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C:\ProgramData\Anaconda3\python.exe C:/Users/Joshmiao/Desktop/ABSA-Aspect-Based-Sentimental-Analysis/main.py
CUDA is available.
There are 1 CUDA device(s) on this computer.
Some weights of the model checkpoint at ./pretrained_model/BERT_model/ were not used when initializing BertModel
: ['cls.predictions.decoder.weight', 'cls.predictions.transform.LayerNorm.bias', 'cls.predictions.transform.
LayerNorm.weight', 'cls.predictions.transform.dense.bias', 'cls.seq_relationship.weight', 'cls.seq_relationship.
bias', 'cls.predictions.transform.dense.weight', 'cls.predictions.bias']
- This IS expected if you are initializing BertModel from the checkpoint of a model trained on another task or
with another architecture (e.g. initializing a BertForSequenceClassification model from a BertForPreTraining model
).
- This IS NOT expected if you are initializing BertModel from the checkpoint of a model that you expect to be
exactly identical (initializing a BertForSequenceClassification model from a BertForSequenceClassification model).
Some weights of the model checkpoint at ./pretrained_model/BERT_model/ were not used when initializing BertModel
: ['cls.predictions.decoder.weight', 'cls.predictions.transform.LayerNorm.bias', 'cls.predictions.transform.
LayerNorm.weight', 'cls.predictions.transform.dense.bias', 'cls.seq_relationship.weight', 'cls.seq_relationship.
bias', 'cls.predictions.transform.dense.weight', 'cls.predictions.bias']
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- This IS NOT expected if you are initializing BertModel from the checkpoint of a model that you expect to be
exactly identical (initializing a BertForSequenceClassification model from a BertForSequenceClassification model).
Some weights of the model checkpoint at ./pretrained_model/Roberta_model/ were not used when initializing
RobertaModel: ['lm_head.dense.bias', 'lm_head.bias', 'lm_head.layer_norm.bias', 'lm_head.layer_norm.weight', '
lm_head.decoder.weight', 'lm_head.dense.weight']
- This IS expected if you are initializing RobertaModel from the checkpoint of a model trained on another task or
with another architecture (e.g. initializing a BertForSequenceClassification model from a BertForPreTraining model
).
- This IS NOT expected if you are initializing RobertaModel from the checkpoint of a model that you expect to be
exactly identical (initializing a BertForSequenceClassification model from a BertForSequenceClassification model).
Some weights of the model checkpoint at ./pretrained_model/Roberta_model/ were not used when initializing
RobertaModel: ['lm_head.dense.bias', 'lm_head.bias', 'lm_head.layer_norm.bias', 'lm_head.layer_norm.weight', '
lm_head.decoder.weight', 'lm_head.dense.weight']
- This IS expected if you are initializing RobertaModel from the checkpoint of a model trained on another task or
with another architecture (e.g. initializing a BertForSequenceClassification model from a BertForPreTraining model
).
- This IS NOT expected if you are initializing RobertaModel from the checkpoint of a model that you expect to be
exactly identical (initializing a BertForSequenceClassification model from a BertForSequenceClassification model).
max length = 86
max length = 54
max length = 87
max length = 57
391
0 tensor([[ 101, 5791, 2019, ..., 0, 0, 0],
          [ 101, 3666, 2227, ..., 0, 0, 0],
          [ 101, 2428, 2025, ..., 0, 0, 0],
          ...,
          [ 101, 2165, 1996, ..., 0, 0, 0],
          [ 101, 3203, 18201, ..., 0, 0, 0],
          [ 101, 8239, 18264, ..., 0, 0, 0]], device='cuda:0') tensor([[0, 0, 0, ..., 0, 0, 0],
          [0, 0, 0, ..., 0, 0, 0],
          [0, 0, 0, ..., 0, 0, 0],
          ...,
          [0, 0, 0, ..., 0, 0, 0],
          [0, 0, 0, ..., 0, 0, 0],
          [0, 0, 5, ..., 0, 0, 0]], device='cuda:0')
epoch0 :
avg_training_loss = 0.056056464114762325
used time = 55.43522024154663
tot_cnt=76120 acc_cnt=75304 true_cnt=1524 pred_cnt=1556 true_pred_cnt=775
acc.=0.989280 pre.=0.498072 rec.=0.508530 f1=0.503247
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epoch1 :
avg_training_loss = 0.022674814209608776
used time = 55.4950966835022
tot_cnt=76120 acc_cnt=75390 true_cnt=1524 pred_cnt=1519 true_pred_cnt=837
acc.=0.990410 pre.=0.551020 rec.=0.549213 f1=0.550115
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epoch2 :
avg_training_loss = 0.019702291854507174
used time = 55.576013803482056
tot_cnt=76120 acc_cnt=75490 true_cnt=1524 pred_cnt=1517 true_pred_cnt=937
acc.=0.991724 pre.=0.617666 rec.=0.614829 f1=0.616245
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epoch3 :
avg_training_loss = 0.016404225088446342
used time = 55.70139145851135
tot_cnt=76120 acc_cnt=75584 true_cnt=1524 pred_cnt=1501 true_pred_cnt=1025
acc.=0.992958 pre.=0.682878 rec.=0.672572 f1=0.677686
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epoch4 :

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avg_training_loss = 0.013174948485001274
used time = 56.462202310562134
tot_cnt=76120 acc_cnt=75594 true_cnt=1524 pred_cnt=1565 true_pred_cnt=1068
acc.=0.993090 pre.=0.682428 rec.=0.700787 f1=0.691486
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epoch5 :
avg_training_loss = 0.010475803824032055
used time = 55.80563259124756
tot_cnt=76120 acc_cnt=75583 true_cnt=1524 pred_cnt=1538 true_pred_cnt=1049
acc.=0.992945 pre.=0.682055 rec.=0.688320 f1=0.685173
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epoch6 :
avg_training_loss = 0.007305425756117877
used time = 55.75977277755737
tot_cnt=76120 acc_cnt=75586 true_cnt=1524 pred_cnt=1571 true_pred_cnt=1063
acc.=0.992985 pre.=0.676639 rec.=0.697507 f1=0.686914
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epoch7 :
avg_training_loss = 0.004938776535756143
used time = 55.79492926597595
tot_cnt=76120 acc_cnt=75585 true_cnt=1524 pred_cnt=1542 true_pred_cnt=1048
acc.=0.992972 pre.=0.679637 rec.=0.687664 f1=0.683627
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epoch8 :
avg_training_loss = 0.003192673558774202
used time = 56.12945246696472
tot_cnt=76120 acc_cnt=75576 true_cnt=1524 pred_cnt=1547 true_pred_cnt=1038
acc.=0.992853 pre.=0.670976 rec.=0.681102 f1=0.676001
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epoch9 :
avg_training_loss = 0.0023080305675106587
used time = 56.425331830978394
tot_cnt=76120 acc_cnt=75573 true_cnt=1524 pred_cnt=1539 true_pred_cnt=1033
acc.=0.992814 pre.=0.671215 rec.=0.677822 f1=0.674502
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epoch10 :
avg_training_loss = 0.0020374152666467536
used time = 56.36663269996643
tot_cnt=76120 acc_cnt=75587 true_cnt=1524 pred_cnt=1548 true_pred_cnt=1053
acc.=0.992998 pre.=0.680233 rec.=0.690945 f1=0.685547
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epoch11 :
avg_training_loss = 0.0014834498505458197
used time = 56.41333484649658
tot_cnt=76120 acc_cnt=75615 true_cnt=1524 pred_cnt=1555 true_pred_cnt=1083
acc.=0.993366 pre.=0.696463 rec.=0.710630 f1=0.703475
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epoch12 :
avg_training_loss = 0.0012514094257598642
used time = 56.445658445358276
tot_cnt=76120 acc_cnt=75598 true_cnt=1524 pred_cnt=1543 true_pred_cnt=1061
acc.=0.993142 pre.=0.687622 rec.=0.696194 f1=0.691881
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epoch13 :
avg_training_loss = 0.0012086455321982693
used time = 56.37036108970642
tot_cnt=76120 acc_cnt=75583 true_cnt=1524 pred_cnt=1566 true_pred_cnt=1061
acc.=0.992945 pre.=0.677522 rec.=0.696194 f1=0.686731
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epoch14 :
avg_training_loss = 0.0008525741679589157
used time = 56.364155530929565
tot_cnt=76120 acc_cnt=75576 true_cnt=1524 pred_cnt=1533 true_pred_cnt=1029
acc.=0.992853 pre.=0.671233 rec.=0.675197 f1=0.673209
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epoch15 :
avg_training_loss = 0.0009315231876909885
used time = 56.37718391418457
tot_cnt=76120 acc_cnt=75586 true_cnt=1524 pred_cnt=1561 true_pred_cnt=1058
acc.=0.992985 pre.=0.677771 rec.=0.694226 f1=0.685900
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epoch16 :
avg_training_loss = 0.0011248344655536934
used time = 56.30672073364258
tot_cnt=76120 acc_cnt=75585 true_cnt=1524 pred_cnt=1548 true_pred_cnt=1049
acc.=0.992972 pre.=0.677649 rec.=0.688320 f1=0.682943
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epoch17 :
avg_training_loss = 0.0009081833197942475
used time = 55.78638505935669
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tot_cnt=76120 acc_cnt=75637 true_cnt=1524 pred_cnt=1523 true_pred_cnt=1084
acc.=0.993655 pre.=0.711753 rec.=0.711286 f1=0.711520
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epoch18 :
avg_training_loss = 0.0009189580407593866
used time = 55.82502555847168
tot_cnt=76120 acc_cnt=75591 true_cnt=1524 pred_cnt=1535 true_pred_cnt=1042
acc.=0.993050 pre.=0.678827 rec.=0.683727 f1=0.681268
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epoch19 :
avg_training_loss = 0.0006870131206024638
used time = 55.88286066055298
tot_cnt=76120 acc_cnt=75566 true_cnt=1524 pred_cnt=1547 true_pred_cnt=1030
acc.=0.992722 pre.=0.665805 rec.=0.675853 f1=0.670791
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epoch20 :
avg_training_loss = 0.0006935715370470911
used time = 56.345862865448
tot_cnt=76120 acc_cnt=75601 true_cnt=1524 pred_cnt=1535 true_pred_cnt=1052
acc.=0.993182 pre.=0.685342 rec.=0.690289 f1=0.687806
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epoch21 :
avg_training_loss = 0.0005402346248821834
used time = 55.8833703994751
tot_cnt=76120 acc_cnt=75590 true_cnt=1524 pred_cnt=1538 true_pred_cnt=1046
acc.=0.993037 pre.=0.680104 rec.=0.686352 f1=0.683214
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epoch22 :
avg_training_loss = 0.0010873537386774713
used time = 55.85794377326965
tot_cnt=76120 acc_cnt=75603 true_cnt=1524 pred_cnt=1529 true_pred_cnt=1048
acc.=0.993208 pre.=0.685415 rec.=0.687664 f1=0.686538
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epoch23 :
avg_training_loss = 0.0006841096426824779
used time = 55.93214511871338
tot_cnt=76120 acc_cnt=75570 true_cnt=1524 pred_cnt=1537 true_pred_cnt=1026
acc.=0.992775 pre.=0.667534 rec.=0.673228 f1=0.670369
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epoch24 :
avg_training_loss = 0.0005529752701444699
used time = 55.99677348136902
tot_cnt=76120 acc_cnt=75580 true_cnt=1524 pred_cnt=1540 true_pred_cnt=1039
acc.=0.992906 pre.=0.674675 rec.=0.681759 f1=0.678198
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epoch25 :
avg_training_loss = 0.00029145699480305547
used time = 56.323394536972046
tot_cnt=76120 acc_cnt=75595 true_cnt=1524 pred_cnt=1534 true_pred_cnt=1046
acc.=0.993103 pre.=0.681877 rec.=0.686352 f1=0.684107
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epoch26 :
avg_training_loss = 0.0004676403977986797
used time = 55.912970542907715
tot_cnt=76120 acc_cnt=75566 true_cnt=1524 pred_cnt=1528 true_pred_cnt=1016
acc.=0.992722 pre.=0.664921 rec.=0.666667 f1=0.665793
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epoch27 :
avg_training_loss = 0.0005197167548986957
used time = 55.86498141288757
tot_cnt=76120 acc_cnt=75601 true_cnt=1524 pred_cnt=1522 true_pred_cnt=1047
acc.=0.993182 pre.=0.687911 rec.=0.687008 f1=0.687459
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epoch28 :
avg_training_loss = 0.0006988306179680787
used time = 55.85653352737427
tot_cnt=76120 acc_cnt=75605 true_cnt=1524 pred_cnt=1514 true_pred_cnt=1042
acc.=0.993234 pre.=0.688243 rec.=0.683727 f1=0.685978
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epoch29 :
avg_training_loss = 0.0005276192484609307
used time = 56.43826866149902
tot_cnt=76120 acc_cnt=75569 true_cnt=1524 pred_cnt=1521 true_pred_cnt=1014
acc.=0.992761 pre.=0.666667 rec.=0.665354 f1=0.666010
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```
epoch30 :
avg_training_loss = 0.00039409314427534334
used time = 56.389545917510986
tot_cnt=76120 acc_cnt=75587 true_cnt=1524 pred_cnt=1545 true_pred_cnt=1050
acc.=0.992998 pre.=0.679612 rec.=0.688976 f1=0.684262
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epoch31 :
avg_training_loss = 0.0004410453693336233
used time = 56.375964403152466
tot_cnt=76120 acc_cnt=75595 true_cnt=1524 pred_cnt=1518 true_pred_cnt=1043
acc.=0.993103 pre.=0.687088 rec.=0.684383 f1=0.685733
-----

epoch32 :
avg_training_loss = 0.00019811373918562594
used time = 56.002156257629395
tot_cnt=76120 acc_cnt=75583 true_cnt=1524 pred_cnt=1554 true_pred_cnt=1047
acc.=0.992945 pre.=0.673745 rec.=0.687008 f1=0.680312
-----

epoch33 :
avg_training_loss = 0.0004690063502782446
used time = 55.88321137428284
tot_cnt=76120 acc_cnt=75562 true_cnt=1524 pred_cnt=1555 true_pred_cnt=1030
acc.=0.992669 pre.=0.662379 rec.=0.675853 f1=0.669048
-----

epoch34 :
avg_training_loss = 0.00043264923193265717
used time = 55.87158560752869
tot_cnt=76120 acc_cnt=75573 true_cnt=1524 pred_cnt=1562 true_pred_cnt=1040
acc.=0.992814 pre.=0.665813 rec.=0.682415 f1=0.674012
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epoch35 :
avg_training_loss = 0.0005196207548346361
used time = 55.998944997787476
tot_cnt=76120 acc_cnt=75581 true_cnt=1524 pred_cnt=1535 true_pred_cnt=1039
acc.=0.992919 pre.=0.676873 rec.=0.681759 f1=0.679307
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epoch36 :
avg_training_loss = 0.00045775288663556815
used time = 56.46064567565918
tot_cnt=76120 acc_cnt=75587 true_cnt=1524 pred_cnt=1546 true_pred_cnt=1050
acc.=0.992998 pre.=0.679172 rec.=0.688976 f1=0.684039
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epoch37 :
avg_training_loss = 0.0003042601792098921
used time = 55.901100397109985
tot_cnt=76120 acc_cnt=75587 true_cnt=1524 pred_cnt=1523 true_pred_cnt=1036
acc.=0.992998 pre.=0.680236 rec.=0.679790 f1=0.680013
-----

epoch38 :
avg_training_loss = 0.0004076490850399827
used time = 55.89312434196472
tot_cnt=76120 acc_cnt=75582 true_cnt=1524 pred_cnt=1528 true_pred_cnt=1034
acc.=0.992932 pre.=0.676702 rec.=0.678478 f1=0.677588
-----

epoch39 :
avg_training_loss = 0.000329231476539846
used time = 55.96266984939575
tot_cnt=76120 acc_cnt=75590 true_cnt=1524 pred_cnt=1541 true_pred_cnt=1043
acc.=0.993037 pre.=0.676833 rec.=0.684383 f1=0.680587
-----

epoch0 :
avg_training_loss = 0.043901589825330184
used time = 59.722105979919434
tot_cnt=76120 acc_cnt=75328 true_cnt=1524 pred_cnt=1551 true_pred_cnt=804
acc.=0.989595 pre.=0.518375 rec.=0.527559 f1=0.522927
-----

epoch1 :
avg_training_loss = 0.021147108443862642
used time = 59.86175203323364
tot_cnt=76120 acc_cnt=75432 true_cnt=1524 pred_cnt=1571 true_pred_cnt=918
acc.=0.990962 pre.=0.584341 rec.=0.602362 f1=0.593215
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epoch2 :
avg_training_loss = 0.016865807116184087
used time = 59.89059257507324
tot_cnt=76120 acc_cnt=75600 true_cnt=1524 pred_cnt=1552 true_pred_cnt=1069
acc.=0.993169 pre.=0.688789 rec.=0.701444 f1=0.695059
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epoch3 :
avg_training_loss = 0.013085797009870524
used time = 59.88883948326111
tot_cnt=76120 acc_cnt=75602 true_cnt=1524 pred_cnt=1541 true_pred_cnt=1069
acc.=0.993195 pre.=0.693705 rec.=0.701444 f1=0.697553
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epoch4 :
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avg_training_loss = 0.009808336682331836
used time = 59.851150035858154
tot_cnt=76120 acc_cnt=75661 true_cnt=1524 pred_cnt=1543 true_pred_cnt=1124
acc.=0.993970 pre.=0.728451 rec.=0.737533 f1=0.732964
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epoch5 :
avg_training_loss = 0.0068896682670964
used time = 59.775848388671875
tot_cnt=76120 acc_cnt=75568 true_cnt=1524 pred_cnt=1582 true_pred_cnt=1051
acc.=0.992748 pre.=0.664349 rec.=0.689633 f1=0.676755
-----

epoch6 :
avg_training_loss = 0.004273433209685109
used time = 59.82439684867859
tot_cnt=76120 acc_cnt=75543 true_cnt=1524 pred_cnt=1565 true_pred_cnt=1012
acc.=0.992420 pre.=0.646645 rec.=0.664042 f1=0.655228
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epoch7 :
avg_training_loss = 0.0030355737032487875
used time = 59.92306208610535
tot_cnt=76120 acc_cnt=75557 true_cnt=1524 pred_cnt=1547 true_pred_cnt=1021
acc.=0.992604 pre.=0.659987 rec.=0.669948 f1=0.664930
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epoch8 :
avg_training_loss = 0.0021947943950857956
used time = 59.873828172683716
tot_cnt=76120 acc_cnt=75608 true_cnt=1524 pred_cnt=1568 true_pred_cnt=1080
acc.=0.993274 pre.=0.688776 rec.=0.708661 f1=0.698577
-----

epoch9 :
avg_training_loss = 0.0016071177504556563
used time = 59.893893241882324
tot_cnt=76120 acc_cnt=75611 true_cnt=1524 pred_cnt=1542 true_pred_cnt=1073
acc.=0.993313 pre.=0.695850 rec.=0.704068 f1=0.699935
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epoch10 :
avg_training_loss = 0.0014178130937659223
used time = 59.82894682884216
tot_cnt=76120 acc_cnt=75598 true_cnt=1524 pred_cnt=1535 true_pred_cnt=1054
acc.=0.993142 pre.=0.686645 rec.=0.691601 f1=0.689114
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epoch11 :
avg_training_loss = 0.0012645146730915664
used time = 59.85532593727112
tot_cnt=76120 acc_cnt=75565 true_cnt=1524 pred_cnt=1554 true_pred_cnt=1032
acc.=0.992709 pre.=0.664093 rec.=0.677165 f1=0.670565
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epoch12 :
avg_training_loss = 0.0013099477419158078
used time = 59.46143436431885
tot_cnt=76120 acc_cnt=75638 true_cnt=1524 pred_cnt=1534 true_pred_cnt=1091
acc.=0.993668 pre.=0.711213 rec.=0.715879 f1=0.713538
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epoch13 :
avg_training_loss = 0.001137548242993367
used time = 59.361772775650024
tot_cnt=76120 acc_cnt=75612 true_cnt=1524 pred_cnt=1542 true_pred_cnt=1068
acc.=0.993326 pre.=0.692607 rec.=0.700787 f1=0.696673
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epoch14 :
avg_training_loss = 0.0008594985965572659
used time = 59.367899894714355
tot_cnt=76120 acc_cnt=75629 true_cnt=1524 pred_cnt=1535 true_pred_cnt=1074
acc.=0.993550 pre.=0.699674 rec.=0.704724 f1=0.702190
-----

epoch15 :
avg_training_loss = 0.0009582489347823745
used time = 59.52913475036621
tot_cnt=76120 acc_cnt=75585 true_cnt=1524 pred_cnt=1533 true_pred_cnt=1029
acc.=0.992972 pre.=0.671233 rec.=0.675197 f1=0.673209
-----

epoch16 :
avg_training_loss = 0.0006999791125812189
used time = 59.73663377761841
tot_cnt=76120 acc_cnt=75564 true_cnt=1524 pred_cnt=1550 true_pred_cnt=1026
acc.=0.992696 pre.=0.661935 rec.=0.673228 f1=0.667534
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epoch17 :
avg_training_loss = 0.0006476299994436981
used time = 59.39483070373535
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tot_cnt=76120 acc_cnt=75653 true_cnt=1524 pred_cnt=1548 true_pred_cnt=1108
acc.=0.993865 pre.=0.715762 rec.=0.727034 f1=0.721354
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epoch18 :
avg_training_loss = 0.0004419919932284928
used time = 59.386582374572754
tot_cnt=76120 acc_cnt=75645 true_cnt=1524 pred_cnt=1550 true_pred_cnt=1099
acc.=0.993760 pre.=0.709032 rec.=0.721129 f1=0.715029
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epoch19 :
avg_training_loss = 0.0005724341668131406
used time = 59.480233669281006
tot_cnt=76120 acc_cnt=75602 true_cnt=1524 pred_cnt=1531 true_pred_cnt=1044
acc.=0.993195 pre.=0.681907 rec.=0.685039 f1=0.683470
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epoch20 :
avg_training_loss = 0.0010932735012620307
used time = 59.916500091552734
tot_cnt=76120 acc_cnt=75598 true_cnt=1524 pred_cnt=1524 true_pred_cnt=1040
acc.=0.993142 pre.=0.682415 rec.=0.682415 f1=0.682415
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epoch21 :
avg_training_loss = 0.0005756112391991383
used time = 59.78035521507263
tot_cnt=76120 acc_cnt=75617 true_cnt=1524 pred_cnt=1528 true_pred_cnt=1063
acc.=0.993392 pre.=0.695681 rec.=0.697507 f1=0.696592
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```
epoch22 :
avg_training_loss = 0.0006634367396459555
used time = 59.84399104118347
tot_cnt=76120 acc_cnt=75591 true_cnt=1524 pred_cnt=1532 true_pred_cnt=1038
acc.=0.993050 pre.=0.677546 rec.=0.681102 f1=0.679319
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```
epoch23 :
avg_training_loss = 0.0007435210677973755
used time = 59.897855043411255
tot_cnt=76120 acc_cnt=75616 true_cnt=1524 pred_cnt=1506 true_pred_cnt=1062
acc.=0.993379 pre.=0.705179 rec.=0.696850 f1=0.700990
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```
epoch24 :
avg_training_loss = 0.0006831539866259641
used time = 59.882755279541016
tot_cnt=76120 acc_cnt=75637 true_cnt=1524 pred_cnt=1521 true_pred_cnt=1082
acc.=0.993655 pre.=0.711374 rec.=0.709974 f1=0.710673
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```
epoch25 :
avg_training_loss = 0.000498116435602193
used time = 59.846816539764404
tot_cnt=76120 acc_cnt=75618 true_cnt=1524 pred_cnt=1537 true_pred_cnt=1072
acc.=0.993405 pre.=0.697463 rec.=0.703412 f1=0.700425
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epoch26 :
avg_training_loss = 0.00023707402560412121
used time = 59.872283935546875
tot_cnt=76120 acc_cnt=75625 true_cnt=1524 pred_cnt=1513 true_pred_cnt=1069
acc.=0.993497 pre.=0.706543 rec.=0.701444 f1=0.703984
-----
```

```
epoch27 :
avg_training_loss = 0.0006458854583828041
used time = 59.85369420051575
tot_cnt=76120 acc_cnt=75602 true_cnt=1524 pred_cnt=1540 true_pred_cnt=1057
acc.=0.993195 pre.=0.686364 rec.=0.693570 f1=0.689948
-----
```

```
epoch28 :
avg_training_loss = 0.00044251643025966557
used time = 59.78907108306885
tot_cnt=76120 acc_cnt=75607 true_cnt=1524 pred_cnt=1536 true_pred_cnt=1061
acc.=0.993261 pre.=0.690755 rec.=0.696194 f1=0.693464
-----
```

```
epoch29 :
avg_training_loss = 0.0004938442993651876
used time = 59.43078374862671
tot_cnt=76120 acc_cnt=75615 true_cnt=1524 pred_cnt=1506 true_pred_cnt=1050
acc.=0.993366 pre.=0.697211 rec.=0.688976 f1=0.693069
-----
```

```
epoch30 :
avg_training_loss = 0.0005515361457224697
used time = 59.43259882926941
tot_cnt=76120 acc_cnt=75577 true_cnt=1524 pred_cnt=1550 true_pred_cnt=1039
acc.=0.992867 pre.=0.670323 rec.=0.681759 f1=0.675992
```

```
-----
epoch31 :
avg_training_loss = 0.0004038635803305584
used time = 59.35248899459839
tot_cnt=76120 acc_cnt=75632 true_cnt=1524 pred_cnt=1538 true_pred_cnt=1086
acc.=0.993589 pre.=0.706112 rec.=0.712598 f1=0.709340
-----

epoch32 :
avg_training_loss = 0.0003868465304679578
used time = 59.87409234046936
tot_cnt=76120 acc_cnt=75612 true_cnt=1524 pred_cnt=1524 true_pred_cnt=1058
acc.=0.993326 pre.=0.694226 rec.=0.694226 f1=0.694226
-----

epoch33 :
avg_training_loss = 0.000506748666848673
used time = 59.38789200782776
tot_cnt=76120 acc_cnt=75644 true_cnt=1524 pred_cnt=1544 true_pred_cnt=1095
acc.=0.993747 pre.=0.709197 rec.=0.718504 f1=0.713820
-----

epoch34 :
avg_training_loss = 0.00041277497015950625
used time = 59.352996826171875
tot_cnt=76120 acc_cnt=75601 true_cnt=1524 pred_cnt=1520 true_pred_cnt=1040
acc.=0.993182 pre.=0.684211 rec.=0.682415 f1=0.683311
-----

epoch35 :
avg_training_loss = 0.0005662934402065814
used time = 59.38039541244507
tot_cnt=76120 acc_cnt=75652 true_cnt=1524 pred_cnt=1536 true_pred_cnt=1107
acc.=0.993852 pre.=0.720703 rec.=0.726378 f1=0.723529
-----

epoch36 :
avg_training_loss = 0.00021286360214433403
used time = 59.883994817733765
tot_cnt=76120 acc_cnt=75653 true_cnt=1524 pred_cnt=1534 true_pred_cnt=1100
acc.=0.993865 pre.=0.717080 rec.=0.721785 f1=0.719424
-----

epoch37 :
avg_training_loss = 0.00020364241298202358
used time = 59.931952714920044
tot_cnt=76120 acc_cnt=75648 true_cnt=1524 pred_cnt=1535 true_pred_cnt=1096
acc.=0.993799 pre.=0.714007 rec.=0.719160 f1=0.716574
-----

epoch38 :
avg_training_loss = 0.000494793476655965
used time = 59.868534088134766
tot_cnt=76120 acc_cnt=75590 true_cnt=1524 pred_cnt=1548 true_pred_cnt=1047
acc.=0.993037 pre.=0.676357 rec.=0.687008 f1=0.681641
-----

epoch39 :
avg_training_loss = 0.00035560569342444926
used time = 59.822651386260986
tot_cnt=76120 acc_cnt=75655 true_cnt=1524 pred_cnt=1537 true_pred_cnt=1103
acc.=0.993891 pre.=0.717632 rec.=0.723753 f1=0.720680
-----

epoch0 :
avg_training_loss = 0.07336301876760809
used time = 57.98667311668396
tot_cnt=76120 acc_cnt=74853 true_cnt=2571 pred_cnt=2579 true_pred_cnt=1338
acc.=0.983355 pre.=0.518806 rec.=0.520420 f1=0.519612
-----

epoch1 :
avg_training_loss = 0.03562313577403193
used time = 58.02523946762085
tot_cnt=76120 acc_cnt=75012 true_cnt=2571 pred_cnt=2582 true_pred_cnt=1487
acc.=0.985444 pre.=0.575910 rec.=0.578374 f1=0.577140
-----

epoch2 :
avg_training_loss = 0.030001223239752337
used time = 58.03195643424988
tot_cnt=76120 acc_cnt=75326 true_cnt=2571 pred_cnt=2578 true_pred_cnt=1792
acc.=0.989569 pre.=0.695112 rec.=0.697005 f1=0.696057
-----

epoch3 :
avg_training_loss = 0.022751786214921174
used time = 58.039681911468506
tot_cnt=76120 acc_cnt=75406 true_cnt=2571 pred_cnt=2608 true_pred_cnt=1894
acc.=0.990620 pre.=0.726227 rec.=0.736678 f1=0.731415
-----

epoch4 :
```

```
avg_training_loss = 0.020140743011708758
used time = 58.081037521362305
tot_cnt=76120 acc_cnt=75380 true_cnt=2571 pred_cnt=2577 true_pred_cnt=1850
acc.=0.990279 pre.=0.717889 rec.=0.719564 f1=0.718726
-----

epoch5 :
avg_training_loss = 0.016614587105753476
used time = 58.13333797454834
tot_cnt=76120 acc_cnt=75447 true_cnt=2571 pred_cnt=2582 true_pred_cnt=1910
acc.=0.991159 pre.=0.739737 rec.=0.742902 f1=0.741316
-----

epoch6 :
avg_training_loss = 0.013012526285312975
used time = 58.059351205825806
tot_cnt=76120 acc_cnt=75377 true_cnt=2571 pred_cnt=2591 true_pred_cnt=1859
acc.=0.990239 pre.=0.717484 rec.=0.723065 f1=0.720263
-----

epoch7 :
avg_training_loss = 0.01120037069101163
used time = 58.03602600097656
tot_cnt=76120 acc_cnt=75361 true_cnt=2571 pred_cnt=2575 true_pred_cnt=1820
acc.=0.990029 pre.=0.706796 rec.=0.707896 f1=0.707346
-----

epoch8 :
avg_training_loss = 0.008299401958885096
used time = 58.074063777923584
tot_cnt=76120 acc_cnt=75452 true_cnt=2571 pred_cnt=2592 true_pred_cnt=1926
acc.=0.991224 pre.=0.743056 rec.=0.749125 f1=0.746078
-----

epoch9 :
avg_training_loss = 0.00692518714748685
used time = 58.057034969329834
tot_cnt=76120 acc_cnt=75455 true_cnt=2571 pred_cnt=2573 true_pred_cnt=1914
acc.=0.991264 pre.=0.743879 rec.=0.744457 f1=0.744168
-----

epoch10 :
avg_training_loss = 0.005963427331441504
used time = 57.919246196746826
tot_cnt=76120 acc_cnt=75418 true_cnt=2571 pred_cnt=2584 true_pred_cnt=1893
acc.=0.990778 pre.=0.732585 rec.=0.736289 f1=0.734433
-----

epoch11 :
avg_training_loss = 0.004643196035224154
used time = 57.99949789047241
tot_cnt=76120 acc_cnt=75423 true_cnt=2571 pred_cnt=2581 true_pred_cnt=1889
acc.=0.990843 pre.=0.731887 rec.=0.734734 f1=0.733307
-----

epoch12 :
avg_training_loss = 0.0037837964494514954
used time = 58.09172964096069
tot_cnt=76120 acc_cnt=75493 true_cnt=2571 pred_cnt=2584 true_pred_cnt=1969
acc.=0.991763 pre.=0.761997 rec.=0.765850 f1=0.763919
-----

epoch13 :
avg_training_loss = 0.0030032673760143386
used time = 57.89969444274902
tot_cnt=76120 acc_cnt=75433 true_cnt=2571 pred_cnt=2573 true_pred_cnt=1893
acc.=0.990975 pre.=0.735717 rec.=0.736289 f1=0.736003
-----

epoch14 :
avg_training_loss = 0.0034731333822850376
used time = 57.61043047904968
tot_cnt=76120 acc_cnt=75437 true_cnt=2571 pred_cnt=2586 true_pred_cnt=1906
acc.=0.991027 pre.=0.737046 rec.=0.741346 f1=0.739189
-----

epoch15 :
avg_training_loss = 0.0019939351264778
used time = 57.57159066200256
tot_cnt=76120 acc_cnt=75355 true_cnt=2571 pred_cnt=2577 true_pred_cnt=1815
acc.=0.989950 pre.=0.704307 rec.=0.705951 f1=0.705128
-----

epoch16 :
avg_training_loss = 0.0023328533867740873
used time = 57.644509077072144
tot_cnt=76120 acc_cnt=75380 true_cnt=2571 pred_cnt=2576 true_pred_cnt=1838
acc.=0.990279 pre.=0.713509 rec.=0.714897 f1=0.714202
-----

epoch17 :
avg_training_loss = 0.0019409397374028745
used time = 57.64360451698303
```



```
tot_cnt=76120 acc_cnt=75447 true_cnt=2571 pred_cnt=2572 true_pred_cnt=1901
acc.=0.991159 pre.=0.739114 rec.=0.739401 f1=0.739257
-----
```

```
epoch18 :
avg_training_loss = 0.002297543503744218
used time = 57.629071950912476
tot_cnt=76120 acc_cnt=75465 true_cnt=2571 pred_cnt=2570 true_pred_cnt=1921
acc.=0.991395 pre.=0.747471 rec.=0.747180 f1=0.747325
-----
```

```
epoch19 :
avg_training_loss = 0.0020636407005817383
used time = 57.68020701408386
tot_cnt=76120 acc_cnt=75431 true_cnt=2571 pred_cnt=2577 true_pred_cnt=1890
acc.=0.990949 pre.=0.733411 rec.=0.735123 f1=0.734266
-----
```

```
epoch20 :
avg_training_loss = 0.0019733344807344325
used time = 57.605464220047
tot_cnt=76120 acc_cnt=75335 true_cnt=2571 pred_cnt=2576 true_pred_cnt=1803
acc.=0.989687 pre.=0.699922 rec.=0.701284 f1=0.700602
-----
```

```
epoch21 :
avg_training_loss = 0.001359254045559622
used time = 57.59909725189209
tot_cnt=76120 acc_cnt=75397 true_cnt=2571 pred_cnt=2589 true_pred_cnt=1867
acc.=0.990502 pre.=0.721128 rec.=0.726177 f1=0.723643
-----
```

```
epoch22 :
avg_training_loss = 0.0013851479191304473
used time = 57.60505175590515
tot_cnt=76120 acc_cnt=75341 true_cnt=2571 pred_cnt=2582 true_pred_cnt=1807
acc.=0.989766 pre.=0.699845 rec.=0.702839 f1=0.701339
-----
```

```
epoch23 :
avg_training_loss = 0.0014952744364433582
used time = 57.68794798851013
tot_cnt=76120 acc_cnt=75378 true_cnt=2571 pred_cnt=2583 true_pred_cnt=1844
acc.=0.990252 pre.=0.713899 rec.=0.717231 f1=0.715561
-----
```

```
epoch24 :
avg_training_loss = 0.0019833719943795364
used time = 57.65497541427612
tot_cnt=76120 acc_cnt=75300 true_cnt=2571 pred_cnt=2581 true_pred_cnt=1769
acc.=0.989228 pre.=0.685393 rec.=0.688059 f1=0.686724
-----
```

```
epoch25 :
avg_training_loss = 0.0015870828152922413
used time = 57.64528751373291
tot_cnt=76120 acc_cnt=75375 true_cnt=2571 pred_cnt=2579 true_pred_cnt=1840
acc.=0.990213 pre.=0.713455 rec.=0.715675 f1=0.714563
-----
```

```
epoch26 :
avg_training_loss = 0.0016065857294575332
used time = 57.646528005599976
tot_cnt=76120 acc_cnt=75369 true_cnt=2571 pred_cnt=2574 true_pred_cnt=1839
acc.=0.990134 pre.=0.714452 rec.=0.715286 f1=0.714869
-----
```

```
epoch27 :
avg_training_loss = 0.001593523318200465
used time = 57.66459822654724
tot_cnt=76120 acc_cnt=75394 true_cnt=2571 pred_cnt=2580 true_pred_cnt=1858
acc.=0.990462 pre.=0.720155 rec.=0.722676 f1=0.721413
-----
```

```
epoch28 :
avg_training_loss = 0.001030460724135494
used time = 57.698901653289795
tot_cnt=76120 acc_cnt=75374 true_cnt=2571 pred_cnt=2580 true_pred_cnt=1839
acc.=0.990200 pre.=0.712791 rec.=0.715286 f1=0.714036
-----
```

```
epoch29 :
avg_training_loss = 0.0009047562813819827
used time = 57.66437292098999
tot_cnt=76120 acc_cnt=75348 true_cnt=2571 pred_cnt=2581 true_pred_cnt=1813
acc.=0.989858 pre.=0.702441 rec.=0.705173 f1=0.703804
-----
```

```
epoch30 :
avg_training_loss = 0.0011703634963316075
used time = 57.696279525756836
tot_cnt=76120 acc_cnt=75361 true_cnt=2571 pred_cnt=2578 true_pred_cnt=1819
acc.=0.990029 pre.=0.705586 rec.=0.707507 f1=0.706545
```

```
-----
epoch31 :
avg_training_loss = 0.001120555202674378
used time = 57.72755408287048
tot_cnt=76120 acc_cnt=75368 true_cnt=2571 pred_cnt=2586 true_pred_cnt=1839
acc.=0.990121 pre.=0.711137 rec.=0.715286 f1=0.713205
-----

epoch32 :
avg_training_loss = 0.0010257873236370818
used time = 57.66336178779602
tot_cnt=76120 acc_cnt=75387 true_cnt=2571 pred_cnt=2582 true_pred_cnt=1850
acc.=0.990370 pre.=0.716499 rec.=0.719564 f1=0.718028
-----

epoch33 :
avg_training_loss = 0.001169208522952731
used time = 57.698923110961914
tot_cnt=76120 acc_cnt=75415 true_cnt=2571 pred_cnt=2586 true_pred_cnt=1882
acc.=0.990738 pre.=0.727765 rec.=0.732011 f1=0.729882
-----

epoch34 :
avg_training_loss = 0.0017275887986888056
used time = 57.72745370864868
tot_cnt=76120 acc_cnt=75423 true_cnt=2571 pred_cnt=2582 true_pred_cnt=1892
acc.=0.990843 pre.=0.732765 rec.=0.735900 f1=0.734330
-----

epoch35 :
avg_training_loss = 0.0007811963863080115
used time = 57.71112012863159
tot_cnt=76120 acc_cnt=75446 true_cnt=2571 pred_cnt=2577 true_pred_cnt=1906
acc.=0.991146 pre.=0.739620 rec.=0.741346 f1=0.740482
-----

epoch36 :
avg_training_loss = 0.0010272759915617726
used time = 57.70619797706604
tot_cnt=76120 acc_cnt=75402 true_cnt=2571 pred_cnt=2581 true_pred_cnt=1864
acc.=0.990568 pre.=0.722201 rec.=0.725010 f1=0.723602
-----

epoch37 :
avg_training_loss = 0.001218189516335802
used time = 57.7404625415802
tot_cnt=76120 acc_cnt=75436 true_cnt=2571 pred_cnt=2585 true_pred_cnt=1901
acc.=0.991014 pre.=0.735397 rec.=0.739401 f1=0.737393
-----

epoch38 :
avg_training_loss = 0.0006903776579805653
used time = 57.78196907043457
tot_cnt=76120 acc_cnt=75403 true_cnt=2571 pred_cnt=2588 true_pred_cnt=1873
acc.=0.990581 pre.=0.723725 rec.=0.728510 f1=0.726110
-----

epoch39 :
avg_training_loss = 0.0009532356658555053
used time = 57.77110576629639
tot_cnt=76120 acc_cnt=75378 true_cnt=2571 pred_cnt=2579 true_pred_cnt=1839
acc.=0.990252 pre.=0.713067 rec.=0.715286 f1=0.714175
-----

epoch0 :
avg_training_loss = 0.07385282687214025
used time = 61.12954092025757
tot_cnt=76120 acc_cnt=74719 true_cnt=2571 pred_cnt=2482 true_pred_cnt=1232
acc.=0.981595 pre.=0.496374 rec.=0.479191 f1=0.487631
-----

epoch1 :
avg_training_loss = 0.036496364856924854
used time = 61.23242783546448
tot_cnt=76120 acc_cnt=75103 true_cnt=2571 pred_cnt=2570 true_pred_cnt=1573
acc.=0.986640 pre.=0.612062 rec.=0.611824 f1=0.611943
-----

epoch2 :
avg_training_loss = 0.02748226448702995
used time = 61.22920870780945
tot_cnt=76120 acc_cnt=75362 true_cnt=2571 pred_cnt=2566 true_pred_cnt=1825
acc.=0.990042 pre.=0.711224 rec.=0.709841 f1=0.710531
-----

epoch3 :
avg_training_loss = 0.0229354282779157
used time = 61.21424221992493
tot_cnt=76120 acc_cnt=75403 true_cnt=2571 pred_cnt=2595 true_pred_cnt=1889
acc.=0.990581 pre.=0.727938 rec.=0.734734 f1=0.731320
-----

epoch4 :
```

```
avg_training_loss = 0.019653698367535916
used time = 61.22128915786743
tot_cnt=76120 acc_cnt=75421 true_cnt=2571 pred_cnt=2589 true_pred_cnt=1898
acc.=0.990817 pre.=0.733102 rec.=0.738234 f1=0.735659
-----

epoch5 :
avg_training_loss = 0.01633784838039857
used time = 61.21746635437012
tot_cnt=76120 acc_cnt=75395 true_cnt=2571 pred_cnt=2593 true_pred_cnt=1884
acc.=0.990476 pre.=0.726572 rec.=0.732789 f1=0.729667
-----

epoch6 :
avg_training_loss = 0.012611158668537579
used time = 61.21291494369507
tot_cnt=76120 acc_cnt=75368 true_cnt=2571 pred_cnt=2589 true_pred_cnt=1842
acc.=0.990121 pre.=0.711472 rec.=0.716453 f1=0.713953
-----

epoch7 :
avg_training_loss = 0.01087744217699446
used time = 61.202184438705444
tot_cnt=76120 acc_cnt=75386 true_cnt=2571 pred_cnt=2561 true_pred_cnt=1857
acc.=0.990357 pre.=0.725107 rec.=0.722287 f1=0.723694
-----

epoch8 :
avg_training_loss = 0.008857222164378446
used time = 61.23709726333618
tot_cnt=76120 acc_cnt=75287 true_cnt=2571 pred_cnt=2571 true_pred_cnt=1767
acc.=0.989057 pre.=0.687281 rec.=0.687281 f1=0.687281
-----

epoch9 :
avg_training_loss = 0.0064179647304212955
used time = 61.27384924888611
tot_cnt=76120 acc_cnt=75354 true_cnt=2571 pred_cnt=2572 true_pred_cnt=1827
acc.=0.989937 pre.=0.710342 rec.=0.710618 f1=0.710480
-----

epoch10 :
avg_training_loss = 0.005770043643844097
used time = 61.199671030044556
tot_cnt=76120 acc_cnt=75396 true_cnt=2571 pred_cnt=2572 true_pred_cnt=1862
acc.=0.990489 pre.=0.723950 rec.=0.724232 f1=0.724091
-----

epoch11 :
avg_training_loss = 0.004996486636988647
used time = 61.216739892959595
tot_cnt=76120 acc_cnt=75449 true_cnt=2571 pred_cnt=2587 true_pred_cnt=1923
acc.=0.991185 pre.=0.743332 rec.=0.747958 f1=0.745638
-----

epoch12 :
avg_training_loss = 0.004276670153488589
used time = 61.20048689842224
tot_cnt=76120 acc_cnt=75439 true_cnt=2571 pred_cnt=2565 true_pred_cnt=1897
acc.=0.991054 pre.=0.739571 rec.=0.737845 f1=0.738707
-----

epoch13 :
avg_training_loss = 0.003412018956430733
used time = 61.19686532020569
tot_cnt=76120 acc_cnt=75425 true_cnt=2571 pred_cnt=2559 true_pred_cnt=1884
acc.=0.990870 pre.=0.736225 rec.=0.732789 f1=0.734503
-----

epoch14 :
avg_training_loss = 0.003117640000170149
used time = 61.16558384895325
tot_cnt=76120 acc_cnt=75365 true_cnt=2571 pred_cnt=2557 true_pred_cnt=1826
acc.=0.990081 pre.=0.714118 rec.=0.710229 f1=0.712168
-----

epoch15 :
avg_training_loss = 0.002612637132025131
used time = 61.2240264415741
tot_cnt=76120 acc_cnt=75383 true_cnt=2571 pred_cnt=2571 true_pred_cnt=1849
acc.=0.990318 pre.=0.719175 rec.=0.719175 f1=0.719175
-----

epoch16 :
avg_training_loss = 0.002588976679555595
used time = 61.21715712547302
tot_cnt=76120 acc_cnt=75356 true_cnt=2571 pred_cnt=2589 true_pred_cnt=1831
acc.=0.989963 pre.=0.707223 rec.=0.712174 f1=0.709690
-----

epoch17 :
avg_training_loss = 0.0020246924951558224
used time = 61.24169969558716
```

```
tot_cnt=76120 acc_cnt=75391 true_cnt=2571 pred_cnt=2582 true_pred_cnt=1861
acc.=0.990423 pre.=0.720759 rec.=0.723843 f1=0.722298
-----
```

```
epoch18 :
avg_training_loss = 0.00228852750090382
used time = 61.209195613861084
tot_cnt=76120 acc_cnt=75387 true_cnt=2571 pred_cnt=2573 true_pred_cnt=1846
acc.=0.990370 pre.=0.717450 rec.=0.718009 f1=0.717729
-----
```

```
epoch19 :
avg_training_loss = 0.0017938998044299348
used time = 61.16800785064697
tot_cnt=76120 acc_cnt=75385 true_cnt=2571 pred_cnt=2573 true_pred_cnt=1846
acc.=0.990344 pre.=0.717450 rec.=0.718009 f1=0.717729
-----
```

```
epoch20 :
avg_training_loss = 0.0018363184941089367
used time = 61.15455079078674
tot_cnt=76120 acc_cnt=75382 true_cnt=2571 pred_cnt=2559 true_pred_cnt=1840
acc.=0.990305 pre.=0.719031 rec.=0.715675 f1=0.717349
-----
```

```
epoch21 :
avg_training_loss = 0.0025158823298676238
used time = 61.134766817092896
tot_cnt=76120 acc_cnt=75306 true_cnt=2571 pred_cnt=2556 true_pred_cnt=1768
acc.=0.989306 pre.=0.691706 rec.=0.687670 f1=0.689682
-----
```

```
epoch22 :
avg_training_loss = 0.0017235175423000169
used time = 61.150389671325684
tot_cnt=76120 acc_cnt=75327 true_cnt=2571 pred_cnt=2590 true_pred_cnt=1816
acc.=0.989582 pre.=0.701158 rec.=0.706340 f1=0.703740
-----
```

```
epoch23 :
avg_training_loss = 0.0019605405190411735
used time = 61.1175901889801
tot_cnt=76120 acc_cnt=75348 true_cnt=2571 pred_cnt=2567 true_pred_cnt=1809
acc.=0.989858 pre.=0.704714 rec.=0.703617 f1=0.704165
-----
```

```
epoch24 :
avg_training_loss = 0.001534297947993364
used time = 61.18126034736633
tot_cnt=76120 acc_cnt=75355 true_cnt=2571 pred_cnt=2568 true_pred_cnt=1814
acc.=0.989950 pre.=0.706386 rec.=0.705562 f1=0.705974
-----
```

```
epoch25 :
avg_training_loss = 0.0014307645275769636
used time = 61.2639057636261
tot_cnt=76120 acc_cnt=75380 true_cnt=2571 pred_cnt=2536 true_pred_cnt=1845
acc.=0.990279 pre.=0.727524 rec.=0.717620 f1=0.722538
-----
```

```
epoch26 :
avg_training_loss = 0.0012942197377724415
used time = 61.196857929229736
tot_cnt=76120 acc_cnt=75353 true_cnt=2571 pred_cnt=2568 true_pred_cnt=1816
acc.=0.989924 pre.=0.707165 rec.=0.706340 f1=0.706752
-----
```

```
epoch27 :
avg_training_loss = 0.0009339063826119503
used time = 61.20130205154419
tot_cnt=76120 acc_cnt=75377 true_cnt=2571 pred_cnt=2571 true_pred_cnt=1840
acc.=0.990239 pre.=0.715675 rec.=0.715675 f1=0.715675
-----
```

```
epoch28 :
avg_training_loss = 0.0012469896117744544
used time = 61.15505409240723
tot_cnt=76120 acc_cnt=75367 true_cnt=2571 pred_cnt=2581 true_pred_cnt=1838
acc.=0.990108 pre.=0.712127 rec.=0.714897 f1=0.713509
-----
```

```
epoch29 :
avg_training_loss = 0.0013208311537037725
used time = 61.25993728637695
tot_cnt=76120 acc_cnt=75348 true_cnt=2571 pred_cnt=2581 true_pred_cnt=1816
acc.=0.989858 pre.=0.703603 rec.=0.706340 f1=0.704969
-----
```

```
epoch30 :
avg_training_loss = 0.001133095882737728
used time = 61.151830196380615
tot_cnt=76120 acc_cnt=75350 true_cnt=2571 pred_cnt=2569 true_pred_cnt=1812
acc.=0.989884 pre.=0.705333 rec.=0.704784 f1=0.705058
```

```
-----  
epoch31 :  
avg_training_loss = 0.0011608163871423668  
used time = 61.90661668777466  
tot_cnt=76120 acc_cnt=75321 true_cnt=2571 pred_cnt=2613 true_pred_cnt=1820  
acc.=0.989503 pre.=0.696517 rec.=0.707896 f1=0.702160  
-----
```

```
epoch32 :  
avg_training_loss = 0.001121927557698906  
used time = 61.371803760528564  
tot_cnt=76120 acc_cnt=75360 true_cnt=2571 pred_cnt=2571 true_pred_cnt=1824  
acc.=0.990016 pre.=0.709452 rec.=0.709452 f1=0.709452  
-----
```

```
epoch33 :  
avg_training_loss = 0.0012196585955217367  
used time = 61.74430704116821  
tot_cnt=76120 acc_cnt=75324 true_cnt=2571 pred_cnt=2578 true_pred_cnt=1794  
acc.=0.989543 pre.=0.695888 rec.=0.697783 f1=0.696834  
-----
```

```
epoch34 :  
avg_training_loss = 0.0008852667820728039  
used time = 61.35635495185852  
tot_cnt=76120 acc_cnt=75370 true_cnt=2571 pred_cnt=2575 true_pred_cnt=1840  
acc.=0.990147 pre.=0.714563 rec.=0.715675 f1=0.715119  
-----
```

```
epoch35 :  
avg_training_loss = 0.0012003753496252973  
used time = 61.22103428840637  
tot_cnt=76120 acc_cnt=75347 true_cnt=2571 pred_cnt=2572 true_pred_cnt=1817  
acc.=0.989845 pre.=0.706454 rec.=0.706729 f1=0.706591  
-----
```

```
epoch36 :  
avg_training_loss = 0.0013543181407177235  
used time = 61.210050106048584  
tot_cnt=76120 acc_cnt=75353 true_cnt=2571 pred_cnt=2566 true_pred_cnt=1812  
acc.=0.989924 pre.=0.706157 rec.=0.704784 f1=0.705470  
-----
```

```
epoch37 :  
avg_training_loss = 0.0006607283106850237  
used time = 61.27536678314209  
tot_cnt=76120 acc_cnt=75359 true_cnt=2571 pred_cnt=2580 true_pred_cnt=1832  
acc.=0.990003 pre.=0.710078 rec.=0.712563 f1=0.711318  
-----
```

```
epoch38 :  
avg_training_loss = 0.001125240112509569  
used time = 61.40690350532532  
tot_cnt=76120 acc_cnt=75320 true_cnt=2571 pred_cnt=2559 true_pred_cnt=1785  
acc.=0.989490 pre.=0.697538 rec.=0.694282 f1=0.695906  
-----
```

```
epoch39 :  
avg_training_loss = 0.0011875204113133424  
used time = 61.240501403808594  
tot_cnt=76120 acc_cnt=75363 true_cnt=2571 pred_cnt=2576 true_pred_cnt=1829  
acc.=0.990055 pre.=0.710016 rec.=0.711396 f1=0.710705  
-----
```

```
max F1_measure for BertAndLinear = 0.7115  
max F1_measure for BertAndTransformer = 0.7330  
max F1_measure for RoBERTaAndLinear = 0.7639  
max F1_measure for RoBERTaAndTransformer = 0.7456
```

进程结束,退出