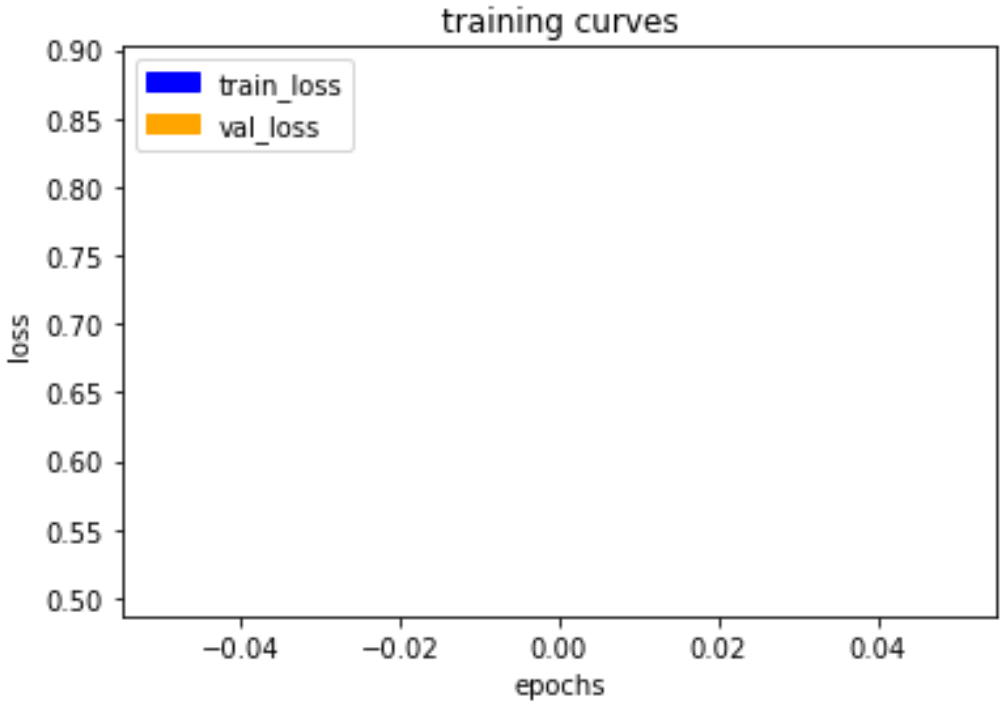
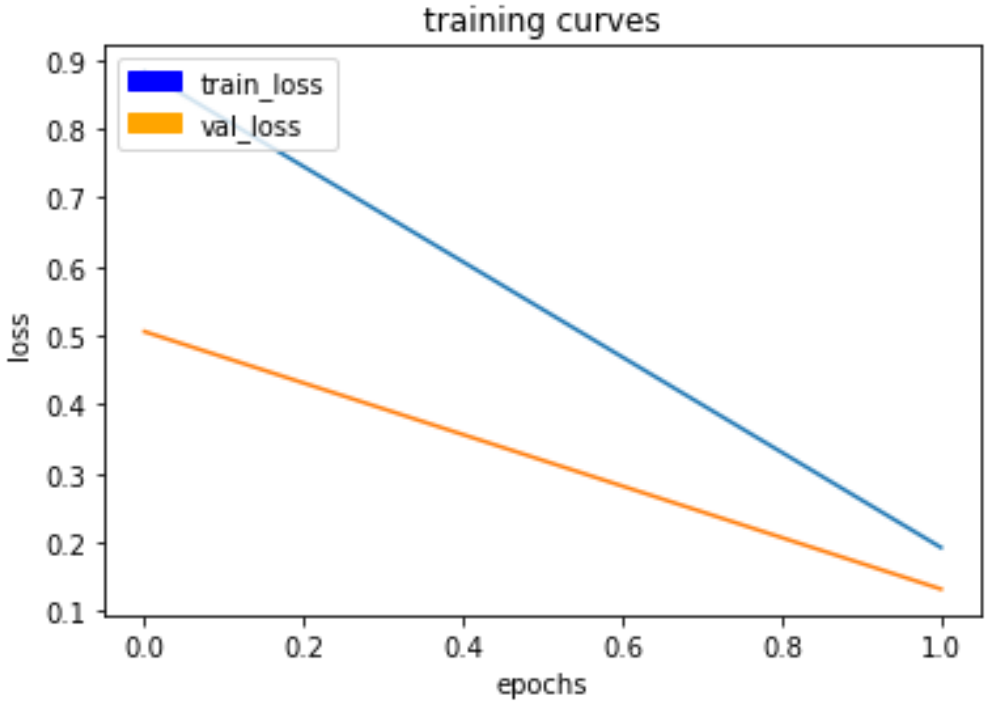
Run 3

On AWS instance

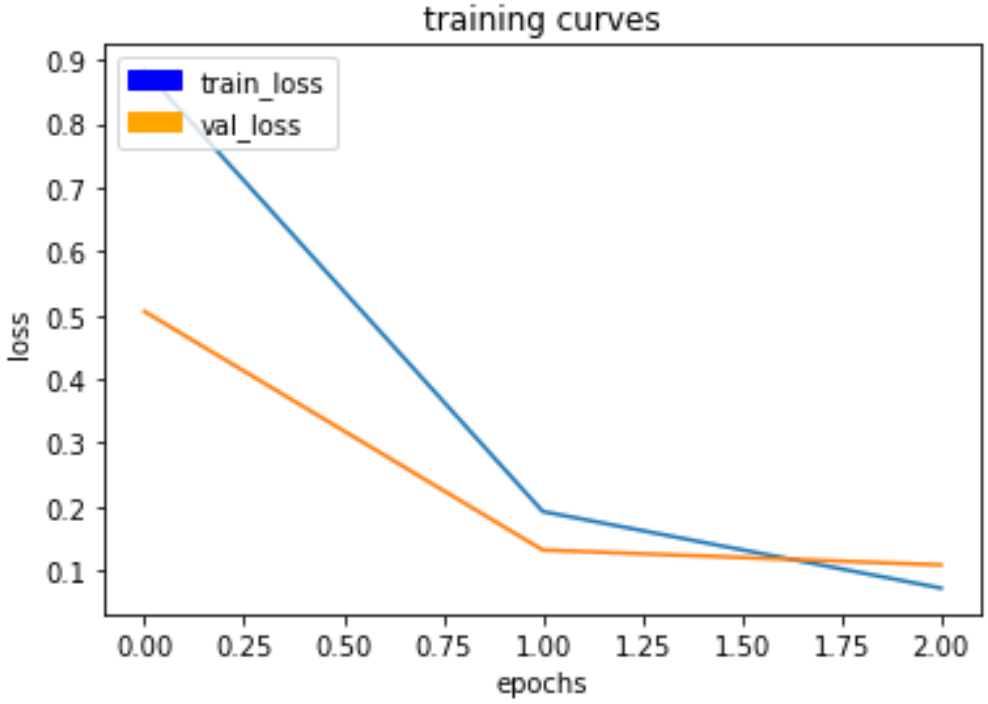
Epoch 1/50
64/65 [==============================>.] - ETA: 2s - loss: 0.8877



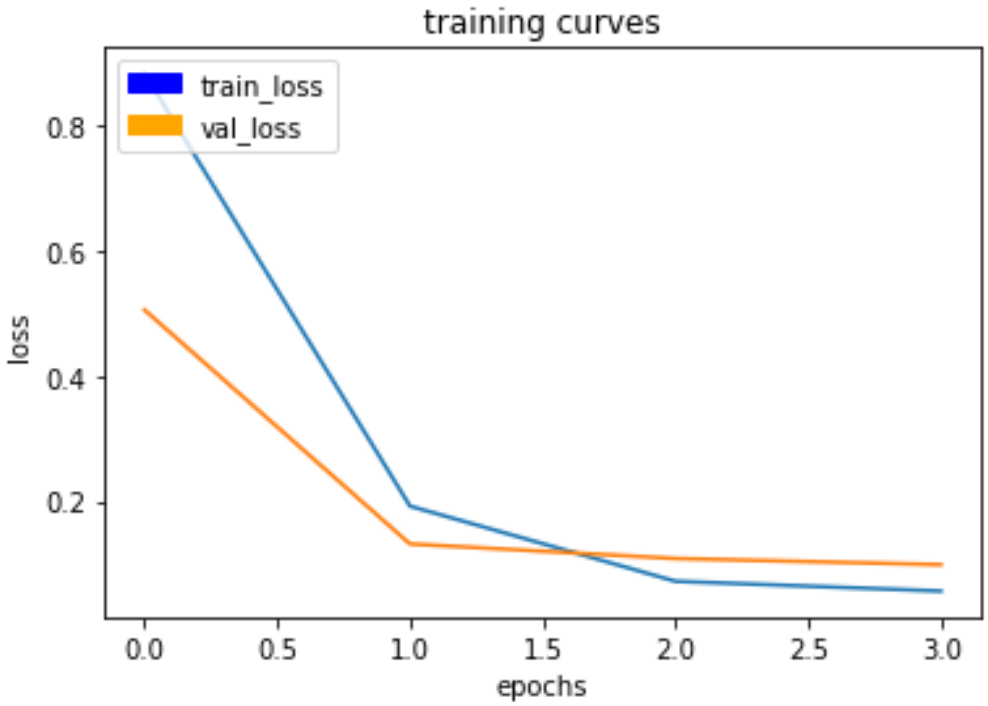
65/65 [==============================] - 191s - loss: 0.8812 - val_loss: 0.5057
Epoch 2/50
64/65 [==============================>.] - ETA: 2s - loss: 0.1931



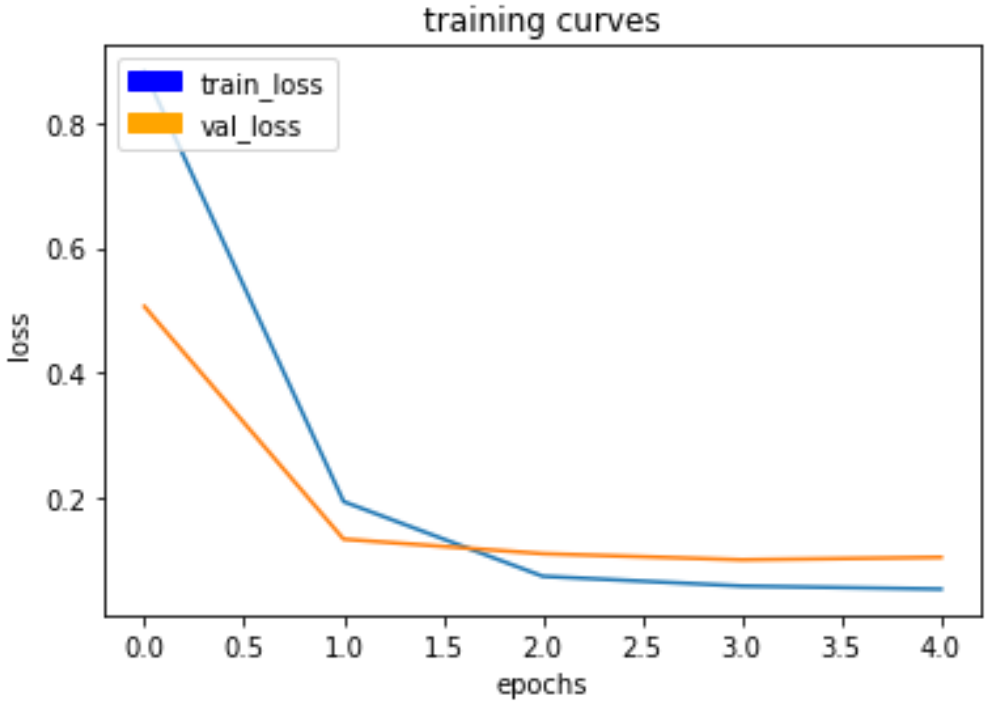
65/65 [==============================] - 188s - loss: 0.1916 - val_loss: 0.1319
Epoch 3/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0725



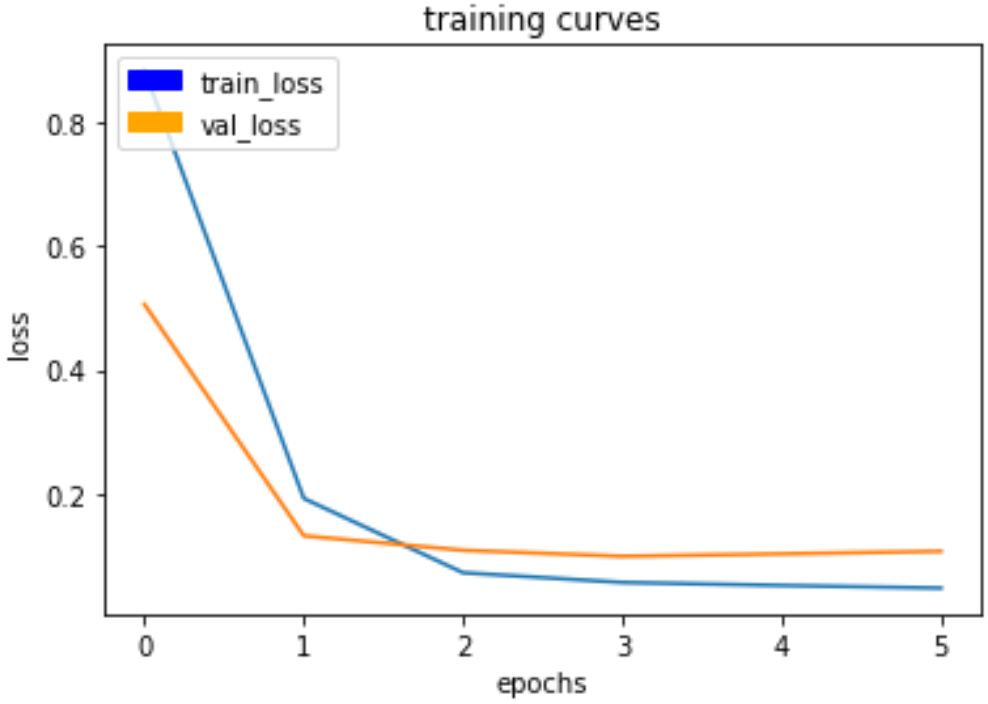
65/65 [==============================] - 188s - loss: 0.0722 - val_loss: 0.1086
Epoch 4/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0569



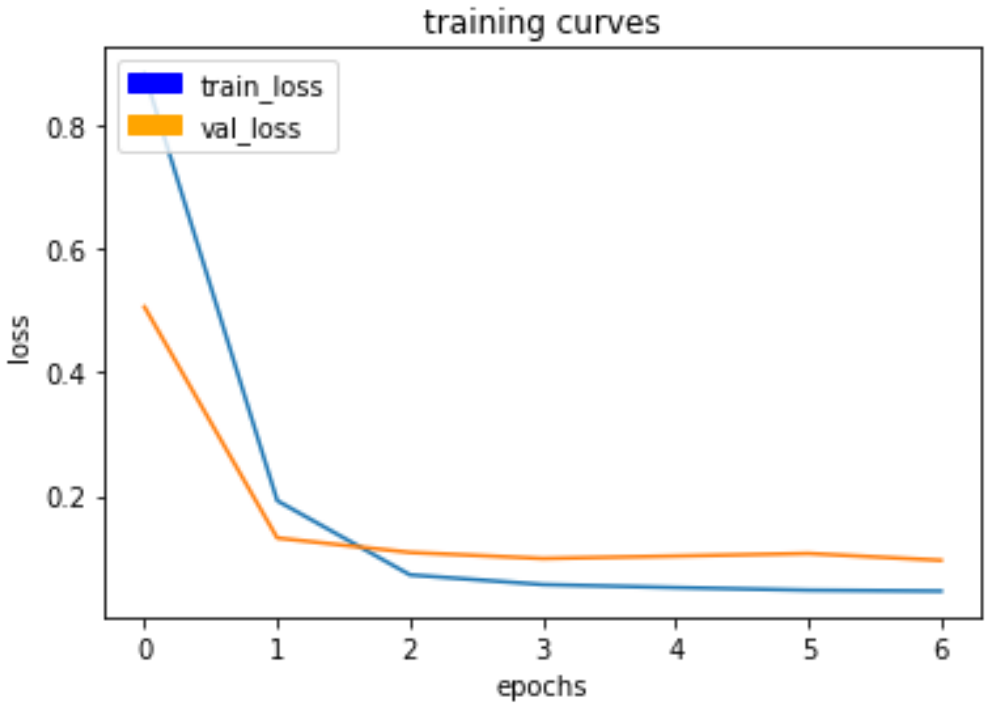
65/65 [==============================] - 189s - loss: 0.0568 - val_loss: 0.0988
Epoch 5/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0519



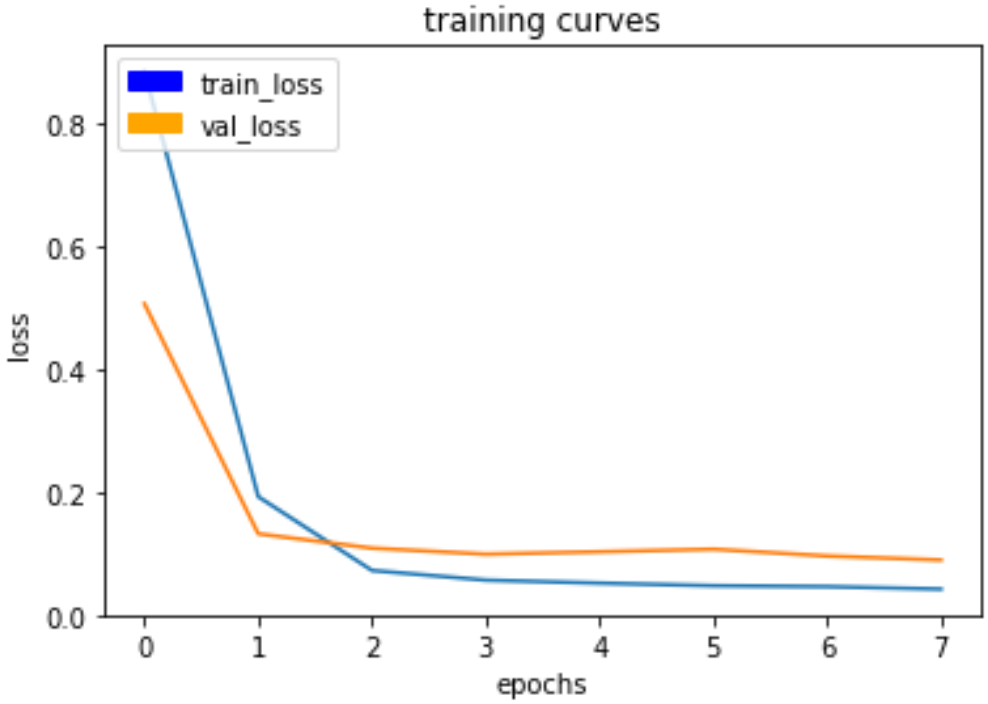
65/65 [==============================] - 188s - loss: 0.0518 - val_loss: 0.1027
Epoch 6/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0473



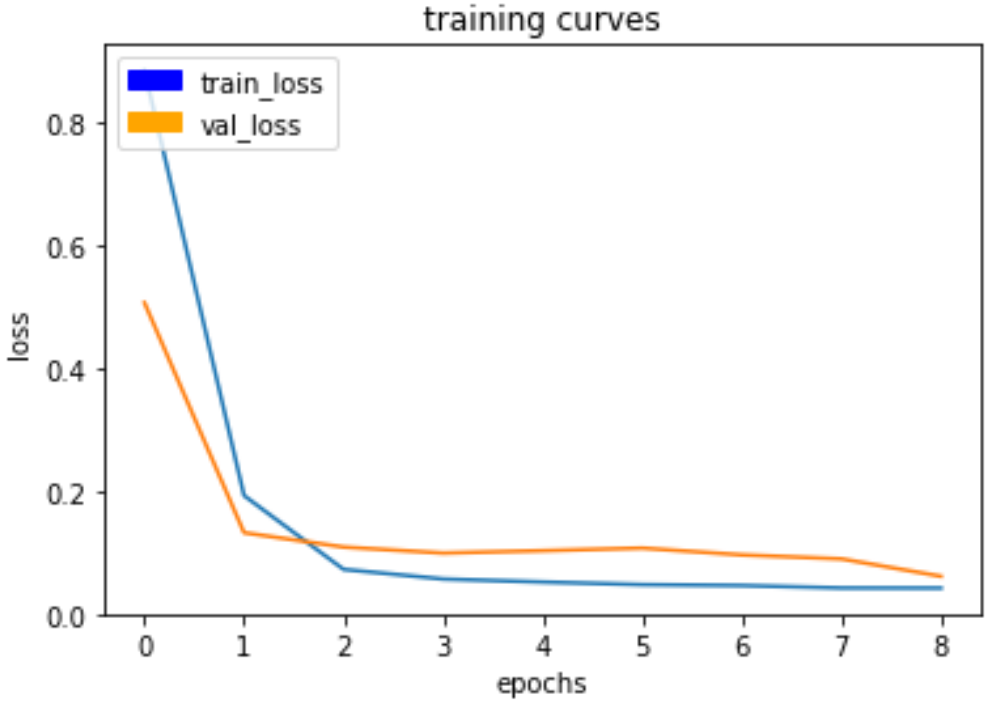
65/65 [==============================] - 188s - loss: 0.0477 - val_loss: 0.1069
Epoch 7/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0462



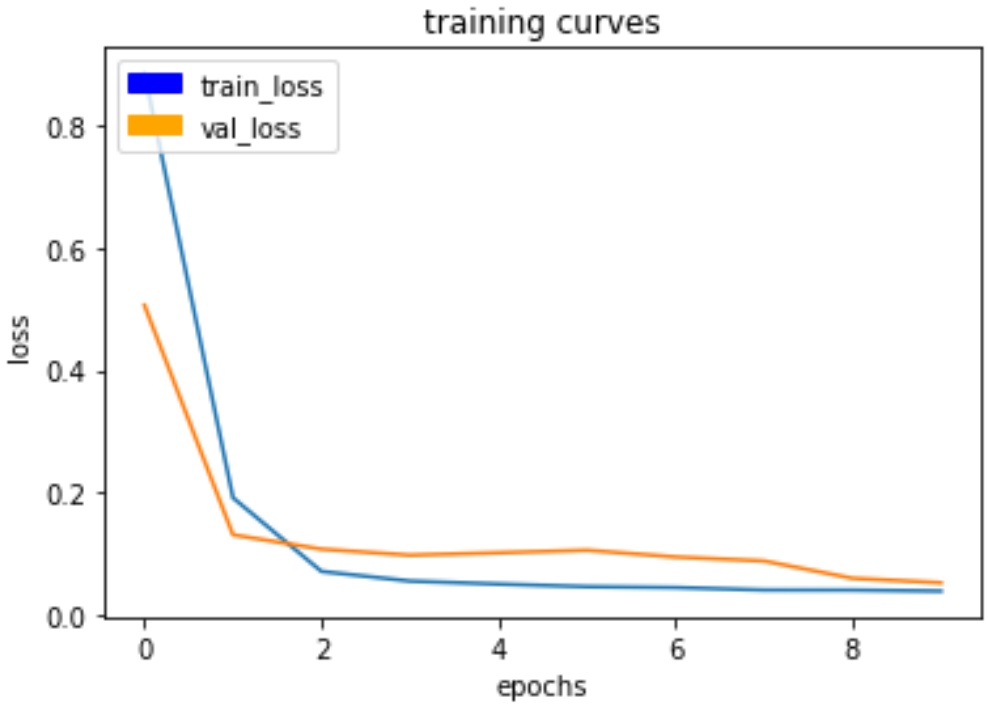
65/65 [==============================] - 189s - loss: 0.0460 - val_loss: 0.0959
Epoch 8/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0422



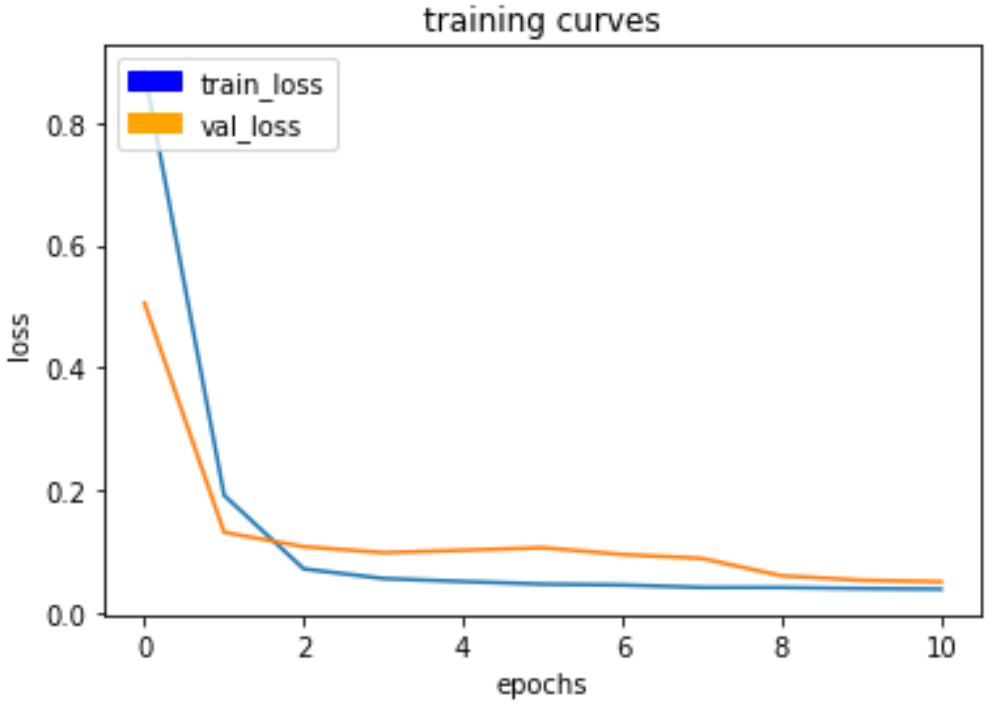
65/65 [==============================] - 188s - loss: 0.0421 - val_loss: 0.0894
Epoch 9/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0418



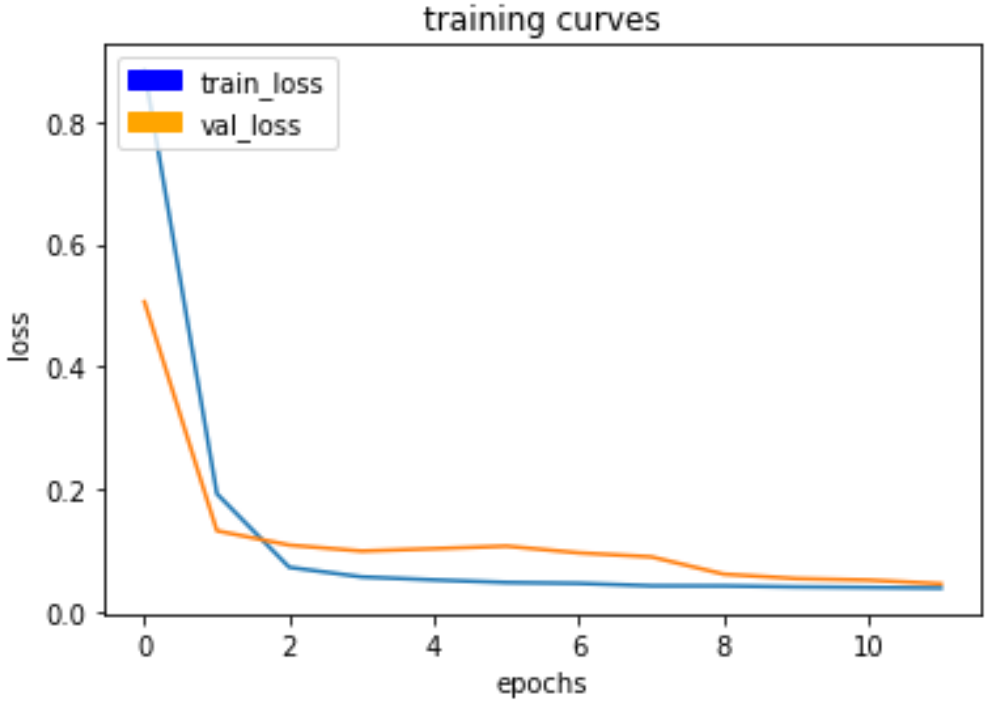
65/65 [==============================] - 188s - loss: 0.0419 - val_loss: 0.0611
Epoch 10/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0405



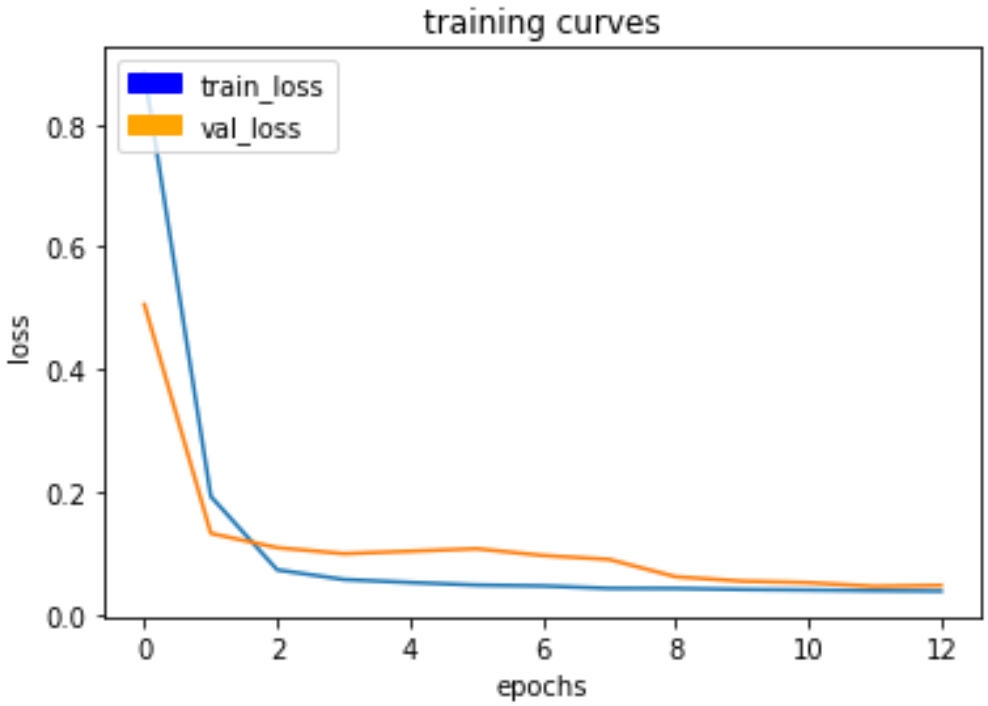
65/65 [==============================] - 188s - loss: 0.0404 - val_loss: 0.0539
Epoch 11/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0395



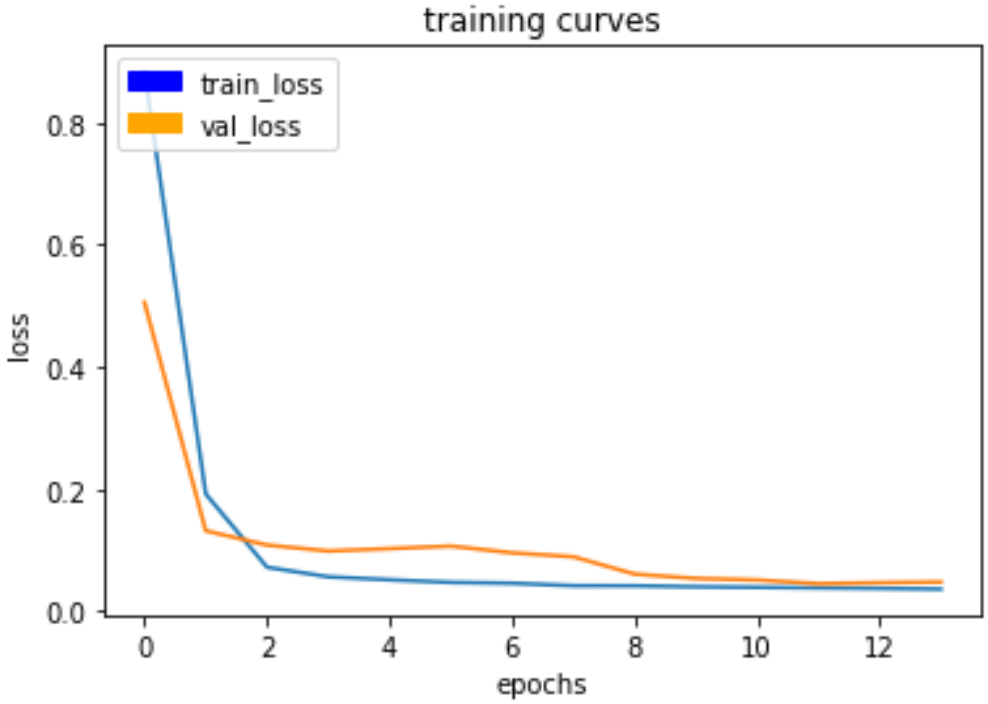
65/65 [==============================] - 188s - loss: 0.0394 - val_loss: 0.0515
Epoch 12/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0384



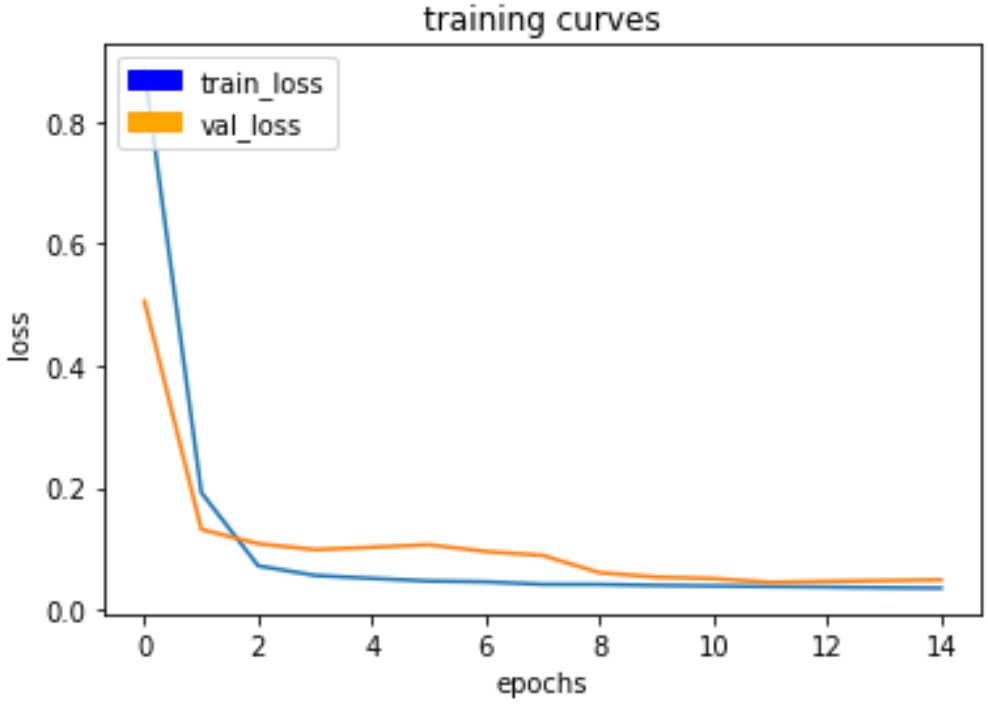
65/65 [==============================] - 188s - loss: 0.0384 - val_loss: 0.0454
Epoch 13/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0377



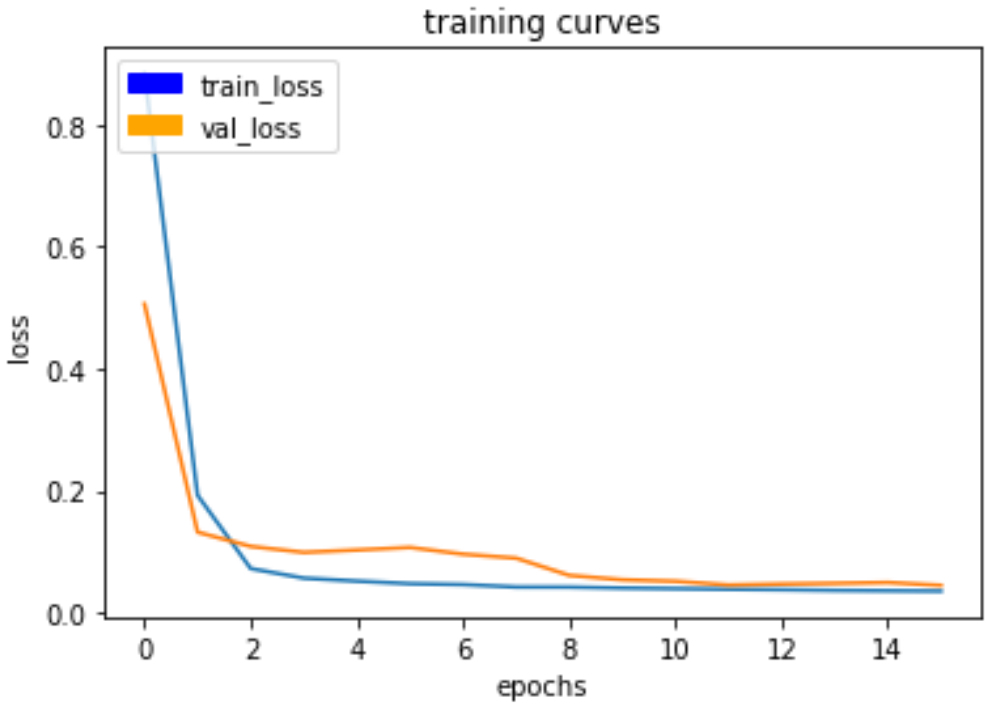
65/65 [==============================] - 188s - loss: 0.0376 - val_loss: 0.0470
Epoch 14/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0367



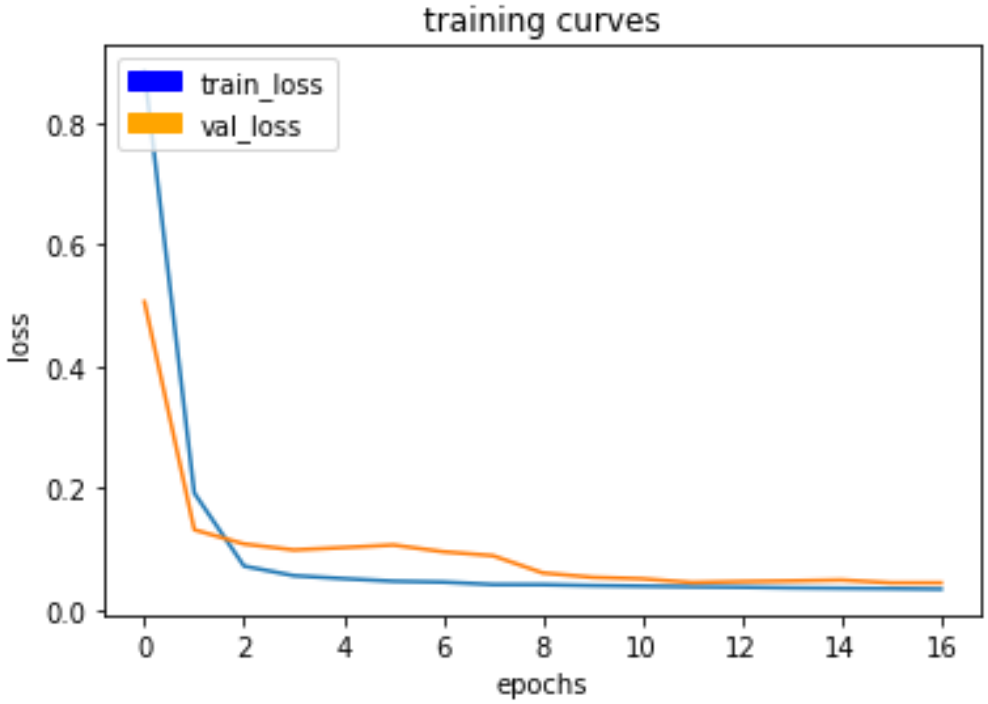
65/65 [==============================] - 188s - loss: 0.0366 - val_loss: 0.0481
Epoch 15/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0360



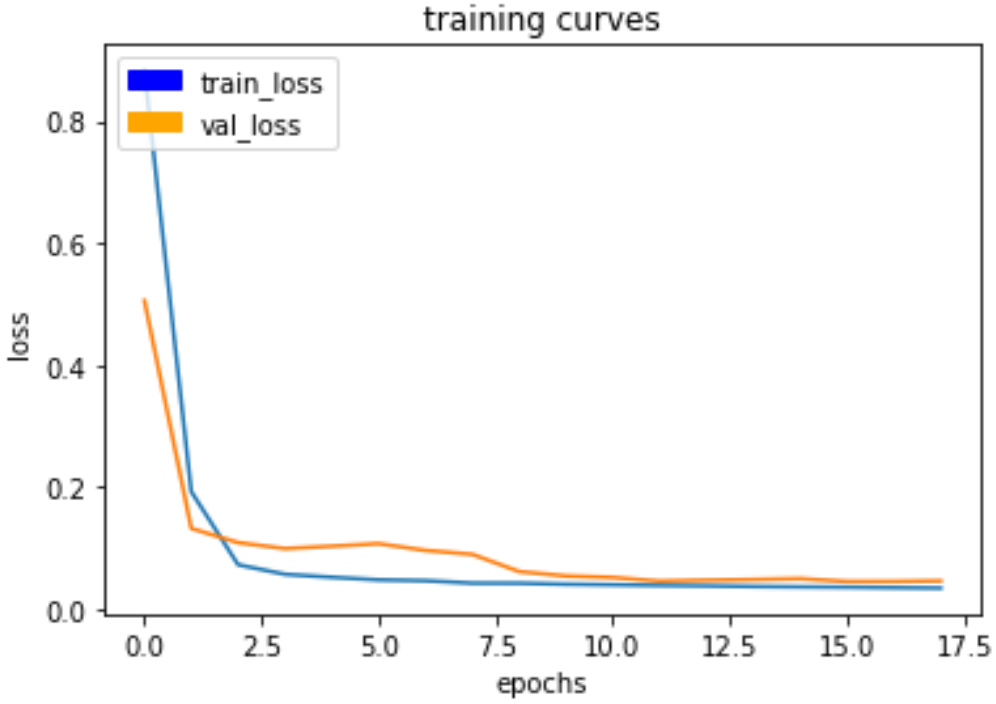
65/65 [==============================] - 188s - loss: 0.0361 - val_loss: 0.0495
Epoch 16/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0354



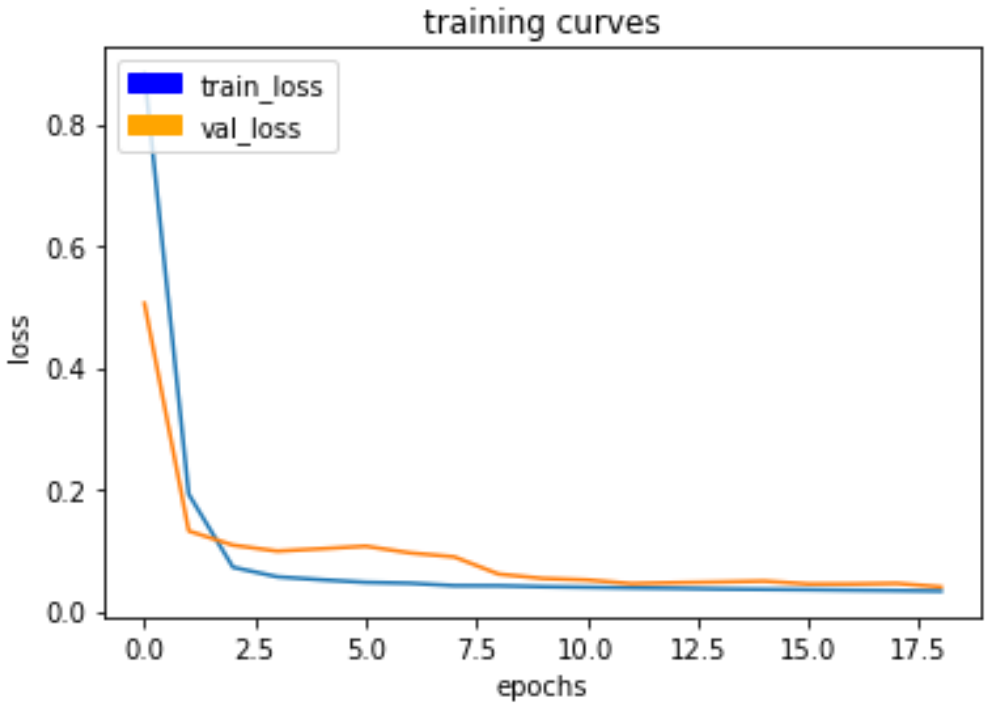
65/65 [==============================] - 189s - loss: 0.0353 - val_loss: 0.0448
Epoch 17/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0348



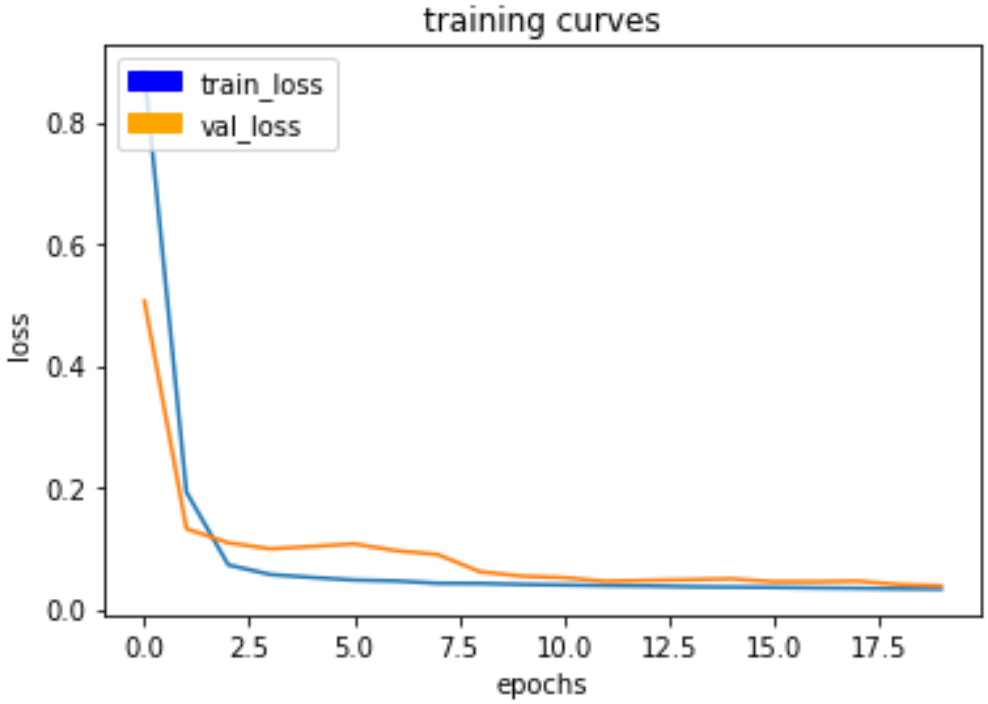
65/65 [==============================] - 188s - loss: 0.0348 - val_loss: 0.0448
Epoch 18/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0340



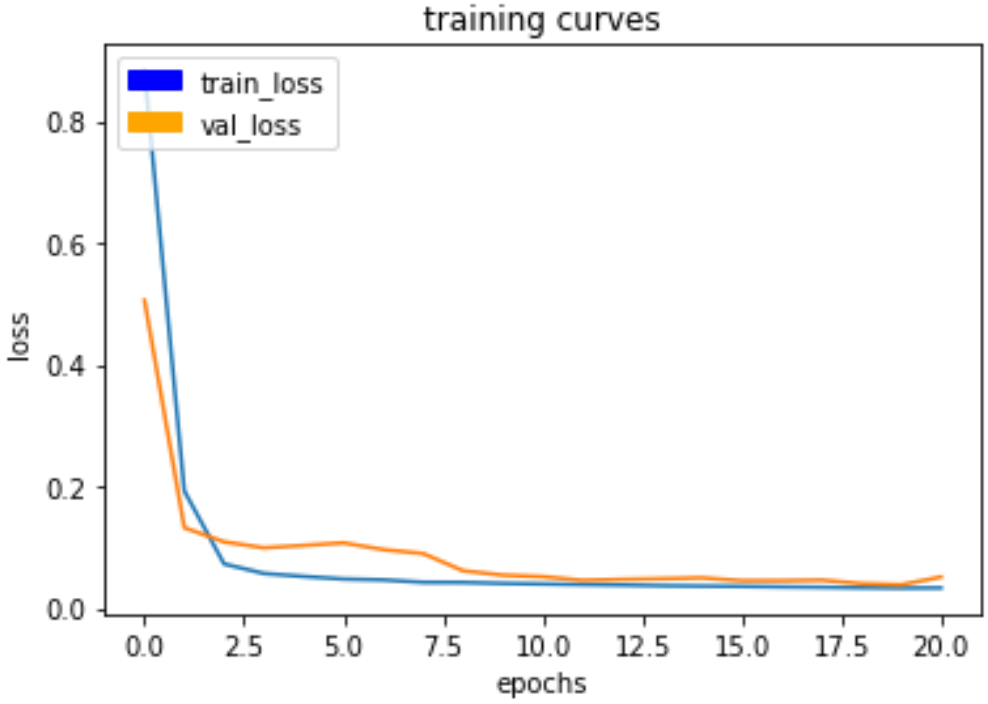
65/65 [==============================] - 188s - loss: 0.0340 - val_loss: 0.0458
Epoch 19/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0329



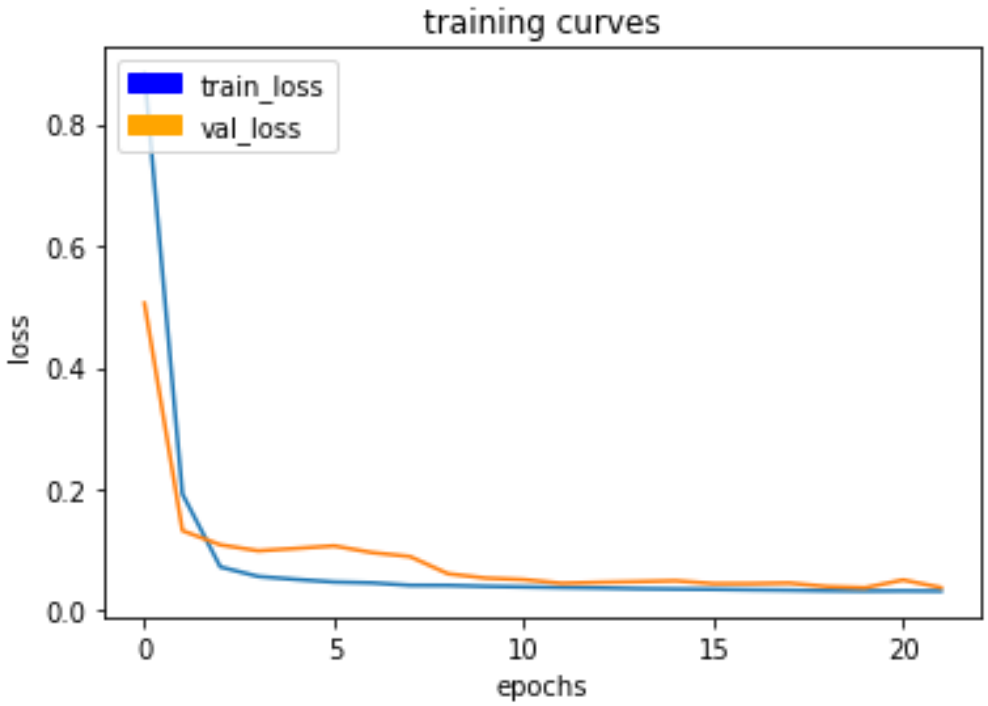
65/65 [==============================] - 188s - loss: 0.0334 - val_loss: 0.0399
Epoch 20/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0326



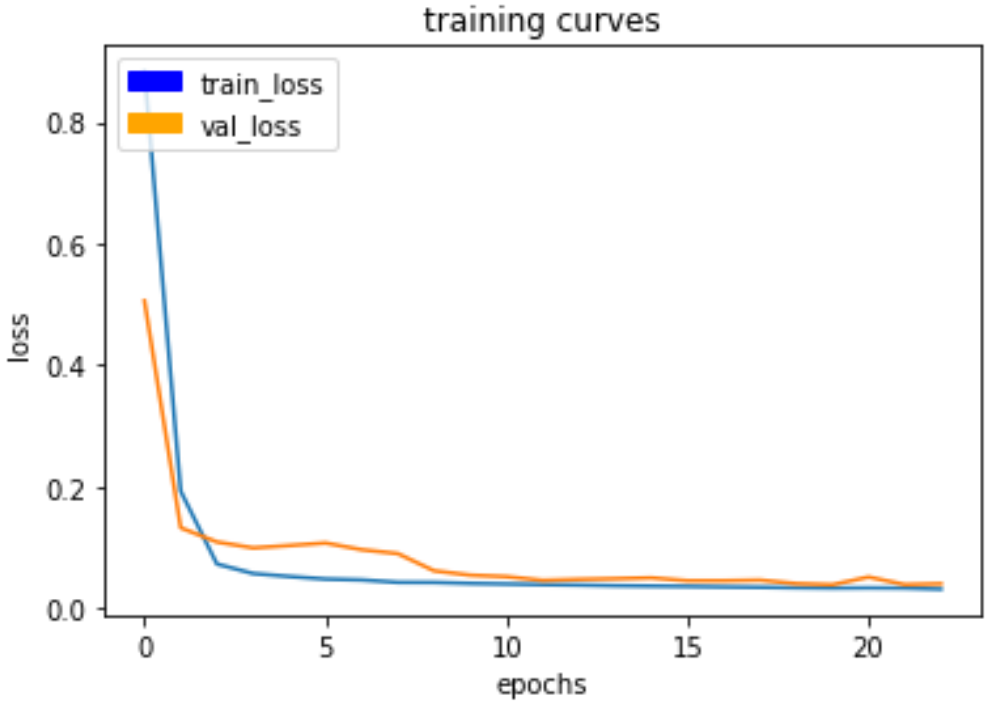
65/65 [==============================] - 188s - loss: 0.0326 - val_loss: 0.0381
Epoch 21/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0329



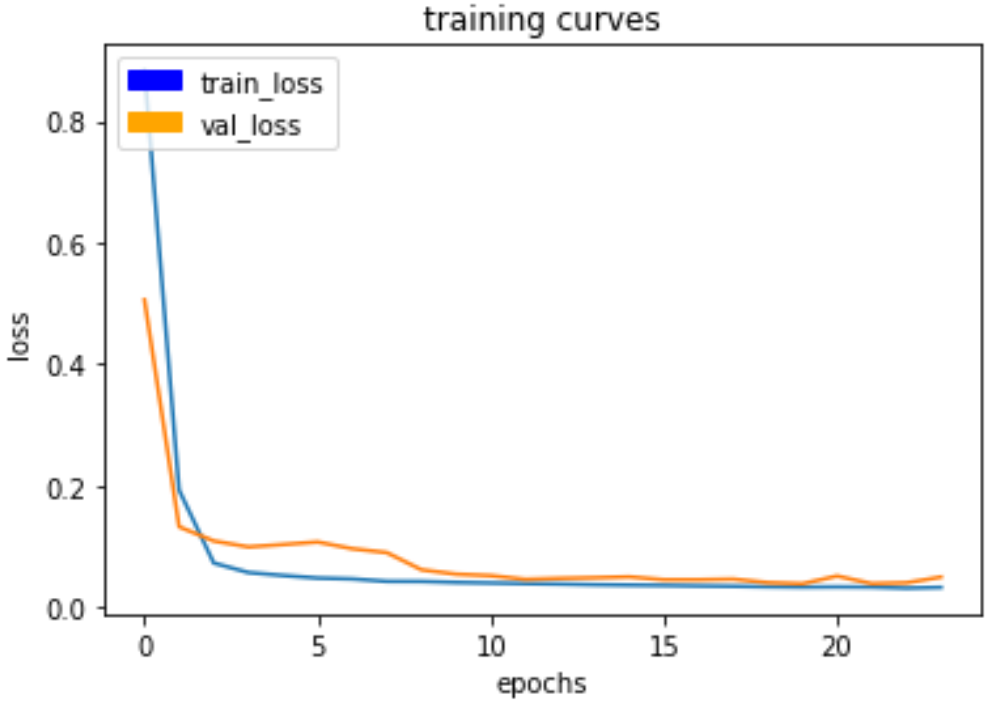
65/65 [==============================] - 188s - loss: 0.0329 - val_loss: 0.0509
Epoch 22/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0326



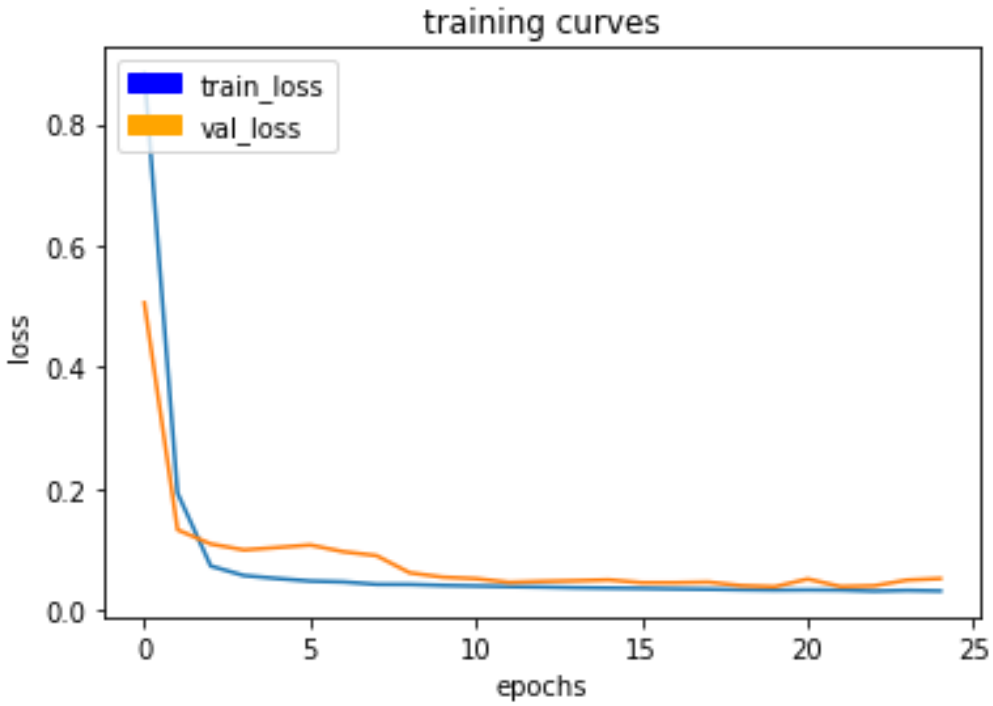
65/65 [==============================] - 186s - loss: 0.0326 - val_loss: 0.0384
Epoch 23/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0310



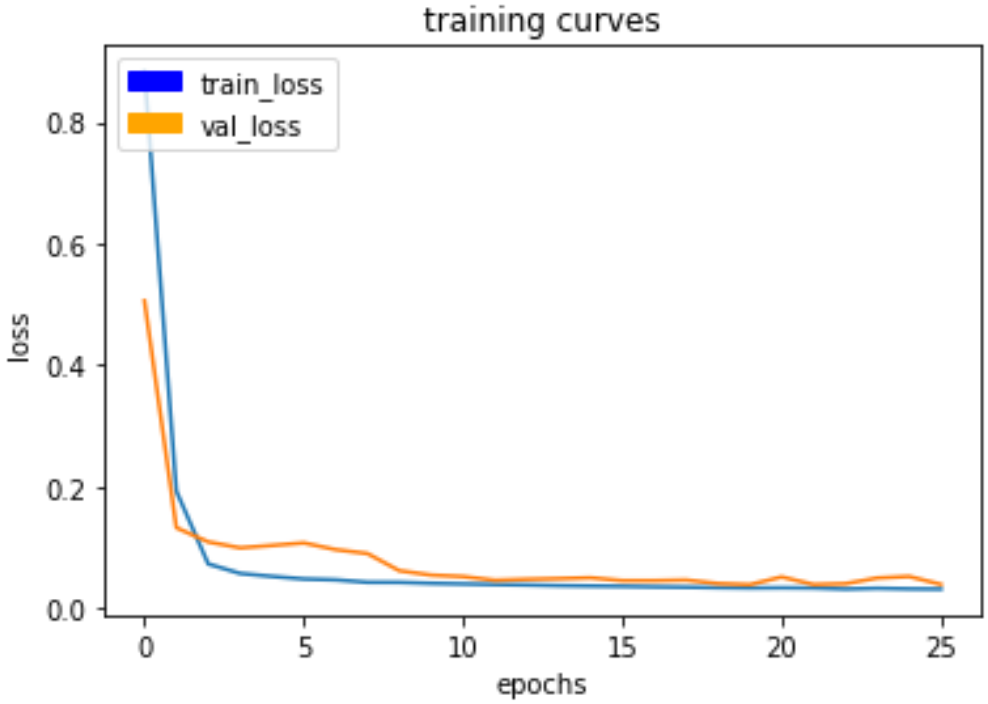
65/65 [==============================] - 188s - loss: 0.0310 - val_loss: 0.0397
Epoch 24/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0322



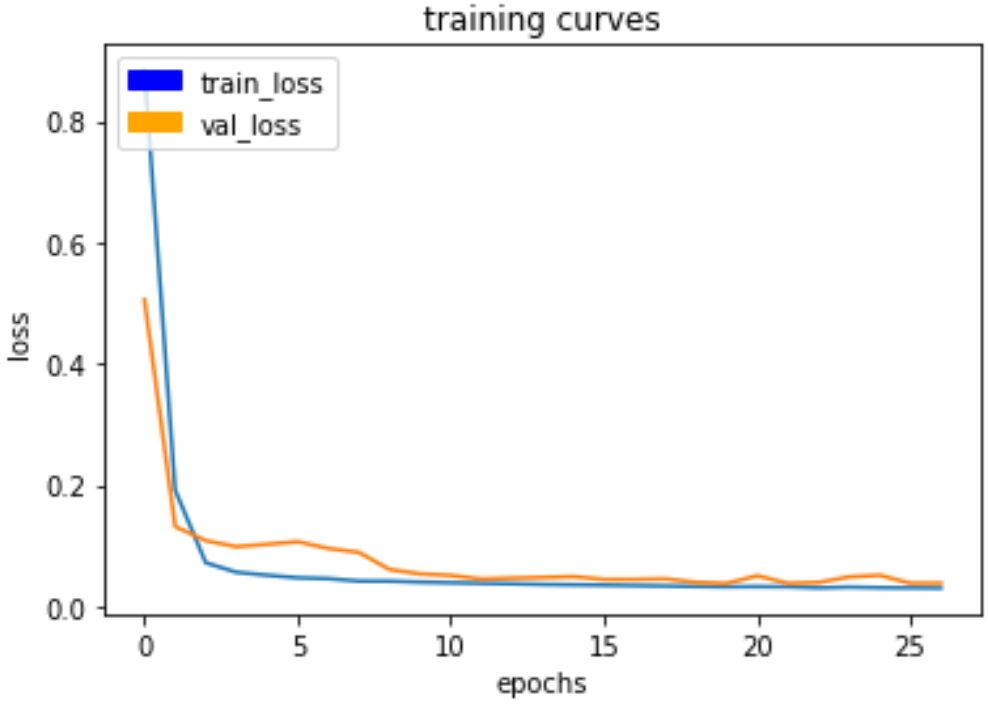
65/65 [==============================] - 188s - loss: 0.0321 - val_loss: 0.0491
Epoch 25/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0312



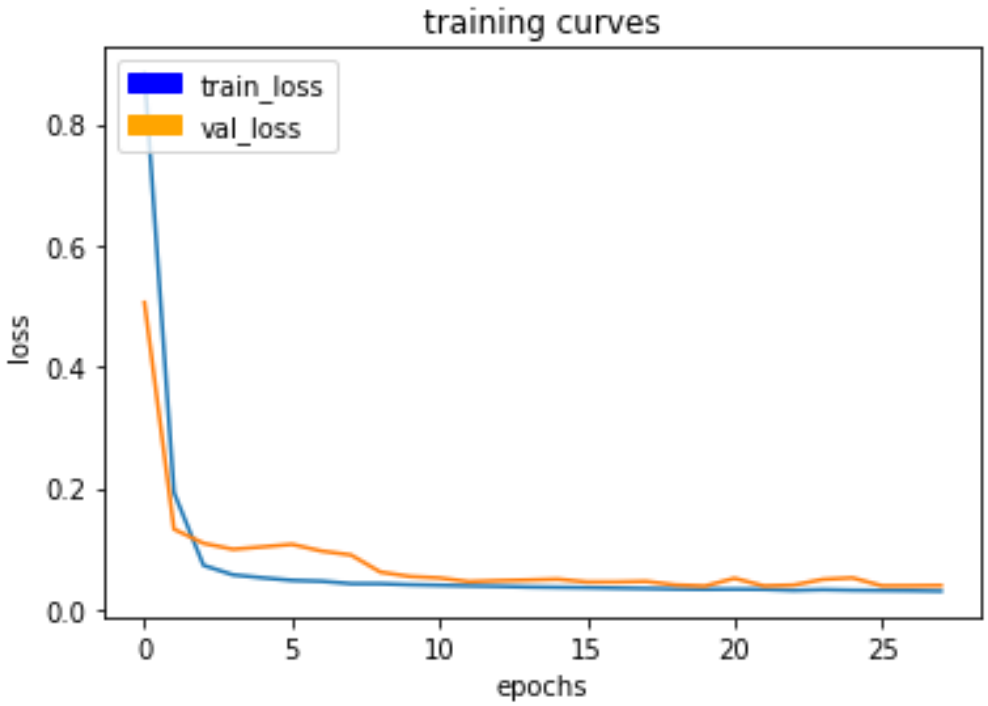
65/65 [==============================] - 189s - loss: 0.0312 - val_loss: 0.0516
Epoch 26/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0311



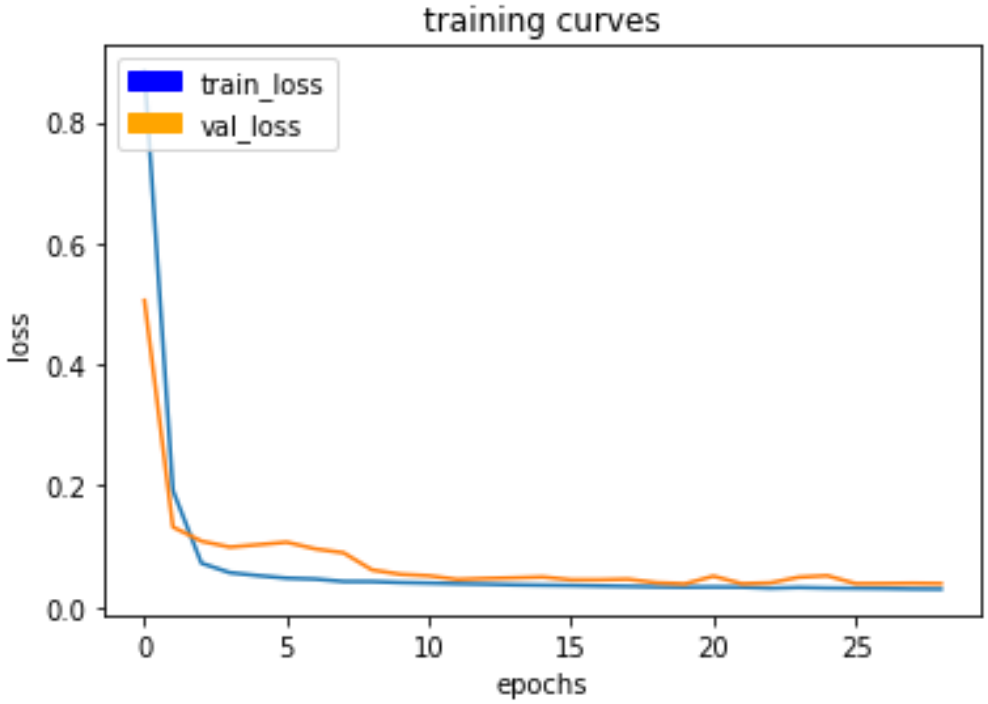
65/65 [==============================] - 188s - loss: 0.0310 - val_loss: 0.0385
Epoch 27/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0306



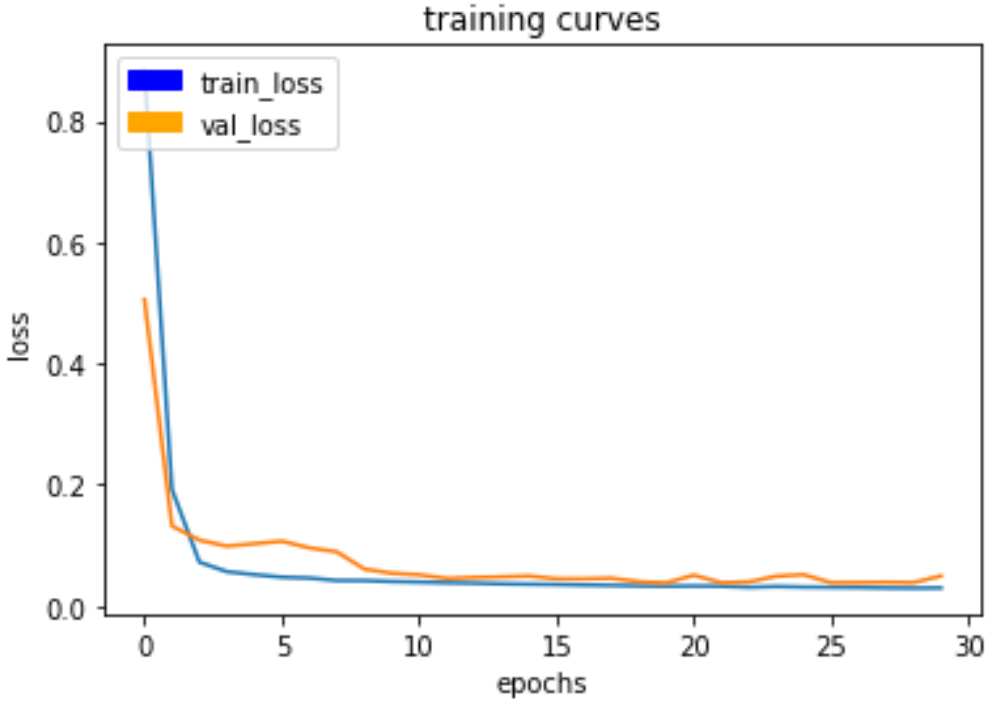
65/65 [==============================] - 188s - loss: 0.0305 - val_loss: 0.0386
Epoch 28/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0299



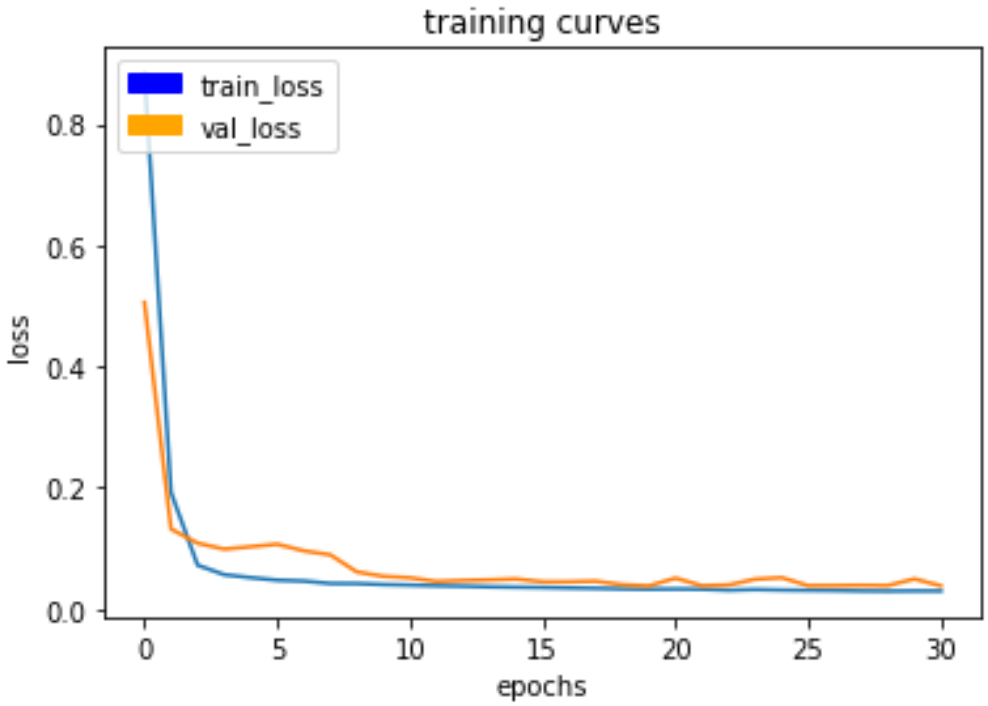
65/65 [==============================] - 188s - loss: 0.0299 - val_loss: 0.0390
Epoch 29/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0296



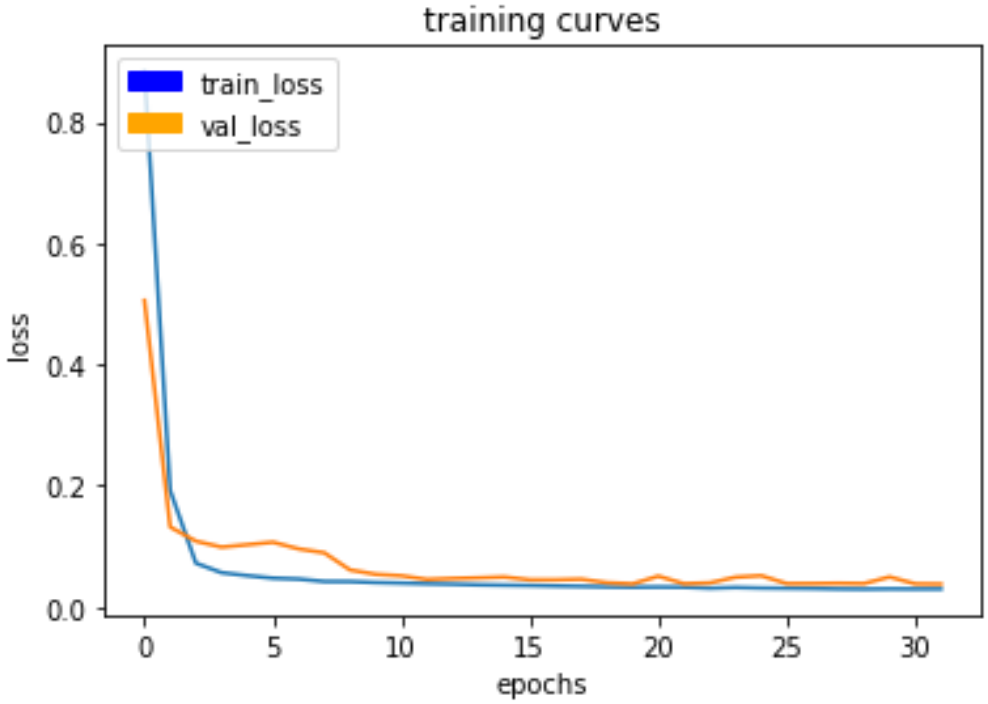
65/65 [==============================] - 188s - loss: 0.0295 - val_loss: 0.0386
Epoch 30/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0301



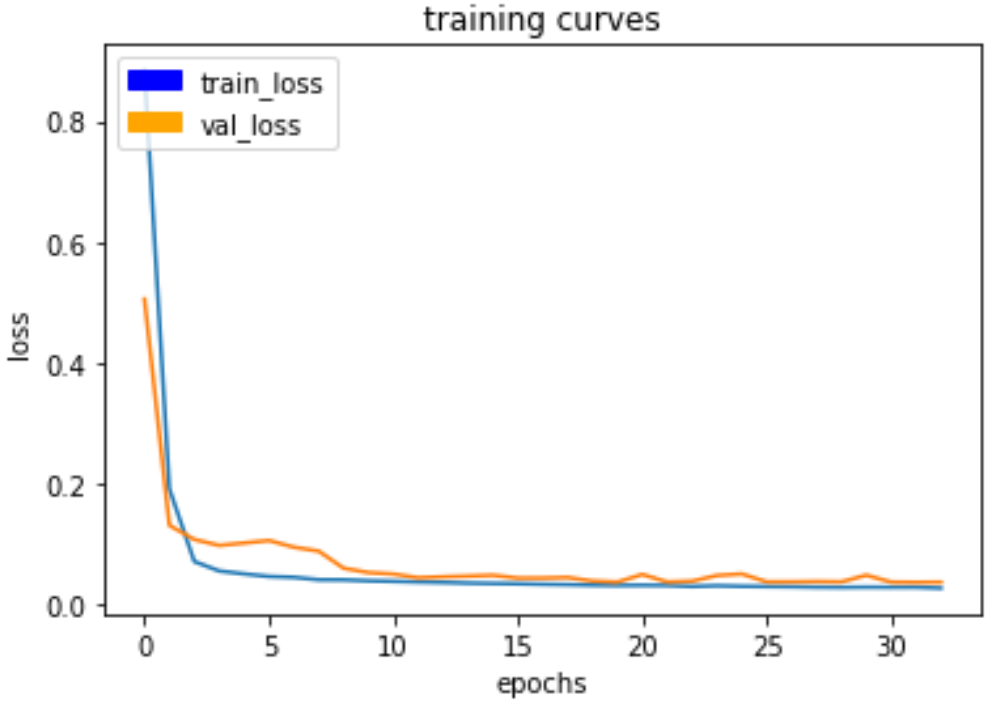
65/65 [==============================] - 188s - loss: 0.0301 - val_loss: 0.0496
Epoch 31/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0296



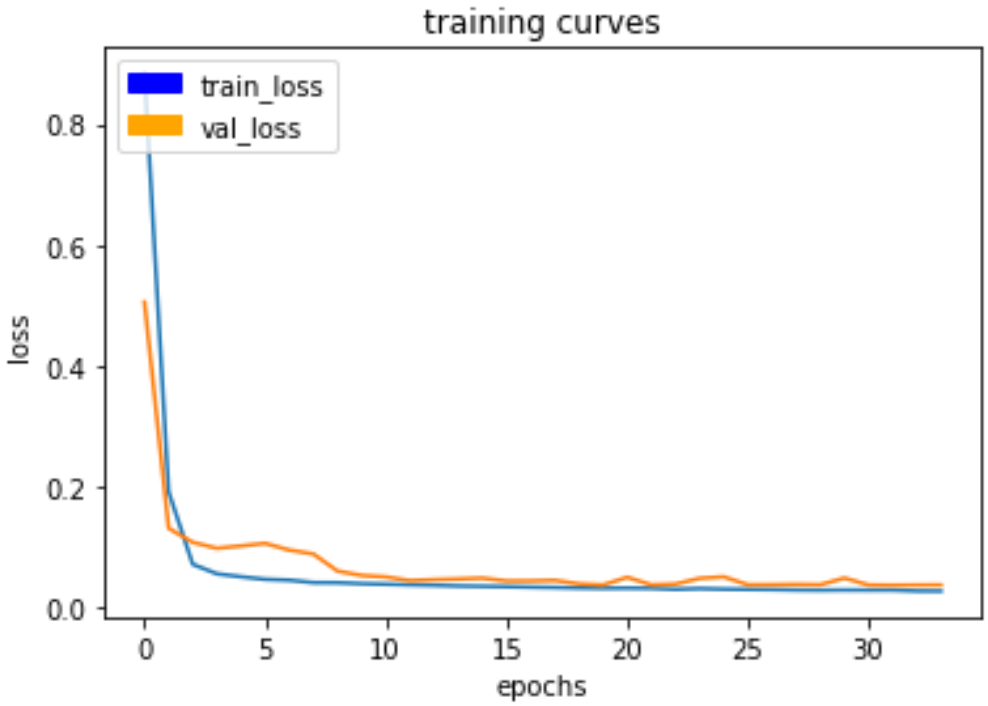
65/65 [==============================] - 188s - loss: 0.0297 - val_loss: 0.0381
Epoch 32/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0296



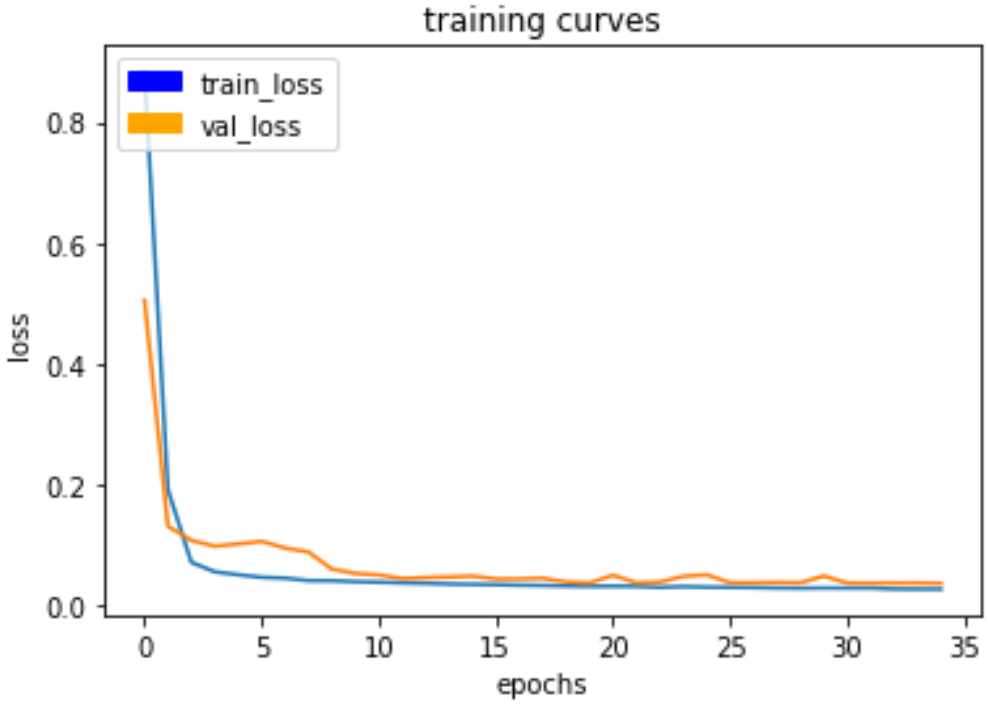
65/65 [==============================] - 188s - loss: 0.0297 - val_loss: 0.0378
Epoch 33/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0284



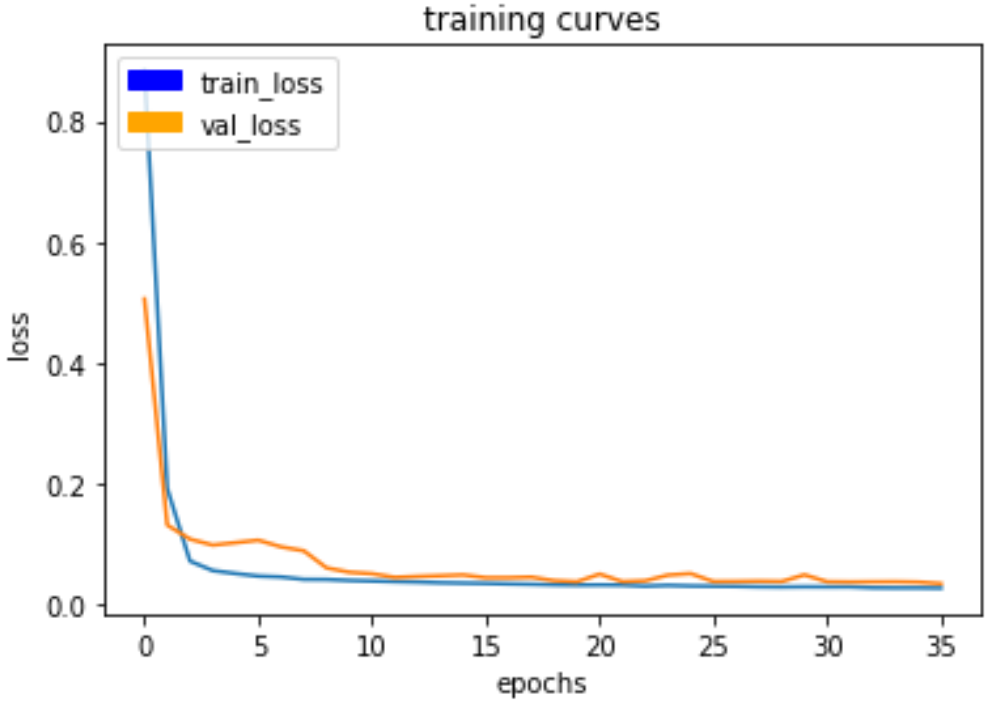
65/65 [==============================] - 188s - loss: 0.0283 - val_loss: 0.0380
Epoch 34/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0281



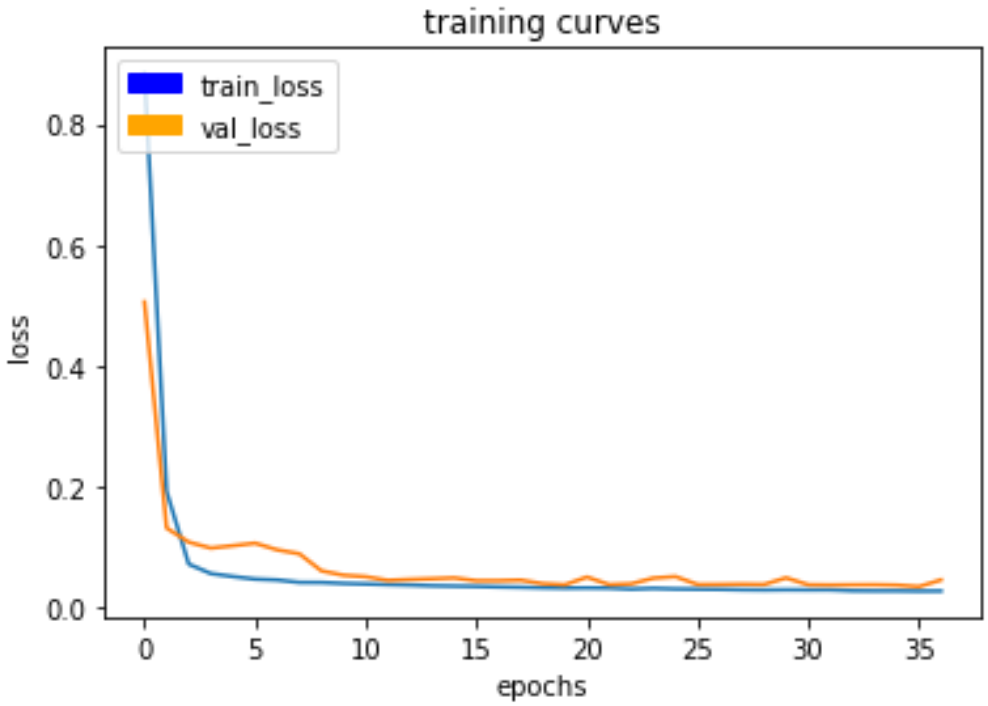
65/65 [==============================] - 187s - loss: 0.0281 - val_loss: 0.0382
Epoch 35/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0281



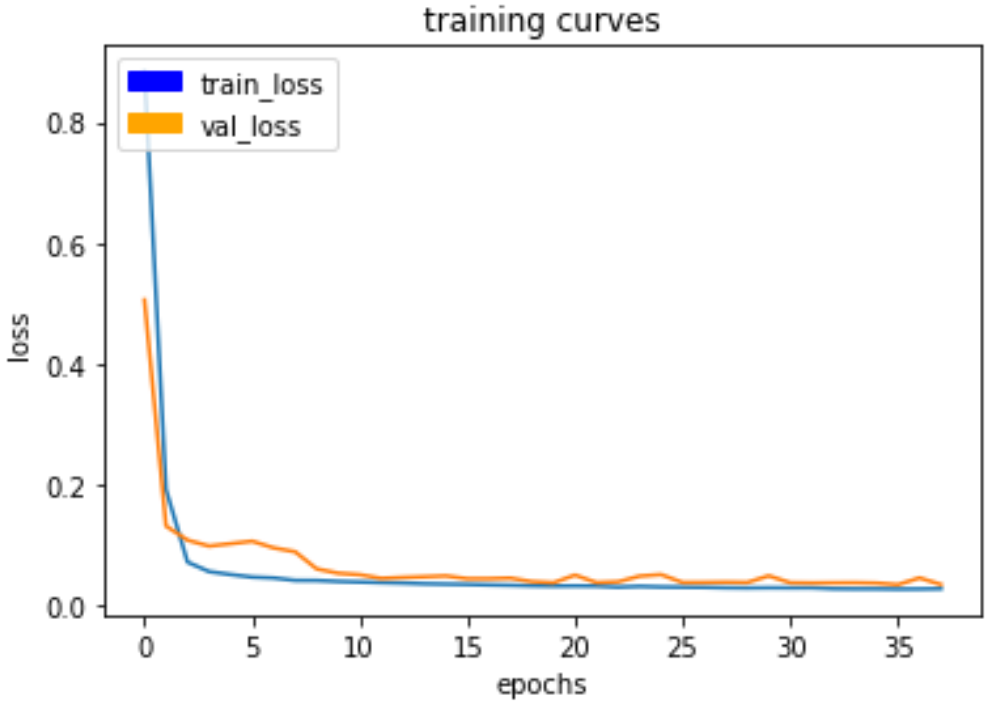
65/65 [==============================] - 189s - loss: 0.0281 - val_loss: 0.0375
Epoch 36/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0274



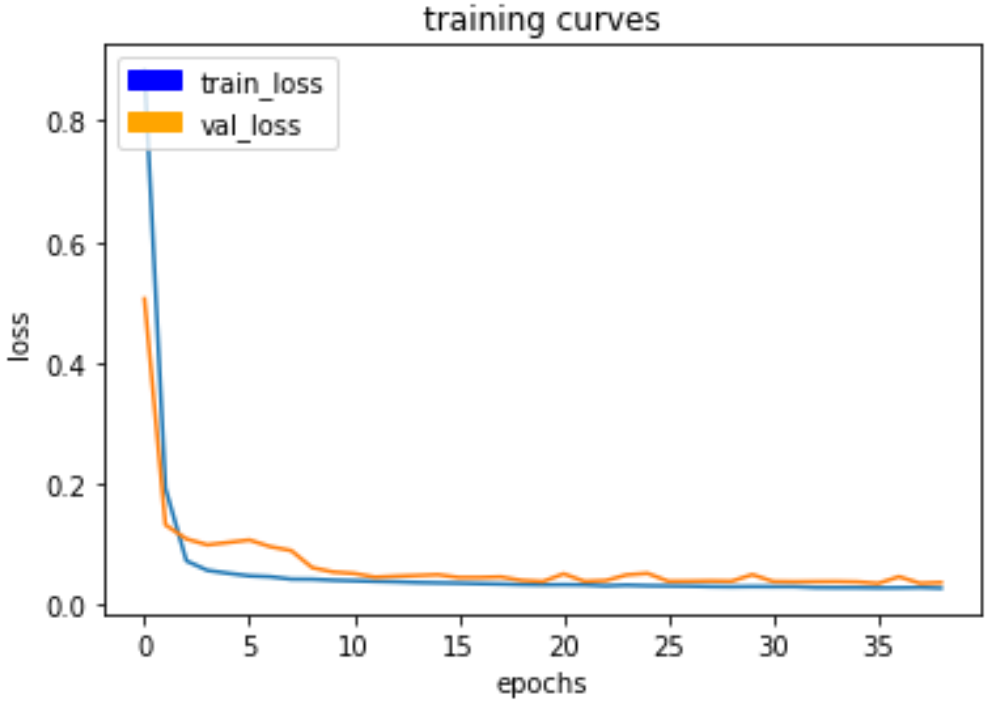
65/65 [==============================] - 188s - loss: 0.0277 - val_loss: 0.0350
Epoch 37/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0280



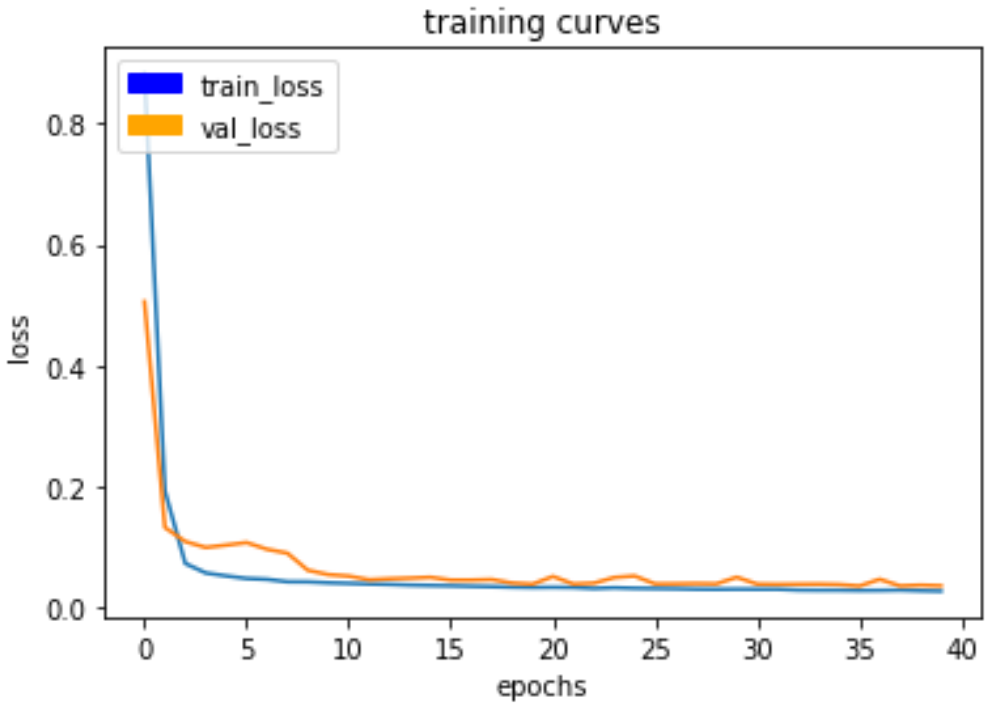
65/65 [==============================] - 187s - loss: 0.0281 - val_loss: 0.0462
Epoch 38/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0283



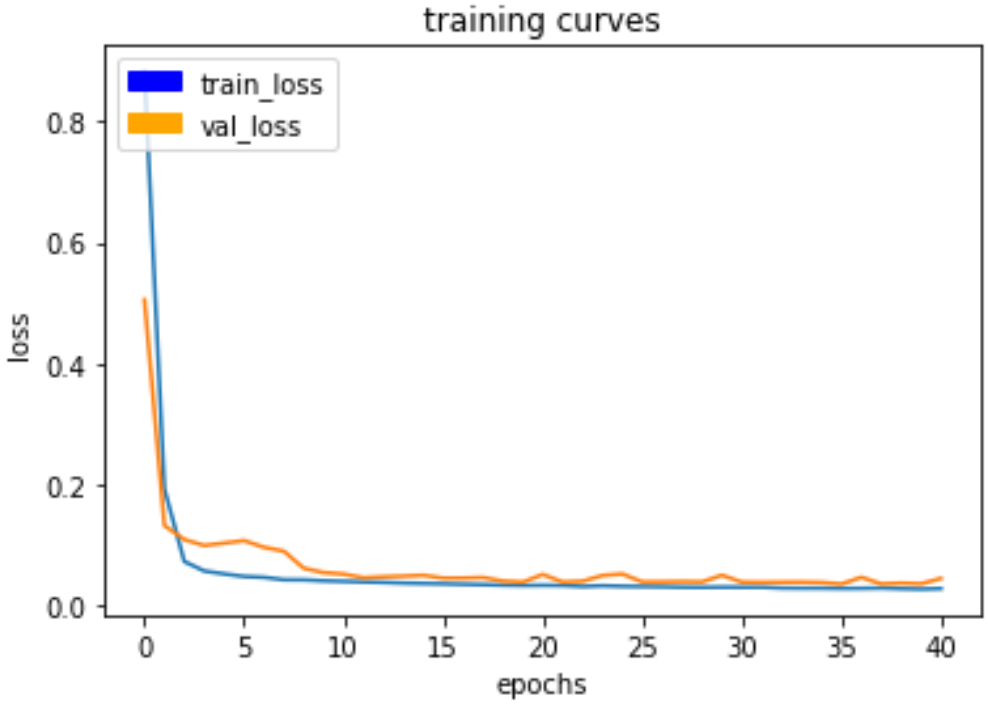
65/65 [==============================] - 188s - loss: 0.0283 - val_loss: 0.0352
Epoch 39/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0273



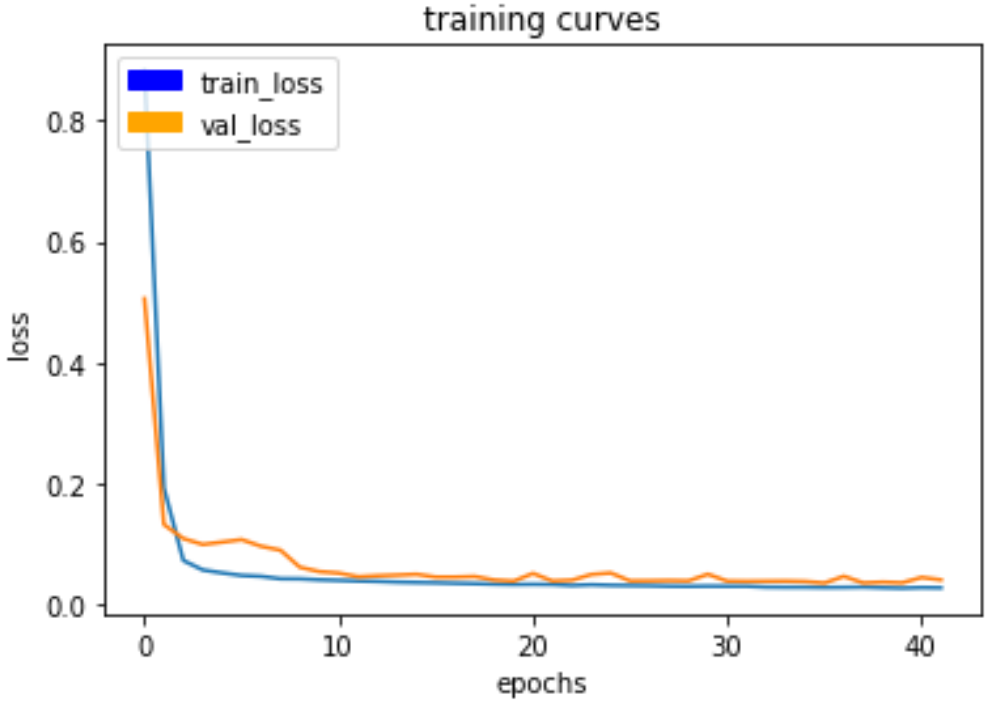
65/65 [==============================] - 188s - loss: 0.0273 - val_loss: 0.0364
Epoch 40/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0267



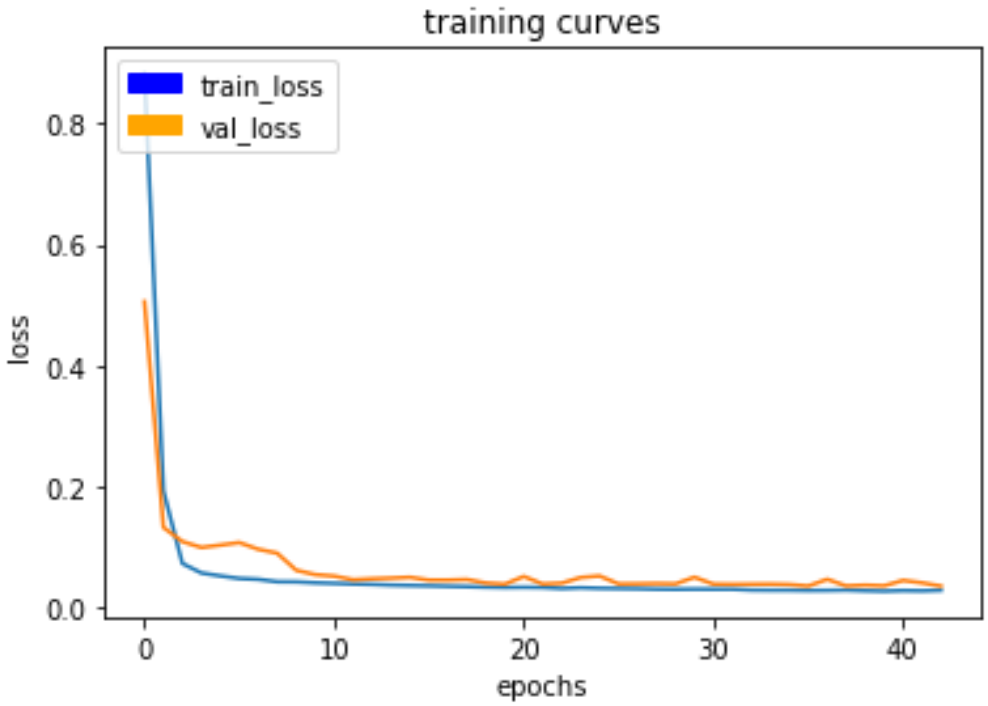
65/65 [==============================] - 188s - loss: 0.0266 - val_loss: 0.0354
Epoch 41/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0279



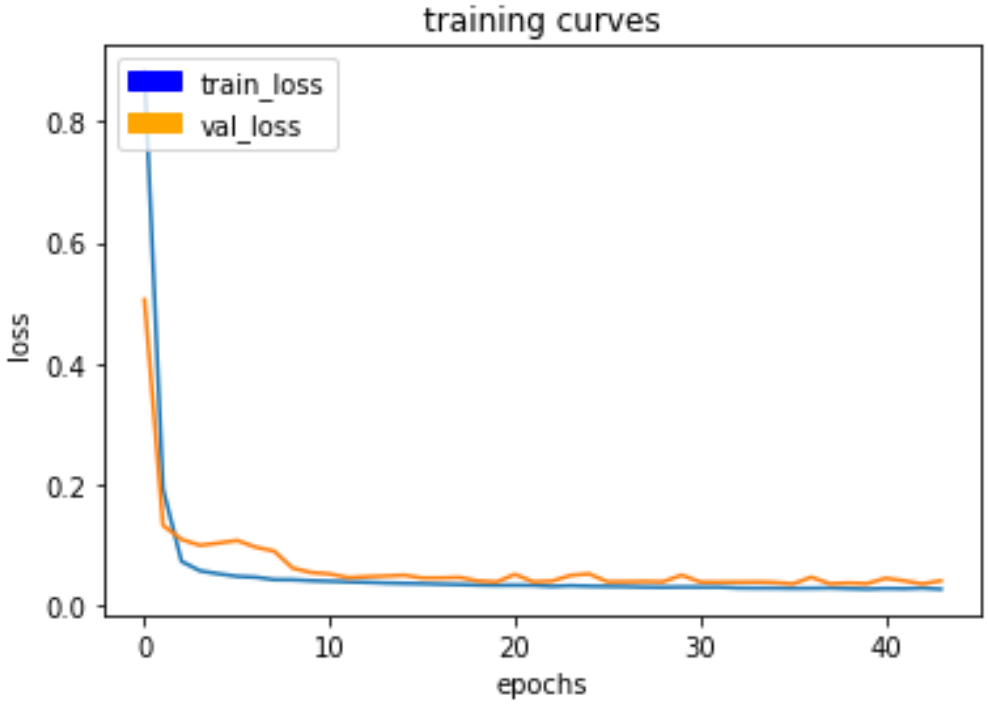
65/65 [==============================] - 188s - loss: 0.0279 - val_loss: 0.0443
Epoch 42/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0268



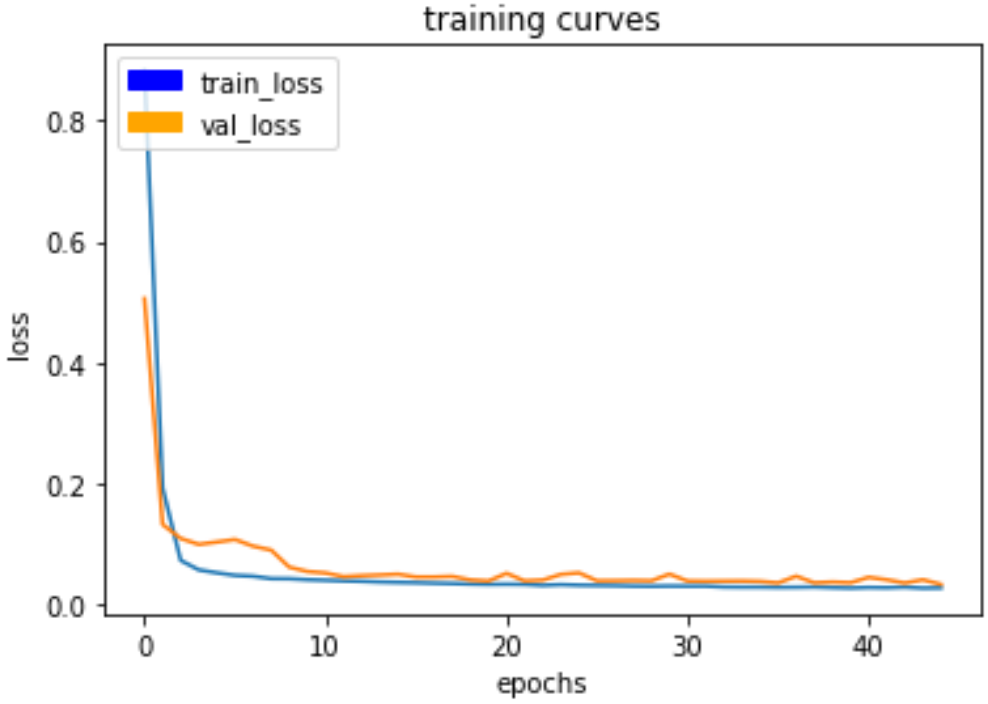
65/65 [==============================] - 187s - loss: 0.0271 - val_loss: 0.0403
Epoch 43/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0281



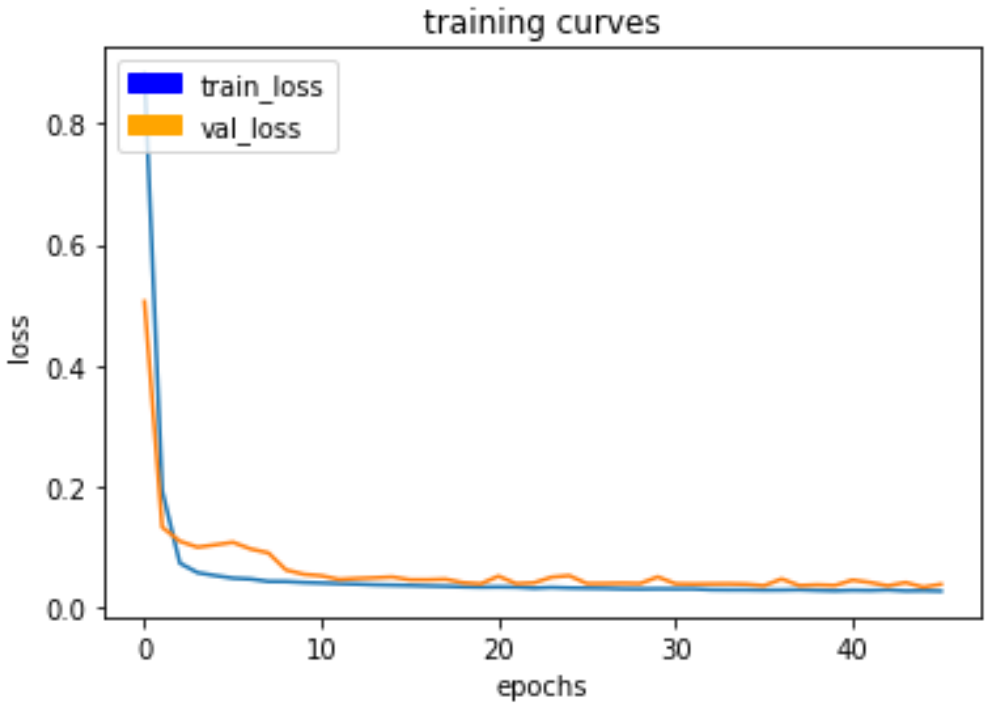
65/65 [==============================] - 188s - loss: 0.0280 - val_loss: 0.0349
Epoch 44/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0263



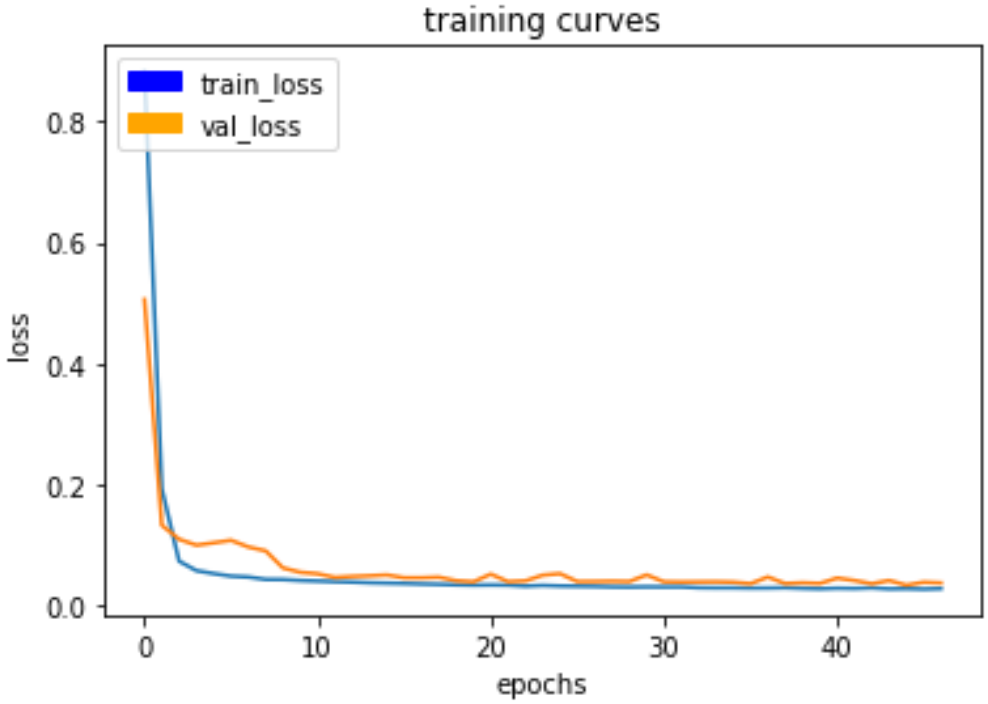
65/65 [==============================] - 188s - loss: 0.0264 - val_loss: 0.0403
Epoch 45/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0267



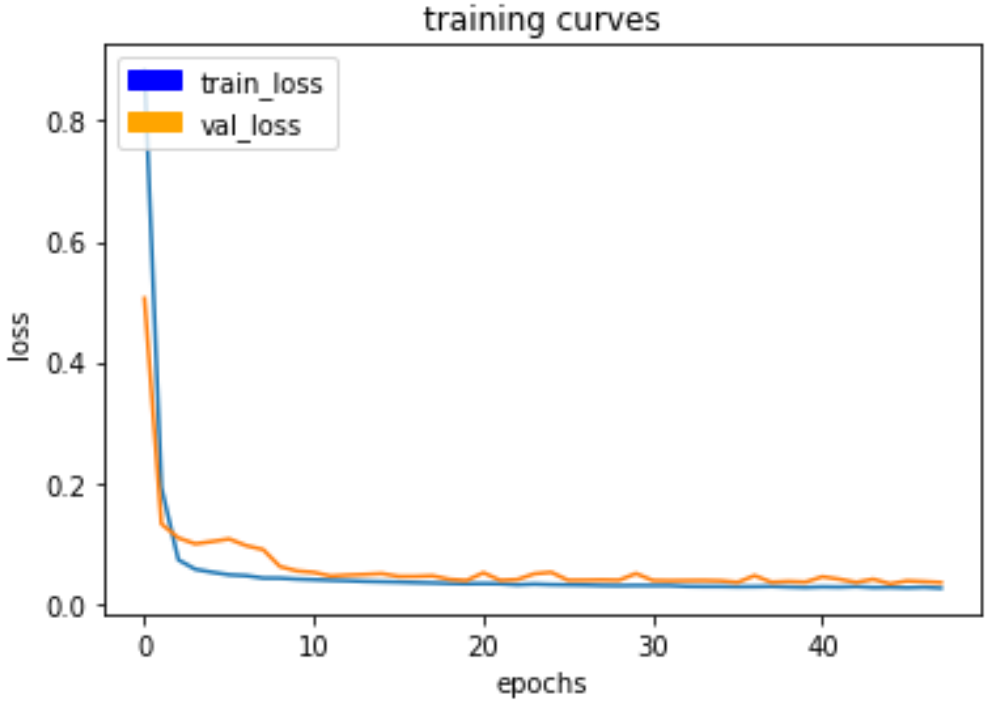
65/65 [==============================] - 187s - loss: 0.0268 - val_loss: 0.0325
Epoch 46/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0262



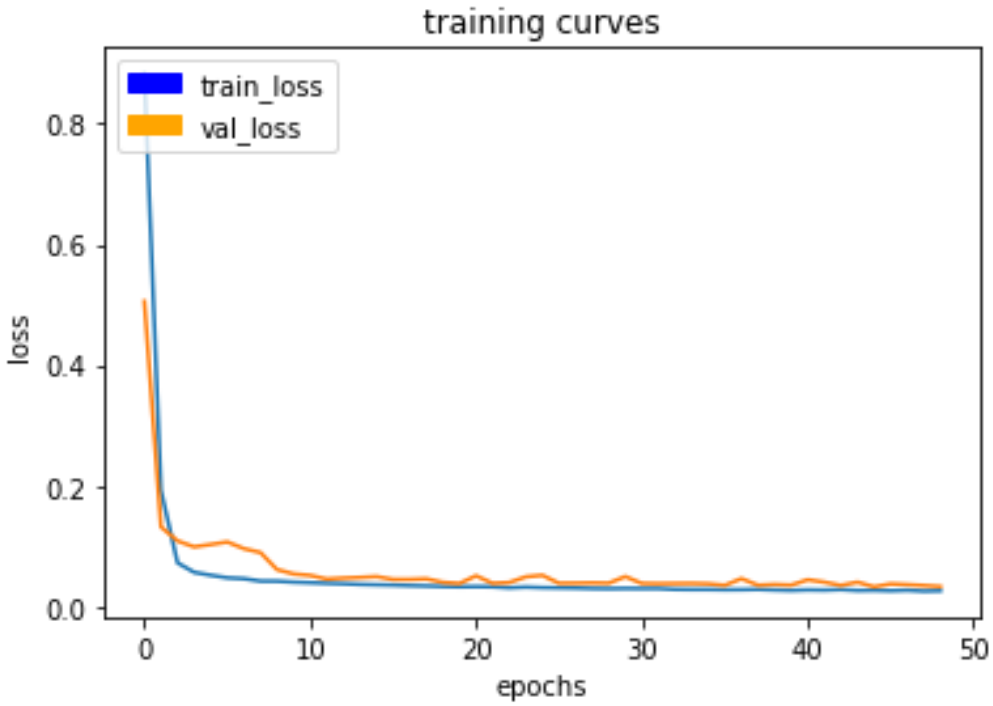
65/65 [==============================] - 188s - loss: 0.0261 - val_loss: 0.0374
Epoch 47/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0269



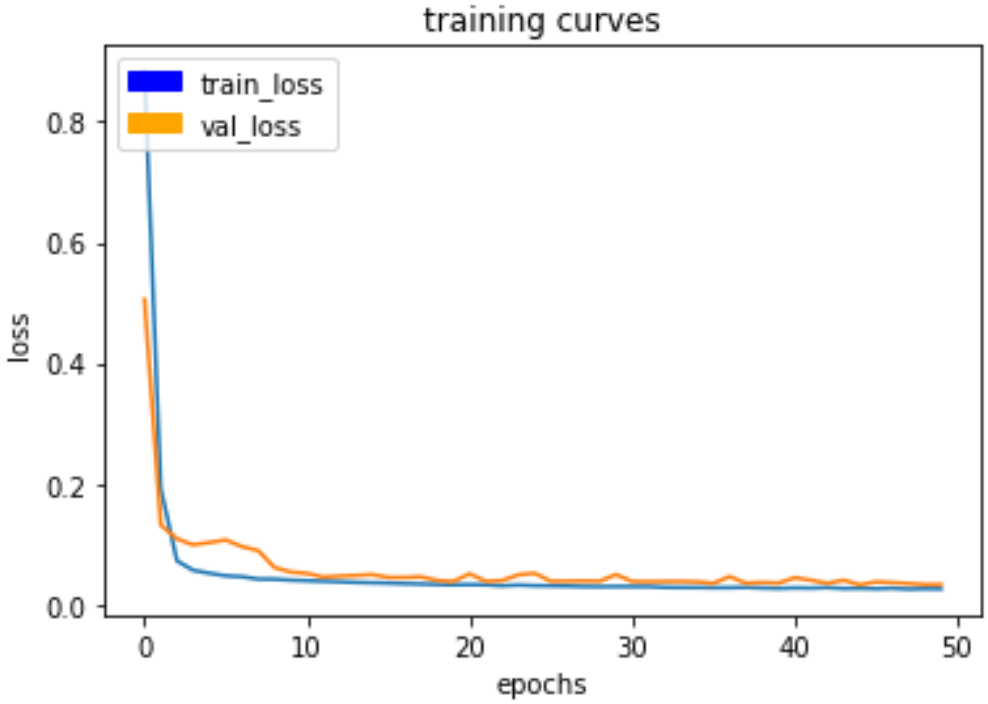
65/65 [==============================] - 188s - loss: 0.0269 - val_loss: 0.0362
Epoch 48/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0255



65/65 [==============================] - 189s - loss: 0.0255 - val_loss: 0.0347
Epoch 49/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0260



65/65 [==============================] - 188s - loss: 0.0260 - val_loss: 0.0330
Epoch 50/50
64/65 [==============================>.] - ETA: 2s - loss: 0.0257

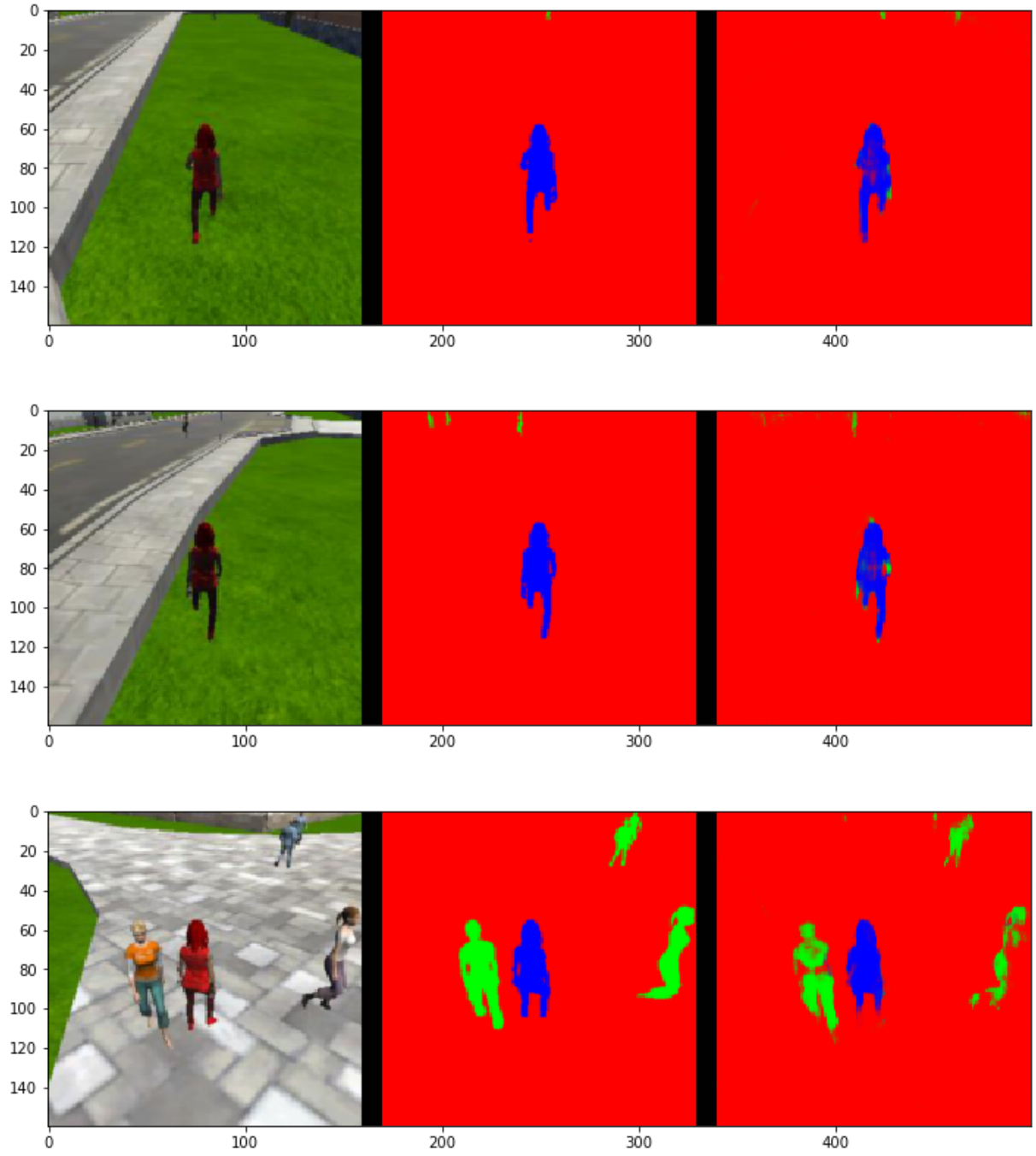


65/65 [==============================] - 188s - loss: 0.0257 - val_loss: 0.0331

Scores for while the quad is following behind the target:

number of validation samples intersection over the union evaulated on 542
average intersection over union for background is 0.9934951791991926
average intersection over union for other people is 0.30460518710312634
average intersection over union for the hero is 0.8458781287335181
number true positives: 539, number false positives: 0, number false negatives: 0

Images while following the target:

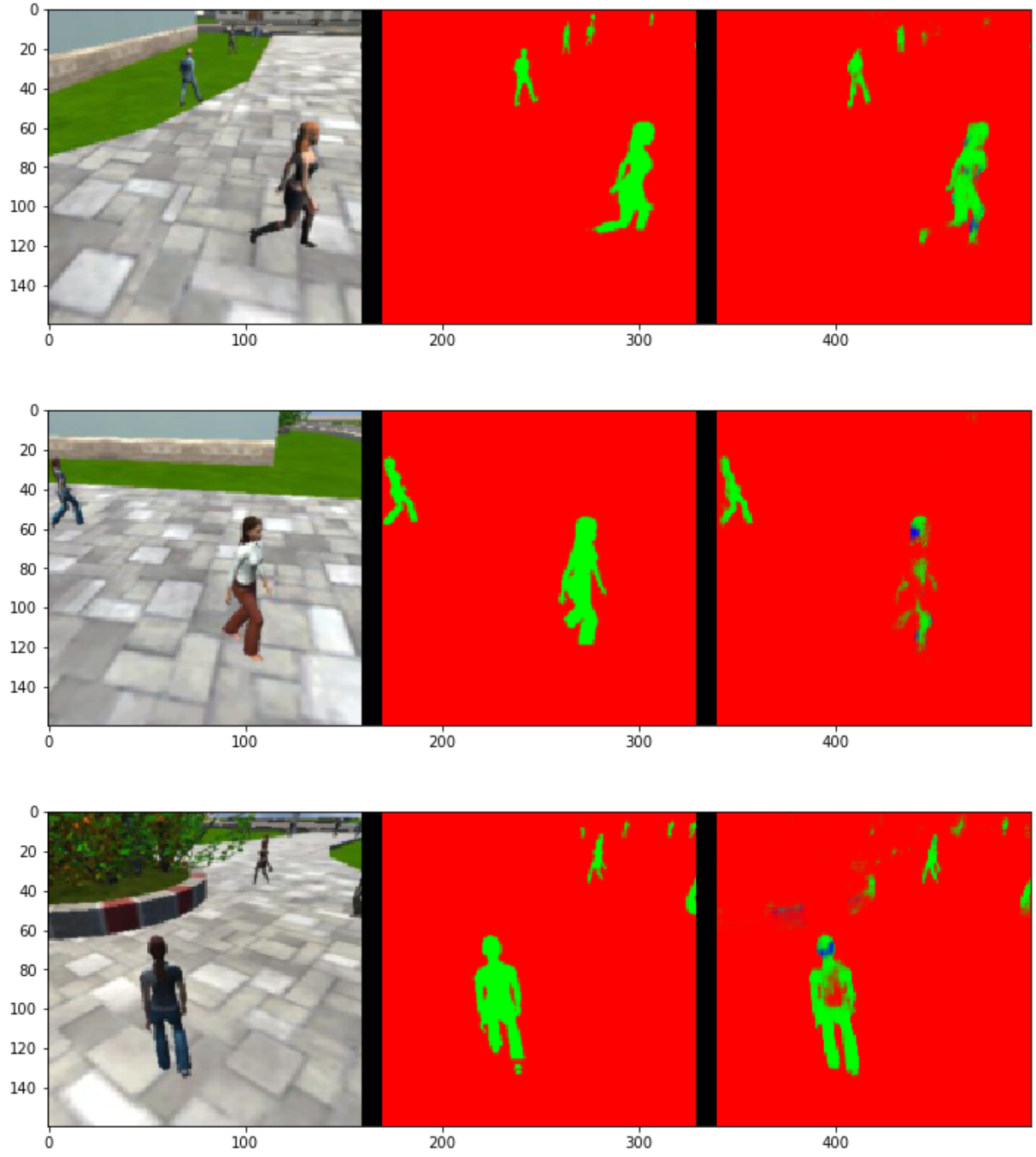


Scores for images while the quad is on patrol and the target is not visible:

number of validation samples intersection over the union evaluated on 270
average intersection over union for background is 0.9801343174318125
average intersection over union for other people is 0.5856224157018557
average intersection over union for the hero is 0.0
number true positives: 0, number false positives: 119, number false negatives:

0

Images while at patrol without target

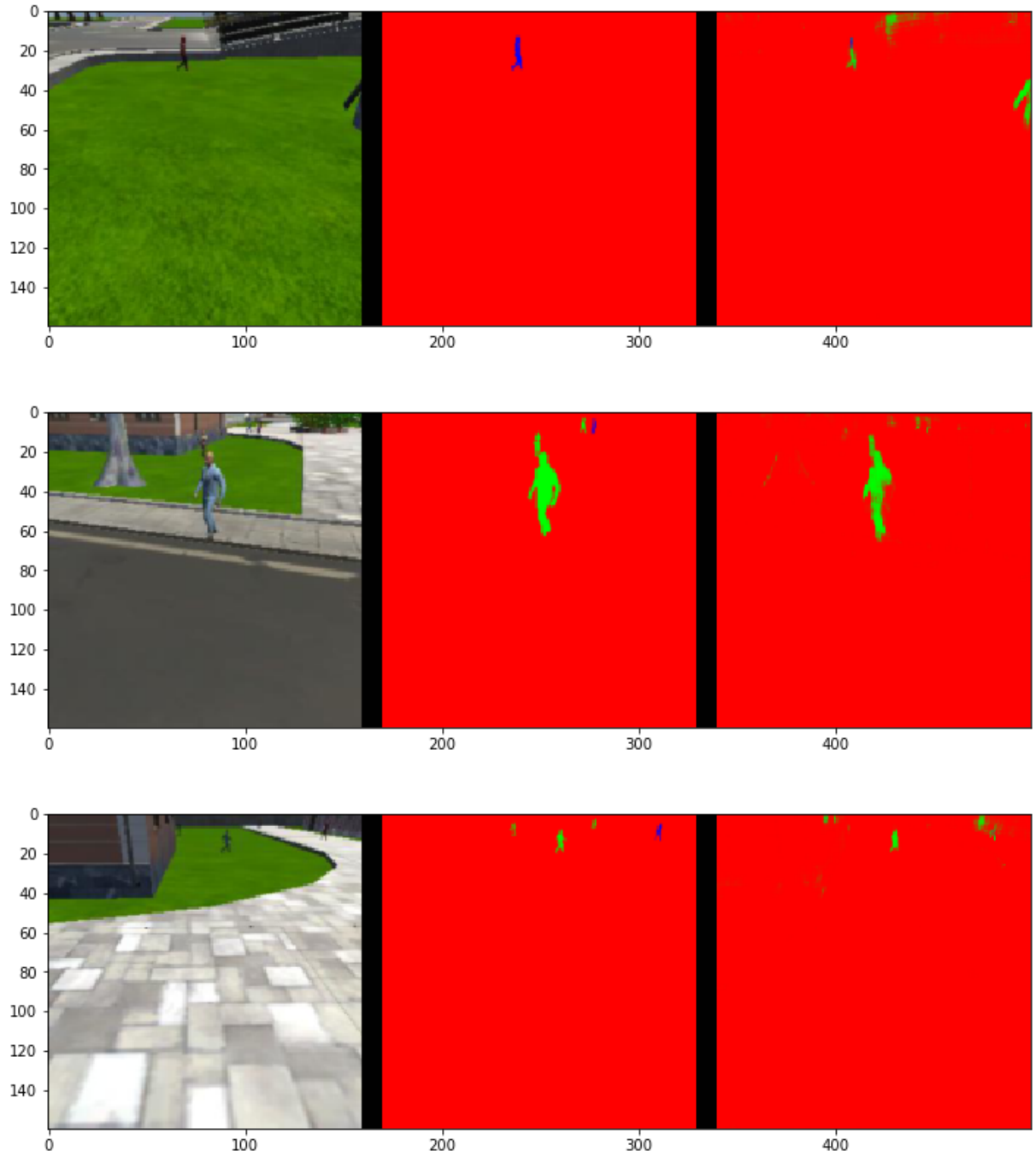


This score measures how well the neural network can detect the target from far away:

number of validation samples intersection over the union evaulated on 322
average intersection over union for background is 0.9950563153399987

average intersection over union for other people is 0.389016767524459 46
average intersection over union for the hero is 0.226110797815440 58
number true positives: 154, number false positives: 2, number false negatives: 147

Images while at patrol with target



Sum all the true positives, etc from the three datasets to get a weight for the score:

0.7211238293444329

Final IoU:

0.535994463274

Final score:

0.386518379864