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: 150

gru\_backward\_cell units: 150

---vars name and shapes---

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/kernel:0', TensorShape([Dimension(450), Dimension(300)]), 135000)

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

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/kernel:0', TensorShape([Dimension(450), Dimension(150)]), 67500)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/kernel:0', TensorShape([Dimension(300), Dimension(300)]), 90000)

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

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/kernel:0', TensorShape([Dimension(300), Dimension(150)]), 45000)

(u'bidirectional\_rnn/fw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/kernel:0', TensorShape([Dimension(450), Dimension(300)]), 135000)

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

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/kernel:0', TensorShape([Dimension(450), Dimension(150)]), 67500)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/kernel:0', TensorShape([Dimension(300), Dimension(300)]), 90000)

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

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/kernel:0', TensorShape([Dimension(300), Dimension(150)]), 45000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/candidate/bias:0', TensorShape([Dimension(150)]), 150)

(u'weight:0', TensorShape([Dimension(300), Dimension(5)]), 1500)

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

total PARAM 678,305

---done vars---

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

DEV accuracy on epoch 1/10 in train step 1012 = 51.6822%

Class turkey : (6201/9025) -> accuracy: 68.7091%

Class germany: (3915/8906) -> accuracy: 43.9591%

Class russia : (5328/9026) -> accuracy: 59.0295%

Class us : (4364/9085) -> accuracy: 48.0352%

Class france : (3449/8958) -> accuracy: 38.5019%

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

INFO:root: Best accuracy 51.6822% at epoch 1/10 (23257/45000)

DEV accuracy on epoch 1/10 in train step 2022 = 53.7644%

Class turkey : (5424/9025) -> accuracy: 60.0997%

Class germany: (5015/8906) -> accuracy: 56.3104%

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

Class us : (4784/9085) -> accuracy: 52.6582%

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

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

INFO:root: Best accuracy 53.7644% at epoch 1/10 (24194/45000)

Epoch run time: 00:30:01

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Epoch: 2/10 ---- best so far on epoch 1: acc=53.7644%

DEV accuracy on epoch 2/10 in train step 1012 = 55.7200%

Class turkey : (6110/9025) -> accuracy: 67.7008%

Class germany: (4595/8906) -> accuracy: 51.5944%

Class russia : (5622/9026) -> accuracy: 62.2867%

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

Class france : (4111/8958) -> accuracy: 45.8919%

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

INFO:root: Best accuracy 55.7200% at epoch 2/10 (25074/45000)

DEV accuracy on epoch 2/10 in train step 2022 = 56.1844%

Class turkey : (5583/9025) -> accuracy: 61.8615%

Class germany: (5274/8906) -> accuracy: 59.2185%

Class russia : (5349/9026) -> accuracy: 59.2621%

Class us : (4746/9085) -> accuracy: 52.2400%

Class france : (4331/8958) -> accuracy: 48.3478%

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

INFO:root: Best accuracy 56.1844% at epoch 2/10 (25283/45000)

Epoch run time: 00:29:41

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Epoch: 3/10 ---- best so far on epoch 2: acc=56.1844%

DEV accuracy on epoch 3/10 in train step 1012 = 56.9156%

Class turkey : (6037/9025) -> accuracy: 66.8920%

Class germany: (4515/8906) -> accuracy: 50.6962%

Class russia : (5946/9026) -> accuracy: 65.8764%

Class us : (4902/9085) -> accuracy: 53.9571%

Class france : (4212/8958) -> accuracy: 47.0194%

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

INFO:root: Best accuracy 56.9156% at epoch 3/10 (25612/45000)

DEV accuracy on epoch 3/10 in train step 2022 = 56.9622%

Class turkey : (5651/9025) -> accuracy: 62.6150%

Class germany: (5248/8906) -> accuracy: 58.9266%

Class russia : (5490/9026) -> accuracy: 60.8243%

Class us : (4752/9085) -> accuracy: 52.3060%

Class france : (4492/8958) -> accuracy: 50.1451%

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

INFO:root: Best accuracy 56.9622% at epoch 3/10 (25633/45000)

Epoch run time: 00:29:44

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Epoch: 4/10 ---- best so far on epoch 3: acc=56.9622%

DEV accuracy on epoch 4/10 in train step 1012 = 57.3378%

Class turkey : (6136/9025) -> accuracy: 67.9889%

Class germany: (4549/8906) -> accuracy: 51.0779%

Class russia : (5787/9026) -> accuracy: 64.1148%

Class us : (5013/9085) -> accuracy: 55.1789%

Class france : (4317/8958) -> accuracy: 48.1916%

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

INFO:root: Best accuracy 57.3378% at epoch 4/10 (25802/45000)

DEV accuracy on epoch 4/10 in train step 2022 = 57.4578%

Class turkey : (5937/9025) -> accuracy: 65.7839%

Class germany: (5084/8906) -> accuracy: 57.0851%

Class russia : (5754/9026) -> accuracy: 63.7492%

Class us : (4792/9085) -> accuracy: 52.7463%

Class france : (4289/8958) -> accuracy: 47.8790%

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

INFO:root: Best accuracy 57.4578% at epoch 4/10 (25856/45000)

Epoch run time: 00:29:38

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Epoch: 5/10 ---- best so far on epoch 4: acc=57.4578%

DEV accuracy on epoch 5/10 in train step 1012 = 57.4489%

Class turkey : (6085/9025) -> accuracy: 67.4238%

Class germany: (4590/8906) -> accuracy: 51.5383%

Class russia : (5814/9026) -> accuracy: 64.4139%

Class us : (4911/9085) -> accuracy: 54.0561%

Class france : (4452/8958) -> accuracy: 49.6986%

DEV accuracy on epoch 5/10 in train step 2022 = 57.3467%

Class turkey : (5932/9025) -> accuracy: 65.7285%

Class germany: (5147/8906) -> accuracy: 57.7925%

Class russia : (5648/9026) -> accuracy: 62.5748%

Class us : (4538/9085) -> accuracy: 49.9505%

Class france : (4541/8958) -> accuracy: 50.6921%

Epoch run time: 00:29:37

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Epoch: 6/10 ---- best so far on epoch 4: acc=57.4578%

DEV accuracy on epoch 6/10 in train step 1012 = 57.0422%

Class turkey : (6005/9025) -> accuracy: 66.5374%

Class germany: (4639/8906) -> accuracy: 52.0885%

Class russia : (5793/9026) -> accuracy: 64.1813%

Class us : (4678/9085) -> accuracy: 51.4915%

Class france : (4554/8958) -> accuracy: 50.8372%

DEV accuracy on epoch 6/10 in train step 2022 = 57.2067%

Class turkey : (6018/9025) -> accuracy: 66.6814%

Class germany: (5031/8906) -> accuracy: 56.4900%

Class russia : (5825/9026) -> accuracy: 64.5358%

Class us : (4649/9085) -> accuracy: 51.1723%

Class france : (4220/8958) -> accuracy: 47.1087%

Epoch run time: 00:29:38

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Epoch: 7/10 ---- best so far on epoch 4: acc=57.4578%

DEV accuracy on epoch 7/10 in train step 1012 = 56.7800%

Class turkey : (5823/9025) -> accuracy: 64.5208%

Class germany: (4635/8906) -> accuracy: 52.0436%

Class russia : (5905/9026) -> accuracy: 65.4221%

Class us : (4486/9085) -> accuracy: 49.3781%

Class france : (4702/8958) -> accuracy: 52.4894%

DEV accuracy on epoch 7/10 in train step 2022 = 56.7089%

Class turkey : (6109/9025) -> accuracy: 67.6898%

Class germany: (4813/8906) -> accuracy: 54.0422%

Class russia : (5692/9026) -> accuracy: 63.0623%

Class us : (4486/9085) -> accuracy: 49.3781%

Class france : (4419/8958) -> accuracy: 49.3302%

Epoch run time: 00:29:36

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Epoch: 8/10 ---- best so far on epoch 4: acc=57.4578%

DEV accuracy on epoch 8/10 in train step 1012 = 56.5600%

Class turkey : (5635/9025) -> accuracy: 62.4377%

Class germany: (4722/8906) -> accuracy: 53.0204%

Class russia : (5932/9026) -> accuracy: 65.7212%

Class us : (4683/9085) -> accuracy: 51.5465%

Class france : (4480/8958) -> accuracy: 50.0112%

DEV accuracy on epoch 8/10 in train step 2022 = 56.2556%

Class turkey : (6262/9025) -> accuracy: 69.3850%

Class germany: (4743/8906) -> accuracy: 53.2562%

Class russia : (5274/9026) -> accuracy: 58.4312%

Class us : (4586/9085) -> accuracy: 50.4788%

Class france : (4450/8958) -> accuracy: 49.6763%

Epoch run time: 00:29:36

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Epoch: 9/10 ---- best so far on epoch 4: acc=57.4578%

DEV accuracy on epoch 9/10 in train step 1012 = 56.2133%

Class turkey : (5569/9025) -> accuracy: 61.7064%

Class germany: (4904/8906) -> accuracy: 55.0640%

Class russia : (5856/9026) -> accuracy: 64.8792%

Class us : (4550/9085) -> accuracy: 50.0826%

Class france : (4417/8958) -> accuracy: 49.3079%

DEV accuracy on epoch 9/10 in train step 2022 = 56.0533%

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

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

Class russia : (5485/9026) -> accuracy: 60.7689%

Class us : (4488/9085) -> accuracy: 49.4001%

Class france : (4570/8958) -> accuracy: 51.0159%

Epoch run time: 00:29:35

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

\*\*\*Testing...

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

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

Accuracy on test set - (28626/50000) -> accuracy: 57.2520%

Class turkey : (6483/9957) -> accuracy: 65.1100%

Class germany: (5634/9905) -> accuracy: 56.8804%

Class russia : (6466/10046) -> accuracy: 64.3639%

Class us : (5188/10019) -> accuracy: 51.7816%

Class france : (4855/10073) -> accuracy: 48.1982%

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 150

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=0 is 0

testing acc 57.252

Time(HH:MM:SS): 00:03:26

Leaving function \_\_main\_\_