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: 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(150), Dimension(200)]), 30000)

(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(150), Dimension(100)]), 15000)

(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/bw/multi\_rnn\_cell/cell\_0/gru\_cell/gates/kernel:0', TensorShape([Dimension(150), Dimension(200)]), 30000)

(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(150), Dimension(100)]), 15000)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_0/gru\_cell/candidate/bias:0', TensorShape([Dimension(100)]), 100)

(u'bidirectional\_rnn/bw/multi\_rnn\_cell/cell\_1/gru\_cell/gates/kernel:0', TensorShape([Dimension(200), Dimension(200)]), 40000)

(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'weight:0', TensorShape([Dimension(200), Dimension(5)]), 1000)

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

total PARAM 332,805

---done vars---

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

DEV accuracy on epoch 1/20 in train step 506 = 19.7411%

Class turkey : (4422/4422) -> accuracy: 100.0000%

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

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

Class us : (0/4495) -> accuracy: 0.0000%

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

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

INFO:root: Best accuracy 19.7411% at epoch 1/20 (4422/22400)

DEV accuracy on epoch 1/20 in train step 1009 = 20.0759%

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

Class germany: (1/4405) -> accuracy: 0.0227%

Class russia : (1/4506) -> accuracy: 0.0222%

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 20.0759% at epoch 1/20 (4497/22400)

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Epoch: 2/20 ---- best so far on epoch 1: acc=20.0759%

DEV accuracy on epoch 2/20 in train step 506 = 19.7455%

Class turkey : (4422/4422) -> accuracy: 100.0000%

Class germany: (1/4405) -> accuracy: 0.0227%

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

Class us : (0/4495) -> accuracy: 0.0000%

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

DEV accuracy on epoch 2/20 in train step 1009 = 20.0714%

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

Class germany: (1/4405) -> accuracy: 0.0227%

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

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

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

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Epoch: 3/20 ---- best so far on epoch 1: acc=20.0759%

DEV accuracy on epoch 3/20 in train step 506 = 44.6473%

Class turkey : (2214/4422) -> accuracy: 50.0678%

Class germany: (1190/4405) -> accuracy: 27.0148%

Class russia : (3254/4506) -> accuracy: 72.2148%

Class us : (2035/4495) -> accuracy: 45.2725%

Class france : (1308/4572) -> accuracy: 28.6089%

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

INFO:root: Best accuracy 44.6473% at epoch 3/20 (10001/22400)

DEV accuracy on epoch 3/20 in train step 1009 = 49.3304%

Class turkey : (2366/4422) -> accuracy: 53.5052%

Class germany: (1546/4405) -> accuracy: 35.0965%

Class russia : (3088/4506) -> accuracy: 68.5308%

Class us : (2417/4495) -> accuracy: 53.7709%

Class france : (1633/4572) -> accuracy: 35.7174%

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

INFO:root: Best accuracy 49.3304% at epoch 3/20 (11050/22400)

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Epoch: 4/20 ---- best so far on epoch 3: acc=49.3304%

DEV accuracy on epoch 4/20 in train step 506 = 51.0000%

Class turkey : (3072/4422) -> accuracy: 69.4708%

Class germany: (1522/4405) -> accuracy: 34.5516%

Class russia : (2361/4506) -> accuracy: 52.3968%

Class us : (2511/4495) -> accuracy: 55.8621%

Class france : (1958/4572) -> accuracy: 42.8259%

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

INFO:root: Best accuracy 51.0000% at epoch 4/20 (11424/22400)

DEV accuracy on epoch 4/20 in train step 1009 = 51.5000%

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

Class germany: (1623/4405) -> accuracy: 36.8445%

Class russia : (3163/4506) -> accuracy: 70.1953%

Class us : (2286/4495) -> accuracy: 50.8565%

Class france : (1906/4572) -> accuracy: 41.6885%

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

INFO:root: Best accuracy 51.5000% at epoch 4/20 (11536/22400)

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Epoch: 5/20 ---- best so far on epoch 4: acc=51.5000%

DEV accuracy on epoch 5/20 in train step 506 = 52.0625%

Class turkey : (3005/4422) -> accuracy: 67.9557%

Class germany: (1542/4405) -> accuracy: 35.0057%

Class russia : (2567/4506) -> accuracy: 56.9685%

Class us : (2734/4495) -> accuracy: 60.8231%

Class france : (1814/4572) -> accuracy: 39.6763%

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

INFO:root: Best accuracy 52.0625% at epoch 5/20 (11662/22400)

DEV accuracy on epoch 5/20 in train step 1009 = 52.7009%

Class turkey : (2750/4422) -> accuracy: 62.1891%

Class germany: (1781/4405) -> accuracy: 40.4313%

Class russia : (3051/4506) -> accuracy: 67.7097%

Class us : (2407/4495) -> accuracy: 53.5484%

Class france : (1816/4572) -> accuracy: 39.7200%

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

INFO:root: Best accuracy 52.7009% at epoch 5/20 (11805/22400)

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Epoch: 6/20 ---- best so far on epoch 5: acc=52.7009%

DEV accuracy on epoch 6/20 in train step 506 = 52.9420%

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

Class germany: (1670/4405) -> accuracy: 37.9115%

Class russia : (2677/4506) -> accuracy: 59.4097%

Class us : (2723/4495) -> accuracy: 60.5784%

Class france : (1791/4572) -> accuracy: 39.1732%

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

INFO:root: Best accuracy 52.9420% at epoch 6/20 (11859/22400)

DEV accuracy on epoch 6/20 in train step 1009 = 53.1875%

Class turkey : (2770/4422) -> accuracy: 62.6413%

Class germany: (1823/4405) -> accuracy: 41.3848%

Class russia : (3049/4506) -> accuracy: 67.6653%

Class us : (2395/4495) -> accuracy: 53.2814%

Class france : (1877/4572) -> accuracy: 41.0542%

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

INFO:root: Best accuracy 53.1875% at epoch 6/20 (11914/22400)

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Epoch: 7/20 ---- best so far on epoch 6: acc=53.1875%

DEV accuracy on epoch 7/20 in train step 506 = 53.1205%

Class turkey : (2972/4422) -> accuracy: 67.2094%

Class germany: (1655/4405) -> accuracy: 37.5709%

Class russia : (2696/4506) -> accuracy: 59.8313%

Class us : (2823/4495) -> accuracy: 62.8031%

Class france : (1753/4572) -> accuracy: 38.3421%

DEV accuracy on epoch 7/20 in train step 1009 = 53.6696%

Class turkey : (2809/4422) -> accuracy: 63.5233%

Class germany: (1831/4405) -> accuracy: 41.5664%

Class russia : (3051/4506) -> accuracy: 67.7097%

Class us : (2437/4495) -> accuracy: 54.2158%

Class france : (1894/4572) -> accuracy: 41.4261%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 7

INFO:root: Best accuracy 53.6696% at epoch 7/20 (12022/22400)

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Epoch: 8/20 ---- best so far on epoch 7: acc=53.6696%

DEV accuracy on epoch 8/20 in train step 506 = 53.5536%

Class turkey : (2970/4422) -> accuracy: 67.1642%

Class germany: (1890/4405) -> accuracy: 42.9058%

Class russia : (2584/4506) -> accuracy: 57.3458%

Class us : (2705/4495) -> accuracy: 60.1780%

Class france : (1847/4572) -> accuracy: 40.3981%

DEV accuracy on epoch 8/20 in train step 1009 = 53.9420%

Class turkey : (2778/4422) -> accuracy: 62.8223%

Class germany: (1820/4405) -> accuracy: 41.3167%

Class russia : (3051/4506) -> accuracy: 67.7097%

Class us : (2410/4495) -> accuracy: 53.6151%

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

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

INFO:root: Best accuracy 53.9420% at epoch 8/20 (12083/22400)

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Epoch: 9/20 ---- best so far on epoch 8: acc=53.9420%

DEV accuracy on epoch 9/20 in train step 506 = 53.6652%

Class turkey : (2991/4422) -> accuracy: 67.6391%

Class germany: (1840/4405) -> accuracy: 41.7707%

Class russia : (2653/4506) -> accuracy: 58.8771%

Class us : (2737/4495) -> accuracy: 60.8899%

Class france : (1800/4572) -> accuracy: 39.3701%

DEV accuracy on epoch 9/20 in train step 1009 = 54.5446%

Class turkey : (2794/4422) -> accuracy: 63.1841%

Class germany: (1910/4405) -> accuracy: 43.3598%

Class russia : (3059/4506) -> accuracy: 67.8873%

Class us : (2420/4495) -> accuracy: 53.8376%

Class france : (2035/4572) -> accuracy: 44.5101%

INFO:root: Saved model ../model\_temp/model.ckpt at epoch 9

INFO:root: Best accuracy 54.5446% at epoch 9/20 (12218/22400)

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Epoch: 10/20 ---- best so far on epoch 9: acc=54.5446%

DEV accuracy on epoch 10/20 in train step 506 = 53.5714%

Class turkey : (2890/4422) -> accuracy: 65.3550%

Class germany: (1871/4405) -> accuracy: 42.4745%

Class russia : (2681/4506) -> accuracy: 59.4984%

Class us : (2753/4495) -> accuracy: 61.2458%

Class france : (1805/4572) -> accuracy: 39.4794%

DEV accuracy on epoch 10/20 in train step 1009 = 54.3170%

Class turkey : (2774/4422) -> accuracy: 62.7318%

Class germany: (1866/4405) -> accuracy: 42.3610%

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

Class us : (2538/4495) -> accuracy: 56.4627%

Class france : (2015/4572) -> accuracy: 44.0726%

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Epoch: 11/20 ---- best so far on epoch 9: acc=54.5446%

DEV accuracy on epoch 11/20 in train step 506 = 53.5402%

Class turkey : (2926/4422) -> accuracy: 66.1692%

Class germany: (1943/4405) -> accuracy: 44.1090%

Class russia : (2581/4506) -> accuracy: 57.2792%

Class us : (2758/4495) -> accuracy: 61.3571%

Class france : (1785/4572) -> accuracy: 39.0420%

DEV accuracy on epoch 11/20 in train step 1009 = 54.3571%

Class turkey : (2742/4422) -> accuracy: 62.0081%

Class germany: (1862/4405) -> accuracy: 42.2701%

Class russia : (3104/4506) -> accuracy: 68.8859%

Class us : (2412/4495) -> accuracy: 53.6596%

Class france : (2056/4572) -> accuracy: 44.9694%

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Epoch: 12/20 ---- best so far on epoch 9: acc=54.5446%

DEV accuracy on epoch 12/20 in train step 506 = 53.7634%

Class turkey : (2997/4422) -> accuracy: 67.7748%

Class germany: (1899/4405) -> accuracy: 43.1101%

Class russia : (2624/4506) -> accuracy: 58.2335%

Class us : (2589/4495) -> accuracy: 57.5973%

Class france : (1934/4572) -> accuracy: 42.3010%

DEV accuracy on epoch 12/20 in train step 1009 = 53.8929%

Class turkey : (2747/4422) -> accuracy: 62.1212%

Class germany: (1892/4405) -> accuracy: 42.9512%

Class russia : (3094/4506) -> accuracy: 68.6640%

Class us : (2370/4495) -> accuracy: 52.7253%

Class france : (1969/4572) -> accuracy: 43.0665%

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Epoch: 13/20 ---- best so far on epoch 9: acc=54.5446%

DEV accuracy on epoch 13/20 in train step 506 = 53.4420%

Class turkey : (3000/4422) -> accuracy: 67.8426%

Class germany: (1942/4405) -> accuracy: 44.0863%

Class russia : (2628/4506) -> accuracy: 58.3222%

Class us : (2588/4495) -> accuracy: 57.5751%

Class france : (1813/4572) -> accuracy: 39.6544%

DEV accuracy on epoch 13/20 in train step 1009 = 53.8750%

Class turkey : (2799/4422) -> accuracy: 63.2972%

Class germany: (1923/4405) -> accuracy: 43.6549%

Class russia : (3062/4506) -> accuracy: 67.9538%

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

Class france : (2016/4572) -> accuracy: 44.0945%

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Epoch: 14/20 ---- best so far on epoch 9: acc=54.5446%

DEV accuracy on epoch 14/20 in train step 506 = 53.4598%

Class turkey : (2977/4422) -> accuracy: 67.3225%

Class germany: (1935/4405) -> accuracy: 43.9274%

Class russia : (2672/4506) -> accuracy: 59.2987%

Class us : (2412/4495) -> accuracy: 53.6596%

Class france : (1979/4572) -> accuracy: 43.2852%

DEV accuracy on epoch 14/20 in train step 1009 = 53.5045%

Class turkey : (2890/4422) -> accuracy: 65.3550%

Class germany: (1875/4405) -> accuracy: 42.5653%

Class russia : (3013/4506) -> accuracy: 66.8664%

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

Class france : (2037/4572) -> accuracy: 44.5538%

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Epoch: 15/20 ---- best so far on epoch 9: acc=54.5446%

DEV accuracy on epoch 15/20 in train step 506 = 53.0134%

Class turkey : (2959/4422) -> accuracy: 66.9154%

Class germany: (1958/4405) -> accuracy: 44.4495%

Class russia : (2581/4506) -> accuracy: 57.2792%

Class us : (2279/4495) -> accuracy: 50.7008%

Class france : (2098/4572) -> accuracy: 45.8880%

DEV accuracy on epoch 15/20 in train step 1009 = 53.0625%

Class turkey : (2901/4422) -> accuracy: 65.6038%

Class germany: (1988/4405) -> accuracy: 45.1305%

Class russia : (2775/4506) -> accuracy: 61.5846%

Class us : (2139/4495) -> accuracy: 47.5862%

Class france : (2083/4572) -> accuracy: 45.5599%

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Test results:

Accuracy on test set - (13450/25000) -> accuracy: 53.8000%

Class turkey : (3146/4971) -> accuracy: 63.2871%

Class germany: (2120/5035) -> accuracy: 42.1053%

Class russia : (3366/5020) -> accuracy: 67.0518%

Class us : (2598/4954) -> accuracy: 52.4425%

Class france : (2220/5020) -> accuracy: 44.2231%