Entering function \_\_main\_\_

Embedding tokens size=400001

File name 4way\_tur\_ger\_rus\_usa25-150. Total data size is 200000

Our 4 labels to index dictionary ={u'turkey': 2, u'germany': 0, u'russia': 1, u'us': 3}

Our 4 index to labels dictionary ={0: u'germany', 1: u'russia', 2: u'turkey', 3: u'us'}

x\_train: 162000, x\_dev: 18000, x\_test: 20000

y\_train: 162000, y\_dev: 18000, y\_test: 20000

input\_data\_x\_batch shape: (200, 150)

input\_labels\_batch shape: (200, 4)

gru\_forward\_cell units: 300

gru\_backward\_cell units: 300

---vars name and shapes---

(u'bidirectional\_rnn/fw/gru\_cell/gates/kernel:0', TensorShape([Dimension(350), Dimension(600)]), 210000)

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

(u'bidirectional\_rnn/fw/gru\_cell/candidate/kernel:0', TensorShape([Dimension(350), Dimension(300)]), 105000)

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

(u'bidirectional\_rnn/bw/gru\_cell/gates/kernel:0', TensorShape([Dimension(350), Dimension(600)]), 210000)

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

(u'bidirectional\_rnn/bw/gru\_cell/candidate/kernel:0', TensorShape([Dimension(350), Dimension(300)]), 105000)

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

(u'weight:0', TensorShape([Dimension(600), Dimension(4)]), 2400)

(u'bias:0', TensorShape([Dimension(4)]), 4)

total PARAM 634,204

---done vars---

Epoch: 1/20 ---- best so far on epoch 0: acc=0.0000%

DEV accuracy on epoch 1/20 in train step 0 = 25.0667%

Class turkey : (0/4476) -> accuracy: 0.0000%

Class germany: (0/4486) -> accuracy: 0.0000%

Class russia : (4511/4511) -> accuracy: 100.0000%

Class us : (1/4527) -> accuracy: 0.0221%

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

INFO:root: Best accuracy 25.0667% at epoch 1/20 (4512/18000)

DEV accuracy on epoch 1/20 in train step 405 = 24.8611%

Class turkey : (4471/4476) -> accuracy: 99.8883%

Class germany: (3/4486) -> accuracy: 0.0669%

Class russia : (1/4511) -> accuracy: 0.0222%

Class us : (0/4527) -> accuracy: 0.0000%

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Epoch: 2/20 ---- best so far on epoch 1: acc=25.0667%

DEV accuracy on epoch 2/20 in train step 0 = 24.8444%

Class turkey : (4463/4476) -> accuracy: 99.7096%

Class germany: (0/4486) -> accuracy: 0.0000%

Class russia : (2/4511) -> accuracy: 0.0443%

Class us : (7/4527) -> accuracy: 0.1546%

DEV accuracy on epoch 2/20 in train step 405 = 24.8444%

Class turkey : (4468/4476) -> accuracy: 99.8213%

Class germany: (1/4486) -> accuracy: 0.0223%

Class russia : (2/4511) -> accuracy: 0.0443%

Class us : (1/4527) -> accuracy: 0.0221%

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Epoch: 3/20 ---- best so far on epoch 1: acc=25.0667%

DEV accuracy on epoch 3/20 in train step 0 = 25.1500%

Class turkey : (3/4476) -> accuracy: 0.0670%

Class germany: (0/4486) -> accuracy: 0.0000%

Class russia : (2/4511) -> accuracy: 0.0443%

Class us : (4522/4527) -> accuracy: 99.8896%

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

INFO:root: Best accuracy 25.1500% at epoch 3/20 (4527/18000)

DEV accuracy on epoch 3/20 in train step 405 = 24.8389%

Class turkey : (4456/4476) -> accuracy: 99.5532%

Class germany: (3/4486) -> accuracy: 0.0669%

Class russia : (1/4511) -> accuracy: 0.0222%

Class us : (11/4527) -> accuracy: 0.2430%

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Epoch: 4/20 ---- best so far on epoch 3: acc=25.1500%

DEV accuracy on epoch 4/20 in train step 0 = 25.1500%

Class turkey : (3/4476) -> accuracy: 0.0670%

Class germany: (1/4486) -> accuracy: 0.0223%

Class russia : (1/4511) -> accuracy: 0.0222%

Class us : (4522/4527) -> accuracy: 99.8896%

DEV accuracy on epoch 4/20 in train step 405 = 24.8500%

Class turkey : (4467/4476) -> accuracy: 99.7989%

Class germany: (4/4486) -> accuracy: 0.0892%

Class russia : (1/4511) -> accuracy: 0.0222%

Class us : (1/4527) -> accuracy: 0.0221%

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Epoch: 5/20 ---- best so far on epoch 3: acc=25.1500%

DEV accuracy on epoch 5/20 in train step 0 = 25.1500%

Class turkey : (3/4476) -> accuracy: 0.0670%

Class germany: (1/4486) -> accuracy: 0.0223%

Class russia : (1/4511) -> accuracy: 0.0222%

Class us : (4522/4527) -> accuracy: 99.8896%

DEV accuracy on epoch 5/20 in train step 405 = 24.8556%

Class turkey : (4470/4476) -> accuracy: 99.8660%

Class germany: (2/4486) -> accuracy: 0.0446%

Class russia : (1/4511) -> accuracy: 0.0222%

Class us : (1/4527) -> accuracy: 0.0221%

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Epoch: 6/20 ---- best so far on epoch 3: acc=25.1500%

DEV accuracy on epoch 6/20 in train step 0 = 25.1444%

Class turkey : (3/4476) -> accuracy: 0.0670%

Class germany: (1/4486) -> accuracy: 0.0223%

Class russia : (1/4511) -> accuracy: 0.0222%

Class us : (4521/4527) -> accuracy: 99.8675%

DEV accuracy on epoch 6/20 in train step 405 = 24.8778%

Class turkey : (4467/4476) -> accuracy: 99.7989%

Class germany: (6/4486) -> accuracy: 0.1337%

Class russia : (1/4511) -> accuracy: 0.0222%

Class us : (4/4527) -> accuracy: 0.0884%

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Epoch: 7/20 ---- best so far on epoch 3: acc=25.1500%

DEV accuracy on epoch 7/20 in train step 0 = 25.1500%

Class turkey : (3/4476) -> accuracy: 0.0670%

Class germany: (2/4486) -> accuracy: 0.0446%

Class russia : (1/4511) -> accuracy: 0.0222%

Class us : (4521/4527) -> accuracy: 99.8675%

DEV accuracy on epoch 7/20 in train step 405 = 24.8556%

Class turkey : (4467/4476) -> accuracy: 99.7989%

Class germany: (5/4486) -> accuracy: 0.1115%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (2/4527) -> accuracy: 0.0442%

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Epoch: 8/20 ---- best so far on epoch 3: acc=25.1500%

DEV accuracy on epoch 8/20 in train step 0 = 25.1889%

Class turkey : (3/4476) -> accuracy: 0.0670%

Class germany: (10/4486) -> accuracy: 0.2229%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (4521/4527) -> accuracy: 99.8675%

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

INFO:root: Best accuracy 25.1889% at epoch 8/20 (4534/18000)

DEV accuracy on epoch 8/20 in train step 405 = 24.8611%

Class turkey : (4469/4476) -> accuracy: 99.8436%

Class germany: (4/4486) -> accuracy: 0.0892%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (2/4527) -> accuracy: 0.0442%

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Epoch: 9/20 ---- best so far on epoch 8: acc=25.1889%

DEV accuracy on epoch 9/20 in train step 0 = 25.1556%

Class turkey : (3/4476) -> accuracy: 0.0670%

Class germany: (3/4486) -> accuracy: 0.0669%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (4522/4527) -> accuracy: 99.8896%

DEV accuracy on epoch 9/20 in train step 405 = 24.8611%

Class turkey : (4468/4476) -> accuracy: 99.8213%

Class germany: (4/4486) -> accuracy: 0.0892%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (3/4527) -> accuracy: 0.0663%

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Epoch: 10/20 ---- best so far on epoch 8: acc=25.1889%

DEV accuracy on epoch 10/20 in train step 0 = 25.1667%

Class turkey : (3/4476) -> accuracy: 0.0670%

Class germany: (5/4486) -> accuracy: 0.1115%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (4522/4527) -> accuracy: 99.8896%

DEV accuracy on epoch 10/20 in train step 405 = 24.8667%

Class turkey : (4467/4476) -> accuracy: 99.7989%

Class germany: (7/4486) -> accuracy: 0.1560%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (2/4527) -> accuracy: 0.0442%

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Epoch: 11/20 ---- best so far on epoch 8: acc=25.1889%

DEV accuracy on epoch 11/20 in train step 0 = 25.1611%

Class turkey : (4/4476) -> accuracy: 0.0894%

Class germany: (6/4486) -> accuracy: 0.1337%

Class russia : (4490/4511) -> accuracy: 99.5345%

Class us : (29/4527) -> accuracy: 0.6406%

DEV accuracy on epoch 11/20 in train step 405 = 24.8778%

Class turkey : (4467/4476) -> accuracy: 99.7989%

Class germany: (9/4486) -> accuracy: 0.2006%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (2/4527) -> accuracy: 0.0442%

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Epoch: 12/20 ---- best so far on epoch 8: acc=25.1889%

DEV accuracy on epoch 12/20 in train step 0 = 25.1111%

Class turkey : (4/4476) -> accuracy: 0.0894%

Class germany: (8/4486) -> accuracy: 0.1783%

Class russia : (4500/4511) -> accuracy: 99.7562%

Class us : (8/4527) -> accuracy: 0.1767%

DEV accuracy on epoch 12/20 in train step 405 = 24.8611%

Class turkey : (4466/4476) -> accuracy: 99.7766%

Class germany: (7/4486) -> accuracy: 0.1560%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (2/4527) -> accuracy: 0.0442%

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Epoch: 13/20 ---- best so far on epoch 8: acc=25.1889%

DEV accuracy on epoch 13/20 in train step 0 = 25.1611%

Class turkey : (4/4476) -> accuracy: 0.0894%

Class germany: (16/4486) -> accuracy: 0.3567%

Class russia : (4496/4511) -> accuracy: 99.6675%

Class us : (13/4527) -> accuracy: 0.2872%

DEV accuracy on epoch 13/20 in train step 405 = 24.8722%

Class turkey : (4467/4476) -> accuracy: 99.7989%

Class germany: (8/4486) -> accuracy: 0.1783%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (2/4527) -> accuracy: 0.0442%

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Epoch: 14/20 ---- best so far on epoch 8: acc=25.1889%

DEV accuracy on epoch 14/20 in train step 0 = 25.1222%

Class turkey : (4/4476) -> accuracy: 0.0894%

Class germany: (8/4486) -> accuracy: 0.1783%

Class russia : (4500/4511) -> accuracy: 99.7562%

Class us : (10/4527) -> accuracy: 0.2209%

DEV accuracy on epoch 14/20 in train step 405 = 24.8722%

Class turkey : (4467/4476) -> accuracy: 99.7989%

Class germany: (9/4486) -> accuracy: 0.2006%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (1/4527) -> accuracy: 0.0221%

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Epoch: 15/20 ---- best so far on epoch 8: acc=25.1889%

DEV accuracy on epoch 15/20 in train step 0 = 25.1056%

Class turkey : (4/4476) -> accuracy: 0.0894%

Class germany: (8/4486) -> accuracy: 0.1783%

Class russia : (4503/4511) -> accuracy: 99.8227%

Class us : (4/4527) -> accuracy: 0.0884%

DEV accuracy on epoch 15/20 in train step 405 = 24.8667%

Class turkey : (4469/4476) -> accuracy: 99.8436%

Class germany: (6/4486) -> accuracy: 0.1337%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (1/4527) -> accuracy: 0.0221%

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Epoch: 16/20 ---- best so far on epoch 8: acc=25.1889%

DEV accuracy on epoch 16/20 in train step 0 = 25.1333%

Class turkey : (4/4476) -> accuracy: 0.0894%

Class germany: (11/4486) -> accuracy: 0.2452%

Class russia : (4501/4511) -> accuracy: 99.7783%

Class us : (8/4527) -> accuracy: 0.1767%

DEV accuracy on epoch 16/20 in train step 405 = 24.8722%

Class turkey : (4466/4476) -> accuracy: 99.7766%

Class germany: (9/4486) -> accuracy: 0.2006%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (2/4527) -> accuracy: 0.0442%

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Epoch: 17/20 ---- best so far on epoch 8: acc=25.1889%

DEV accuracy on epoch 17/20 in train step 0 = 25.2056%

Class turkey : (4/4476) -> accuracy: 0.0894%

Class germany: (13/4486) -> accuracy: 0.2898%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (4520/4527) -> accuracy: 99.8454%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 17

INFO:root: Best accuracy 25.2056% at epoch 17/20 (4537/18000)

DEV accuracy on epoch 17/20 in train step 405 = 24.8667%

Class turkey : (4466/4476) -> accuracy: 99.7766%

Class germany: (9/4486) -> accuracy: 0.2006%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (1/4527) -> accuracy: 0.0221%

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Epoch: 18/20 ---- best so far on epoch 17: acc=25.2056%

DEV accuracy on epoch 18/20 in train step 0 = 25.1833%

Class turkey : (4/4476) -> accuracy: 0.0894%

Class germany: (11/4486) -> accuracy: 0.2452%

Class russia : (15/4511) -> accuracy: 0.3325%

Class us : (4503/4527) -> accuracy: 99.4698%

DEV accuracy on epoch 18/20 in train step 405 = 24.8778%

Class turkey : (4466/4476) -> accuracy: 99.7766%

Class germany: (11/4486) -> accuracy: 0.2452%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (1/4527) -> accuracy: 0.0221%

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Epoch: 19/20 ---- best so far on epoch 17: acc=25.2056%

DEV accuracy on epoch 19/20 in train step 0 = 25.1778%

Class turkey : (4/4476) -> accuracy: 0.0894%

Class germany: (6/4486) -> accuracy: 0.1337%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (4522/4527) -> accuracy: 99.8896%

DEV accuracy on epoch 19/20 in train step 405 = 24.8889%

Class turkey : (4462/4476) -> accuracy: 99.6872%

Class germany: (17/4486) -> accuracy: 0.3790%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (1/4527) -> accuracy: 0.0221%

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Epoch: 20/20 ---- best so far on epoch 17: acc=25.2056%

DEV accuracy on epoch 20/20 in train step 0 = 25.1333%

Class turkey : (4/4476) -> accuracy: 0.0894%

Class germany: (11/4486) -> accuracy: 0.2452%

Class russia : (4505/4511) -> accuracy: 99.8670%

Class us : (4/4527) -> accuracy: 0.0884%

DEV accuracy on epoch 20/20 in train step 405 = 25.1944%

Class turkey : (14/4476) -> accuracy: 0.3128%

Class germany: (15/4486) -> accuracy: 0.3344%

Class russia : (0/4511) -> accuracy: 0.0000%

Class us : (4506/4527) -> accuracy: 99.5361%

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\*\*\*Training is complete. Best accuracy 25.2056% at epoch 17/20

\*\*\*Testing...

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

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

Accuracy on test set - (4881/20000) -> accuracy: 24.4050%

Class turkey : (2/5094) -> accuracy: 0.0393%

Class germany: (8/5032) -> accuracy: 0.1590%

Class russia : (0/4995) -> accuracy: 0.0000%

Class us : (4871/4879) -> accuracy: 99.8360%

End summary ----------------------

data:

DATA\_FILE\_PATH is ../input/4way\_tur\_ger\_rus\_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 4

Total data size is 200000

embedding:

EMB\_FILE\_PATH ../input/glove.6B.50d.txt

EMB\_DIM 50

EMB\_WORDS\_COUNT 400001

run config:

EPOCHS 20

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 AdagradOptimizer - learn rate: 0.001

model:

USE\_TMP\_FOLDER True

mdl\_path ../model\_temp/model.ckpt

results:

best training acc at epoch=17 is 25.2055555556

testing acc 24.405

Time(HH:MM:SS): 02:39:30

Leaving function \_\_main\_\_