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(400), Dimension(600)]), 240000)

(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(400), Dimension(300)]), 120000)

(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(400), Dimension(600)]), 240000)

(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(400), Dimension(300)]), 120000)

(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 1,806,605

---done vars---

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

DEV accuracy on epoch 1/10 in train step 506 = 20.0670%

Class turkey : (0/4422) -> accuracy: 0.0000%

Class germany: (0/4405) -> accuracy: 0.0000%

Class russia : (0/4506) -> accuracy: 0.0000%

Class us : (4495/4495) -> accuracy: 100.0000%

Class france : (0/4572) -> accuracy: 0.0000%

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

INFO:root: Best accuracy 20.0670% at epoch 1/10 (4495/22400)

DEV accuracy on epoch 1/10 in train step 1009 = 50.2009%

Class turkey : (2297/4422) -> accuracy: 51.9448%

Class germany: (2248/4405) -> accuracy: 51.0329%

Class russia : (2980/4506) -> accuracy: 66.1340%

Class us : (2095/4495) -> accuracy: 46.6073%

Class france : (1625/4572) -> accuracy: 35.5424%

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

INFO:root: Best accuracy 50.2009% at epoch 1/10 (11245/22400)

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Epoch: 2/10 ---- best so far on epoch 1: acc=50.2009%

DEV accuracy on epoch 2/10 in train step 506 = 52.3170%

Class turkey : (2880/4422) -> accuracy: 65.1289%

Class germany: (1627/4405) -> accuracy: 36.9353%

Class russia : (3160/4506) -> accuracy: 70.1287%

Class us : (2149/4495) -> accuracy: 47.8087%

Class france : (1903/4572) -> accuracy: 41.6229%

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

INFO:root: Best accuracy 52.3170% at epoch 2/10 (11719/22400)

DEV accuracy on epoch 2/10 in train step 1009 = 53.9152%

Class turkey : (2480/4422) -> accuracy: 56.0832%

Class germany: (1977/4405) -> accuracy: 44.8808%

Class russia : (3130/4506) -> accuracy: 69.4629%

Class us : (2566/4495) -> accuracy: 57.0857%

Class france : (1924/4572) -> accuracy: 42.0822%

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

INFO:root: Best accuracy 53.9152% at epoch 2/10 (12077/22400)

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Epoch: 3/10 ---- best so far on epoch 2: acc=53.9152%

DEV accuracy on epoch 3/10 in train step 506 = 54.8929%

Class turkey : (2984/4422) -> accuracy: 67.4808%

Class germany: (1835/4405) -> accuracy: 41.6572%

Class russia : (3123/4506) -> accuracy: 69.3076%

Class us : (2291/4495) -> accuracy: 50.9677%

Class france : (2063/4572) -> accuracy: 45.1225%

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

INFO:root: Best accuracy 54.8929% at epoch 3/10 (12296/22400)

DEV accuracy on epoch 3/10 in train step 1009 = 55.4152%

Class turkey : (2686/4422) -> accuracy: 60.7417%

Class germany: (2027/4405) -> accuracy: 46.0159%

Class russia : (3201/4506) -> accuracy: 71.0386%

Class us : (2584/4495) -> accuracy: 57.4861%

Class france : (1915/4572) -> accuracy: 41.8854%

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

INFO:root: Best accuracy 55.4152% at epoch 3/10 (12413/22400)

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Epoch: 4/10 ---- best so far on epoch 3: acc=55.4152%

DEV accuracy on epoch 4/10 in train step 506 = 55.9375%

Class turkey : (2984/4422) -> accuracy: 67.4808%

Class germany: (1916/4405) -> accuracy: 43.4960%

Class russia : (2974/4506) -> accuracy: 66.0009%

Class us : (2476/4495) -> accuracy: 55.0834%

Class france : (2180/4572) -> accuracy: 47.6815%

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

INFO:root: Best accuracy 55.9375% at epoch 4/10 (12530/22400)

DEV accuracy on epoch 4/10 in train step 1009 = 55.8393%

Class turkey : (2767/4422) -> accuracy: 62.5735%

Class germany: (2001/4405) -> accuracy: 45.4257%

Class russia : (3123/4506) -> accuracy: 69.3076%

Class us : (2608/4495) -> accuracy: 58.0200%

Class france : (2009/4572) -> accuracy: 43.9414%

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Epoch: 5/10 ---- best so far on epoch 4: acc=55.9375%

DEV accuracy on epoch 5/10 in train step 506 = 56.1473%

Class turkey : (2998/4422) -> accuracy: 67.7974%

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

Class russia : (2890/4506) -> accuracy: 64.1367%

Class us : (2483/4495) -> accuracy: 55.2392%

Class france : (2226/4572) -> accuracy: 48.6877%

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

INFO:root: Best accuracy 56.1473% at epoch 5/10 (12577/22400)

DEV accuracy on epoch 5/10 in train step 1009 = 55.7277%

Class turkey : (2776/4422) -> accuracy: 62.7770%

Class germany: (2045/4405) -> accuracy: 46.4245%

Class russia : (2963/4506) -> accuracy: 65.7568%

Class us : (2551/4495) -> accuracy: 56.7519%

Class france : (2148/4572) -> accuracy: 46.9816%

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Epoch: 6/10 ---- best so far on epoch 5: acc=56.1473%

DEV accuracy on epoch 6/10 in train step 506 = 55.5312%

Class turkey : (2914/4422) -> accuracy: 65.8978%

Class germany: (1977/4405) -> accuracy: 44.8808%

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

Class us : (2547/4495) -> accuracy: 56.6630%

Class france : (2180/4572) -> accuracy: 47.6815%

DEV accuracy on epoch 6/10 in train step 1009 = 55.2232%

Class turkey : (2673/4422) -> accuracy: 60.4478%

Class germany: (2111/4405) -> accuracy: 47.9228%

Class russia : (2817/4506) -> accuracy: 62.5166%

Class us : (2620/4495) -> accuracy: 58.2870%

Class france : (2149/4572) -> accuracy: 47.0035%

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Epoch: 7/10 ---- best so far on epoch 5: acc=56.1473%

DEV accuracy on epoch 7/10 in train step 506 = 54.7143%

Class turkey : (2802/4422) -> accuracy: 63.3650%

Class germany: (1925/4405) -> accuracy: 43.7003%

Class russia : (2621/4506) -> accuracy: 58.1669%

Class us : (2607/4495) -> accuracy: 57.9978%

Class france : (2301/4572) -> accuracy: 50.3281%

DEV accuracy on epoch 7/10 in train step 1009 = 54.6205%

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

Class germany: (1912/4405) -> accuracy: 43.4052%

Class russia : (2793/4506) -> accuracy: 61.9840%

Class us : (2591/4495) -> accuracy: 57.6418%

Class france : (2351/4572) -> accuracy: 51.4217%

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Epoch: 8/10 ---- best so far on epoch 5: acc=56.1473%

DEV accuracy on epoch 8/10 in train step 506 = 53.5982%

Class turkey : (2671/4422) -> accuracy: 60.4025%

Class germany: (2020/4405) -> accuracy: 45.8570%

Class russia : (2450/4506) -> accuracy: 54.3719%

Class us : (2549/4495) -> accuracy: 56.7075%

Class france : (2316/4572) -> accuracy: 50.6562%

DEV accuracy on epoch 8/10 in train step 1009 = 53.7812%

Class turkey : (2555/4422) -> accuracy: 57.7793%

Class germany: (1608/4405) -> accuracy: 36.5040%

Class russia : (3119/4506) -> accuracy: 69.2188%

Class us : (2360/4495) -> accuracy: 52.5028%

Class france : (2405/4572) -> accuracy: 52.6028%

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Epoch: 9/10 ---- best so far on epoch 5: acc=56.1473%

DEV accuracy on epoch 9/10 in train step 506 = 52.5982%

Class turkey : (2823/4422) -> accuracy: 63.8399%

Class germany: (1858/4405) -> accuracy: 42.1793%

Class russia : (2321/4506) -> accuracy: 51.5091%

Class us : (2686/4495) -> accuracy: 59.7553%

Class france : (2094/4572) -> accuracy: 45.8005%

DEV accuracy on epoch 9/10 in train step 1009 = 53.2723%

Class turkey : (2897/4422) -> accuracy: 65.5133%

Class germany: (1627/4405) -> accuracy: 36.9353%

Class russia : (2990/4506) -> accuracy: 66.3560%

Class us : (2195/4495) -> accuracy: 48.8320%

Class france : (2224/4572) -> accuracy: 48.6439%

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Epoch: 10/10 ---- best so far on epoch 5: acc=56.1473%

DEV accuracy on epoch 10/10 in train step 506 = 52.4821%

Class turkey : (2976/4422) -> accuracy: 67.2999%

Class germany: (1782/4405) -> accuracy: 40.4540%

Class russia : (2562/4506) -> accuracy: 56.8575%

Class us : (2374/4495) -> accuracy: 52.8142%

Class france : (2062/4572) -> accuracy: 45.1006%

DEV accuracy on epoch 10/10 in train step 1009 = 52.8884%

Class turkey : (2882/4422) -> accuracy: 65.1741%

Class germany: (1532/4405) -> accuracy: 34.7787%

Class russia : (2828/4506) -> accuracy: 62.7608%

Class us : (2421/4495) -> accuracy: 53.8598%

Class france : (2184/4572) -> accuracy: 47.7690%

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\*\*\*Training is complete. Best accuracy 56.1473% at epoch 5/10

\*\*\*Testing...

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

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

Accuracy on test set - (13900/25000) -> accuracy: 55.6000%

Class turkey : (3434/4971) -> accuracy: 69.0807%

Class germany: (2223/5035) -> accuracy: 44.1509%

Class russia : (3207/5020) -> accuracy: 63.8845%

Class us : (2660/4954) -> accuracy: 53.6940%

Class france : (2376/5020) -> accuracy: 47.3307%

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.100d.txt

EMB\_DIM 100

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=5 is 56.1473214286

testing acc 55.6

Time(HH:MM:SS): 03:15:33

Leaving function \_\_main\_\_