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: 300

gru\_backward\_cell units: 300

---vars name and shapes---

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/kernel:0', TensorShape([Dimension(600), Dimension(600)]), 360000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/bias:0', TensorShape([Dimension(600)]), 600)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/kernel:0', TensorShape([Dimension(600), Dimension(300)]), 180000)

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

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/kernel:0', TensorShape([Dimension(600), Dimension(600)]), 360000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/bias:0', TensorShape([Dimension(600)]), 600)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/kernel:0', TensorShape([Dimension(600), Dimension(300)]), 180000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/bias:0', TensorShape([Dimension(300)]), 300)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/kernel:0', TensorShape([Dimension(600), Dimension(600)]), 360000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/bias:0', TensorShape([Dimension(600)]), 600)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/kernel:0', TensorShape([Dimension(600), Dimension(300)]), 180000)

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

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/kernel:0', TensorShape([Dimension(600), Dimension(600)]), 360000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/bias:0', TensorShape([Dimension(600)]), 600)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/kernel:0', TensorShape([Dimension(600), Dimension(300)]), 180000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/bias:0', TensorShape([Dimension(300)]), 300)

(u'weight:0', TensorShape([Dimension(600), Dimension(5)]), 3000)

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

total PARAM 2,166,605

---done vars---

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

DEV accuracy on epoch 1/10 in train step 506 = 48.6786%

Class turkey : (2588/4422) -> accuracy: 58.5256%

Class germany: (1359/4405) -> accuracy: 30.8513%

Class russia : (2944/4506) -> accuracy: 65.3351%

Class us : (2490/4495) -> accuracy: 55.3949%

Class france : (1523/4572) -> accuracy: 33.3115%

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

INFO:root: Best accuracy 48.6786% at epoch 1/10 (10904/22400)

DEV accuracy on epoch 1/10 in train step 1009 = 52.9464%

Class turkey : (2476/4422) -> accuracy: 55.9928%

Class germany: (2105/4405) -> accuracy: 47.7866%

Class russia : (3265/4506) -> accuracy: 72.4589%

Class us : (2371/4495) -> accuracy: 52.7475%

Class france : (1643/4572) -> accuracy: 35.9361%

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

INFO:root: Best accuracy 52.9464% at epoch 1/10 (11860/22400)

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Epoch: 2/10 ---- best so far on epoch 1: acc=52.9464%

DEV accuracy on epoch 2/10 in train step 506 = 55.6964%

Class turkey : (3024/4422) -> accuracy: 68.3853%

Class germany: (1854/4405) -> accuracy: 42.0885%

Class russia : (3168/4506) -> accuracy: 70.3063%

Class us : (2170/4495) -> accuracy: 48.2759%

Class france : (2260/4572) -> accuracy: 49.4313%

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

INFO:root: Best accuracy 55.6964% at epoch 2/10 (12476/22400)

DEV accuracy on epoch 2/10 in train step 1009 = 56.2679%

Class turkey : (2814/4422) -> accuracy: 63.6364%

Class germany: (2155/4405) -> accuracy: 48.9217%

Class russia : (3202/4506) -> accuracy: 71.0608%

Class us : (2716/4495) -> accuracy: 60.4227%

Class france : (1717/4572) -> accuracy: 37.5547%

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

INFO:root: Best accuracy 56.2679% at epoch 2/10 (12604/22400)

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Epoch: 3/10 ---- best so far on epoch 2: acc=56.2679%

DEV accuracy on epoch 3/10 in train step 506 = 57.6116%

Class turkey : (2993/4422) -> accuracy: 67.6843%

Class germany: (2307/4405) -> accuracy: 52.3723%

Class russia : (2948/4506) -> accuracy: 65.4239%

Class us : (2278/4495) -> accuracy: 50.6785%

Class france : (2379/4572) -> accuracy: 52.0341%

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

INFO:root: Best accuracy 57.6116% at epoch 3/10 (12905/22400)

DEV accuracy on epoch 3/10 in train step 1009 = 57.4732%

Class turkey : (2875/4422) -> accuracy: 65.0158%

Class germany: (2224/4405) -> accuracy: 50.4881%

Class russia : (3158/4506) -> accuracy: 70.0843%

Class us : (2792/4495) -> accuracy: 62.1135%

Class france : (1825/4572) -> accuracy: 39.9169%

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Epoch: 4/10 ---- best so far on epoch 3: acc=57.6116%

DEV accuracy on epoch 4/10 in train step 506 = 57.6786%

Class turkey : (3114/4422) -> accuracy: 70.4206%

Class germany: (2334/4405) -> accuracy: 52.9852%

Class russia : (2821/4506) -> accuracy: 62.6054%

Class us : (2357/4495) -> accuracy: 52.4360%

Class france : (2294/4572) -> accuracy: 50.1750%

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

INFO:root: Best accuracy 57.6786% at epoch 4/10 (12920/22400)

DEV accuracy on epoch 4/10 in train step 1009 = 57.4955%

Class turkey : (2811/4422) -> accuracy: 63.5685%

Class germany: (2369/4405) -> accuracy: 53.7798%

Class russia : (3081/4506) -> accuracy: 68.3755%

Class us : (2646/4495) -> accuracy: 58.8654%

Class france : (1972/4572) -> accuracy: 43.1321%

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Epoch: 5/10 ---- best so far on epoch 4: acc=57.6786%

DEV accuracy on epoch 5/10 in train step 506 = 56.9598%

Class turkey : (3112/4422) -> accuracy: 70.3754%

Class germany: (2352/4405) -> accuracy: 53.3939%

Class russia : (2715/4506) -> accuracy: 60.2530%

Class us : (2359/4495) -> accuracy: 52.4805%

Class france : (2221/4572) -> accuracy: 48.5783%

DEV accuracy on epoch 5/10 in train step 1009 = 56.6295%

Class turkey : (2836/4422) -> accuracy: 64.1339%

Class germany: (2545/4405) -> accuracy: 57.7753%

Class russia : (2794/4506) -> accuracy: 62.0062%

Class us : (2486/4495) -> accuracy: 55.3059%

Class france : (2024/4572) -> accuracy: 44.2695%

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Epoch: 6/10 ---- best so far on epoch 4: acc=57.6786%

DEV accuracy on epoch 6/10 in train step 506 = 55.9196%

Class turkey : (2810/4422) -> accuracy: 63.5459%

Class germany: (2430/4405) -> accuracy: 55.1646%

Class russia : (2565/4506) -> accuracy: 56.9241%

Class us : (2468/4495) -> accuracy: 54.9055%

Class france : (2253/4572) -> accuracy: 49.2782%

DEV accuracy on epoch 6/10 in train step 1009 = 55.9241%

Class turkey : (2531/4422) -> accuracy: 57.2365%

Class germany: (2409/4405) -> accuracy: 54.6879%

Class russia : (3019/4506) -> accuracy: 66.9996%

Class us : (2458/4495) -> accuracy: 54.6830%

Class france : (2110/4572) -> accuracy: 46.1505%

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Epoch: 7/10 ---- best so far on epoch 4: acc=57.6786%

DEV accuracy on epoch 7/10 in train step 506 = 55.1250%

Class turkey : (2674/4422) -> accuracy: 60.4704%

Class germany: (2191/4405) -> accuracy: 49.7389%

Class russia : (2630/4506) -> accuracy: 58.3666%

Class us : (2695/4495) -> accuracy: 59.9555%

Class france : (2158/4572) -> accuracy: 47.2003%

DEV accuracy on epoch 7/10 in train step 1009 = 54.8973%

Class turkey : (2558/4422) -> accuracy: 57.8471%

Class germany: (2213/4405) -> accuracy: 50.2384%

Class russia : (3349/4506) -> accuracy: 74.3231%

Class us : (2146/4495) -> accuracy: 47.7419%

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

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Epoch: 8/10 ---- best so far on epoch 4: acc=57.6786%

DEV accuracy on epoch 8/10 in train step 506 = 54.8527%

Class turkey : (2838/4422) -> accuracy: 64.1791%

Class germany: (2017/4405) -> accuracy: 45.7889%

Class russia : (2758/4506) -> accuracy: 61.2073%

Class us : (2609/4495) -> accuracy: 58.0423%

Class france : (2065/4572) -> accuracy: 45.1662%

DEV accuracy on epoch 8/10 in train step 1009 = 54.5402%

Class turkey : (2870/4422) -> accuracy: 64.9028%

Class germany: (1709/4405) -> accuracy: 38.7968%

Class russia : (2985/4506) -> accuracy: 66.2450%

Class us : (2166/4495) -> accuracy: 48.1869%

Class france : (2487/4572) -> accuracy: 54.3963%

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Epoch: 9/10 ---- best so far on epoch 4: acc=57.6786%

DEV accuracy on epoch 9/10 in train step 506 = 54.1205%

Class turkey : (3163/4422) -> accuracy: 71.5287%

Class germany: (1901/4405) -> accuracy: 43.1555%

Class russia : (3075/4506) -> accuracy: 68.2423%

Class us : (1961/4495) -> accuracy: 43.6263%

Class france : (2023/4572) -> accuracy: 44.2476%

DEV accuracy on epoch 9/10 in train step 1009 = 53.9464%

Class turkey : (2971/4422) -> accuracy: 67.1868%

Class germany: (1575/4405) -> accuracy: 35.7548%

Class russia : (2667/4506) -> accuracy: 59.1877%

Class us : (2268/4495) -> accuracy: 50.4561%

Class france : (2603/4572) -> accuracy: 56.9335%

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Epoch: 10/10 ---- best so far on epoch 4: acc=57.6786%

DEV accuracy on epoch 10/10 in train step 506 = 53.9420%

Class turkey : (3172/4422) -> accuracy: 71.7322%

Class germany: (2048/4405) -> accuracy: 46.4926%

Class russia : (2768/4506) -> accuracy: 61.4292%

Class us : (1901/4495) -> accuracy: 42.2914%

Class france : (2194/4572) -> accuracy: 47.9878%

DEV accuracy on epoch 10/10 in train step 1009 = 53.2902%

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

Class germany: (1650/4405) -> accuracy: 37.4574%

Class russia : (2502/4506) -> accuracy: 55.5260%

Class us : (2535/4495) -> accuracy: 56.3960%

Class france : (2398/4572) -> accuracy: 52.4497%

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\*\*\*Training is complete. Best accuracy 57.6786% 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 - (14303/25000) -> accuracy: 57.2120%

Class turkey : (3516/4971) -> accuracy: 70.7302%

Class germany: (2655/5035) -> accuracy: 52.7309%

Class russia : (3109/5020) -> accuracy: 61.9323%

Class us : (2569/4954) -> accuracy: 51.8571%

Class france : (2454/5020) -> accuracy: 48.8845%

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 300

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 57.6785714286

testing acc 57.212

Time(HH:MM:SS): 03:39:16

Leaving function \_\_main\_\_