracy: 58.5336%

Class russia : (5541/9026) -> accuracy: 61.3893%

Class us : (4628/9085) -> accuracy: 50.9411%

Class france : (4366/8958) -> accuracy: 48.7386%

Epoch run time: 01:00:18

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Epoch: 10/10 ---- best so far on epoch 6: acc=57.0444%

DEV accuracy on epoch 10/10 in train step 1012 = 56.3378%

Class turkey : (5706/9025) -> accuracy: 63.2244%

Class germany: (4714/8906) -> accuracy: 52.9306%

Class russia : (5493/9026) -> accuracy: 60.8575%

Class us : (4944/9085) -> accuracy: 54.4194%

Class france : (4495/8958) -> accuracy: 50.1786%

DEV accuracy on epoch 10/10 in train step 2022 = 56.2022%

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

Class germany: (5282/8906) -> accuracy: 59.3083%

Class russia : (5536/9026) -> accuracy: 61.3339%

Class us : (4526/9085) -> accuracy: 49.8184%

Class france : (4453/8958) -> accuracy: 49.7098%

Epoch run time: 01:00:16

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\*\*\*Training is complete. Best accuracy 57.0444% at epoch 6/10

\*\*\*Testing...

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

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

Accuracy on test set - (28241/50000) -> accuracy: 56.4820%

Class turkey : (6256/9957) -> accuracy: 62.8302%

Class germany: (5871/9905) -> accuracy: 59.2731%

Class russia : (6504/10046) -> accuracy: 64.7422%

Class us : (4832/10019) -> accuracy: 48.2284%

Class france : (4778/10073) -> accuracy: 47.4337%

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=6 is 57.0444

testing acc 56.4820

Time(HH:MM:SS): 10:14:10

Leaving function \_\_main\_\_