Epoch 46/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.4187 - cls\_loss: 0.2414 - box\_loss: 0.0035 - reg\_l2\_loss: 0.1001 - loss: 0.5188 - learning\_rate: 0.0637 - gradient\_norm: 1.3167

Epoch 46: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-46

445/445 [==============================] - 458s 926ms/step - det\_loss: 0.4185 - cls\_loss: 0.2413 - box\_loss: 0.0035 - reg\_l2\_loss: 0.1001 - loss: 0.5186 - learning\_rate: 0.0637 - gradient\_norm: 1.3153 - val\_det\_loss: 0.2944 - val\_cls\_loss: 0.1795 - val\_box\_loss: 0.0023 - val\_reg\_l2\_loss: 0.1016 - val\_loss: 0.3960

Epoch 47/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3904 - cls\_loss: 0.2268 - box\_loss: 0.0033 - reg\_l2\_loss: 0.1022 - loss: 0.4926 - learning\_rate: 0.0621 - gradient\_norm: 1.0455

Epoch 47: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-47

445/445 [==============================] - 397s 893ms/step - det\_loss: 0.3903 - cls\_loss: 0.2268 - box\_loss: 0.0033 - reg\_l2\_loss: 0.1022 - loss: 0.4925 - learning\_rate: 0.0621 - gradient\_norm: 1.0456

Epoch 48/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3813 - cls\_loss: 0.2208 - box\_loss: 0.0032 - reg\_l2\_loss: 0.1030 - loss: 0.4843 - learning\_rate: 0.0606 - gradient\_norm: 0.9967

Epoch 48: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-48

445/445 [==============================] - 398s 895ms/step - det\_loss: 0.3813 - cls\_loss: 0.2209 - box\_loss: 0.0032 - reg\_l2\_loss: 0.1030 - loss: 0.4843 - learning\_rate: 0.0606 - gradient\_norm: 0.9964

Epoch 49/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3712 - cls\_loss: 0.2145 - box\_loss: 0.0031 - reg\_l2\_loss: 0.1036 - loss: 0.4748 - learning\_rate: 0.0590 - gradient\_norm: 0.9533

Epoch 49: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-49

445/445 [==============================] - 395s 889ms/step - det\_loss: 0.3713 - cls\_loss: 0.2146 - box\_loss: 0.0031 - reg\_l2\_loss: 0.1036 - loss: 0.4748 - learning\_rate: 0.0590 - gradient\_norm: 0.9531

Epoch 50/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3622 - cls\_loss: 0.2107 - box\_loss: 0.0030 - reg\_l2\_loss: 0.1039 - loss: 0.4660 - learning\_rate: 0.0575 - gradient\_norm: 0.9253

Epoch 50: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-50

445/445 [==============================] - 416s 935ms/step - det\_loss: 0.3621 - cls\_loss: 0.2107 - box\_loss: 0.0030 - reg\_l2\_loss: 0.1039 - loss: 0.4659 - learning\_rate: 0.0575 - gradient\_norm: 0.9250

Epoch 51/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3525 - cls\_loss: 0.2053 - box\_loss: 0.0029 - reg\_l2\_loss: 0.1038 - loss: 0.4563 - learning\_rate: 0.0559 - gradient\_norm: 0.8702

Epoch 51: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-51

445/445 [==============================] - 397s 893ms/step - det\_loss: 0.3523 - cls\_loss: 0.2053 - box\_loss: 0.0029 - reg\_l2\_loss: 0.1038 - loss: 0.4561 - learning\_rate: 0.0559 - gradient\_norm: 0.8696

Epoch 52/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3459 - cls\_loss: 0.2017 - box\_loss: 0.0029 - reg\_l2\_loss: 0.1035 - loss: 0.4494 - learning\_rate: 0.0543 - gradient\_norm: 0.8480

Epoch 52: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-52

445/445 [==============================] - 397s 891ms/step - det\_loss: 0.3460 - cls\_loss: 0.2018 - box\_loss: 0.0029 - reg\_l2\_loss: 0.1035 - loss: 0.4495 - learning\_rate: 0.0543 - gradient\_norm: 0.8482

Epoch 53/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3420 - cls\_loss: 0.1991 - box\_loss: 0.0029 - reg\_l2\_loss: 0.1032 - loss: 0.4452 - learning\_rate: 0.0527 - gradient\_norm: 0.8396

Epoch 53: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-53

445/445 [==============================] - 396s 890ms/step - det\_loss: 0.3420 - cls\_loss: 0.1992 - box\_loss: 0.0029 - reg\_l2\_loss: 0.1032 - loss: 0.4452 - learning\_rate: 0.0527 - gradient\_norm: 0.8392

Epoch 54/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3389 - cls\_loss: 0.1980 - box\_loss: 0.0028 - reg\_l2\_loss: 0.1027 - loss: 0.4417 - learning\_rate: 0.0511 - gradient\_norm: 0.8388

Epoch 54: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-54

445/445 [==============================] - 397s 893ms/step - det\_loss: 0.3389 - cls\_loss: 0.1979 - box\_loss: 0.0028 - reg\_l2\_loss: 0.1027 - loss: 0.4416 - learning\_rate: 0.0511 - gradient\_norm: 0.8383

Epoch 55/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3337 - cls\_loss: 0.1952 - box\_loss: 0.0028 - reg\_l2\_loss: 0.1022 - loss: 0.4359 - learning\_rate: 0.0496 - gradient\_norm: 0.8365

Epoch 55: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-55

445/445 [==============================] - 413s 928ms/step - det\_loss: 0.3336 - cls\_loss: 0.1952 - box\_loss: 0.0028 - reg\_l2\_loss: 0.1022 - loss: 0.4359 - learning\_rate: 0.0496 - gradient\_norm: 0.8362

Epoch 56/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3249 - cls\_loss: 0.1908 - box\_loss: 0.0027 - reg\_l2\_loss: 0.1017 - loss: 0.4266 - learning\_rate: 0.0480 - gradient\_norm: 0.8095

Epoch 56: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-56

445/445 [==============================] - 399s 898ms/step - det\_loss: 0.3248 - cls\_loss: 0.1908 - box\_loss: 0.0027 - reg\_l2\_loss: 0.1017 - loss: 0.4266 - learning\_rate: 0.0480 - gradient\_norm: 0.8091

Epoch 57/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3240 - cls\_loss: 0.1910 - box\_loss: 0.0027 - reg\_l2\_loss: 0.1012 - loss: 0.4252 - learning\_rate: 0.0464 - gradient\_norm: 0.8444

Epoch 57: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-57

445/445 [==============================] - 396s 890ms/step - det\_loss: 0.3238 - cls\_loss: 0.1909 - box\_loss: 0.0027 - reg\_l2\_loss: 0.1012 - loss: 0.4250 - learning\_rate: 0.0464 - gradient\_norm: 0.8443

Epoch 58/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3193 - cls\_loss: 0.1879 - box\_loss: 0.0026 - reg\_l2\_loss: 0.1007 - loss: 0.4200 - learning\_rate: 0.0448 - gradient\_norm: 0.8218

Epoch 58: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-58

445/445 [==============================] - 395s 888ms/step - det\_loss: 0.3194 - cls\_loss: 0.1880 - box\_loss: 0.0026 - reg\_l2\_loss: 0.1007 - loss: 0.4201 - learning\_rate: 0.0448 - gradient\_norm: 0.8233

Epoch 59/100

445/445 [==============================] - ETA: 0s - det\_loss: 0.3177 - cls\_loss: 0.1870 - box\_loss: 0.0026 - reg\_l2\_loss: 0.1002 - loss: 0.4179 - learning\_rate: 0.0432 - gradient\_norm: 0.8246

Epoch 59: saving model to /content/drive/My Drive/STEM\_1/dataset/try6/last\_layers/ckpt-59

445/445 [==============================] - 396s 890ms/step - det\_loss: 0.3176 - cls\_loss: 0.1869 - box\_loss: 0.0026 - reg\_l2\_loss: 0.1002 - loss: 0.4178 - learning\_rate: 0.0432 - gradient\_norm: 0.8240

Epoch 60/100

444/445 [============================>.] - ETA: 0s - det\_loss: 0.3154 - cls\_loss: 0.1856 - box\_loss: 0.0026 - reg\_l2\_loss: 0.0997 - loss: 0.4151 - learning\_rate: 0.0417 - gradient\_norm: 0.8430