

AE:

1)

Confusion Matrix:

prediction: F T

440 560

label: F [[420 20] 440

T [20 540]] 560

Accuracy = 0.96

Normal Test Data Mean = 0.009169315919280052

Normal Test Data Standard Deviation = 0.004234729800373316

Abnormal Test Data Mean = 0.029635341838002205

Abnormal Test Data Standard Deviation = 0.006848580669611692

Precision = 0.9642857142857143

Recall = 0.9642857142857143

2)

Confusion Matrix:

prediction: F T

454 546

label: F [[429 11] 440

T [25 535]] 560

Accuracy = 0.964

Normal Test Data Mean = 0.009109933860599995

Normal Test Data Standard Deviation = 0.00439373729750514

Abnormal Test Data Mean = 0.028675680980086327

Abnormal Test Data Standard Deviation = 0.007510630413889885

Precision = 0.9798534798534798

Recall = 0.9553571428571429

3)

Confusion Matrix:

prediction: F T

447 553

label: F [[424 16] 440

T [23 537]] 560

Accuracy = 0.961

Normal Test Data Mean = 0.008567622862756252

Normal Test Data Standard Deviation = 0.004056971520185471

Abnormal Test Data Mean = 0.028975170105695724

Abnormal Test Data Standard Deviation = 0.00764775974676013

Precision = 0.9710669077757685

Recall = 0.9589285714285715

4)

Confusion Matrix:

prediction: F T

467 533

label: F [[433 7] 440
T [34 526]] 560

Accuracy = 0.959

Normal Test Data Mean = 0.008818737231194973

Normal Test Data Standard Deviation = 0.004446151200681925

Abnormal Test Data Mean = 0.028293026611208916

Abnormal Test Data Standard Deviation = 0.006770873907953501

Precision = 0.9868667917448405

Recall = 0.9392857142857143

5)

Confusion Matrix:

prediction: F T
432 568

label: F [[417 23] 440
T [15 545]] 560

Accuracy = 0.962

Normal Test Data Mean = 0.008740234188735485

Normal Test Data Standard Deviation = 0.004164550453424454

Abnormal Test Data Mean = 0.028457915410399437

Abnormal Test Data Standard Deviation = 0.007251232396811247

Precision = 0.9595070422535211

Recall = 0.9732142857142857

6)

Confusion Matrix:

prediction: F T
424 576

label: F [[413 27] 440
T [11 549]] 560

Accuracy = 0.962

Normal Test Data Mean = 0.009152278304100037

Normal Test Data Standard Deviation = 0.004508689045906067

Abnormal Test Data Mean = 0.03081071935594082

Abnormal Test Data Standard Deviation = 0.0066500757820904255

Precision = 0.953125

Recall = 0.9803571428571428

7)

Confusion Matrix:

prediction: F T
453 547

label: F [[426 14] 440
T [27 533]] 560

Accuracy = 0.959

Normal Test Data Mean = 0.008995910175144672

Normal Test Data Standard Deviation = 0.004053134471178055

Abnormal Test Data Mean = 0.03119600936770439

Abnormal Test Data Standard Deviation = 0.007290606386959553

Precision = 0.9744058500914077

Recall = 0.9517857142857142

8)

Confusion Matrix:

prediction: F T

439 561

label: F [[423 17] 440

T [16 544]] 560

Accuracy = 0.967

Normal Test Data Mean = 0.008402740582823753

Normal Test Data Standard Deviation = 0.003959235269576311

Abnormal Test Data Mean = 0.029310746118426323

Abnormal Test Data Standard Deviation = 0.007161801215261221

Precision = 0.9696969696969697

Recall = 0.9714285714285714

9)

Confusion Matrix:

prediction: F T

455 545

label: F [[431 9] 440

T [24 536]] 560

Accuracy = 0.967

Normal Test Data Mean = 0.008534357883036137

Normal Test Data Standard Deviation = 0.004281103610992432

Abnormal Test Data Mean = 0.031000155955553055

Abnormal Test Data Standard Deviation = 0.007290925830602646

Precision = 0.9834862385321101

Recall = 0.9571428571428572

10)

Confusion Matrix:

prediction: F T

437 563

label: F [[422 18] 440

T [15 545]] 560

Accuracy = 0.967

Normal Test Data Mean = 0.009009676054120064

Normal Test Data Standard Deviation = 0.0042469981126487255

Abnormal Test Data Mean = 0.030258916318416595

Abnormal Test Data Standard Deviation = 0.006745899096131325

Precision = 0.9680284191829485

Recall = 0.9732142857142857

Accuracy = 0.96

Normal Test Data Mean = 0.009169315919280052

Normal Test Data Standard Deviation = 0.004234729800373316

Abnormal Test Data Mean = 0.029635341838002205

Abnormal Test Data Standard Deviation = 0.006848580669611692

Accuracy = 0.964

Normal Test Data Mean = 0.009109933860599995

Normal Test Data Standard Deviation = 0.00439373729750514

Abnormal Test Data Mean = 0.028675680980086327

Abnormal Test Data Standard Deviation = 0.007510630413889885

Accuracy = 0.961

Normal Test Data Mean = 0.008567622862756252

Normal Test Data Standard Deviation = 0.004056971520185471

Abnormal Test Data Mean = 0.028975170105695724

Abnormal Test Data Standard Deviation = 0.00764775974676013

Accuracy = 0.959

Normal Test Data Mean = 0.008818737231194973

Normal Test Data Standard Deviation = 0.004446151200681925

Abnormal Test Data Mean = 0.028293026611208916

Abnormal Test Data Standard Deviation = 0.006770873907953501

Accuracy = 0.962

Normal Test Data Mean = 0.008740234188735485

Normal Test Data Standard Deviation = 0.004164550453424454

Abnormal Test Data Mean = 0.028457915410399437

Abnormal Test Data Standard Deviation = 0.007251232396811247

Accuracy = 0.962

Normal Test Data Mean = 0.009152278304100037

Normal Test Data Standard Deviation = 0.004508689045906067

Abnormal Test Data Mean = 0.03081071935594082

Abnormal Test Data Standard Deviation = 0.0066500757820904255

Accuracy = 0.959

Normal Test Data Mean = 0.008995910175144672

Normal Test Data Standard Deviation = 0.004053134471178055

Abnormal Test Data Mean = 0.03119600936770439

Abnormal Test Data Standard Deviation = 0.007290606386959553

Accuracy = 0.967

Normal Test Data Mean = 0.008402740582823753
Normal Test Data Standard Deviation = 0.003959235269576311
Abnormal Test Data Mean = 0.029310746118426323
Abnormal Test Data Standard Deviation = 0.007161801215261221

Accuracy = 0.967
Normal Test Data Mean = 0.008534357883036137
Normal Test Data Standard Deviation = 0.004281103610992432
Abnormal Test Data Mean = 0.031000155955553055
Abnormal Test Data Standard Deviation = 0.007290925830602646

Accuracy = 0.967
Normal Test Data Mean = 0.009009676054120064
Normal Test Data Standard Deviation = 0.0042469981126487255
Abnormal Test Data Mean = 0.030258916318416595
Abnormal Test Data Standard Deviation = 0.006745899096131325

Overall:

Accuracy = 0.9628
Normal Test Data Mean = 0.0089
Normal Test Data Standard Deviation = 0.0042
Abnormal Test Data Mean = 0.0297
Abnormal Test Data Standard Deviation = 0.0071

VAE Latent Loss:

1)

Confusion Matrix:

prediction: F T
 468 532

label: F [[431 9] 440
 T [37 523]] 560

Accuracy = 0.954

Normal Test Data Mean = 0.020278330892324448
Normal Test Data Standard Deviation = 0.012550999410450459
Abnormal Test Data Mean = 0.052440300583839417
Abnormal Test Data Standard Deviation = 0.008512615226209164
Precision = 0.9830827067669173
Recall = 0.9339285714285714

2)

Confusion Matrix:

prediction: F T
 462 538

label: F [[427 13] 440

T [35 525]] 560
Accuracy = 0.952
Normal Test Data Mean = 0.02027731202542782
Normal Test Data Standard Deviation = 0.012557352893054485
Abnormal Test Data Mean = 0.052289411425590515
Abnormal Test Data Standard Deviation = 0.008569230325520039
Precision = 0.9758364312267658
Recall = 0.9375

3)

Confusion Matrix:

prediction: F T
466 534
label: F [[430 10] 440
T [36 524]] 560

Accuracy = 0.954
Normal Test Data Mean = 0.02030421979725361
Normal Test Data Standard Deviation = 0.012660929933190346
Abnormal Test Data Mean = 0.05262962356209755
Abnormal Test Data Standard Deviation = 0.008615327067673206
Precision = 0.9812734082397003
Recall = 0.9357142857142857

4)

Confusion Matrix:

prediction: F T
464 536
label: F [[429 11] 440
T [35 525]] 560

Accuracy = 0.954
Normal Test Data Mean = 0.020278800278902054
Normal Test Data Standard Deviation = 0.01253422163426876
Abnormal Test Data Mean = 0.05265740305185318
Abnormal Test Data Standard Deviation = 0.008519774302840233
Precision = 0.9794776119402985
Recall = 0.9375

5)

Confusion Matrix:

prediction: F T
456 544
label: F [[422 18] 440
T [34 526]] 560

Accuracy = 0.948
Normal Test Data Mean = 0.0202984306961298
Normal Test Data Standard Deviation = 0.01246469933539629
Abnormal Test Data Mean = 0.05234095826745033

Abnormal Test Data Standard Deviation = 0.008518102578818798

Precision = 0.9669117647058824

Recall = 0.9392857142857143

6)

Confusion Matrix:

prediction: F T

465 535

label: F [[430 10] 440

T [35 525]] 560

Accuracy = 0.955

Normal Test Data Mean = 0.020255139097571373

Normal Test Data Standard Deviation = 0.012553111650049686

Abnormal Test Data Mean = 0.05265644192695618

Abnormal Test Data Standard Deviation = 0.008527365513145924

Precision = 0.9813084112149533

Recall = 0.9375

7)

Confusion Matrix:

prediction: F T

464 536

label: F [[429 11] 440

T [35 525]] 560

Accuracy = 0.954

Normal Test Data Mean = 0.02027713507413864

Normal Test Data Standard Deviation = 0.012428902089595795

Abnormal Test Data Mean = 0.052321240305900574

Abnormal Test Data Standard Deviation = 0.008446901105344296

Precision = 0.9794776119402985

Recall = 0.9375

8)

Confusion Matrix:

prediction: F T

464 536

label: F [[428 12] 440

T [36 524]] 560

Accuracy = 0.952

Normal Test Data Mean = 0.02031519077718258

Normal Test Data Standard Deviation = 0.012432349845767021

Abnormal Test Data Mean = 0.052184123545885086

Abnormal Test Data Standard Deviation = 0.008458820171654224

Precision = 0.9776119402985075

Recall = 0.9357142857142857

9)

Confusion Matrix:

prediction: F T
464 536
label: F [[428 12] 440
T [36 524]] 560
Accuracy = 0.952
Normal Test Data Mean = 0.02027870900928974
Normal Test Data Standard Deviation = 0.012544086202979088
Abnormal Test Data Mean = 0.052306048572063446
Abnormal Test Data Standard Deviation = 0.008525446988642216
Precision = 0.9776119402985075
Recall = 0.9357142857142857

10)

Confusion Matrix:
prediction: F T
466 534
label: F [[429 11] 440
T [37 523]] 560
Accuracy = 0.952
Normal Test Data Mean = 0.020291998982429504
Normal Test Data Standard Deviation = 0.012503359466791153
Abnormal Test Data Mean = 0.052467018365859985
Abnormal Test Data Standard Deviation = 0.008512512780725956
Precision = 0.9794007490636704
Recall = 0.9339285714285714

Accuracy = 0.954
Normal Test Data Mean = 0.020278330892324448
Normal Test Data Standard Deviation = 0.012550999410450459
Abnormal Test Data Mean = 0.052440300583839417
Abnormal Test Data Standard Deviation = 0.008512615226209164

Accuracy = 0.952
Normal Test Data Mean = 0.02027731202542782
Normal Test Data Standard Deviation = 0.012557352893054485
Abnormal Test Data Mean = 0.052289411425590515
Abnormal Test Data Standard Deviation = 0.008569230325520039

Accuracy = 0.954
Normal Test Data Mean = 0.02030421979725361
Normal Test Data Standard Deviation = 0.012660929933190346
Abnormal Test Data Mean = 0.05262962356209755
Abnormal Test Data Standard Deviation = 0.008615327067673206

Accuracy = 0.954

Normal Test Data Mean = 0.020278800278902054

Normal Test Data Standard Deviation = 0.01253422163426876

Abnormal Test Data Mean = 0.05265740305185318

Abnormal Test Data Standard Deviation = 0.008519774302840233

Accuracy = 0.948

Normal Test Data Mean = 0.0202984306961298

Normal Test Data Standard Deviation = 0.01246469933539629

Abnormal Test Data Mean = 0.05234095826745033

Abnormal Test Data Standard Deviation = 0.008518102578818798

Accuracy = 0.955

Normal Test Data Mean = 0.020255139097571373

Normal Test Data Standard Deviation = 0.012553111650049686

Abnormal Test Data Mean = 0.05265644192695618

Abnormal Test Data Standard Deviation = 0.008527365513145924

Accuracy = 0.954

Normal Test Data Mean = 0.02027713507413864

Normal Test Data Standard Deviation = 0.012428902089595795

Abnormal Test Data Mean = 0.052321240305900574

Abnormal Test Data Standard Deviation = 0.008446901105344296

Accuracy = 0.952

Normal Test Data Mean = 0.02031519077718258

Normal Test Data Standard Deviation = 0.012432349845767021

Abnormal Test Data Mean = 0.052184123545885086

Abnormal Test Data Standard Deviation = 0.008458820171654224

Accuracy = 0.952

Normal Test Data Mean = 0.02027870900928974

Normal Test Data Standard Deviation = 0.012544086202979088

Abnormal Test Data Mean = 0.052306048572063446

Abnormal Test Data Standard Deviation = 0.008525446988642216

Accuracy = 0.952

Normal Test Data Mean = 0.020291998982429504

Normal Test Data Standard Deviation = 0.012503359466791153

Abnormal Test Data Mean = 0.052467018365859985

Abnormal Test Data Standard Deviation = 0.008512512780725956

Overall:

Accuracy = 0.9527

Normal Test Data Mean = 0.0203

Normal Test Data Standard Deviation = 0.0125

Abnormal Test Data Mean = 0.0524

Abnormal Test Data Standard Deviation = 0.0085

VAE No Latent Loss:

1)

Confusion Matrix:

prediction: F T

448 552

label: F [[432 8] 440

T [16 544]] 560

Accuracy = 0.976

Normal Test Data Mean = 0.011890496127307415

Normal Test Data Standard Deviation = 0.006298144347965717

Abnormal Test Data Mean = 0.03912049159407616

Abnormal Test Data Standard Deviation = 0.007414747960865498

Precision = 0.9855072463768116

Recall = 0.9714285714285714

2)

Confusion Matrix:

prediction: F T

459 541

label: F [[436 4] 440

T [23 537]] 560

Accuracy = 0.973

Normal Test Data Mean = 0.011758456937968731

Normal Test Data Standard Deviation = 0.00682296697050333

Abnormal Test Data Mean = 0.03400504216551781

Abnormal Test Data Standard Deviation = 0.007839391008019447

Precision = 0.9926062846580407

Recall = 0.9589285714285715

3)

Confusion Matrix:

prediction: F T

448 552

label: F [[433 7] 440

T [15 545]] 560

Accuracy = 0.978

Normal Test Data Mean = 0.011624181643128395

Normal Test Data Standard Deviation = 0.005672227591276169

Abnormal Test Data Mean = 0.037884023040533066

Abnormal Test Data Standard Deviation = 0.00639526080340147

Precision = 0.9873188405797102

Recall = 0.9732142857142857

4)

Confusion Matrix:

prediction: F T

452 548

label: F [[436 4] 440

T [16 544]] 560

Accuracy = 0.98

Normal Test Data Mean = 0.011301727034151554

Normal Test Data Standard Deviation = 0.0063909501768648624

Abnormal Test Data Mean = 0.03968800604343414

Abnormal Test Data Standard Deviation = 0.006851973943412304

Precision = 0.9927007299270073

Recall = 0.9714285714285714

5)

Confusion Matrix:

prediction: F T

460 540

label: F [[437 3] 440

T [23 537]] 560

Accuracy = 0.974

Normal Test Data Mean = 0.011256137862801552

Normal Test Data Standard Deviation = 0.0061439997516572475

Abnormal Test Data Mean = 0.03352537751197815

Abnormal Test Data Standard Deviation = 0.006903990637511015

Precision = 0.9944444444444445

Recall = 0.9589285714285715

6)

Confusion Matrix:

prediction: F T

466 534

label: F [[434 6] 440

T [32 528]] 560

Accuracy = 0.962

Normal Test Data Mean = 0.011013135313987732

Normal Test Data Standard Deviation = 0.004841675516217947

Abnormal Test Data Mean = 0.03077535703778267

Abnormal Test Data Standard Deviation = 0.007029158063232899

Precision = 0.9887640449438202

Recall = 0.9428571428571428

7)

Confusion Matrix:

prediction: F T
463 537
label: F [[436 4] 440
T [27 533]] 560
Accuracy = 0.969
Normal Test Data Mean = 0.01069204043596983
Normal Test Data Standard Deviation = 0.006778466049581766
Abnormal Test Data Mean = 0.03588379546999931
Abnormal Test Data Standard Deviation = 0.007991103455424309
Precision = 0.9925512104283054
Recall = 0.9517857142857142

8)

Confusion Matrix:
prediction: F T
418 582
label: F [[412 28] 440
T [6 554]] 560
Accuracy = 0.966
Normal Test Data Mean = 0.010969104245305061
Normal Test Data Standard Deviation = 0.00477149011567235
Abnormal Test Data Mean = 0.04087081551551819
Abnormal Test Data Standard Deviation = 0.007422576192766428
Precision = 0.9518900343642611
Recall = 0.9892857142857143

9)

Confusion Matrix:
prediction: F T
464 536
label: F [[436 4] 440
T [28 532]] 560
Accuracy = 0.968
Normal Test Data Mean = 0.011013870127499104
Normal Test Data Standard Deviation = 0.00571336317807436
Abnormal Test Data Mean = 0.034051187336444855
Abnormal Test Data Standard Deviation = 0.007243525702506304
Precision = 0.9925373134328358
Recall = 0.95

10)

Confusion Matrix:
prediction: F T
450 550
label: F [[434 6] 440
T [16 544]] 560
Accuracy = 0.978

Normal Test Data Mean = 0.011843753047287464
Normal Test Data Standard Deviation = 0.0067572398111224174
Abnormal Test Data Mean = 0.043713830411434174
Abnormal Test Data Standard Deviation = 0.007445050869137049
Precision = 0.9890909090909091
Recall = 0.9714285714285714

Accuracy = 0.976
Normal Test Data Mean = 0.011890496127307415
Normal Test Data Standard Deviation = 0.006298144347965717
Abnormal Test Data Mean = 0.03912049159407616
Abnormal Test Data Standard Deviation = 0.007414747960865498

Accuracy = 0.973
Normal Test Data Mean = 0.011758456937968731
Normal Test Data Standard Deviation = 0.00682296697050333
Abnormal Test Data Mean = 0.03400504216551781
Abnormal Test Data Standard Deviation = 0.007839391008019447

Accuracy = 0.978
Normal Test Data Mean = 0.011624181643128395
Normal Test Data Standard Deviation = 0.005672227591276169
Abnormal Test Data Mean = 0.037884023040533066
Abnormal Test Data Standard Deviation = 0.00639526080340147

Accuracy = 0.98
Normal Test Data Mean = 0.011301727034151554
Normal Test Data Standard Deviation = 0.0063909501768648624
Abnormal Test Data Mean = 0.03968800604343414
Abnormal Test Data Standard Deviation = 0.006851973943412304

Accuracy = 0.974
Normal Test Data Mean = 0.011256137862801552
Normal Test Data Standard Deviation = 0.0061439997516572475
Abnormal Test Data Mean = 0.03352537751197815
Abnormal Test Data Standard Deviation = 0.006903990637511015

Accuracy = 0.962
Normal Test Data Mean = 0.011013135313987732
Normal Test Data Standard Deviation = 0.004841675516217947
Abnormal Test Data Mean = 0.03077535703778267
Abnormal Test Data Standard Deviation = 0.007029158063232899

Accuracy = 0.969

Normal Test Data Mean = 0.01069204043596983
Normal Test Data Standard Deviation = 0.006778466049581766
Abnormal Test Data Mean = 0.03588379546999931
Abnormal Test Data Standard Deviation = 0.007991103455424309

Accuracy = 0.966
Normal Test Data Mean = 0.010969104245305061
Normal Test Data Standard Deviation = 0.00477149011567235
Abnormal Test Data Mean = 0.04087081551551819
Abnormal Test Data Standard Deviation = 0.007422576192766428

Accuracy = 0.968
Normal Test Data Mean = 0.011013870127499104
Normal Test Data Standard Deviation = 0.00571336317807436
Abnormal Test Data Mean = 0.034051187336444855
Abnormal Test Data Standard Deviation = 0.007243525702506304

Accuracy = 0.978
Normal Test Data Mean = 0.011843753047287464
Normal Test Data Standard Deviation = 0.0067572398111224174
Abnormal Test Data Mean = 0.043713830411434174
Abnormal Test Data Standard Deviation = 0.007445050869137049

Overall:

Accuracy = .9724
Normal Test Data Mean = 0.0113
Normal Test Data Standard Deviation = 0.006
Abnormal Test Data Mean = 0.037
Abnormal Test Data Standard Deviation = 0.0073

Modified VAE w/ latent loss * .5:

1)

Confusion Matrix:

prediction: F T
 462 538

label: F [[428 12] 440
 T [34 526]] 560

Accuracy = 0.954
Normal Test Data Mean = 0.019636353477835655
Normal Test Data Standard Deviation = 0.011443750001490116
Abnormal Test Data Mean = 0.049742575734853745
Abnormal Test Data Standard Deviation = 0.008206172846257687
Precision = 0.9776951672862454

Recall = 0.9392857142857143

2)

Confusion Matrix:

prediction: F T

461 539

label: F [[428 12] 440

 T [33 527]] 560

Accuracy = 0.955

Normal Test Data Mean = 0.02005980722606182

Normal Test Data Standard Deviation = 0.012063581496477127

Abnormal Test Data Mean = 0.051910556852817535

Abnormal Test Data Standard Deviation = 0.008409267291426659

Precision = 0.9777365491651205

Recall = 0.9410714285714286

3)

Confusion Matrix:

prediction: F T

474 526

label: F [[435 5] 440

 T [39 521]] 560

Accuracy = 0.956

Normal Test Data Mean = 0.01881108060479164

Normal Test Data Standard Deviation = 0.010336147621273994

Abnormal Test Data Mean = 0.048558760434389114

Abnormal Test Data Standard Deviation = 0.008033203892409801

Precision = 0.9904942965779467

Recall = 0.9303571428571429

4)

Confusion Matrix:

prediction: F T

455 545

label: F [[425 15] 440

 T [30 530]] 560

Accuracy = 0.955

Normal Test Data Mean = 0.02016635611653328

Normal Test Data Standard Deviation = 0.011501064524054527

Abnormal Test Data Mean = 0.050863709300756454

Abnormal Test Data Standard Deviation = 0.008009366691112518

Precision = 0.9724770642201835

Recall = 0.9464285714285714

5)

Confusion Matrix:

prediction: F T

471 529

label: F [[434 6] 440
T [37 523]] 560

Accuracy = 0.957

Normal Test Data Mean = 0.019585199654102325

Normal Test Data Standard Deviation = 0.010753748007118702

Abnormal Test Data Mean = 0.04814401641488075

Abnormal Test Data Standard Deviation = 0.007959328591823578

Precision = 0.9886578449905482

Recall = 0.9339285714285714

6)

Confusion Matrix:

prediction: F T
474 526

label: F [[433 7] 440
T [41 519]] 560

Accuracy = 0.952

Normal Test Data Mean = 0.01957651600241661

Normal Test Data Standard Deviation = 0.010924983769655228

Abnormal Test Data Mean = 0.048067908734083176

Abnormal Test Data Standard Deviation = 0.008197715505957603

Precision = 0.9866920152091255

Recall = 0.9267857142857143

7)

Confusion Matrix:

prediction: F T
471 529

label: F [[436 4] 440
T [35 525]] 560

Accuracy = 0.961

Normal Test Data Mean = 0.019055575132369995

Normal Test Data Standard Deviation = 0.010787040926516056

Abnormal Test Data Mean = 0.047783125191926956

Abnormal Test Data Standard Deviation = 0.007733700796961784

Precision = 0.9924385633270322

Recall = 0.9375

8)

Confusion Matrix:

prediction: F T
457 543

label: F [[424 16] 440
T [33 527]] 560

Accuracy = 0.951

Normal Test Data Mean = 0.01918996311724186

Normal Test Data Standard Deviation = 0.01048373430967331

Abnormal Test Data Mean = 0.046865314245224
Abnormal Test Data Standard Deviation = 0.007659011986106634
Precision = 0.9705340699815838
Recall = 0.9410714285714286

9)

Confusion Matrix:

prediction: F T
 465 535

label: F [[433 7] 440
 T [32 528]] 560

Accuracy = 0.961

Normal Test Data Mean = 0.01910126581788063
Normal Test Data Standard Deviation = 0.010355845093727112
Abnormal Test Data Mean = 0.048855870962142944
Abnormal Test Data Standard Deviation = 0.007910960353910923
Precision = 0.9869158878504672
Recall = 0.9428571428571428

10)

Confusion Matrix:

prediction: F T
 465 535

label: F [[431 9] 440
 T [34 526]] 560

Accuracy = 0.957

Normal Test Data Mean = 0.020130768418312073
Normal Test Data Standard Deviation = 0.011523047462105751
Abnormal Test Data Mean = 0.049706559628248215
Abnormal Test Data Standard Deviation = 0.008373000659048557
Precision = 0.983177570093458
Recall = 0.9392857142857143

Accuracy = 0.954

Normal Test Data Mean = 0.019636353477835655
Normal Test Data Standard Deviation = 0.011443750001490116
Abnormal Test Data Mean = 0.049742575734853745
Abnormal Test Data Standard Deviation = 0.008206172846257687

Accuracy = 0.955

Normal Test Data Mean = 0.02005980722606182
Normal Test Data Standard Deviation = 0.012063581496477127
Abnormal Test Data Mean = 0.051910556852817535
Abnormal Test Data Standard Deviation = 0.008409267291426659

Accuracy = 0.956
Normal Test Data Mean = 0.01881108060479164
Normal Test Data Standard Deviation = 0.010336147621273994
Abnormal Test Data Mean = 0.048558760434389114
Abnormal Test Data Standard Deviation = 0.008033203892409801

Accuracy = 0.955
Normal Test Data Mean = 0.02016635611653328
Normal Test Data Standard Deviation = 0.011501064524054527
Abnormal Test Data Mean = 0.050863709300756454
Abnormal Test Data Standard Deviation = 0.008009366691112518

Accuracy = 0.957
Normal Test Data Mean = 0.019585199654102325
Normal Test Data Standard Deviation = 0.010753748007118702
Abnormal Test Data Mean = 0.04814401641488075
Abnormal Test Data Standard Deviation = 0.007959328591823578

Accuracy = 0.952
Normal Test Data Mean = 0.01957651600241661
Normal Test Data Standard Deviation = 0.010924983769655228
Abnormal Test Data Mean = 0.048067908734083176
Abnormal Test Data Standard Deviation = 0.008197715505957603

Accuracy = 0.961
Normal Test Data Mean = 0.019055575132369995
Normal Test Data Standard Deviation = 0.010787040926516056
Abnormal Test Data Mean = 0.047783125191926956
Abnormal Test Data Standard Deviation = 0.007733700796961784

Accuracy = 0.951
Normal Test Data Mean = 0.01918996311724186
Normal Test Data Standard Deviation = 0.01048373430967331
Abnormal Test Data Mean = 0.046865314245224
Abnormal Test Data Standard Deviation = 0.007659011986106634

Accuracy = 0.961
Normal Test Data Mean = 0.01910126581788063
Normal Test Data Standard Deviation = 0.010355845093727112
Abnormal Test Data Mean = 0.048855870962142944
Abnormal Test Data Standard Deviation = 0.007910960353910923

Accuracy = 0.957
Normal Test Data Mean = 0.020130768418312073

Normal Test Data Standard Deviation = 0.011523047462105751
Abnormal Test Data Mean = 0.049706559628248215
Abnormal Test Data Standard Deviation = 0.008373000659048557

Overall:

Accuracy = .9559
Normal Test Data Mean = 0.0195
Normal Test Data Standard Deviation = 0.011
Abnormal Test Data Mean = 0.049
Abnormal Test Data Standard Deviation = 0.008

Modified VAE w/ latent loss * 16:

1)

Confusion Matrix:

prediction: F		T	
	466	534	
label: F	[[431	9]	440
T	[35	525]]	560

Accuracy = 0.956
Normal Test Data Mean = 0.020283451303839684
Normal Test Data Standard Deviation = 0.012451909482479095
Abnormal Test Data Mean = 0.05248764157295227
Abnormal Test Data Standard Deviation = 0.008462515659630299
Precision = 0.9831460674157303
Recall = 0.9375