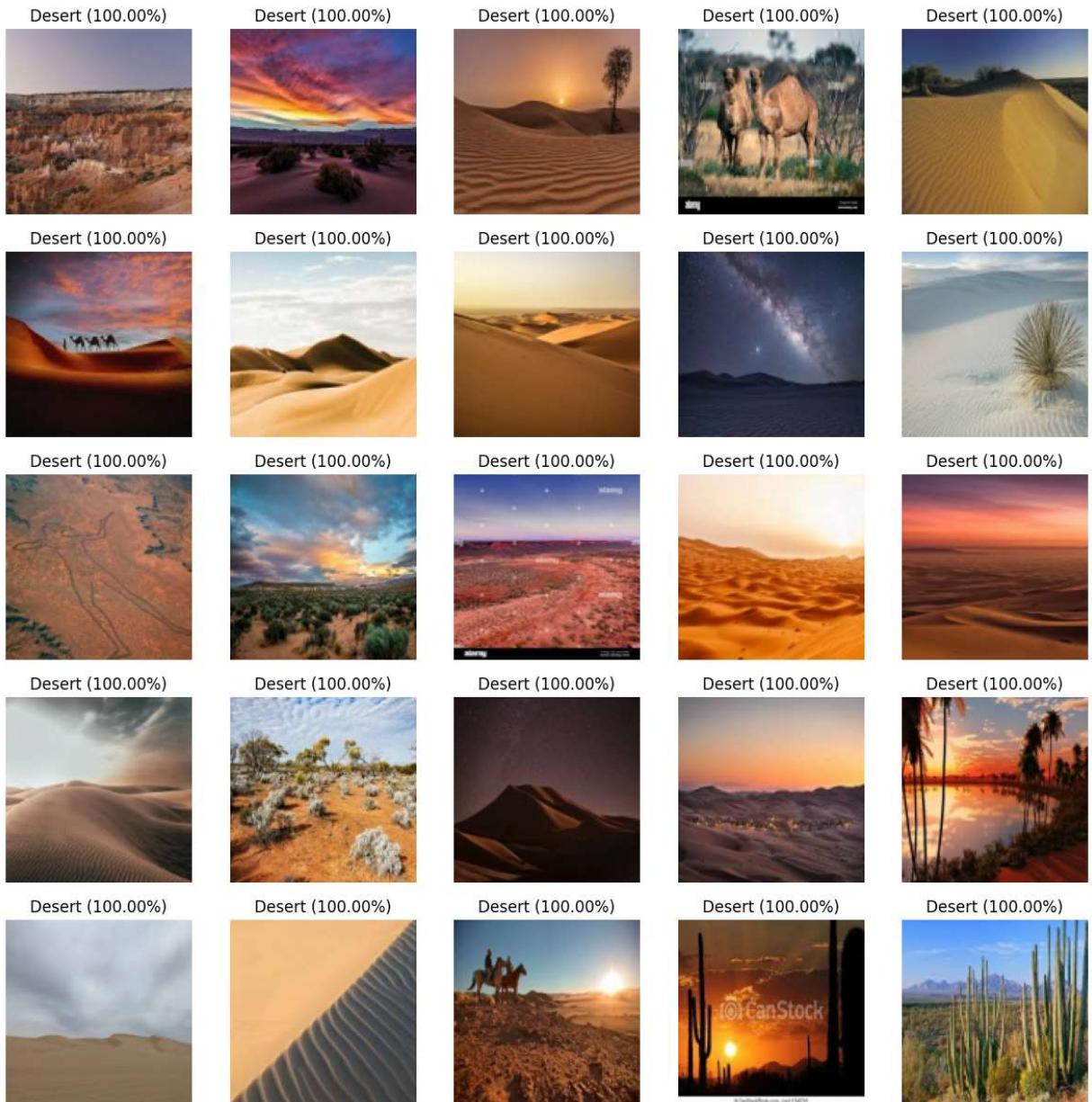


## Visualize Dataset



## Variational AutoEncoder

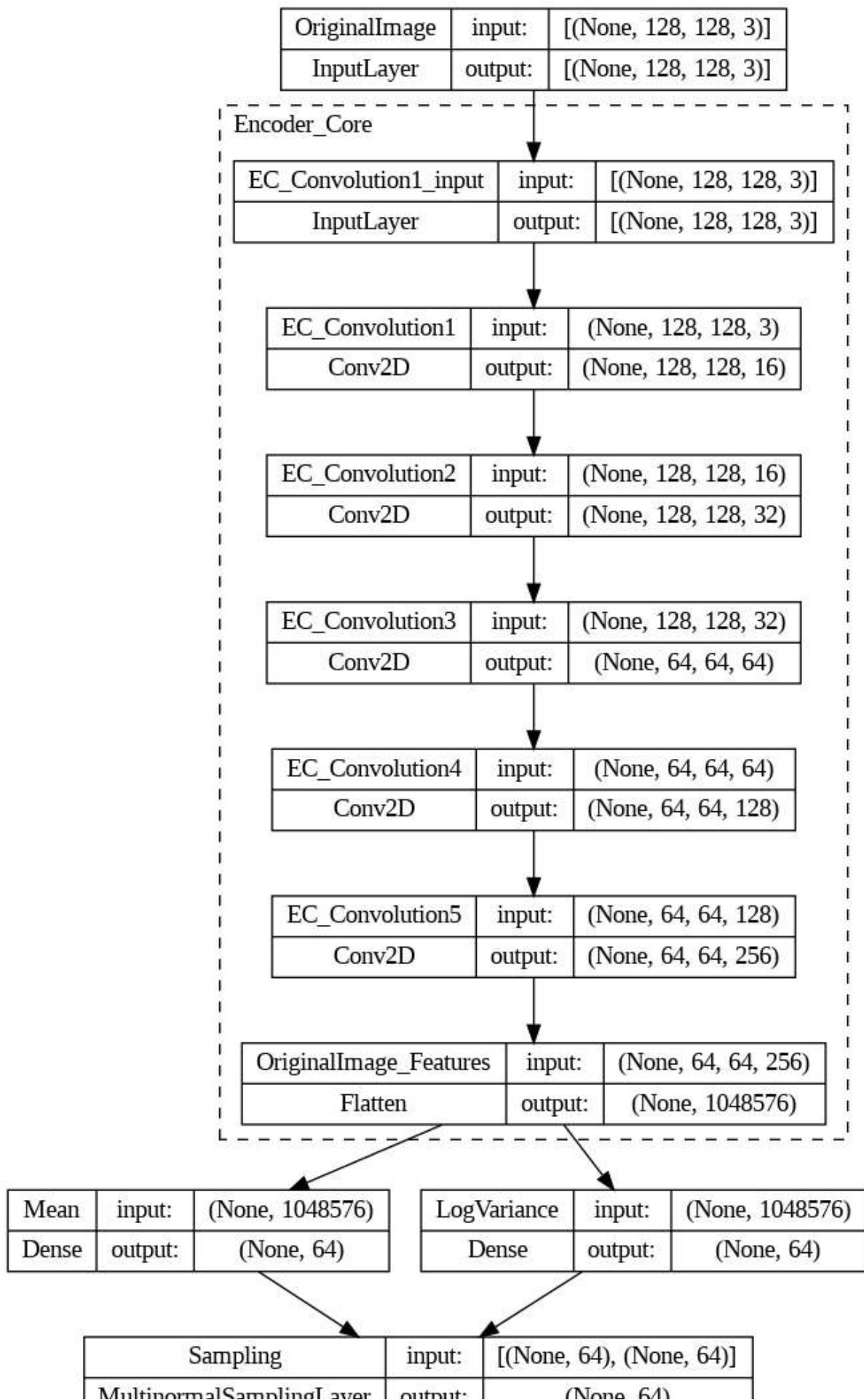
Model: "VAE"

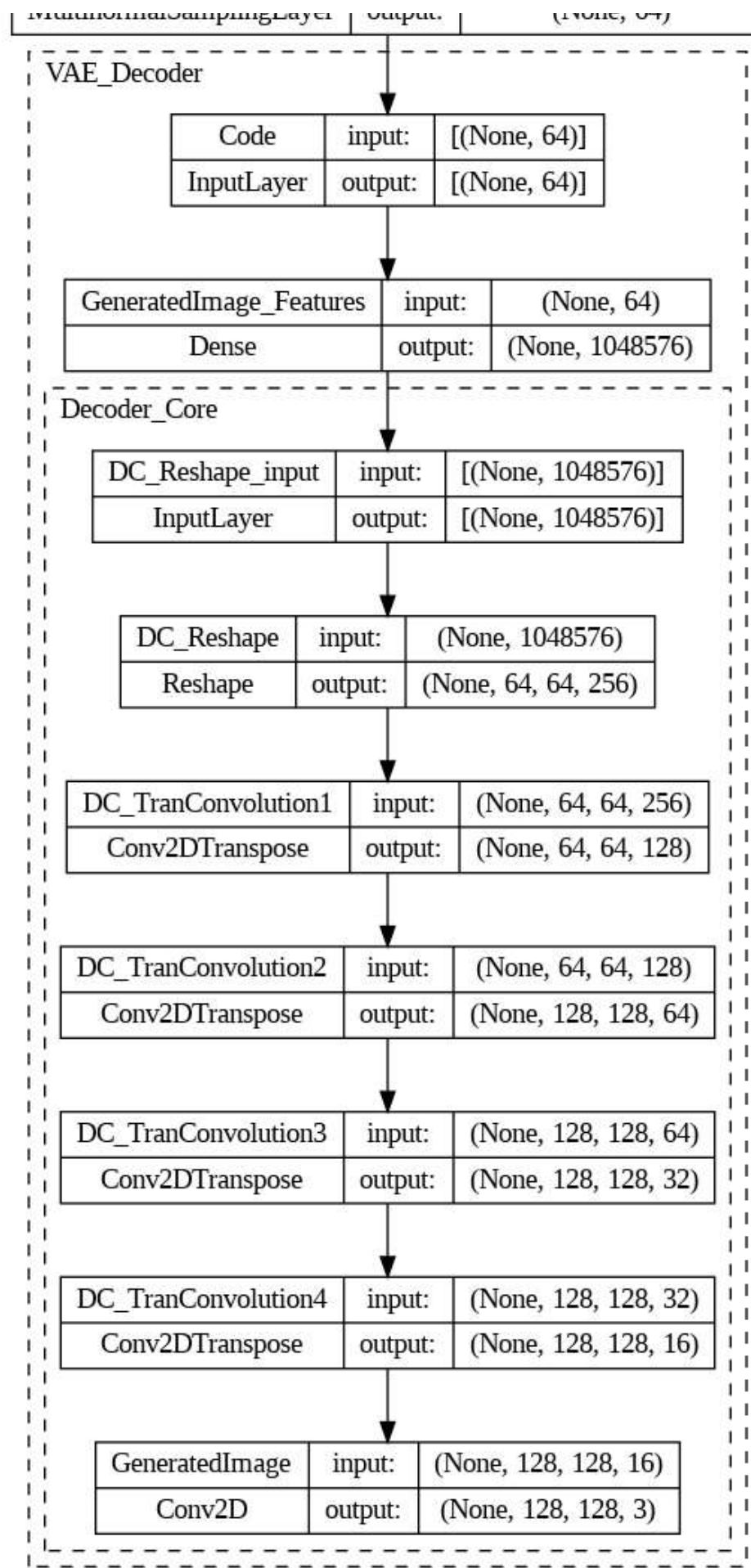
---

Layer (type)	Output Shape	Param #	Connected to
OriginalImage (InputLayer)	[(None, 128, 128, 3)]	0	[]
Encoder_Core (Sequential)	(None, 1048576)	392608	['OriginalImage[0][0]']
Mean (Dense)	(None, 64)	6710892	['Encoder_Core[0][0]']
LogVariance (Dense)	(None, 64)	6710892	['Encoder_Core[0][0]']
Sampling (MultinormalSamplingLayer)	(None, 64)	0	['Mean[0][0]', 'LogVariance[0]']
VAE_Decoder (Functional)	(None, 128, 128, 3)	6833195	['Sampling[0][0]']
		5	
<hr/>			
<hr/>			
Total params:	202942419 (774.16 MB)		
Trainable params:	202942419 (774.16 MB)		
Non-trainable params:	0 (0.00 Byte)		

---

Out[184...]





## Training

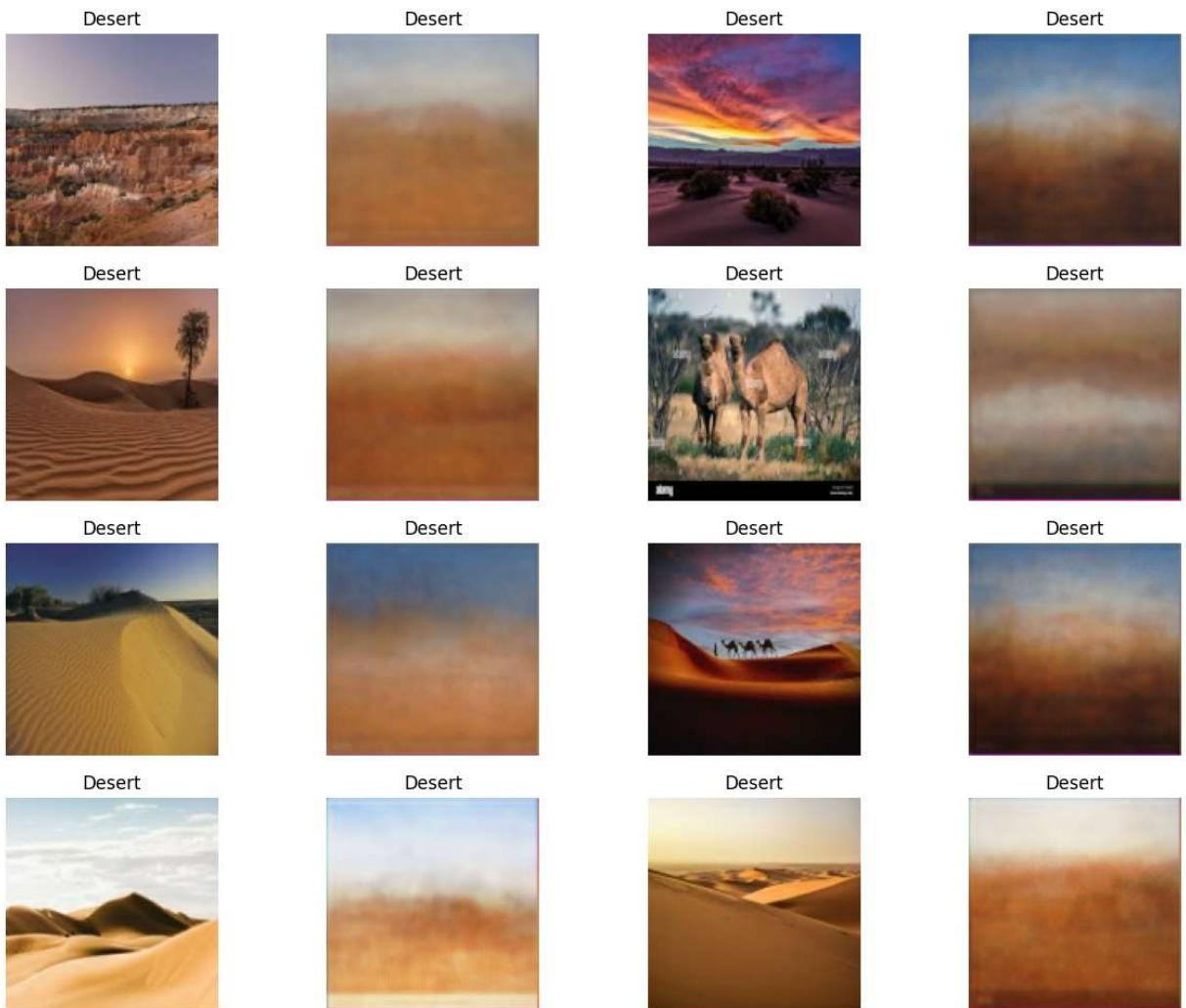
Epoch 1/1000

6/Unknown - 7s 634ms/step - loss: 1225382.0000 - reconstruction\_error: 145.616  
3 - regularization\_error: 1221013.6250

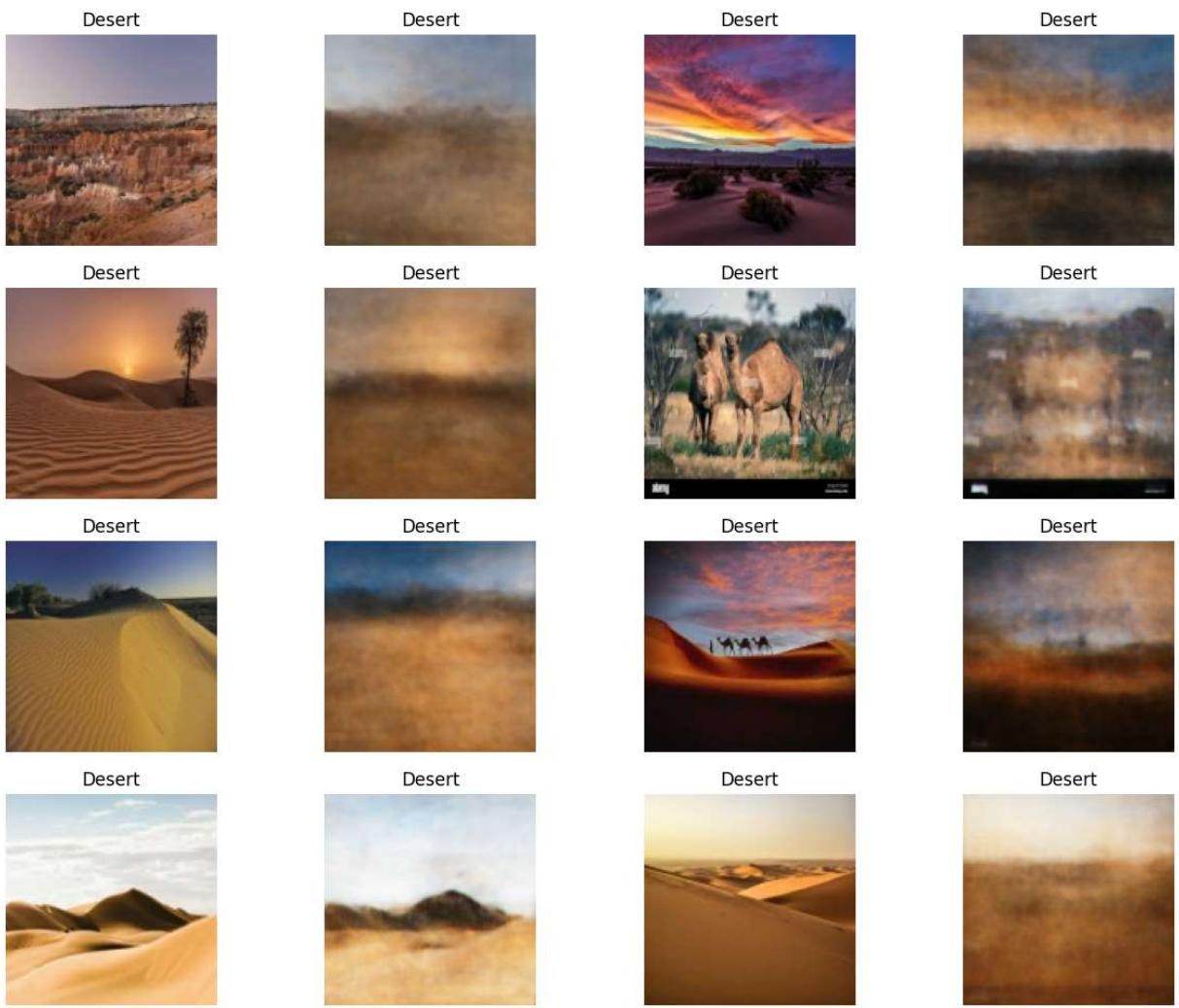
WARNING:tensorflow:Callback method `on\_train\_batch\_end` is slow compared to the batch time (batch time: 0.0453s vs `on\_train\_batch\_end` time: 0.4903s). Check your callbacks.

120/Unknown - 17s 109ms/step - loss: 63785.5742 - reconstruction\_error: 89.5194  
- regularization\_error: 61100.0000

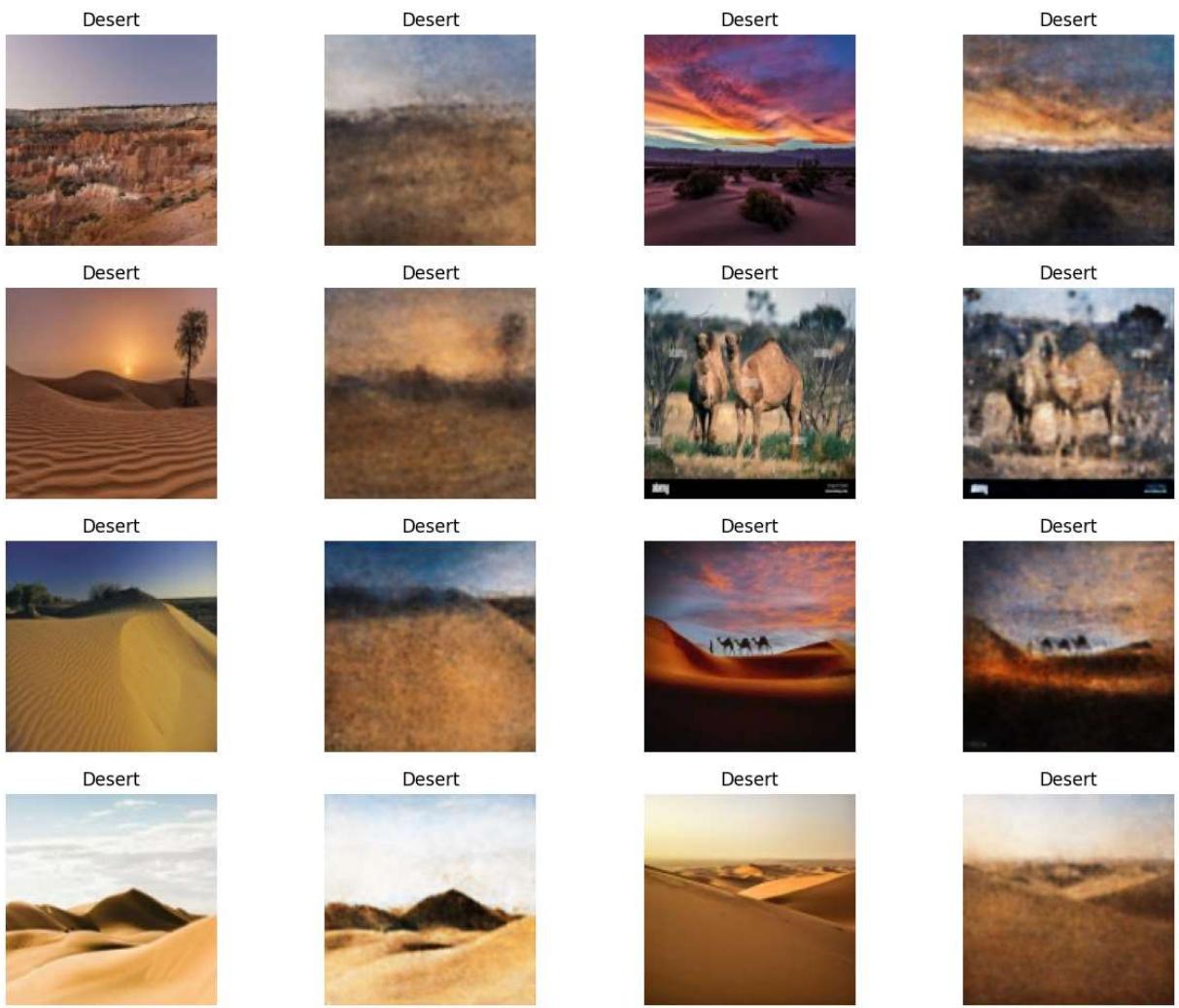
[2023-12-02 21:36:46.187788]: Reconstructing images for epoch 1 ...



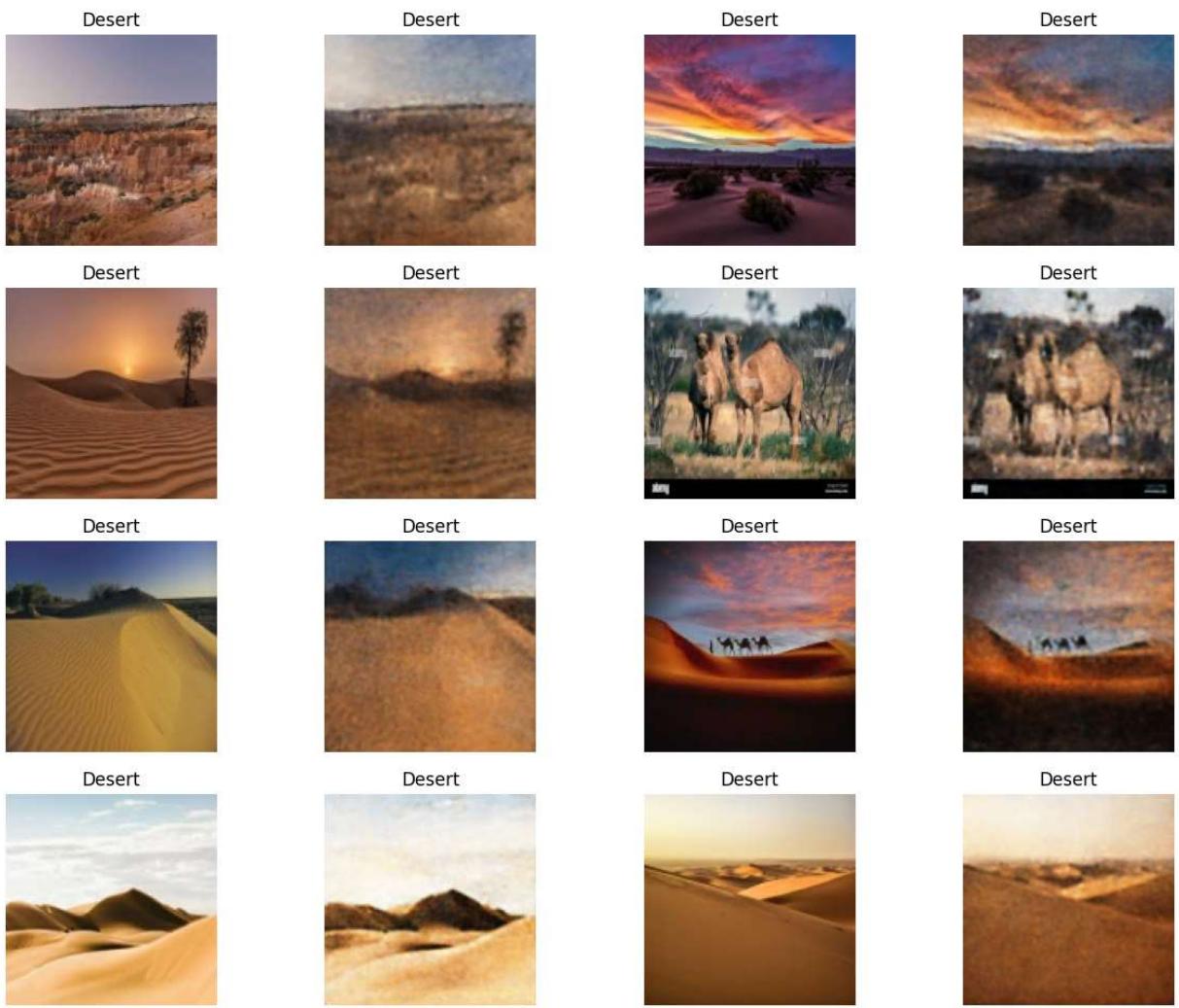
```
120/120 [=====] - 28s 200ms/step - loss: 63785.5742 - reconstruction_error: 89.5194 - regularization_error: 61100.0000 - val_loss: 1739.4510 - val_reconstruction_error: 55.6551 - val_regularization_error: 69.7983
Epoch 2/1000
120/120 [=====] - 17s 142ms/step - loss: 1261.4169 - reconstruction_error: 39.4186 - regularization_error: 78.8590 - val_loss: 1095.9352 - val_reconstruction_error: 33.7989 - val_regularization_error: 81.9680
Epoch 3/1000
120/120 [=====] - 17s 142ms/step - loss: 1046.9005 - reconstruction_error: 32.1303 - regularization_error: 82.9924 - val_loss: 992.6540 - val_reconstruction_error: 30.1184 - val_regularization_error: 89.1006
Epoch 4/1000
120/120 [=====] - 18s 147ms/step - loss: 936.5050 - reconstruction_error: 28.2743 - regularization_error: 88.2759 - val_loss: 930.3215 - val_reconstruction_error: 28.0497 - val_regularization_error: 88.8310
Epoch 5/1000
120/120 [=====] - 18s 150ms/step - loss: 888.3605 - reconstruction_error: 26.5967 - regularization_error: 90.4587 - val_loss: 907.5554 - val_reconstruction_error: 27.2841 - val_regularization_error: 89.0330
Epoch 6/1000
120/120 [=====] - 17s 139ms/step - loss: 841.7144 - reconstruction_error: 24.9443 - regularization_error: 93.3845 - val_loss: 862.3141 - val_reconstruction_error: 25.7026 - val_regularization_error: 91.2361
Epoch 7/1000
120/120 [=====] - 19s 160ms/step - loss: 798.9114 - reconstruction_error: 23.4902 - regularization_error: 94.2053 - val_loss: 863.3098 - val_reconstruction_error: 25.6745 - val_regularization_error: 93.0753
Epoch 8/1000
120/120 [=====] - 17s 141ms/step - loss: 767.7923 - reconstruction_error: 22.3881 - regularization_error: 96.1485 - val_loss: 854.6380 - val_reconstruction_error: 25.4365 - val_regularization_error: 91.5425
Epoch 9/1000
120/120 [=====] - 16s 137ms/step - loss: 745.2211 - reconstruction_error: 21.5895 - regularization_error: 97.5353 - val_loss: 800.0437 - val_reconstruction_error: 23.4047 - val_regularization_error: 97.9040
Epoch 10/1000
120/120 [=====] - 16s 132ms/step - loss: 714.3812 - reconstruction_error: 20.5284 - regularization_error: 98.5310 - val_loss: 784.2781 - val_reconstruction_error: 22.8664 - val_regularization_error: 98.2857
Epoch 11/1000
120/120 [=====] - ETA: 0s - loss: 677.1418 - reconstruction_error: 19.2468 - regularization_error: 99.7376
[2023-12-02 21:39:42.212001]: Reconstructing images for epoch 11 ...
```



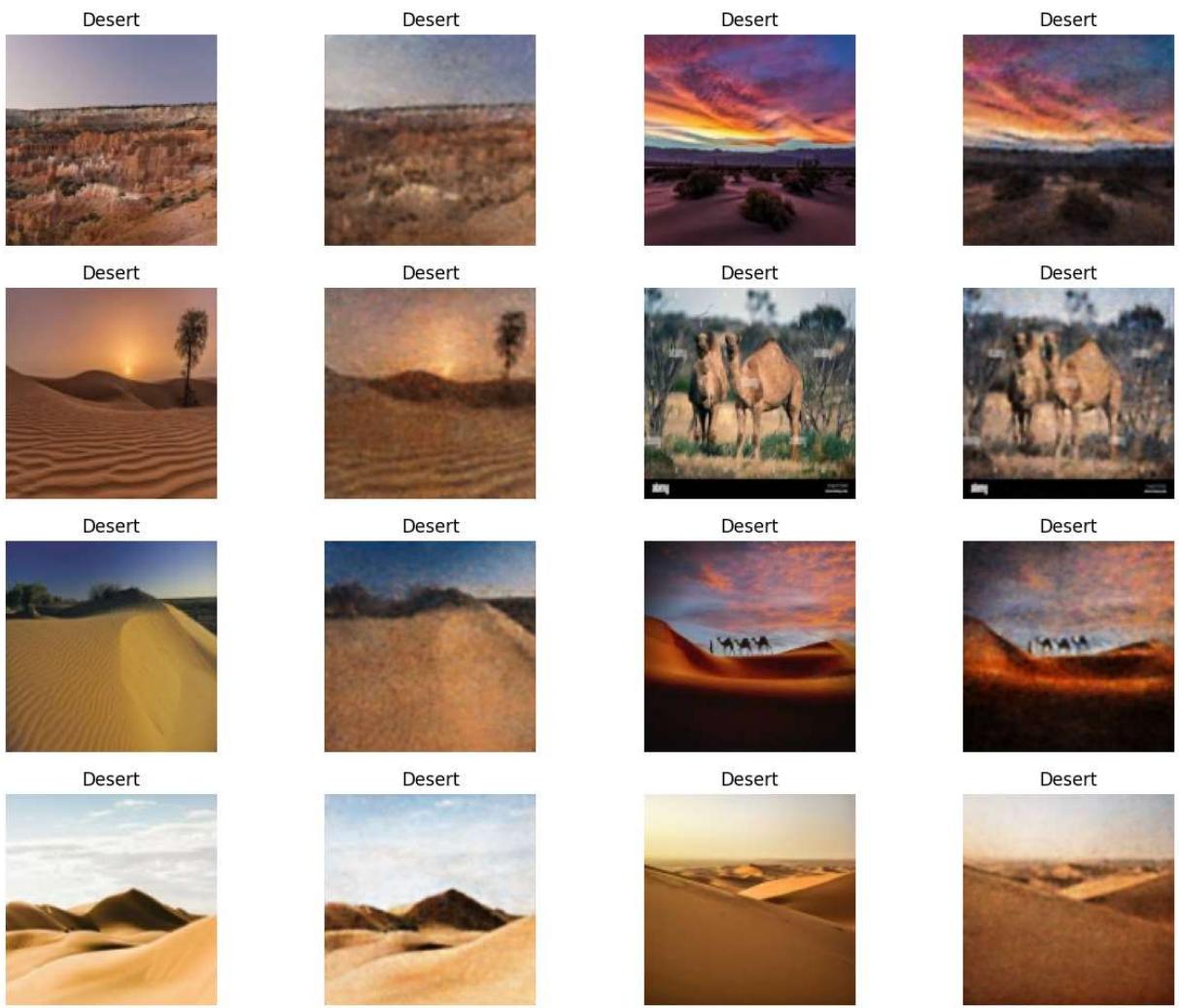
```
120/120 [=====] - 20s 167ms/step - loss: 677.1418 - reconstruction_error: 19.2468 - regularization_error: 99.7376 - val_loss: 792.2057 - val_reconstruction_error: 23.1653 - val_regularization_error: 97.2461
Epoch 12/1000
120/120 [=====] - 16s 136ms/step - loss: 657.0345 - reconstruction_error: 18.5032 - regularization_error: 101.9384 - val_loss: 786.4843 - val_reconstruction_error: 22.9005 - val_regularization_error: 99.4688
Epoch 13/1000
120/120 [=====] - 19s 156ms/step - loss: 615.4827 - reconstruction_error: 17.0905 - regularization_error: 102.7667 - val_loss: 788.4491 - val_reconstruction_error: 22.7940 - val_regularization_error: 104.6301
Epoch 14/1000
120/120 [=====] - 17s 145ms/step - loss: 589.3347 - reconstruction_error: 16.1834 - regularization_error: 103.8321 - val_loss: 790.2523 - val_reconstruction_error: 22.9040 - val_regularization_error: 103.1317
Epoch 15/1000
120/120 [=====] - 17s 142ms/step - loss: 565.1327 - reconstruction_error: 15.3585 - regularization_error: 104.3787 - val_loss: 794.6049 - val_reconstruction_error: 23.0688 - val_regularization_error: 102.5404
Epoch 16/1000
120/120 [=====] - 17s 138ms/step - loss: 534.0110 - reconstruction_error: 14.2819 - regularization_error: 105.5549 - val_loss: 796.9863 - val_reconstruction_error: 22.9818 - val_regularization_error: 107.5327
Epoch 17/1000
120/120 [=====] - 16s 134ms/step - loss: 503.0548 - reconstruction_error: 13.2208 - regularization_error: 106.4302 - val_loss: 813.4335 - val_reconstruction_error: 23.5482 - val_regularization_error: 106.9864
Epoch 18/1000
120/120 [=====] - 19s 155ms/step - loss: 483.3247 - reconstruction_error: 12.5666 - regularization_error: 106.3280 - val_loss: 809.1364 - val_reconstruction_error: 23.7074 - val_regularization_error: 97.9132
Epoch 19/1000
120/120 [=====] - 15s 123ms/step - loss: 470.2741 - reconstruction_error: 12.1145 - regularization_error: 106.8390 - val_loss: 785.4275 - val_reconstruction_error: 22.6712 - val_regularization_error: 105.2906
Epoch 20/1000
120/120 [=====] - 19s 160ms/step - loss: 451.8724 - reconstruction_error: 11.4855 - regularization_error: 107.3074 - val_loss: 814.3983 - val_reconstruction_error: 23.5464 - val_regularization_error: 108.0061
Epoch 21/1000
120/120 [=====] - ETA: 0s - loss: 428.0052 - reconstruction_error: 10.7086 - regularization_error: 106.7480
[2023-12-02 21:42:40.869641]: Reconstructing images for epoch 21 ...
```



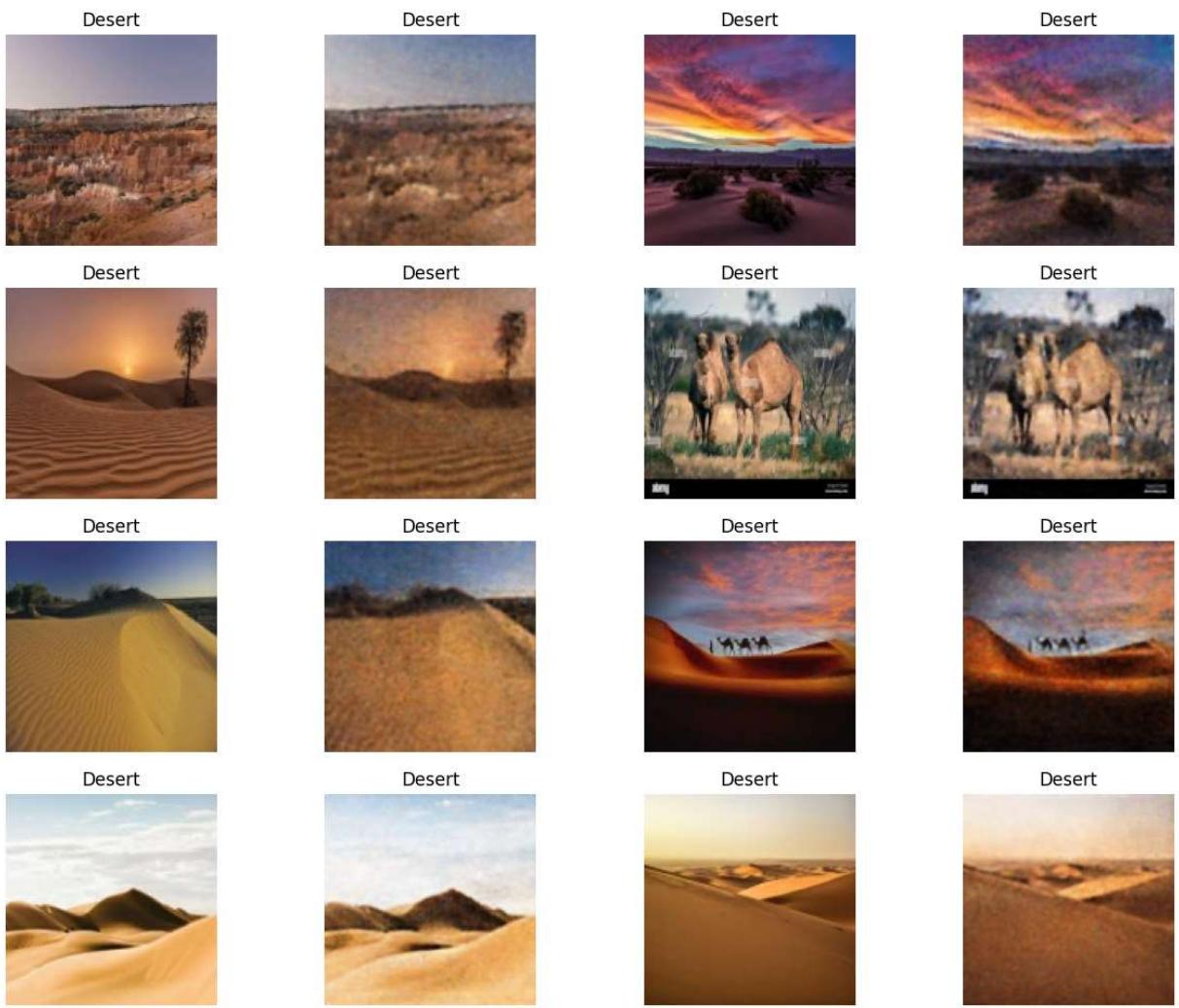
```
120/120 [=====] - 20s 168ms/step - loss: 428.0052 - reconstruction_error: 10.7086 - regularization_error: 106.7480 - val_loss: 809.2868 - val_reconstruction_error: 23.4058 - val_regularization_error: 107.1126
Epoch 22/1000
120/120 [=====] - 16s 133ms/step - loss: 405.0652 - reconstruction_error: 9.9506 - regularization_error: 106.5471 - val_loss: 805.9469 - val_reconstruction_error: 23.2651 - val_regularization_error: 107.9948
Epoch 23/1000
120/120 [=====] - 17s 143ms/step - loss: 393.4663 - reconstruction_error: 9.5656 - regularization_error: 106.4988 - val_loss: 782.3418 - val_reconstruction_error: 22.6719 - val_regularization_error: 102.1847
Epoch 24/1000
120/120 [=====] - 14s 116ms/step - loss: 396.9916 - reconstruction_error: 9.6786 - regularization_error: 106.6338 - val_loss: 842.4398 - val_reconstruction_error: 24.5846 - val_regularization_error: 104.9023
Epoch 25/1000
120/120 [=====] - 16s 131ms/step - loss: 406.9543 - reconstruction_error: 9.9675 - regularization_error: 107.9289 - val_loss: 805.8213 - val_reconstruction_error: 23.4079 - val_regularization_error: 103.5845
Epoch 26/1000
120/120 [=====] - 17s 137ms/step - loss: 372.1695 - reconstruction_error: 8.8666 - regularization_error: 106.1705 - val_loss: 799.1074 - val_reconstruction_error: 23.0590 - val_regularization_error: 107.3386
Epoch 27/1000
120/120 [=====] - 17s 138ms/step - loss: 353.5513 - reconstruction_error: 8.2564 - regularization_error: 105.8594 - val_loss: 800.1845 - val_reconstruction_error: 23.0773 - val_regularization_error: 107.8655
Epoch 28/1000
120/120 [=====] - 17s 144ms/step - loss: 341.9120 - reconstruction_error: 7.8783 - regularization_error: 105.5621 - val_loss: 815.4436 - val_reconstruction_error: 23.7340 - val_regularization_error: 103.4240
Epoch 29/1000
120/120 [=====] - 15s 123ms/step - loss: 336.0429 - reconstruction_error: 7.6929 - regularization_error: 105.2558 - val_loss: 792.4474 - val_reconstruction_error: 22.8382 - val_regularization_error: 107.3014
Epoch 30/1000
120/120 [=====] - 18s 151ms/step - loss: 332.8491 - reconstruction_error: 7.5835 - regularization_error: 105.3428 - val_loss: 800.9807 - val_reconstruction_error: 23.2742 - val_regularization_error: 102.7541
Epoch 31/1000
120/120 [=====] - ETA: 0s - loss: 347.4170 - reconstruction_error: 8.0408 - regularization_error: 106.1919
[2023-12-02 21:45:27.935576]: Reconstructing images for epoch 31 ...
```



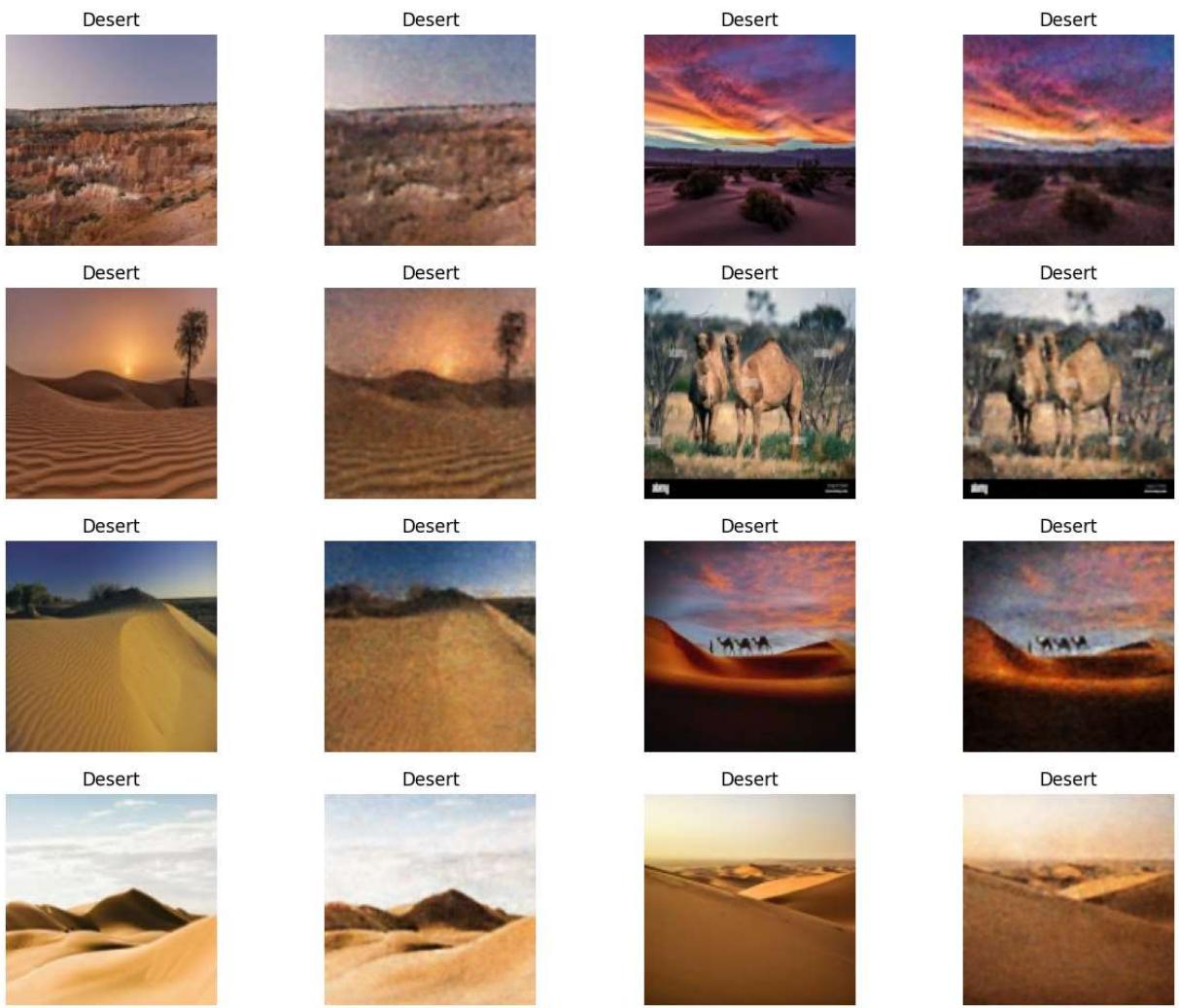
```
120/120 [=====] - 17s 142ms/step - loss: 347.4170 - reconstruction_error: 8.0408 - regularization_error: 106.1919 - val_loss: 827.6768 - val_reconstruction_error: 23.8297 - val_regularization_error: 112.7856
Epoch 32/1000
120/120 [=====] - 15s 128ms/step - loss: 331.7703 - reconstruction_error: 7.5441 - regularization_error: 105.4466 - val_loss: 804.0238 - val_reconstruction_error: 23.3326 - val_regularization_error: 104.0445
Epoch 33/1000
120/120 [=====] - 16s 133ms/step - loss: 321.5210 - reconstruction_error: 7.2205 - regularization_error: 104.9065 - val_loss: 797.0577 - val_reconstruction_error: 23.1073 - val_regularization_error: 103.8389
Epoch 34/1000
120/120 [=====] - 16s 133ms/step - loss: 314.6050 - reconstruction_error: 7.0013 - regularization_error: 104.5668 - val_loss: 796.6683 - val_reconstruction_error: 23.2160 - val_regularization_error: 100.1874
Epoch 35/1000
120/120 [=====] - 20s 168ms/step - loss: 300.5308 - reconstruction_error: 6.5570 - regularization_error: 103.8200 - val_loss: 791.6414 - val_reconstruction_error: 23.0082 - val_regularization_error: 101.3963
Epoch 36/1000
120/120 [=====] - 19s 153ms/step - loss: 298.5604 - reconstruction_error: 6.4826 - regularization_error: 104.0832 - val_loss: 800.0695 - val_reconstruction_error: 23.2949 - val_regularization_error: 101.2212
Epoch 37/1000
120/120 [=====] - 16s 133ms/step - loss: 292.6037 - reconstruction_error: 6.2959 - regularization_error: 103.7281 - val_loss: 806.3187 - val_reconstruction_error: 23.4977 - val_regularization_error: 101.3890
Epoch 38/1000
120/120 [=====] - 16s 132ms/step - loss: 293.6062 - reconstruction_error: 6.3238 - regularization_error: 103.8925 - val_loss: 817.1227 - val_reconstruction_error: 23.8578 - val_regularization_error: 101.3878
Epoch 39/1000
120/120 [=====] - 16s 127ms/step - loss: 292.7783 - reconstruction_error: 6.2923 - regularization_error: 104.0107 - val_loss: 800.7351 - val_reconstruction_error: 23.3720 - val_regularization_error: 99.5743
Epoch 40/1000
120/120 [=====] - 17s 139ms/step - loss: 292.7339 - reconstruction_error: 6.3118 - regularization_error: 103.3814 - val_loss: 810.9483 - val_reconstruction_error: 23.6218 - val_regularization_error: 102.2944
Epoch 41/1000
120/120 [=====] - ETA: 0s - loss: 291.2334 - reconstruction_error: 6.2447 - regularization_error: 103.8927
[2023-12-02 21:48:19.572919]: Reconstructing images for epoch 41 ...
```



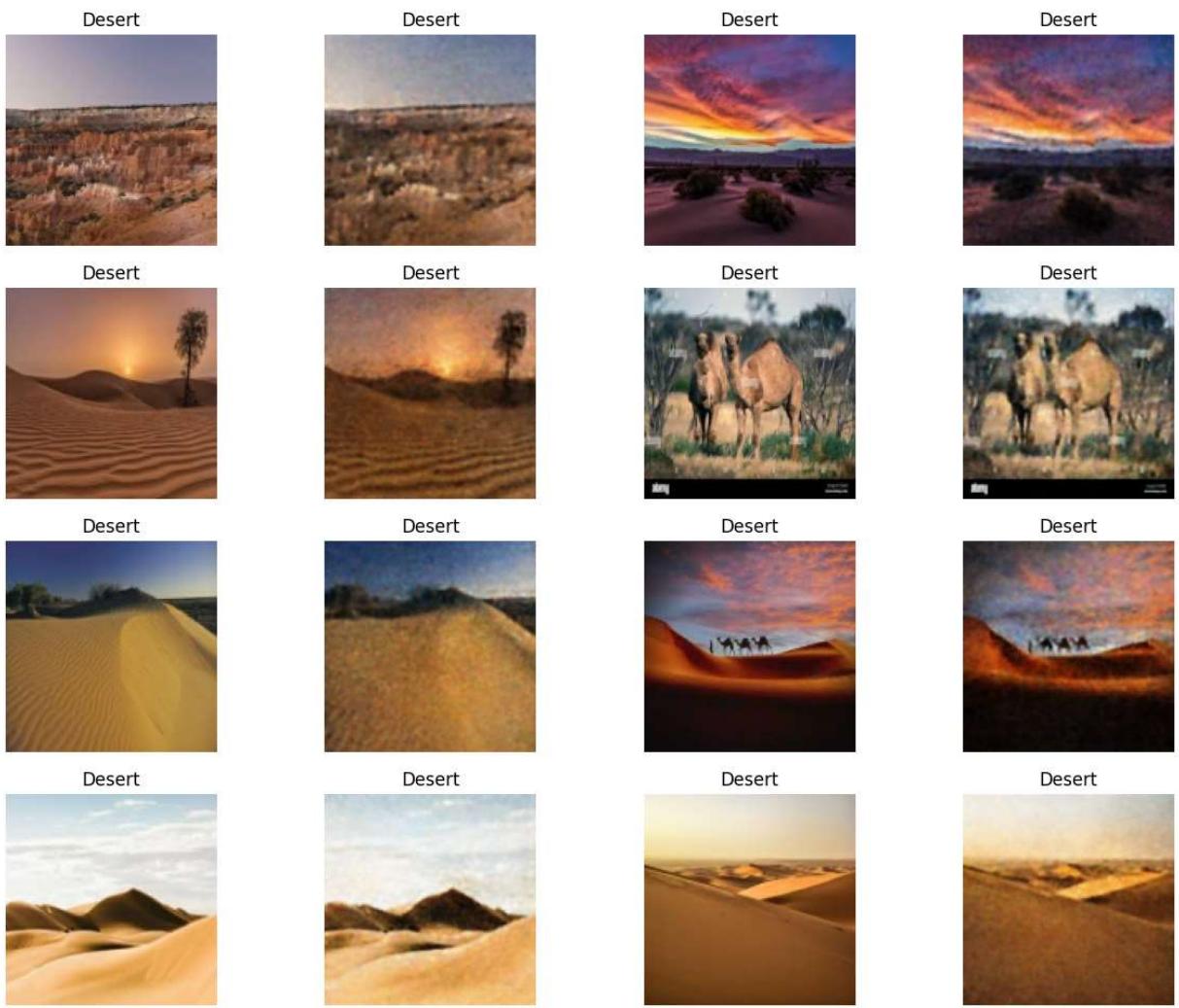
```
120/120 [=====] - 19s 154ms/step - loss: 291.2334 - reconstruction_error: 6.2447 - regularization_error: 103.8927 - val_loss: 803.9125 - val_reconstruction_error: 23.4780 - val_regularization_error: 99.5716
Epoch 42/1000
120/120 [=====] - 16s 130ms/step - loss: 287.0219 - reconstruction_error: 6.1041 - regularization_error: 103.8998 - val_loss: 821.6069 - val_reconstruction_error: 23.9896 - val_regularization_error: 101.9187
Epoch 43/1000
120/120 [=====] - 18s 148ms/step - loss: 283.5246 - reconstruction_error: 5.9971 - regularization_error: 103.6111 - val_loss: 802.9213 - val_reconstruction_error: 23.2367 - val_regularization_error: 105.8201
Epoch 44/1000
120/120 [=====] - 17s 141ms/step - loss: 276.3257 - reconstruction_error: 5.7853 - regularization_error: 102.7678 - val_loss: 800.1266 - val_reconstruction_error: 23.3294 - val_regularization_error: 100.2449
Epoch 45/1000
120/120 [=====] - 17s 142ms/step - loss: 271.3237 - reconstruction_error: 5.6190 - regularization_error: 102.7526 - val_loss: 800.0674 - val_reconstruction_error: 23.3457 - val_regularization_error: 99.6954
Epoch 46/1000
120/120 [=====] - 18s 147ms/step - loss: 273.2311 - reconstruction_error: 5.6891 - regularization_error: 102.5593 - val_loss: 800.6482 - val_reconstruction_error: 23.4345 - val_regularization_error: 97.6118
Epoch 47/1000
120/120 [=====] - 16s 131ms/step - loss: 269.3735 - reconstruction_error: 5.5644 - regularization_error: 102.4428 - val_loss: 814.4883 - val_reconstruction_error: 23.7906 - val_regularization_error: 100.7717
Epoch 48/1000
120/120 [=====] - 15s 112ms/step - loss: 271.9294 - reconstruction_error: 5.6482 - regularization_error: 102.4841 - val_loss: 803.1277 - val_reconstruction_error: 23.3688 - val_regularization_error: 102.0643
Epoch 49/1000
120/120 [=====] - 21s 171ms/step - loss: 267.0437 - reconstruction_error: 5.4863 - regularization_error: 102.4557 - val_loss: 809.3170 - val_reconstruction_error: 23.7778 - val_regularization_error: 95.9831
Epoch 50/1000
120/120 [=====] - 18s 152ms/step - loss: 265.4867 - reconstruction_error: 5.4248 - regularization_error: 102.7438 - val_loss: 810.4306 - val_reconstruction_error: 23.6279 - val_regularization_error: 101.5936
Epoch 51/1000
120/120 [=====] - ETA: 0s - loss: 260.2722 - reconstruction_error: 5.2696 - regularization_error: 102.1830
[2023-12-02 21:51:19.811398]: Reconstructing images for epoch 51 ...
```



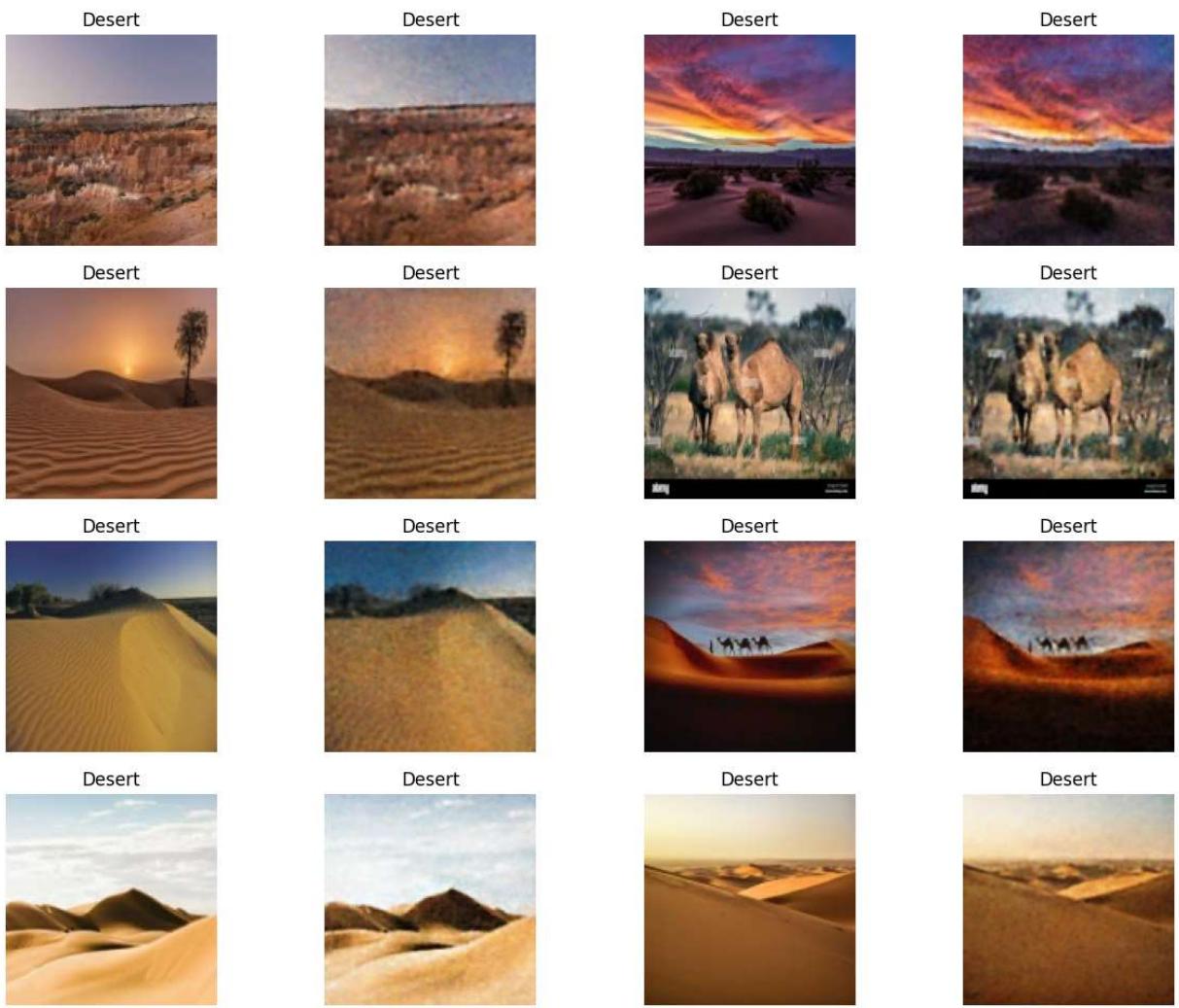
```
120/120 [=====] - 20s 163ms/step - loss: 260.2722 - reconstruction_error: 5.2696 - regularization_error: 102.1830 - val_loss: 798.0159 - val_reconstruction_error: 23.1897 - val_regularization_error: 102.3249
Epoch 52/1000
120/120 [=====] - 16s 131ms/step - loss: 253.5087 - reconstruction_error: 5.0646 - regularization_error: 101.5710 - val_loss: 796.9084 - val_reconstruction_error: 23.1529 - val_regularization_error: 102.3224
Epoch 53/1000
120/120 [=====] - 19s 156ms/step - loss: 253.3509 - reconstruction_error: 5.0626 - regularization_error: 101.4735 - val_loss: 789.0366 - val_reconstruction_error: 22.9812 - val_regularization_error: 99.6018
Epoch 54/1000
120/120 [=====] - 21s 170ms/step - loss: 253.1434 - reconstruction_error: 5.0451 - regularization_error: 101.7904 - val_loss: 799.5071 - val_reconstruction_error: 23.3448 - val_regularization_error: 99.1628
Epoch 55/1000
120/120 [=====] - 16s 130ms/step - loss: 249.4815 - reconstruction_error: 4.9304 - regularization_error: 101.5692 - val_loss: 808.0710 - val_reconstruction_error: 23.4371 - val_regularization_error: 104.9589
Epoch 56/1000
120/120 [=====] - 16s 132ms/step - loss: 261.3504 - reconstruction_error: 5.3039 - regularization_error: 102.2347 - val_loss: 824.3342 - val_reconstruction_error: 24.1529 - val_regularization_error: 99.7480
Epoch 57/1000
120/120 [=====] - 15s 123ms/step - loss: 259.7531 - reconstruction_error: 5.2556 - regularization_error: 102.0846 - val_loss: 796.8176 - val_reconstruction_error: 23.0829 - val_regularization_error: 104.3318
Epoch 58/1000
120/120 [=====] - 16s 135ms/step - loss: 250.6065 - reconstruction_error: 4.9818 - regularization_error: 101.1529 - val_loss: 801.9913 - val_reconstruction_error: 23.4872 - val_regularization_error: 97.3746
Epoch 59/1000
120/120 [=====] - 18s 148ms/step - loss: 245.7400 - reconstruction_error: 4.8225 - regularization_error: 101.0644 - val_loss: 796.3216 - val_reconstruction_error: 23.3181 - val_regularization_error: 96.7780
Epoch 60/1000
120/120 [=====] - 17s 141ms/step - loss: 245.9891 - reconstruction_error: 4.8297 - regularization_error: 101.0978 - val_loss: 805.7314 - val_reconstruction_error: 23.6485 - val_regularization_error: 96.2750
Epoch 61/1000
120/120 [=====] - ETA: 0s - loss: 239.0094 - reconstruction_error: 4.6080 - regularization_error: 100.7708
[2023-12-02 21:54:16.999205]: Reconstructing images for epoch 61 ...
```



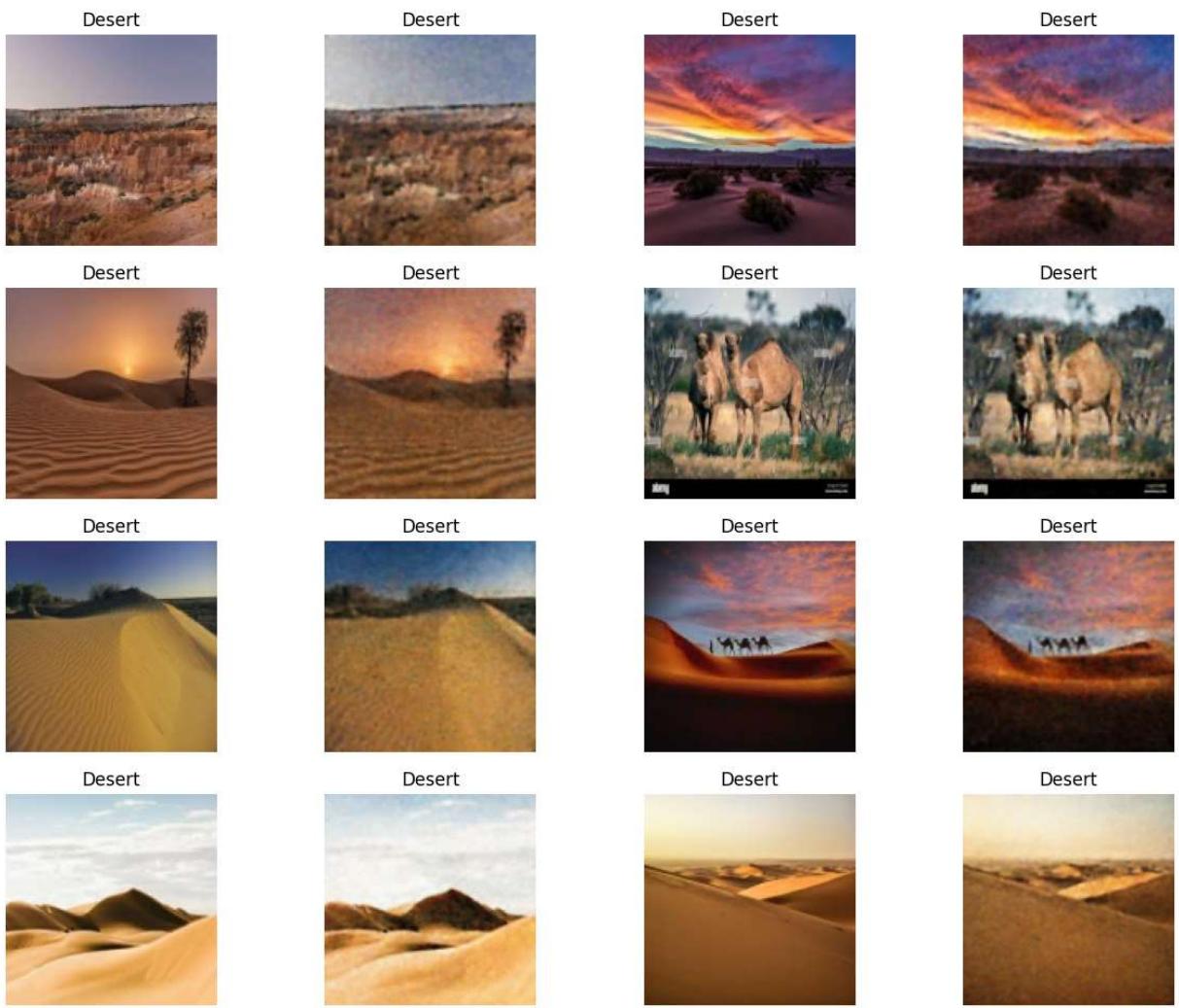
```
120/120 [=====] - 21s 178ms/step - loss: 239.0094 - reconstruction_error: 4.6080 - regularization_error: 100.7708 - val_loss: 795.6731 - val_reconstruction_error: 23.4152 - val_regularization_error: 93.2159
Epoch 62/1000
120/120 [=====] - 15s 129ms/step - loss: 237.6143 - reconstruction_error: 4.5660 - regularization_error: 100.6345 - val_loss: 823.8115 - val_reconstruction_error: 24.1151 - val_regularization_error: 100.3599
Epoch 63/1000
120/120 [=====] - 16s 129ms/step - loss: 243.4941 - reconstruction_error: 4.7301 - regularization_error: 101.5913 - val_loss: 813.4089 - val_reconstruction_error: 23.7786 - val_regularization_error: 100.0507
Epoch 64/1000
120/120 [=====] - 15s 120ms/step - loss: 235.8044 - reconstruction_error: 4.5176 - regularization_error: 100.2761 - val_loss: 810.5637 - val_reconstruction_error: 23.5506 - val_regularization_error: 104.0471
Epoch 65/1000
120/120 [=====] - 17s 143ms/step - loss: 248.7547 - reconstruction_error: 4.9140 - regularization_error: 101.3359 - val_loss: 810.7089 - val_reconstruction_error: 23.7408 - val_regularization_error: 98.4853
Epoch 66/1000
120/120 [=====] - 19s 154ms/step - loss: 240.8759 - reconstruction_error: 4.6749 - regularization_error: 100.6282 - val_loss: 797.8387 - val_reconstruction_error: 23.3334 - val_regularization_error: 97.8374
Epoch 67/1000
120/120 [=====] - 19s 160ms/step - loss: 236.7733 - reconstruction_error: 4.5549 - regularization_error: 100.1265 - val_loss: 792.4991 - val_reconstruction_error: 23.1171 - val_regularization_error: 98.9873
Epoch 68/1000
120/120 [=====] - 19s 157ms/step - loss: 235.8311 - reconstruction_error: 4.5312 - regularization_error: 99.8961 - val_loss: 797.1234 - val_reconstruction_error: 23.3632 - val_regularization_error: 96.2261
Epoch 69/1000
120/120 [=====] - 17s 140ms/step - loss: 230.9805 - reconstruction_error: 4.3629 - regularization_error: 100.0935 - val_loss: 799.4431 - val_reconstruction_error: 23.2852 - val_regularization_error: 100.8878
Epoch 70/1000
120/120 [=====] - 18s 152ms/step - loss: 237.2689 - reconstruction_error: 4.5734 - regularization_error: 100.0660 - val_loss: 794.2599 - val_reconstruction_error: 23.1767 - val_regularization_error: 98.9584
Epoch 71/1000
120/120 [=====] - ETA: 0s - loss: 228.7715 - reconstruction_error: 4.3018 - regularization_error: 99.7175
[2023-12-02 21:57:16.277435]: Reconstructing images for epoch 71 ...
```



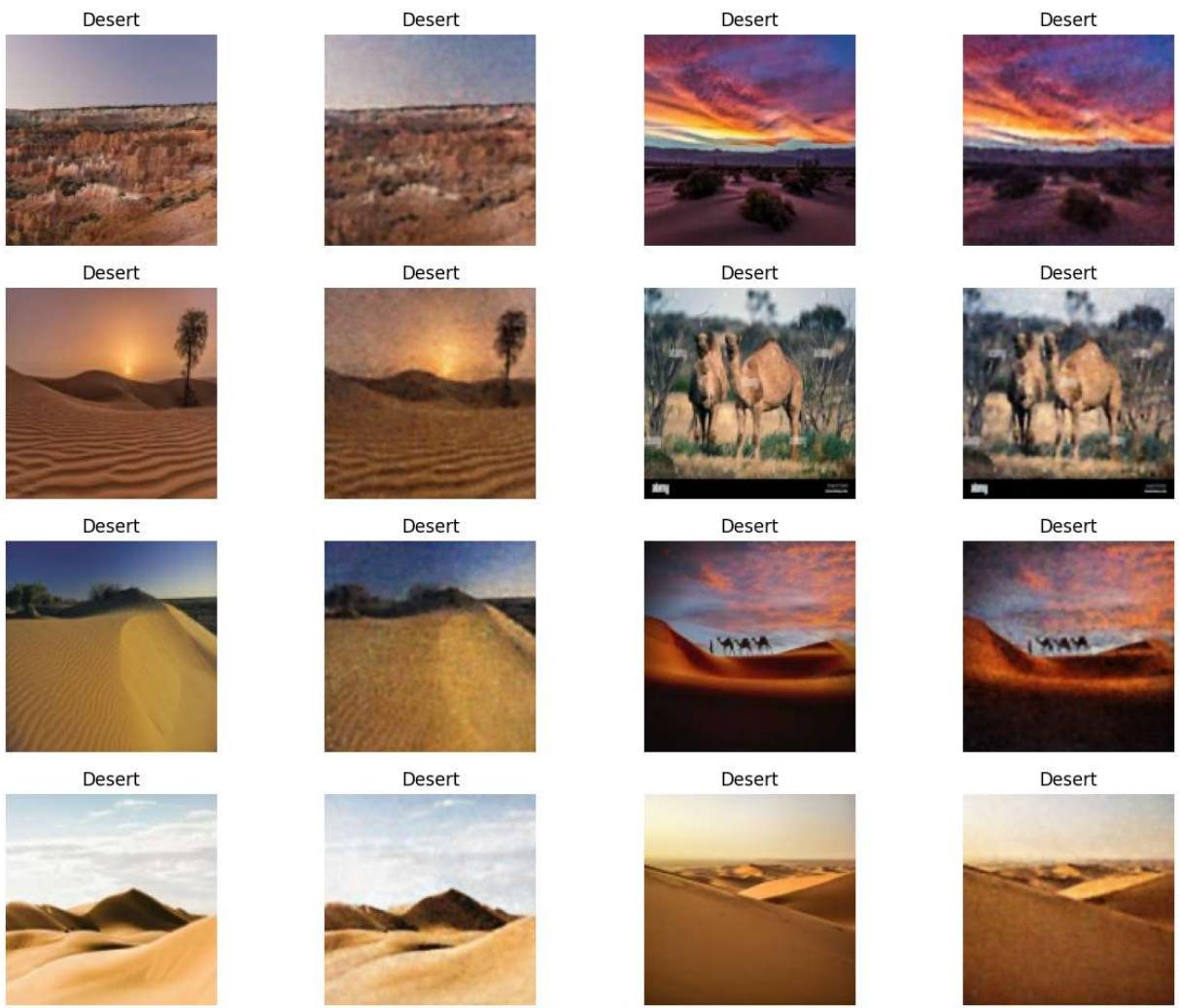
```
120/120 [=====] - 23s 191ms/step - loss: 228.7715 - reconstruction_error: 4.3018 - regularization_error: 99.7175 - val_loss: 796.3915 - val_reconstruction_error: 23.3819 - val_regularization_error: 94.9343
Epoch 72/1000
120/120 [=====] - 17s 143ms/step - loss: 225.3213 - reconstruction_error: 4.2066 - regularization_error: 99.1238 - val_loss: 798.4717 - val_reconstruction_error: 23.3749 - val_regularization_error: 97.2246
Epoch 73/1000
120/120 [=====] - 19s 156ms/step - loss: 225.7123 - reconstruction_error: 4.2028 - regularization_error: 99.6286 - val_loss: 790.2657 - val_reconstruction_error: 23.2357 - val_regularization_error: 93.1954
Epoch 74/1000
120/120 [=====] - 16s 131ms/step - loss: 223.1283 - reconstruction_error: 4.1251 - regularization_error: 99.3759 - val_loss: 805.3703 - val_reconstruction_error: 23.5586 - val_regularization_error: 98.6117
Epoch 75/1000
120/120 [=====] - 21s 170ms/step - loss: 227.2280 - reconstruction_error: 4.2594 - regularization_error: 99.4454 - val_loss: 812.1976 - val_reconstruction_error: 23.8211 - val_regularization_error: 97.5660
Epoch 76/1000
120/120 [=====] - 18s 153ms/step - loss: 223.3142 - reconstruction_error: 4.1249 - regularization_error: 99.5679 - val_loss: 792.4316 - val_reconstruction_error: 23.1352 - val_regularization_error: 98.3757
Epoch 77/1000
120/120 [=====] - 18s 153ms/step - loss: 225.0336 - reconstruction_error: 4.2032 - regularization_error: 98.9367 - val_loss: 790.2725 - val_reconstruction_error: 23.0738 - val_regularization_error: 98.0579
Epoch 78/1000
120/120 [=====] - 16s 131ms/step - loss: 225.3566 - reconstruction_error: 4.2136 - regularization_error: 98.9500 - val_loss: 803.6347 - val_reconstruction_error: 23.5365 - val_regularization_error: 97.5390
Epoch 79/1000
120/120 [=====] - 18s 149ms/step - loss: 231.6882 - reconstruction_error: 4.3777 - regularization_error: 100.3573 - val_loss: 808.7242 - val_reconstruction_error: 23.6647 - val_regularization_error: 98.7829
Epoch 80/1000
120/120 [=====] - 17s 145ms/step - loss: 219.5951 - reconstruction_error: 4.0303 - regularization_error: 98.6872 - val_loss: 802.7307 - val_reconstruction_error: 23.5824 - val_regularization_error: 95.2599
Epoch 81/1000
120/120 [=====] - ETA: 0s - loss: 219.3261 - reconstruction_error: 4.0316 - regularization_error: 98.3792
[2023-12-02 22:00:20.407545]: Reconstructing images for epoch 81 ...
```



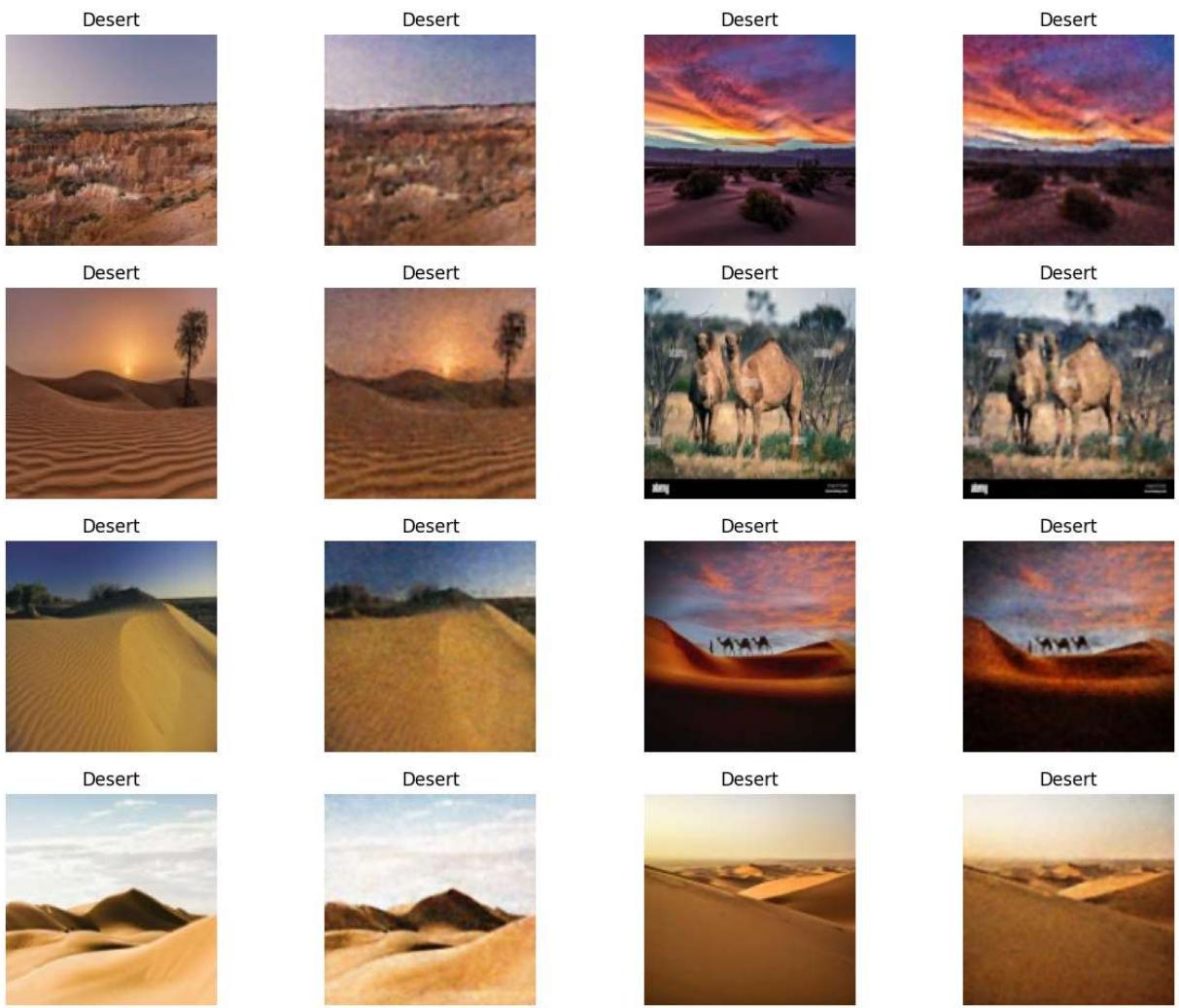
```
120/120 [=====] - 21s 167ms/step - loss: 219.3261 - reconstruction_error: 4.0316 - regularization_error: 98.3792 - val_loss: 812.6245 - val_reconstruction_error: 23.7790 - val_regularization_error: 99.2560
Epoch 82/1000
120/120 [=====] - 17s 142ms/step - loss: 214.9225 - reconstruction_error: 3.8949 - regularization_error: 98.0747 - val_loss: 789.8193 - val_reconstruction_error: 23.0777 - val_regularization_error: 97.4873
Epoch 83/1000
120/120 [=====] - 18s 154ms/step - loss: 219.6964 - reconstruction_error: 4.0279 - regularization_error: 98.8600 - val_loss: 806.0836 - val_reconstruction_error: 23.7508 - val_regularization_error: 93.5599
Epoch 84/1000
120/120 [=====] - 18s 150ms/step - loss: 217.5112 - reconstruction_error: 3.9704 - regularization_error: 98.4006 - val_loss: 800.5128 - val_reconstruction_error: 23.3610 - val_regularization_error: 99.6821
Epoch 85/1000
120/120 [=====] - 17s 139ms/step - loss: 218.0090 - reconstruction_error: 3.9847 - regularization_error: 98.4678 - val_loss: 800.6853 - val_reconstruction_error: 23.4218 - val_regularization_error: 98.0322
Epoch 86/1000
120/120 [=====] - 17s 143ms/step - loss: 213.5715 - reconstruction_error: 3.8473 - regularization_error: 98.1529 - val_loss: 806.3576 - val_reconstruction_error: 23.6935 - val_regularization_error: 95.5538
Epoch 87/1000
120/120 [=====] - 19s 158ms/step - loss: 221.8307 - reconstruction_error: 4.1031 - regularization_error: 98.7373 - val_loss: 798.6878 - val_reconstruction_error: 23.3026 - val_regularization_error: 99.6091
Epoch 88/1000
120/120 [=====] - 17s 142ms/step - loss: 219.3508 - reconstruction_error: 4.0358 - regularization_error: 98.2770 - val_loss: 809.1754 - val_reconstruction_error: 23.7616 - val_regularization_error: 96.3269
Epoch 89/1000
120/120 [=====] - 18s 144ms/step - loss: 212.2737 - reconstruction_error: 3.8124 - regularization_error: 97.9014 - val_loss: 792.6472 - val_reconstruction_error: 23.3121 - val_regularization_error: 93.2832
Epoch 90/1000
120/120 [=====] - 18s 151ms/step - loss: 213.7173 - reconstruction_error: 3.8650 - regularization_error: 97.7668 - val_loss: 801.4240 - val_reconstruction_error: 23.5643 - val_regularization_error: 94.4952
Epoch 91/1000
120/120 [=====] - ETA: 0s - loss: 215.2511 - reconstruction_error: 3.9096 - regularization_error: 97.9617
[2023-12-02 22:03:21.266726]: Reconstructing images for epoch 91 ...
```



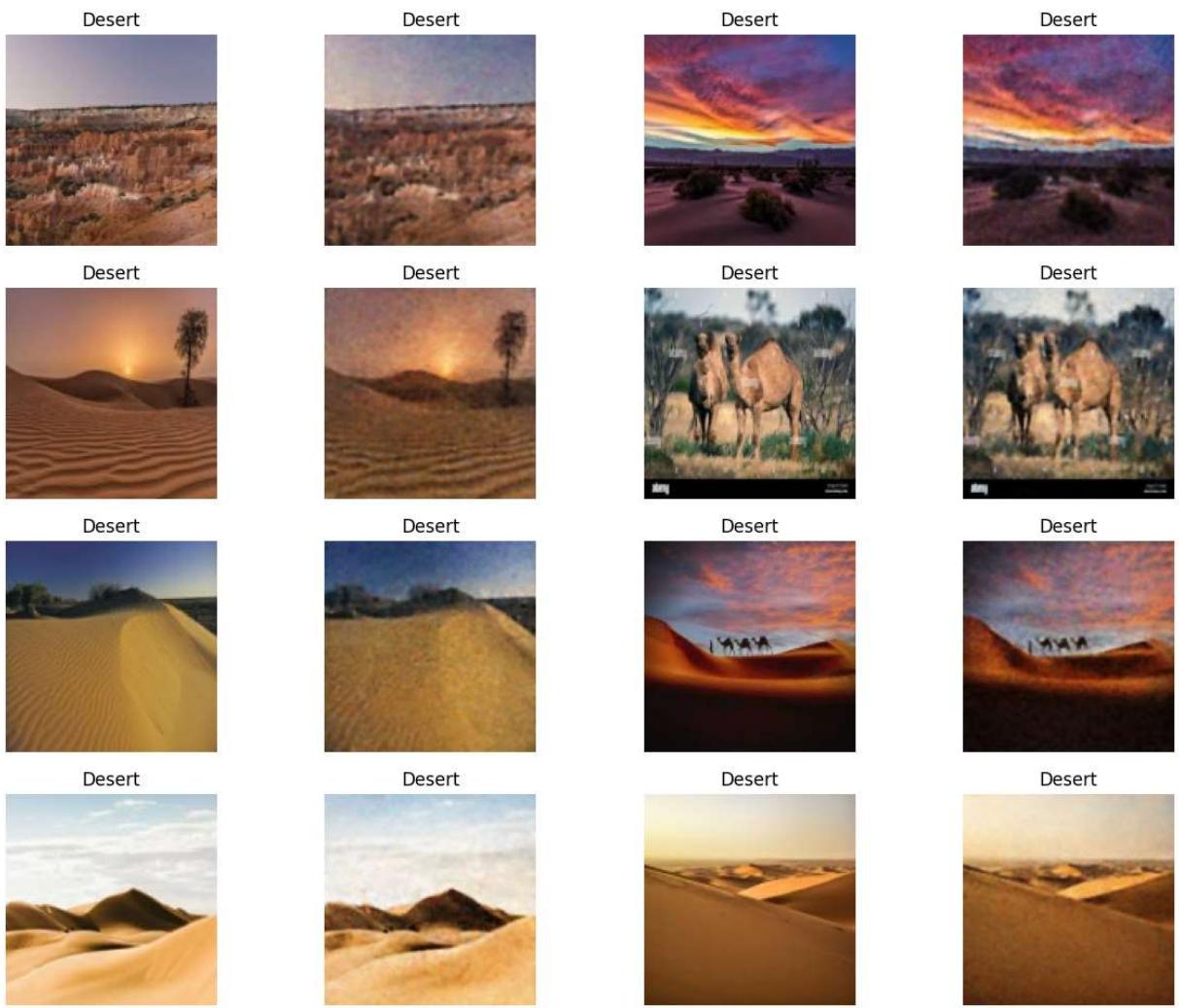
```
120/120 [=====] - 20s 164ms/step - loss: 215.2511 - reconstruction_error: 3.9096 - regularization_error: 97.9617 - val_loss: 814.8925 - val_reconstruction_error: 23.8524 - val_regularization_error: 99.3207
Epoch 92/1000
120/120 [=====] - 17s 139ms/step - loss: 212.0964 - reconstruction_error: 3.8013 - regularization_error: 98.0560 - val_loss: 799.9205 - val_reconstruction_error: 23.5280 - val_regularization_error: 94.0818
Epoch 93/1000
120/120 [=====] - 20s 161ms/step - loss: 211.8859 - reconstruction_error: 3.8098 - regularization_error: 97.5928 - val_loss: 795.9846 - val_reconstruction_error: 23.3069 - val_regularization_error: 96.7763
Epoch 94/1000
120/120 [=====] - 18s 147ms/step - loss: 214.4162 - reconstruction_error: 3.8747 - regularization_error: 98.1747 - val_loss: 799.5612 - val_reconstruction_error: 23.4683 - val_regularization_error: 95.5133
Epoch 95/1000
120/120 [=====] - 17s 141ms/step - loss: 212.9900 - reconstruction_error: 3.8429 - regularization_error: 97.7034 - val_loss: 838.0269 - val_reconstruction_error: 24.8781 - val_regularization_error: 91.6840
Epoch 96/1000
120/120 [=====] - 15s 126ms/step - loss: 215.7951 - reconstruction_error: 3.9245 - regularization_error: 98.0607 - val_loss: 798.6053 - val_reconstruction_error: 23.3818 - val_regularization_error: 97.1509
Epoch 97/1000
120/120 [=====] - 16s 136ms/step - loss: 214.5718 - reconstruction_error: 3.8804 - regularization_error: 98.1589 - val_loss: 796.8531 - val_reconstruction_error: 23.4533 - val_regularization_error: 93.2544
Epoch 98/1000
120/120 [=====] - 19s 158ms/step - loss: 210.7758 - reconstruction_error: 3.7779 - regularization_error: 97.4386 - val_loss: 818.9700 - val_reconstruction_error: 24.2618 - val_regularization_error: 91.1167
Epoch 99/1000
120/120 [=====] - 16s 137ms/step - loss: 213.2278 - reconstruction_error: 3.8535 - regularization_error: 97.6214 - val_loss: 802.4330 - val_reconstruction_error: 23.5342 - val_regularization_error: 96.4055
Epoch 100/1000
120/120 [=====] - 18s 148ms/step - loss: 206.2113 - reconstruction_error: 3.6488 - regularization_error: 96.7488 - val_loss: 806.8336 - val_reconstruction_error: 23.6732 - val_regularization_error: 96.6363
Epoch 101/1000
120/120 [=====] - ETA: 0s - loss: 209.8403 - reconstruction_error: 3.7414 - regularization_error: 97.5995
[2023-12-02 22:06:15.494308]: Reconstructing images for epoch 101 ...
```



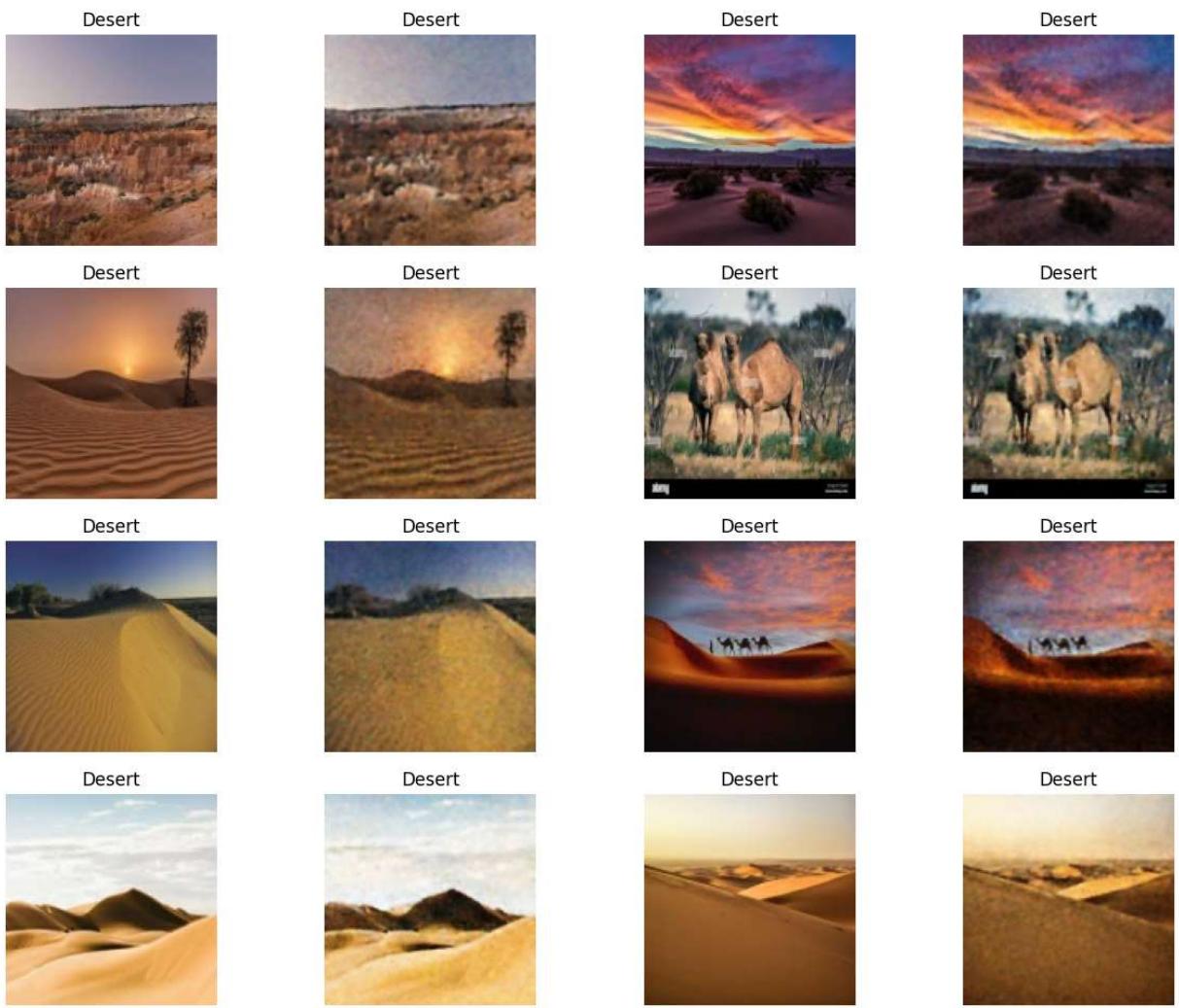
```
120/120 [=====] - 18s 153ms/step - loss: 209.8403 - reconstruction_error: 3.7414 - regularization_error: 97.5995 - val_loss: 808.2662 - val_reconstruction_error: 23.7830 - val_regularization_error: 94.7753
Epoch 102/1000
120/120 [=====] - 16s 126ms/step - loss: 208.1348 - reconstruction_error: 3.6956 - regularization_error: 97.2674 - val_loss: 855.7761 - val_reconstruction_error: 25.1743 - val_regularization_error: 100.5471
Epoch 103/1000
120/120 [=====] - 17s 141ms/step - loss: 221.3791 - reconstruction_error: 4.1044 - regularization_error: 98.2483 - val_loss: 810.3572 - val_reconstruction_error: 23.7126 - val_regularization_error: 98.9779
Epoch 104/1000
120/120 [=====] - 19s 156ms/step - loss: 206.7024 - reconstruction_error: 3.6684 - regularization_error: 96.6499 - val_loss: 797.8858 - val_reconstruction_error: 23.5424 - val_regularization_error: 91.6143
Epoch 105/1000
120/120 [=====] - 20s 166ms/step - loss: 200.9320 - reconstruction_error: 3.4800 - regularization_error: 96.5307 - val_loss: 801.4869 - val_reconstruction_error: 23.5582 - val_regularization_error: 94.7413
Epoch 106/1000
120/120 [=====] - 17s 145ms/step - loss: 198.5111 - reconstruction_error: 3.4060 - regularization_error: 96.3318 - val_loss: 801.5901 - val_reconstruction_error: 23.5729 - val_regularization_error: 94.4034
Epoch 107/1000
120/120 [=====] - 18s 150ms/step - loss: 200.5724 - reconstruction_error: 3.4677 - regularization_error: 96.5422 - val_loss: 802.8641 - val_reconstruction_error: 23.7477 - val_regularization_error: 90.4341
Epoch 108/1000
120/120 [=====] - 18s 145ms/step - loss: 203.3926 - reconstruction_error: 3.5685 - regularization_error: 96.3372 - val_loss: 811.3749 - val_reconstruction_error: 23.9550 - val_regularization_error: 92.7243
Epoch 109/1000
120/120 [=====] - 17s 141ms/step - loss: 205.4057 - reconstruction_error: 3.6210 - regularization_error: 96.7756 - val_loss: 812.7494 - val_reconstruction_error: 23.9271 - val_regularization_error: 94.9374
Epoch 110/1000
120/120 [=====] - 20s 165ms/step - loss: 202.1859 - reconstruction_error: 3.5268 - regularization_error: 96.3833 - val_loss: 806.4286 - val_reconstruction_error: 23.7541 - val_regularization_error: 93.8057
Epoch 111/1000
120/120 [=====] - ETA: 0s - loss: 200.7895 - reconstruction_error: 3.4855 - regularization_error: 96.2251
[2023-12-02 22:09:20.346590]: Reconstructing images for epoch 111 ...
```



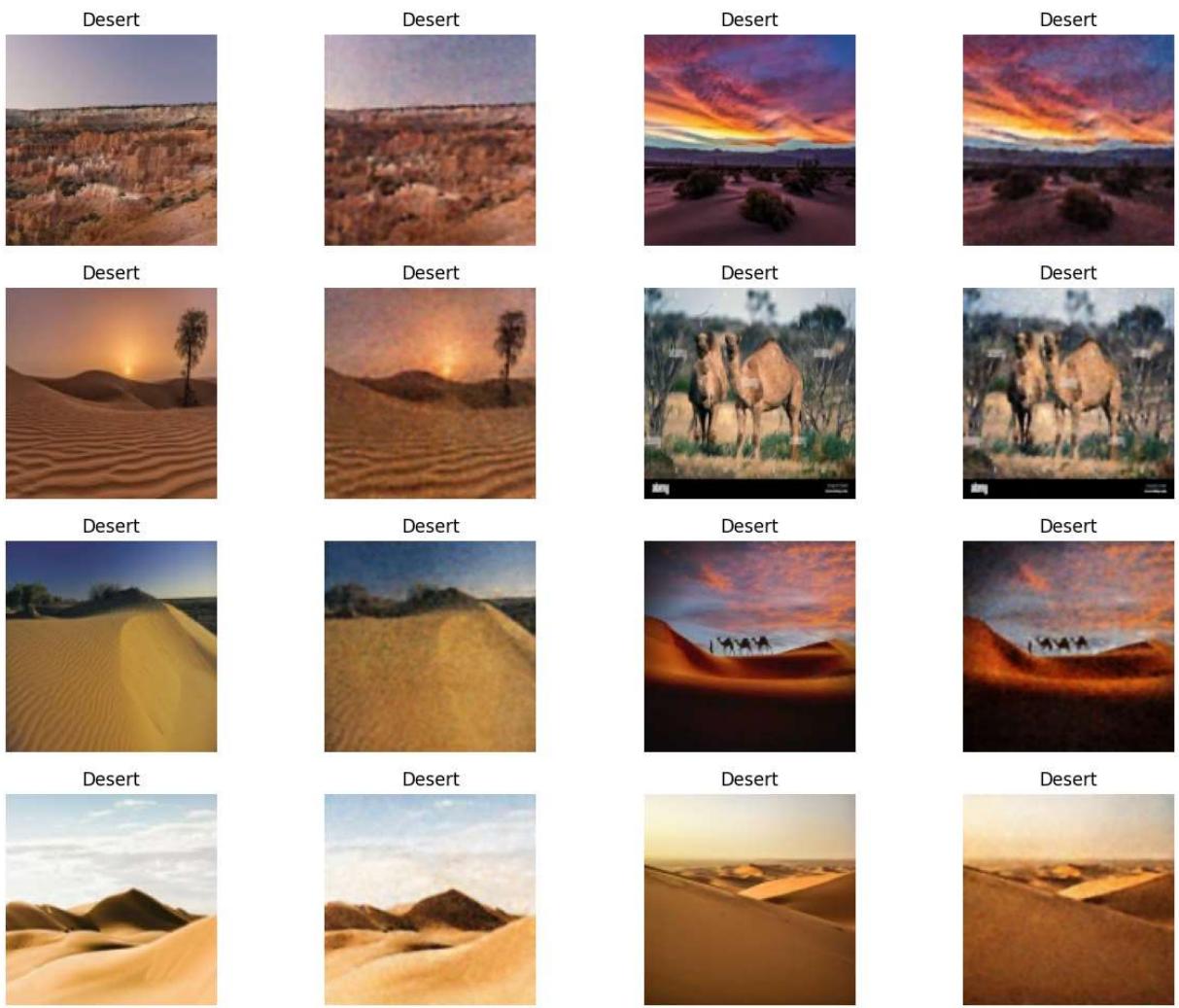
```
120/120 [=====] - 22s 181ms/step - loss: 200.7895 - reconstruction_error: 3.4855 - regularization_error: 96.2251 - val_loss: 804.8717 - val_reconstruction_error: 23.7898 - val_regularization_error: 91.1782
Epoch 112/1000
120/120 [=====] - 16s 137ms/step - loss: 204.2418 - reconstruction_error: 3.5916 - regularization_error: 96.4933 - val_loss: 837.3363 - val_reconstruction_error: 24.7266 - val_regularization_error: 95.5388
Epoch 113/1000
120/120 [=====] - 19s 157ms/step - loss: 201.2288 - reconstruction_error: 3.4893 - regularization_error: 96.5506 - val_loss: 801.4391 - val_reconstruction_error: 23.6163 - val_regularization_error: 92.9513
Epoch 114/1000
120/120 [=====] - 18s 147ms/step - loss: 203.7615 - reconstruction_error: 3.5761 - regularization_error: 96.4790 - val_loss: 819.0168 - val_reconstruction_error: 24.2662 - val_regularization_error: 91.0319
Epoch 115/1000
120/120 [=====] - 19s 160ms/step - loss: 203.5037 - reconstruction_error: 3.5701 - regularization_error: 96.4009 - val_loss: 812.2745 - val_reconstruction_error: 24.0865 - val_regularization_error: 89.6796
Epoch 116/1000
120/120 [=====] - 17s 137ms/step - loss: 199.6928 - reconstruction_error: 3.4525 - regularization_error: 96.1189 - val_loss: 805.4453 - val_reconstruction_error: 23.8320 - val_regularization_error: 90.4863
Epoch 117/1000
120/120 [=====] - 18s 151ms/step - loss: 203.0464 - reconstruction_error: 3.5711 - regularization_error: 95.9125 - val_loss: 817.7072 - val_reconstruction_error: 24.1891 - val_regularization_error: 92.0330
Epoch 118/1000
120/120 [=====] - 20s 169ms/step - loss: 199.3987 - reconstruction_error: 3.4453 - regularization_error: 96.0403 - val_loss: 818.1013 - val_reconstruction_error: 24.1922 - val_regularization_error: 92.3361
Epoch 119/1000
120/120 [=====] - 17s 142ms/step - loss: 198.3850 - reconstruction_error: 3.4290 - regularization_error: 95.5139 - val_loss: 803.5287 - val_reconstruction_error: 23.6140 - val_regularization_error: 95.1081
Epoch 120/1000
120/120 [=====] - 18s 152ms/step - loss: 195.1677 - reconstruction_error: 3.3205 - regularization_error: 95.5533 - val_loss: 816.8340 - val_reconstruction_error: 24.0688 - val_regularization_error: 94.7699
Epoch 121/1000
120/120 [=====] - ETA: 0s - loss: 193.8442 - reconstruction_error: 3.2833 - regularization_error: 95.3440
[2023-12-02 22:12:25.870636]: Reconstructing images for epoch 121 ...
```



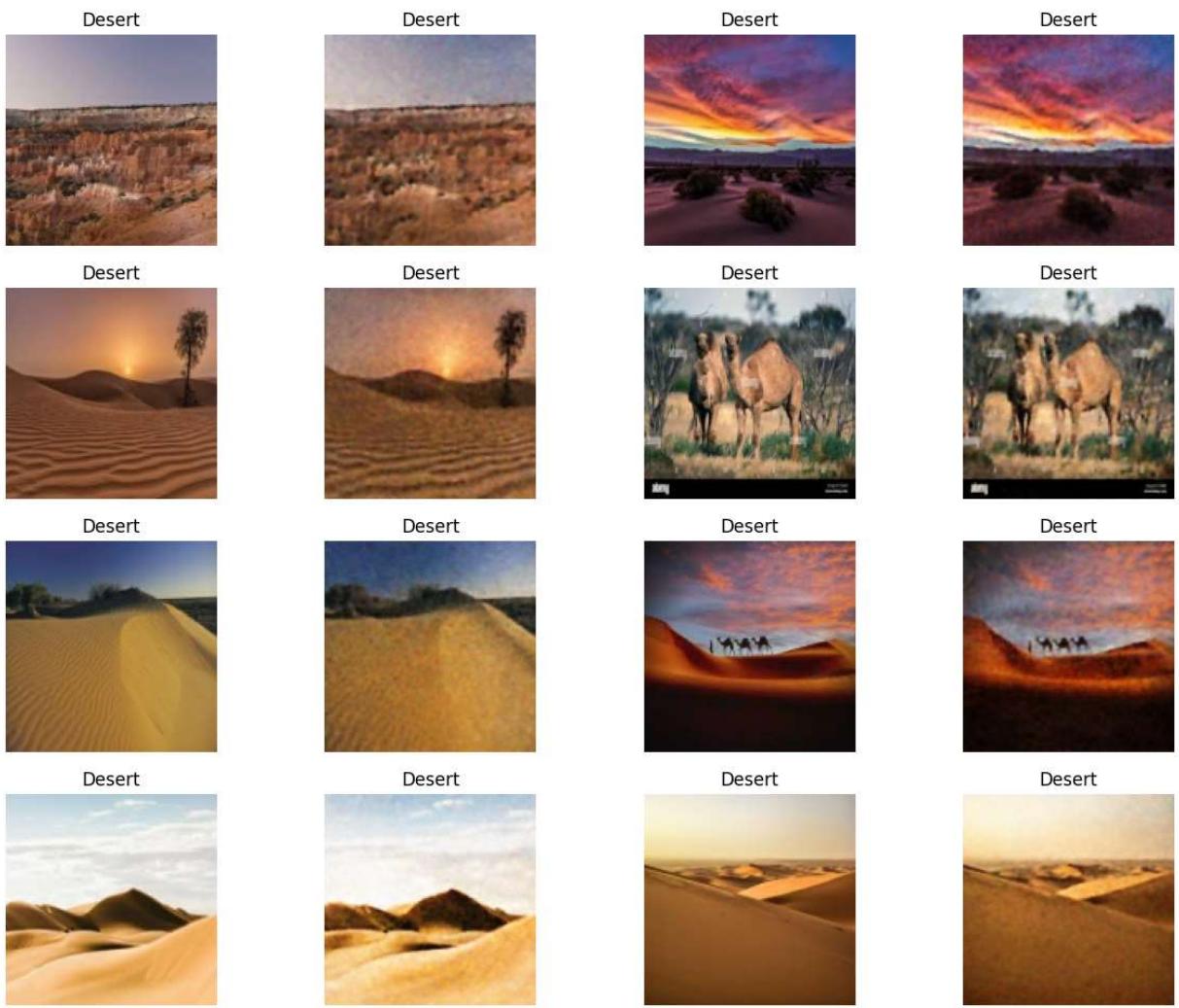
```
120/120 [=====] - 21s 172ms/step - loss: 193.8442 - reconstruction_error: 3.2833 - regularization_error: 95.3440 - val_loss: 806.8397 - val_reconstruction_error: 23.7964 - val_regularization_error: 92.9466
Epoch 122/1000
120/120 [=====] - 17s 141ms/step - loss: 196.6030 - reconstruction_error: 3.3589 - regularization_error: 95.8346 - val_loss: 804.2996 - val_reconstruction_error: 23.7546 - val_regularization_error: 91.6623
Epoch 123/1000
120/120 [=====] - 17s 141ms/step - loss: 194.2327 - reconstruction_error: 3.2966 - regularization_error: 95.3335 - val_loss: 810.8972 - val_reconstruction_error: 23.8632 - val_regularization_error: 95.0003
Epoch 124/1000
120/120 [=====] - 17s 137ms/step - loss: 195.3877 - reconstruction_error: 3.3269 - regularization_error: 95.5793 - val_loss: 814.1575 - val_reconstruction_error: 24.1058 - val_regularization_error: 90.9850
Epoch 125/1000
120/120 [=====] - 18s 153ms/step - loss: 197.8320 - reconstruction_error: 3.4155 - regularization_error: 95.3657 - val_loss: 806.2843 - val_reconstruction_error: 23.7418 - val_regularization_error: 94.0305
Epoch 126/1000
120/120 [=====] - 16s 135ms/step - loss: 197.5674 - reconstruction_error: 3.4016 - regularization_error: 95.5196 - val_loss: 822.1803 - val_reconstruction_error: 24.2811 - val_regularization_error: 93.7469
Epoch 127/1000
120/120 [=====] - 14s 115ms/step - loss: 201.9507 - reconstruction_error: 3.5421 - regularization_error: 95.6878 - val_loss: 826.3059 - val_reconstruction_error: 24.5198 - val_regularization_error: 90.7124
Epoch 128/1000
120/120 [=====] - 18s 147ms/step - loss: 205.0575 - reconstruction_error: 3.6288 - regularization_error: 96.1950 - val_loss: 805.0638 - val_reconstruction_error: 23.7094 - val_regularization_error: 93.7819
Epoch 129/1000
120/120 [=====] - 17s 141ms/step - loss: 194.0355 - reconstruction_error: 3.3049 - regularization_error: 94.8889 - val_loss: 804.0293 - val_reconstruction_error: 23.7004 - val_regularization_error: 93.0178
Epoch 130/1000
120/120 [=====] - 17s 138ms/step - loss: 204.8776 - reconstruction_error: 3.6295 - regularization_error: 95.9933 - val_loss: 851.5032 - val_reconstruction_error: 25.1491 - val_regularization_error: 97.0308
Epoch 131/1000
120/120 [=====] - ETA: 0s - loss: 198.9003 - reconstruction_error: 3.4327 - regularization_error: 95.9208
[2023-12-02 22:15:19.818578]: Reconstructing images for epoch 131 ...
```



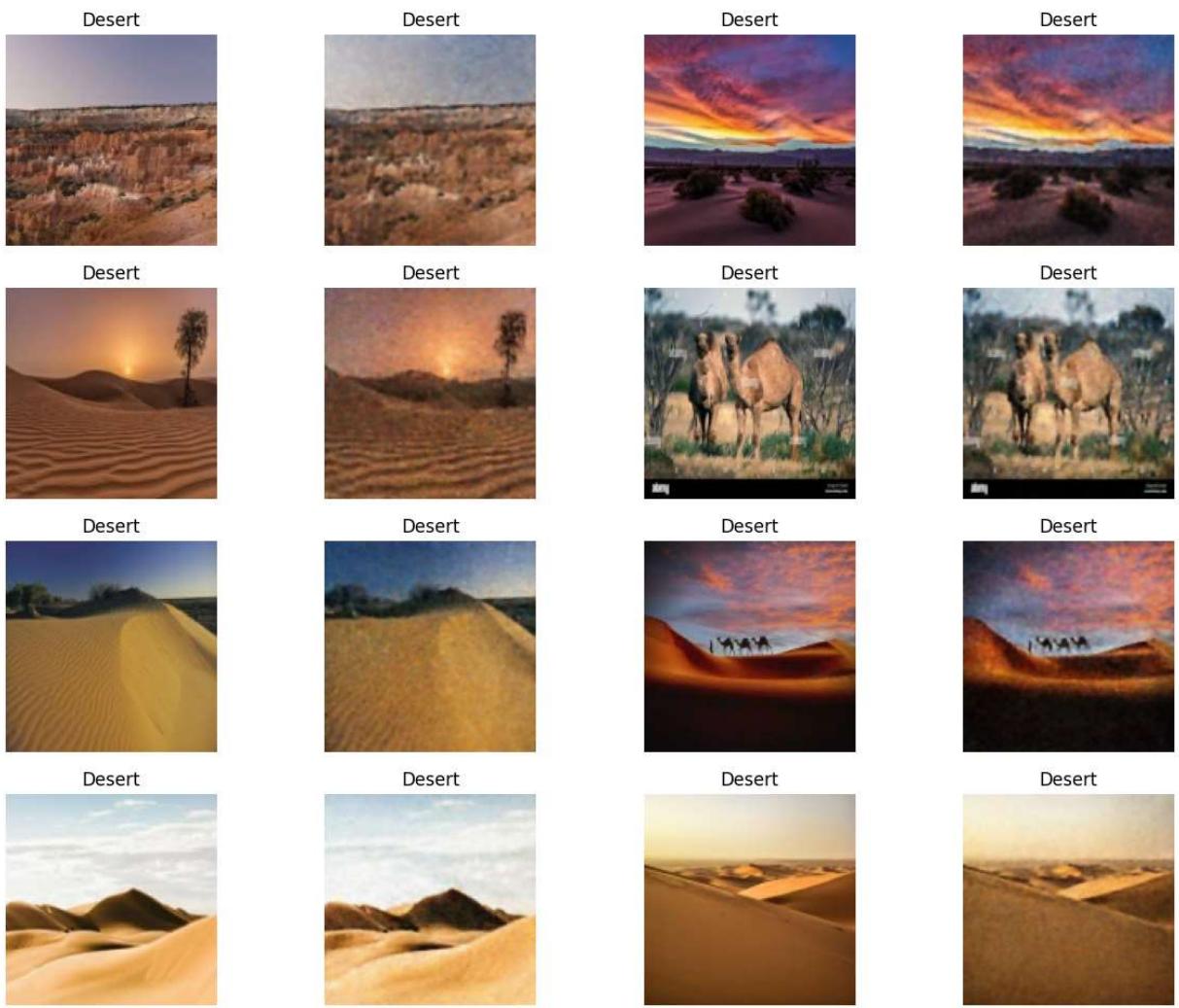
```
120/120 [=====] - 19s 160ms/step - loss: 198.9003 - reconstruction_error: 3.4327 - regularization_error: 95.9208 - val_loss: 820.4305 - val_reconstruction_error: 24.2232 - val_regularization_error: 93.7334
Epoch 132/1000
120/120 [=====] - 15s 128ms/step - loss: 194.2904 - reconstruction_error: 3.3094 - regularization_error: 95.0095 - val_loss: 817.3892 - val_reconstruction_error: 24.0988 - val_regularization_error: 94.4252
Epoch 133/1000
120/120 [=====] - 18s 147ms/step - loss: 192.2691 - reconstruction_error: 3.2546 - regularization_error: 94.6322 - val_loss: 797.0500 - val_reconstruction_error: 23.5256 - val_regularization_error: 91.2811
Epoch 134/1000
120/120 [=====] - 20s 170ms/step - loss: 193.3509 - reconstruction_error: 3.2787 - regularization_error: 94.9894 - val_loss: 836.2191 - val_reconstruction_error: 24.7168 - val_regularization_error: 94.7149
Epoch 135/1000
120/120 [=====] - 19s 155ms/step - loss: 190.9575 - reconstruction_error: 3.2031 - regularization_error: 94.8634 - val_loss: 816.9631 - val_reconstruction_error: 24.1091 - val_regularization_error: 93.6891
Epoch 136/1000
120/120 [=====] - 17s 142ms/step - loss: 193.6735 - reconstruction_error: 3.2902 - regularization_error: 94.9662 - val_loss: 814.9742 - val_reconstruction_error: 23.9832 - val_regularization_error: 95.4774
Epoch 137/1000
120/120 [=====] - 16s 133ms/step - loss: 191.1507 - reconstruction_error: 3.2001 - regularization_error: 95.1476 - val_loss: 818.9338 - val_reconstruction_error: 24.2648 - val_regularization_error: 90.9887
Epoch 138/1000
120/120 [=====] - 16s 137ms/step - loss: 189.4074 - reconstruction_error: 3.1659 - regularization_error: 94.4290 - val_loss: 814.3582 - val_reconstruction_error: 24.1237 - val_regularization_error: 90.6462
Epoch 139/1000
120/120 [=====] - 17s 143ms/step - loss: 193.9252 - reconstruction_error: 3.3046 - regularization_error: 94.7861 - val_loss: 816.9224 - val_reconstruction_error: 24.1467 - val_regularization_error: 92.5205
Epoch 140/1000
120/120 [=====] - 16s 132ms/step - loss: 193.8459 - reconstruction_error: 3.2921 - regularization_error: 95.0828 - val_loss: 829.3435 - val_reconstruction_error: 24.5967 - val_regularization_error: 91.4427
Epoch 141/1000
120/120 [=====] - ETA: 0s - loss: 189.1649 - reconstruction_error: 3.1565 - regularization_error: 94.4711
[2023-12-02 22:18:17.883134]: Reconstructing images for epoch 141 ...
```



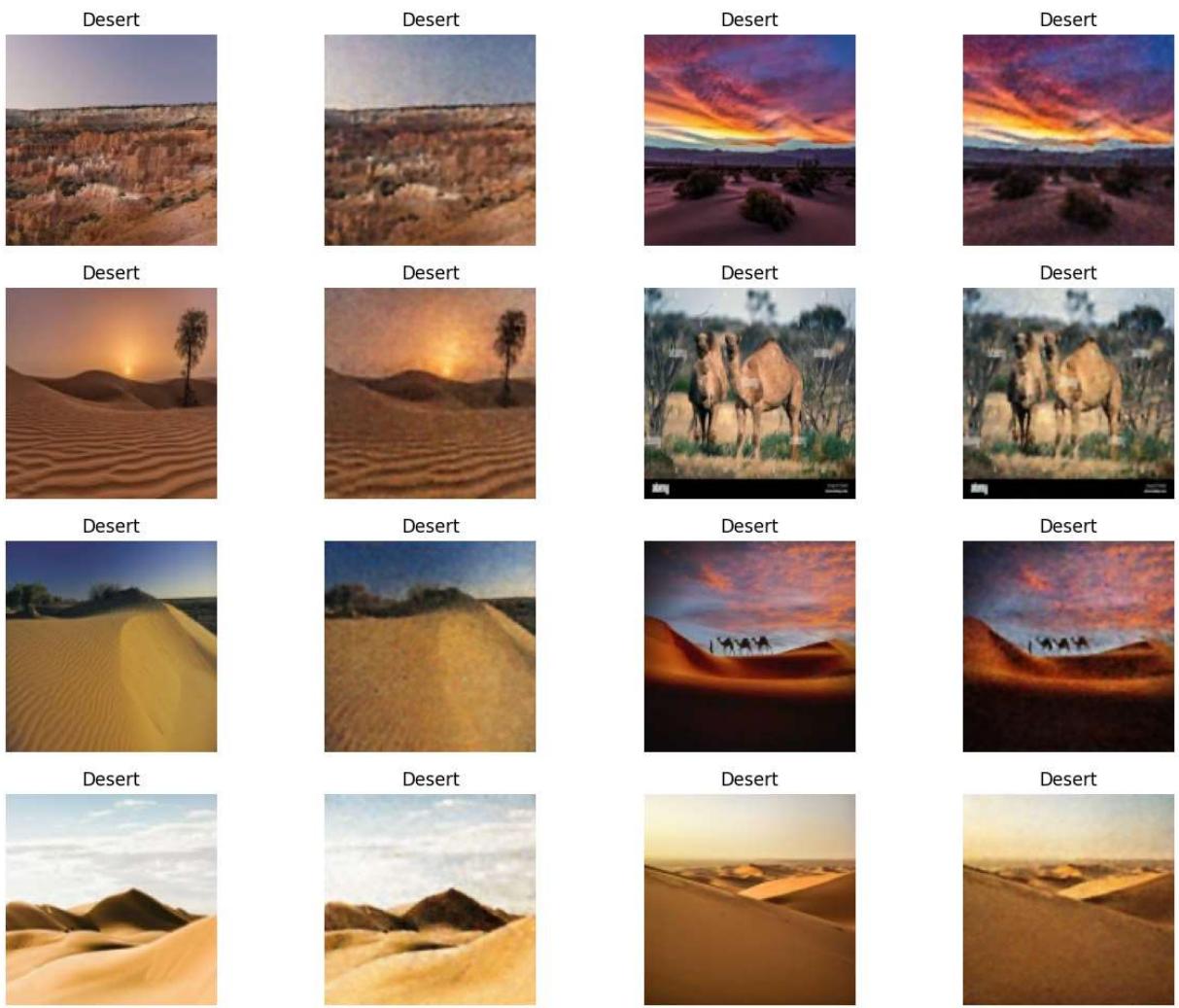
```
120/120 [=====] - 21s 177ms/step - loss: 189.1649 - reconstruction_error: 3.1565 - regularization_error: 94.4711 - val_loss: 815.3418 - val_reconstruction_error: 24.1829 - val_regularization_error: 89.8552
Epoch 142/1000
120/120 [=====] - 15s 129ms/step - loss: 195.7344 - reconstruction_error: 3.3532 - regularization_error: 95.1370 - val_loss: 819.4691 - val_reconstruction_error: 24.2998 - val_regularization_error: 90.4741
Epoch 143/1000
120/120 [=====] - 18s 146ms/step - loss: 192.4637 - reconstruction_error: 3.2570 - regularization_error: 94.7550 - val_loss: 814.4559 - val_reconstruction_error: 24.1470 - val_regularization_error: 90.0458
Epoch 144/1000
120/120 [=====] - 17s 140ms/step - loss: 187.3314 - reconstruction_error: 3.1143 - regularization_error: 93.9021 - val_loss: 818.7900 - val_reconstruction_error: 24.2243 - val_regularization_error: 92.0609
Epoch 145/1000
120/120 [=====] - 16s 130ms/step - loss: 189.6363 - reconstruction_error: 3.1785 - regularization_error: 94.2825 - val_loss: 808.6519 - val_reconstruction_error: 23.9538 - val_regularization_error: 90.0383
Epoch 146/1000
120/120 [=====] - 16s 129ms/step - loss: 186.9585 - reconstruction_error: 3.0975 - regularization_error: 94.0337 - val_loss: 818.7074 - val_reconstruction_error: 24.3986 - val_regularization_error: 86.7503
Epoch 147/1000
120/120 [=====] - 20s 163ms/step - loss: 186.1170 - reconstruction_error: 3.0714 - regularization_error: 93.9755 - val_loss: 810.3688 - val_reconstruction_error: 23.8586 - val_regularization_error: 94.6122
Epoch 148/1000
120/120 [=====] - 19s 158ms/step - loss: 187.4096 - reconstruction_error: 3.1016 - regularization_error: 94.3607 - val_loss: 815.4177 - val_reconstruction_error: 24.1918 - val_regularization_error: 89.6633
Epoch 149/1000
120/120 [=====] - 16s 131ms/step - loss: 190.4272 - reconstruction_error: 3.1973 - regularization_error: 94.5092 - val_loss: 824.5240 - val_reconstruction_error: 24.4998 - val_regularization_error: 89.5297
Epoch 150/1000
120/120 [=====] - 17s 143ms/step - loss: 192.7915 - reconstruction_error: 3.2723 - regularization_error: 94.6211 - val_loss: 815.0740 - val_reconstruction_error: 24.2883 - val_regularization_error: 86.4265
Epoch 151/1000
120/120 [=====] - ETA: 0s - loss: 186.6282 - reconstruction_error: 3.0910 - regularization_error: 93.8994
[2023-12-02 22:21:12.209679]: Reconstructing images for epoch 151 ...
```



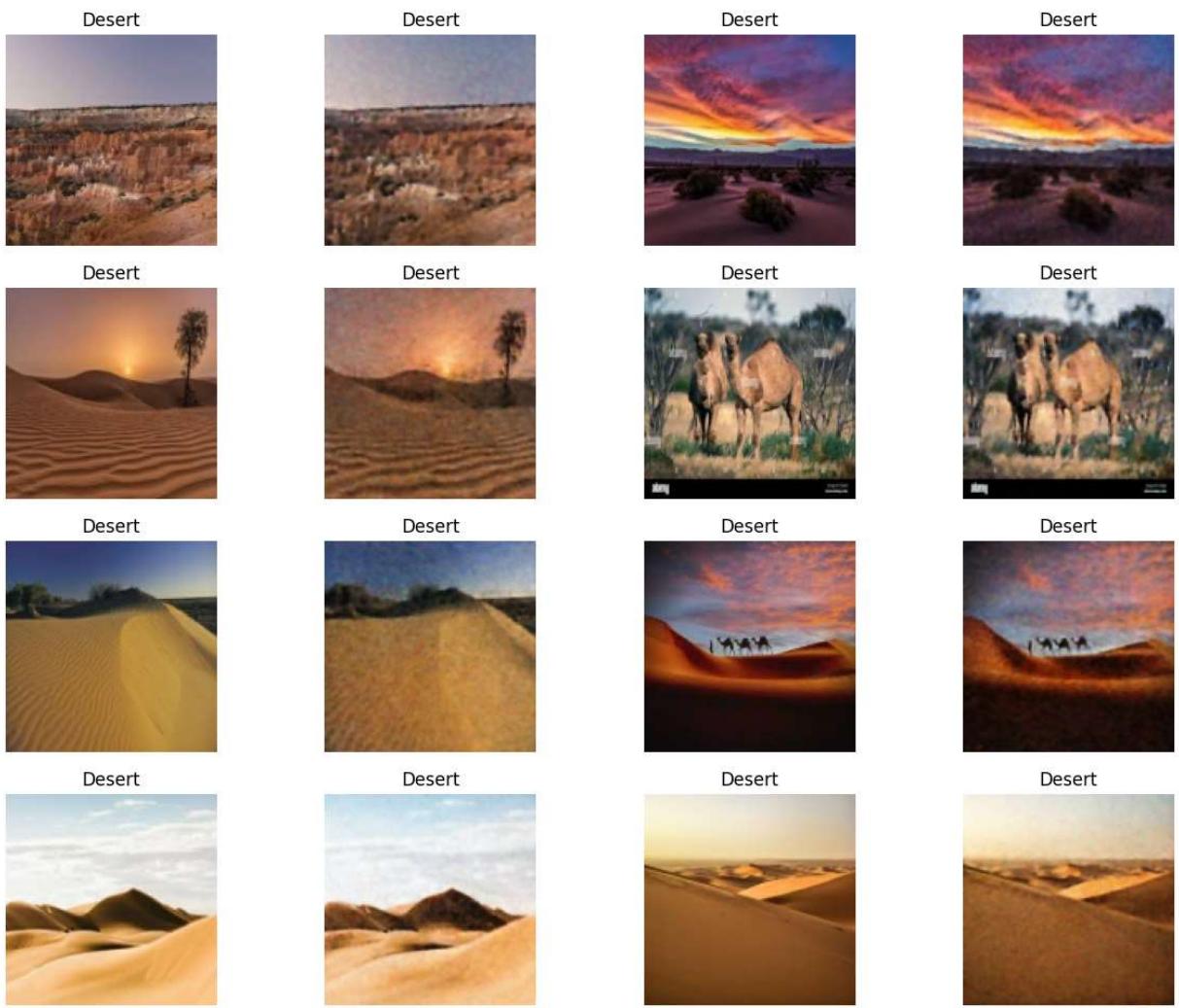
```
120/120 [=====] - 20s 166ms/step - loss: 186.6282 - reconstruction_error: 3.0910 - regularization_error: 93.8994 - val_loss: 834.2773 - val_reconstruction_error: 24.7360 - val_regularization_error: 92.1984
Epoch 152/1000
120/120 [=====] - 17s 139ms/step - loss: 189.5491 - reconstruction_error: 3.1657 - regularization_error: 94.5794 - val_loss: 815.7747 - val_reconstruction_error: 24.2240 - val_regularization_error: 89.0533
Epoch 153/1000
120/120 [=====] - 20s 163ms/step - loss: 185.5769 - reconstruction_error: 3.0575 - regularization_error: 93.8513 - val_loss: 806.3476 - val_reconstruction_error: 23.9217 - val_regularization_error: 88.6968
Epoch 154/1000
120/120 [=====] - 18s 149ms/step - loss: 187.5014 - reconstruction_error: 3.1074 - regularization_error: 94.2780 - val_loss: 816.9875 - val_reconstruction_error: 24.1386 - val_regularization_error: 92.8294
Epoch 155/1000
120/120 [=====] - 18s 149ms/step - loss: 192.6895 - reconstruction_error: 3.2621 - regularization_error: 94.8268 - val_loss: 811.2311 - val_reconstruction_error: 23.9559 - val_regularization_error: 92.5548
Epoch 156/1000
120/120 [=====] - 16s 133ms/step - loss: 185.0854 - reconstruction_error: 3.0452 - regularization_error: 93.7301 - val_loss: 822.0712 - val_reconstruction_error: 24.3994 - val_regularization_error: 90.0906
Epoch 157/1000
120/120 [=====] - 16s 133ms/step - loss: 189.2847 - reconstruction_error: 3.1715 - regularization_error: 94.1390 - val_loss: 818.2913 - val_reconstruction_error: 24.2934 - val_regularization_error: 89.4903
Epoch 158/1000
120/120 [=====] - 18s 147ms/step - loss: 190.4093 - reconstruction_error: 3.2054 - regularization_error: 94.2459 - val_loss: 812.4340 - val_reconstruction_error: 23.9963 - val_regularization_error: 92.5462
Epoch 159/1000
120/120 [=====] - 16s 133ms/step - loss: 184.3539 - reconstruction_error: 3.0418 - regularization_error: 93.0998 - val_loss: 820.6728 - val_reconstruction_error: 24.3686 - val_regularization_error: 89.6137
Epoch 160/1000
120/120 [=====] - 18s 149ms/step - loss: 184.0493 - reconstruction_error: 3.0211 - regularization_error: 93.4171 - val_loss: 829.2292 - val_reconstruction_error: 24.5744 - val_regularization_error: 91.9973
Epoch 161/1000
120/120 [=====] - ETA: 0s - loss: 189.9084 - reconstruction_error: 3.1839 - regularization_error: 94.3900
[2023-12-02 22:24:09.866890]: Reconstructing images for epoch 161 ...
```



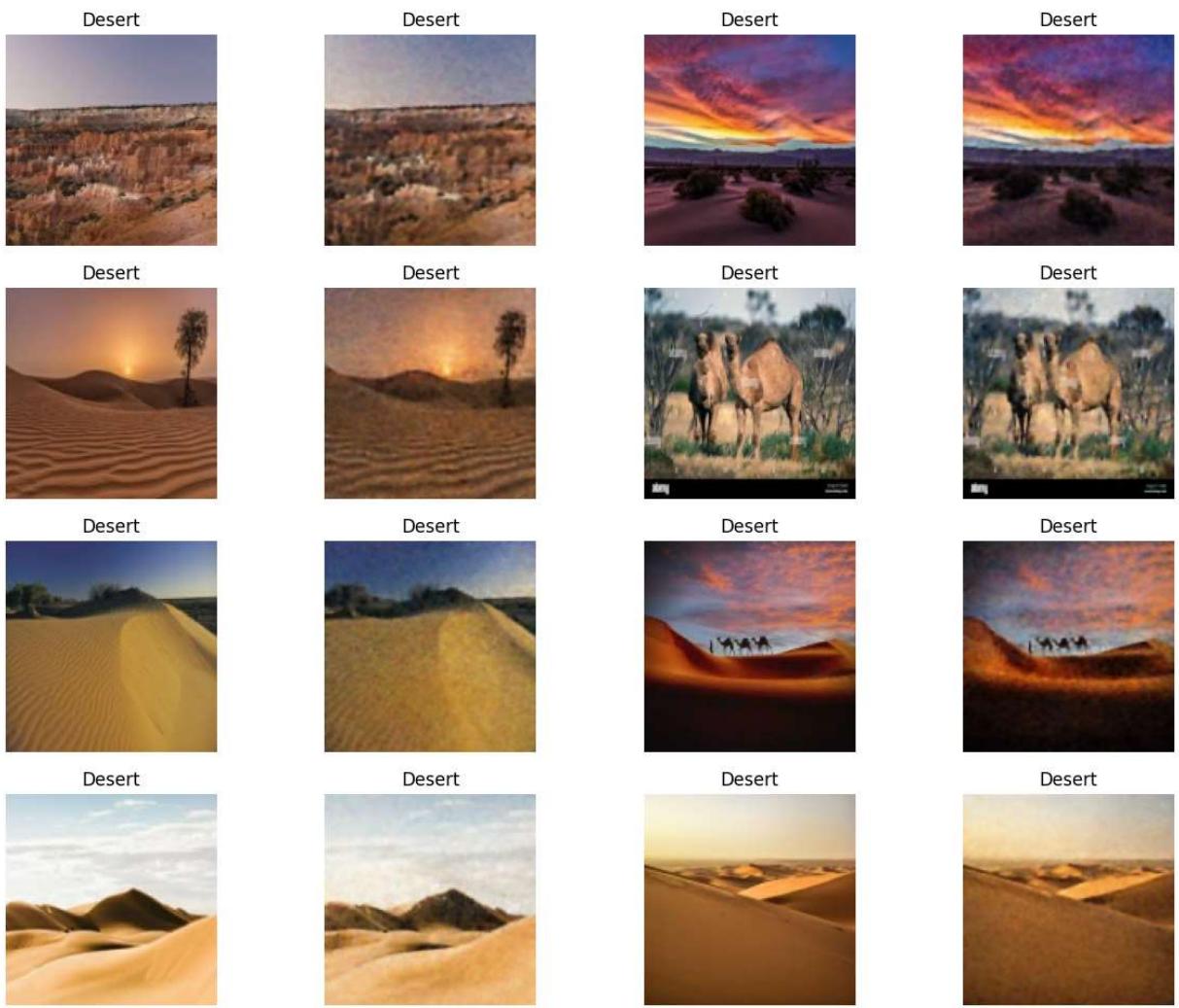
```
120/120 [=====] - 20s 163ms/step - loss: 189.9084 - reconstruction_error: 3.1839 - regularization_error: 94.3900 - val_loss: 815.1042 - val_reconstruction_error: 24.1788 - val_regularization_error: 89.7415
Epoch 162/1000
120/120 [=====] - 14s 120ms/step - loss: 184.5565 - reconstruction_error: 3.0254 - regularization_error: 93.7935 - val_loss: 808.3836 - val_reconstruction_error: 23.9164 - val_regularization_error: 90.8931
Epoch 163/1000
120/120 [=====] - 18s 149ms/step - loss: 180.9981 - reconstruction_error: 2.9267 - regularization_error: 93.1983 - val_loss: 807.6030 - val_reconstruction_error: 23.9275 - val_regularization_error: 89.7790
Epoch 164/1000
120/120 [=====] - 17s 138ms/step - loss: 180.9942 - reconstruction_error: 2.9259 - regularization_error: 93.2167 - val_loss: 811.3268 - val_reconstruction_error: 23.9604 - val_regularization_error: 92.5142
Epoch 165/1000
120/120 [=====] - 15s 123ms/step - loss: 181.2907 - reconstruction_error: 2.9331 - regularization_error: 93.2976 - val_loss: 814.8826 - val_reconstruction_error: 24.1677 - val_regularization_error: 89.8512
Epoch 166/1000
120/120 [=====] - 14s 119ms/step - loss: 184.7655 - reconstruction_error: 3.0367 - regularization_error: 93.6639 - val_loss: 821.8000 - val_reconstruction_error: 24.3207 - val_regularization_error: 92.1791
Epoch 167/1000
120/120 [=====] - 17s 141ms/step - loss: 180.9274 - reconstruction_error: 2.9271 - regularization_error: 93.1150 - val_loss: 814.3181 - val_reconstruction_error: 24.0994 - val_regularization_error: 91.3349
Epoch 168/1000
120/120 [=====] - 18s 150ms/step - loss: 183.6698 - reconstruction_error: 3.0088 - regularization_error: 93.4048 - val_loss: 822.9922 - val_reconstruction_error: 24.4948 - val_regularization_error: 88.1470
Epoch 169/1000
120/120 [=====] - 17s 140ms/step - loss: 185.2106 - reconstruction_error: 3.0553 - regularization_error: 93.5513 - val_loss: 844.0826 - val_reconstruction_error: 25.0525 - val_regularization_error: 92.5074
Epoch 170/1000
120/120 [=====] - 18s 149ms/step - loss: 184.4858 - reconstruction_error: 3.0370 - regularization_error: 93.3766 - val_loss: 823.8919 - val_reconstruction_error: 24.4519 - val_regularization_error: 90.3362
Epoch 171/1000
120/120 [=====] - ETA: 0s - loss: 184.5843 - reconstruction_error: 3.0406 - regularization_error: 93.3673
[2023-12-02 22:26:58.902856]: Reconstructing images for epoch 171 ...
```



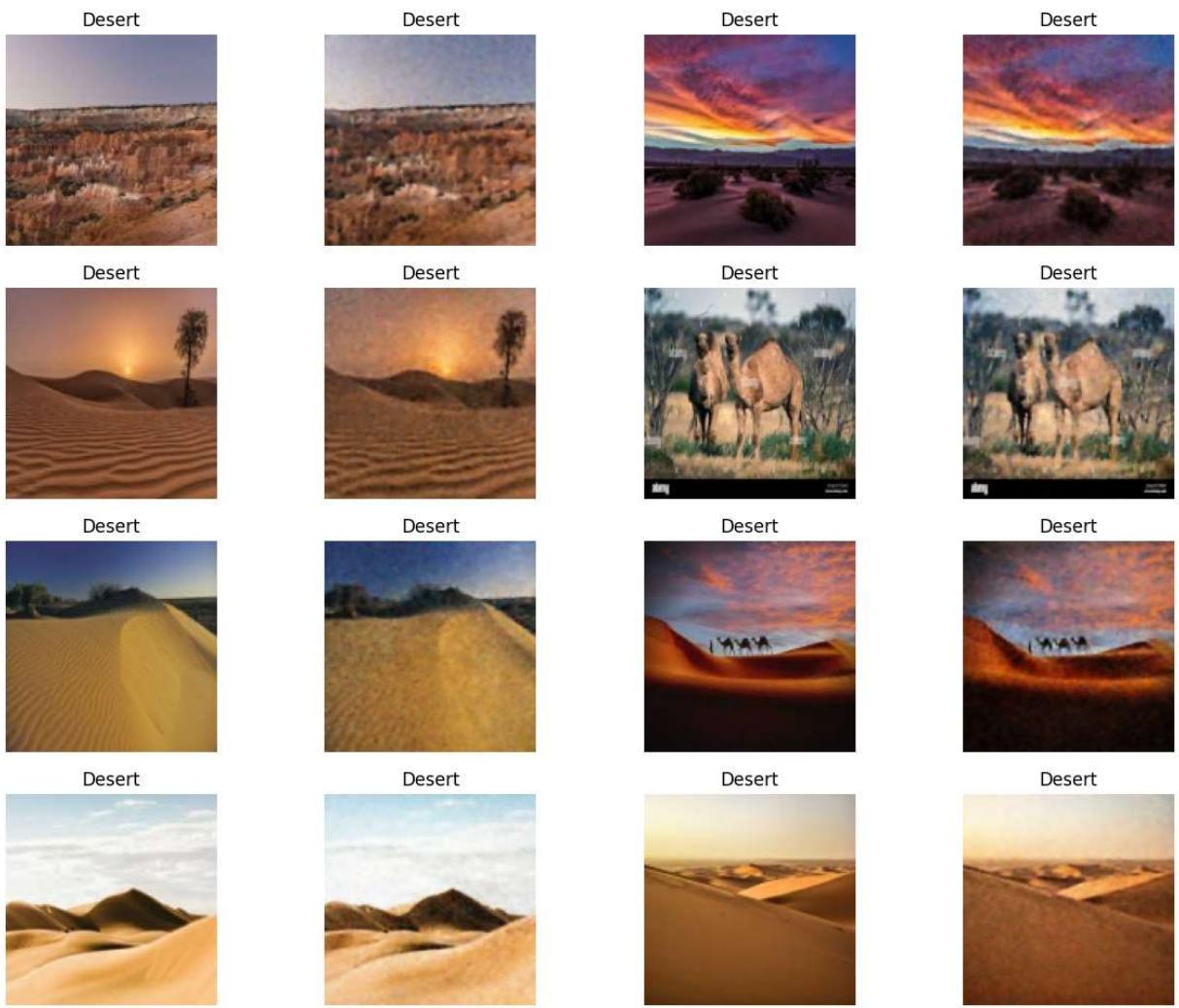
```
120/120 [=====] - 21s 170ms/step - loss: 184.5843 - reconstruction_error: 3.0406 - regularization_error: 93.3673 - val_loss: 820.1561 - val_reconstruction_error: 24.2494 - val_regularization_error: 92.6756
Epoch 172/1000
120/120 [=====] - 17s 138ms/step - loss: 182.7748 - reconstruction_error: 2.9831 - regularization_error: 93.2833 - val_loss: 890.9171 - val_reconstruction_error: 26.6815 - val_regularization_error: 90.4734
Epoch 173/1000
120/120 [=====] - 18s 145ms/step - loss: 188.7739 - reconstruction_error: 3.1615 - regularization_error: 93.9286 - val_loss: 817.1946 - val_reconstruction_error: 24.2906 - val_regularization_error: 88.4774
Epoch 174/1000
120/120 [=====] - 18s 149ms/step - loss: 181.4476 - reconstruction_error: 2.9510 - regularization_error: 92.9178 - val_loss: 818.9471 - val_reconstruction_error: 24.2701 - val_regularization_error: 90.8443
Epoch 175/1000
120/120 [=====] - 15s 126ms/step - loss: 182.5217 - reconstruction_error: 2.9792 - regularization_error: 93.1469 - val_loss: 811.5618 - val_reconstruction_error: 24.0853 - val_regularization_error: 89.0025
Epoch 176/1000
120/120 [=====] - 17s 142ms/step - loss: 179.7718 - reconstruction_error: 2.8959 - regularization_error: 92.8938 - val_loss: 814.5530 - val_reconstruction_error: 24.2282 - val_regularization_error: 87.7058
Epoch 177/1000
120/120 [=====] - 18s 151ms/step - loss: 178.2827 - reconstruction_error: 2.8524 - regularization_error: 92.7110 - val_loss: 840.1630 - val_reconstruction_error: 24.9489 - val_regularization_error: 91.6969
Epoch 178/1000
120/120 [=====] - 19s 154ms/step - loss: 180.2864 - reconstruction_error: 2.9058 - regularization_error: 93.1121 - val_loss: 819.8217 - val_reconstruction_error: 24.2005 - val_regularization_error: 93.8054
Epoch 179/1000
120/120 [=====] - 16s 131ms/step - loss: 181.8599 - reconstruction_error: 2.9553 - regularization_error: 93.2022 - val_loss: 822.7189 - val_reconstruction_error: 24.3956 - val_regularization_error: 90.8519
Epoch 180/1000
120/120 [=====] - 15s 124ms/step - loss: 182.5064 - reconstruction_error: 2.9761 - regularization_error: 93.2232 - val_loss: 817.2560 - val_reconstruction_error: 24.2521 - val_regularization_error: 89.6931
Epoch 181/1000
120/120 [=====] - ETA: 0s - loss: 179.7755 - reconstruction_error: 2.8996 - regularization_error: 92.7887
[2023-12-02 22:29:54.992173]: Reconstructing images for epoch 181 ...
```



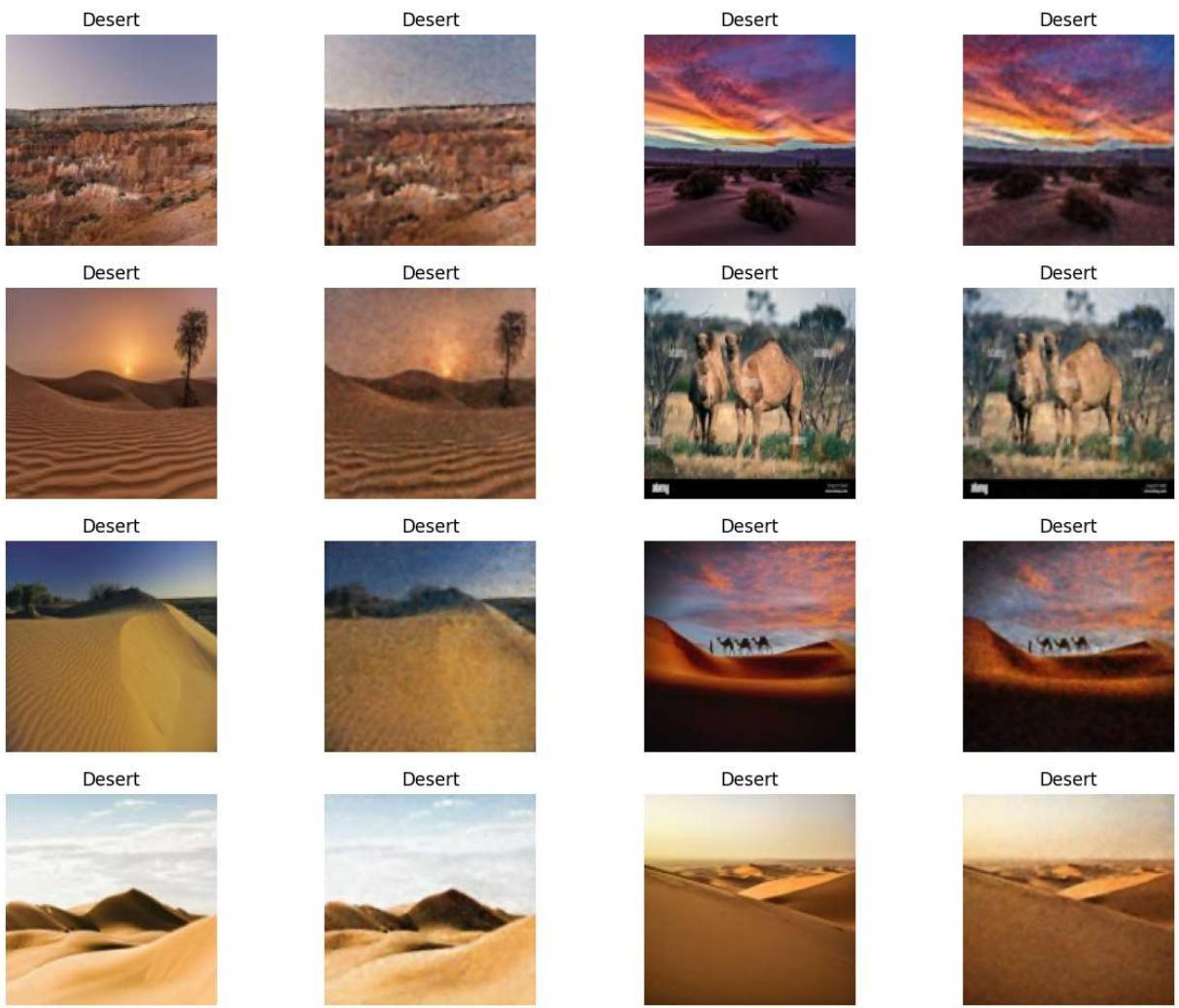
```
120/120 [=====] - 19s 160ms/step - loss: 179.7755 - reconstruction_error: 2.8996 - regularization_error: 92.7887 - val_loss: 815.3580 - val_reconstruction_error: 24.0919 - val_regularization_error: 92.6007
Epoch 182/1000
120/120 [=====] - 15s 125ms/step - loss: 180.0392 - reconstruction_error: 2.9017 - regularization_error: 92.9875 - val_loss: 821.2369 - val_reconstruction_error: 24.3877 - val_regularization_error: 89.6060
Epoch 183/1000
120/120 [=====] - 17s 140ms/step - loss: 181.2063 - reconstruction_error: 2.9528 - regularization_error: 92.6226 - val_loss: 827.5512 - val_reconstruction_error: 24.5932 - val_regularization_error: 89.7551
Epoch 184/1000
120/120 [=====] - 14s 121ms/step - loss: 180.7535 - reconstruction_error: 2.9305 - regularization_error: 92.8390 - val_loss: 828.8474 - val_reconstruction_error: 24.6803 - val_regularization_error: 88.4398
Epoch 185/1000
120/120 [=====] - 17s 143ms/step - loss: 181.3214 - reconstruction_error: 2.9564 - regularization_error: 92.6284 - val_loss: 828.2616 - val_reconstruction_error: 24.7402 - val_regularization_error: 86.0553
Epoch 186/1000
120/120 [=====] - 18s 149ms/step - loss: 181.7599 - reconstruction_error: 2.9626 - regularization_error: 92.8809 - val_loss: 828.9077 - val_reconstruction_error: 24.5689 - val_regularization_error: 91.8398
Epoch 187/1000
120/120 [=====] - 16s 136ms/step - loss: 177.6345 - reconstruction_error: 2.8328 - regularization_error: 92.6495 - val_loss: 819.6248 - val_reconstruction_error: 24.3523 - val_regularization_error: 89.0560
Epoch 188/1000
120/120 [=====] - 16s 135ms/step - loss: 180.7264 - reconstruction_error: 2.9324 - regularization_error: 92.7544 - val_loss: 814.0128 - val_reconstruction_error: 24.2316 - val_regularization_error: 87.0646
Epoch 189/1000
120/120 [=====] - 18s 149ms/step - loss: 178.4001 - reconstruction_error: 2.8664 - regularization_error: 92.4083 - val_loss: 825.7059 - val_reconstruction_error: 24.6029 - val_regularization_error: 87.6200
Epoch 190/1000
120/120 [=====] - 18s 144ms/step - loss: 179.1226 - reconstruction_error: 2.8761 - regularization_error: 92.8395 - val_loss: 813.2824 - val_reconstruction_error: 24.0631 - val_regularization_error: 91.3881
Epoch 191/1000
120/120 [=====] - ETA: 0s - loss: 178.4342 - reconstruction_error: 2.8680 - regularization_error: 92.3956
[2023-12-02 22:32:45.482001]: Reconstructing images for epoch 191 ...
```



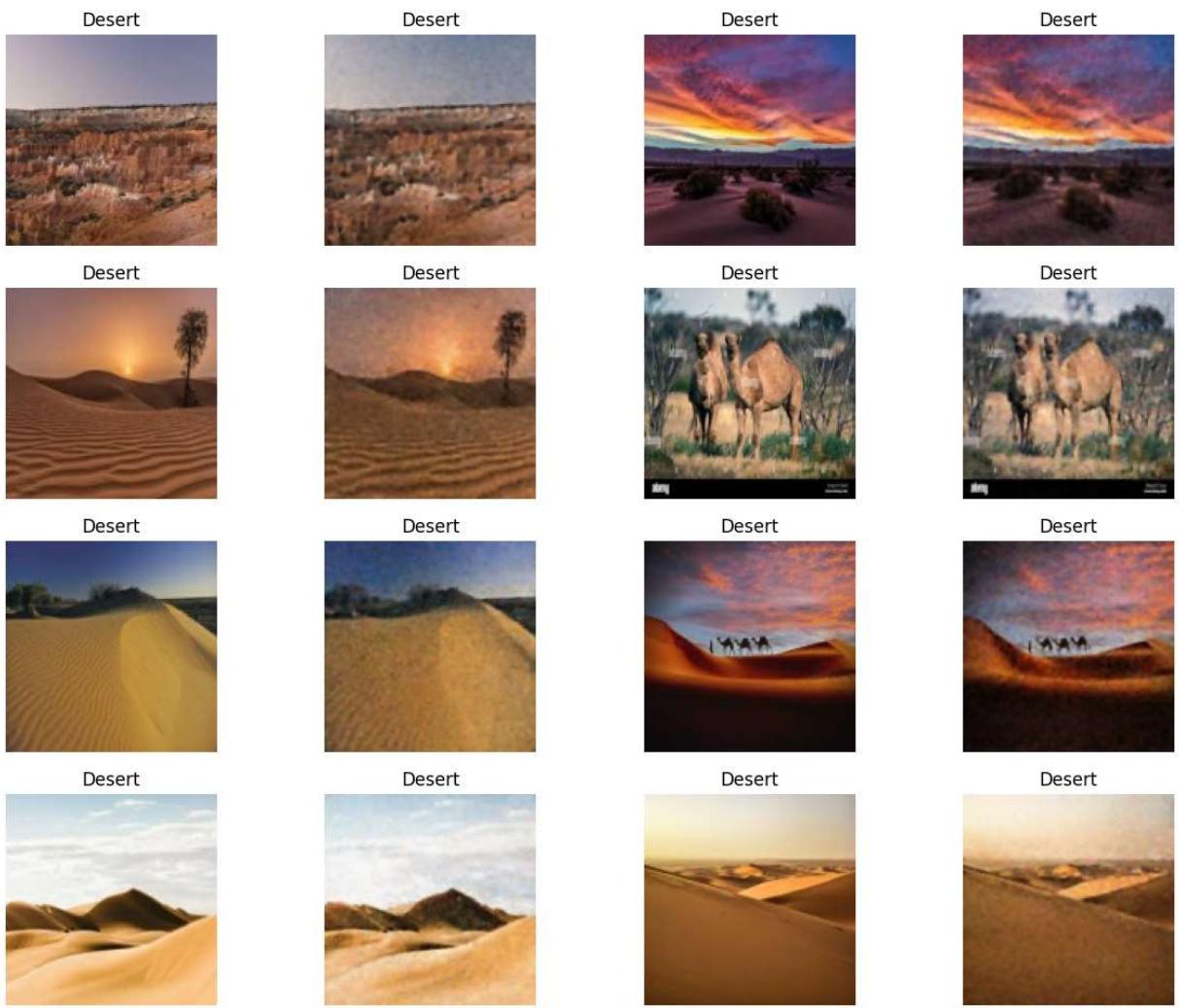
```
120/120 [=====] - 19s 157ms/step - loss: 178.4342 - reconstruction_error: 2.8680 - regularization_error: 92.3956 - val_loss: 837.0103 - val_reconstruction_error: 24.8768 - val_regularization_error: 90.7053
Epoch 192/1000
120/120 [=====] - 14s 118ms/step - loss: 178.6756 - reconstruction_error: 2.8676 - regularization_error: 92.6476 - val_loss: 832.7057 - val_reconstruction_error: 24.7424 - val_regularization_error: 90.4350
Epoch 193/1000
120/120 [=====] - 15s 126ms/step - loss: 178.1926 - reconstruction_error: 2.8638 - regularization_error: 92.2790 - val_loss: 826.2103 - val_reconstruction_error: 24.4445 - val_regularization_error: 92.8764
Epoch 194/1000
120/120 [=====] - 17s 142ms/step - loss: 176.9191 - reconstruction_error: 2.8227 - regularization_error: 92.2388 - val_loss: 822.2839 - val_reconstruction_error: 24.5045 - val_regularization_error: 87.1499
Epoch 195/1000
120/120 [=====] - 13s 107ms/step - loss: 176.0181 - reconstruction_error: 2.7966 - regularization_error: 92.1188 - val_loss: 824.2715 - val_reconstruction_error: 24.4730 - val_regularization_error: 90.0826
Epoch 196/1000
120/120 [=====] - 19s 149ms/step - loss: 173.9748 - reconstruction_error: 2.7320 - regularization_error: 92.0140 - val_loss: 814.1639 - val_reconstruction_error: 24.1632 - val_regularization_error: 89.2691
Epoch 197/1000
120/120 [=====] - 20s 165ms/step - loss: 175.7333 - reconstruction_error: 2.7838 - regularization_error: 92.2192 - val_loss: 839.4296 - val_reconstruction_error: 25.0611 - val_regularization_error: 87.5963
Epoch 198/1000
120/120 [=====] - 16s 131ms/step - loss: 176.1439 - reconstruction_error: 2.7978 - regularization_error: 92.2098 - val_loss: 820.9372 - val_reconstruction_error: 24.3410 - val_regularization_error: 90.7078
Epoch 199/1000
120/120 [=====] - 19s 162ms/step - loss: 175.6950 - reconstruction_error: 2.7861 - regularization_error: 92.1109 - val_loss: 827.6269 - val_reconstruction_error: 24.6295 - val_regularization_error: 88.7413
Epoch 200/1000
120/120 [=====] - 18s 147ms/step - loss: 176.0397 - reconstruction_error: 2.8006 - regularization_error: 92.0212 - val_loss: 822.3822 - val_reconstruction_error: 24.3521 - val_regularization_error: 91.8183
Epoch 201/1000
120/120 [=====] - ETA: 0s - loss: 176.1970 - reconstruction_error: 2.8059 - regularization_error: 92.0194
[2023-12-02 22:35:38.362293]: Reconstructing images for epoch 201 ...
```



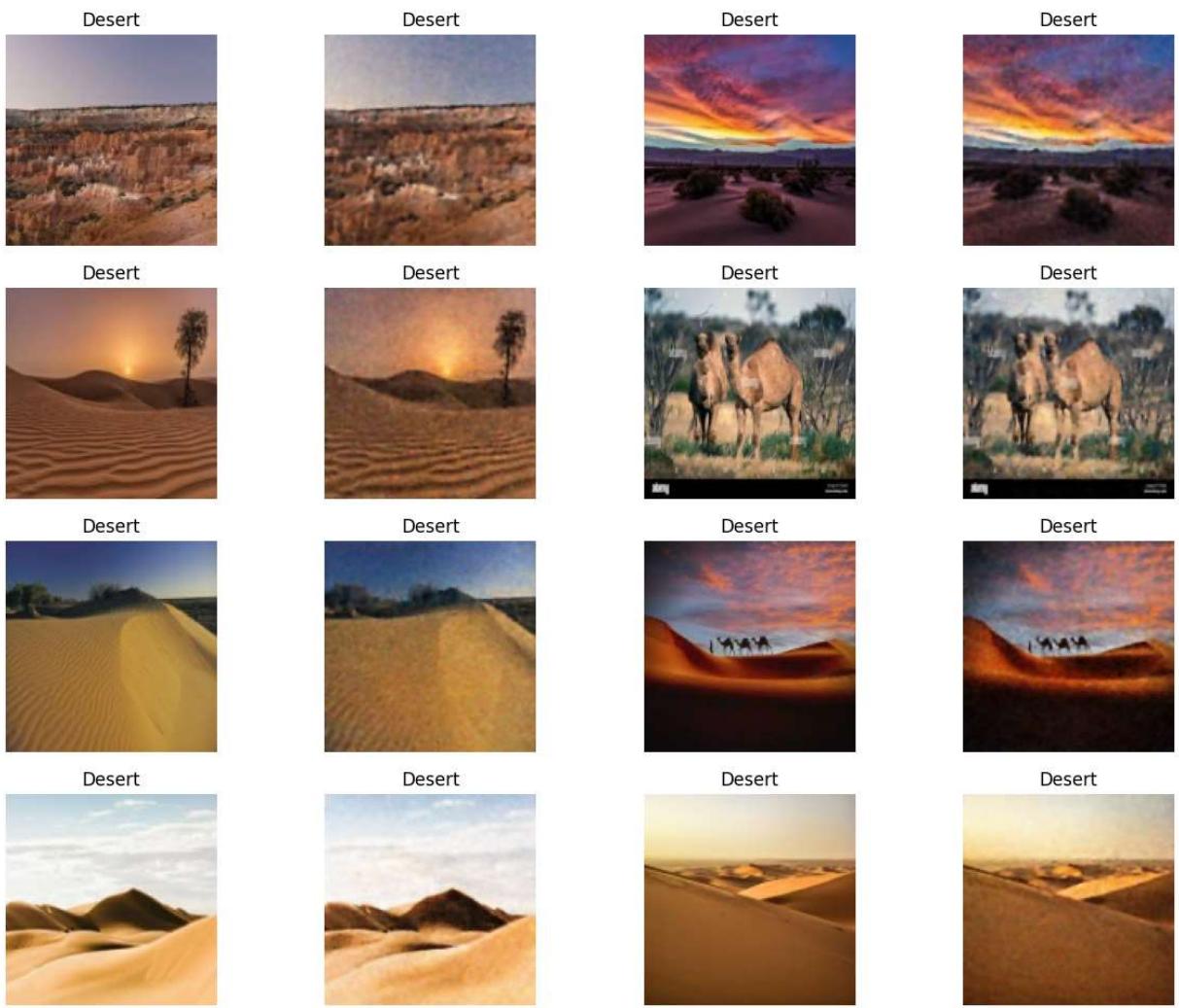
```
120/120 [=====] - 18s 149ms/step - loss: 176.1970 - reconstruction_error: 2.8059 - regularization_error: 92.0194 - val_loss: 821.6873 - val_reconstruction_error: 24.3705 - val_regularization_error: 90.5727
Epoch 202/1000
120/120 [=====] - 14s 120ms/step - loss: 173.7360 - reconstruction_error: 2.7306 - regularization_error: 91.8173 - val_loss: 826.5477 - val_reconstruction_error: 24.6182 - val_regularization_error: 88.0008
Epoch 203/1000
120/120 [=====] - 17s 141ms/step - loss: 176.9663 - reconstruction_error: 2.8281 - regularization_error: 92.1234 - val_loss: 830.9025 - val_reconstruction_error: 24.7233 - val_regularization_error: 89.2023
Epoch 204/1000
120/120 [=====] - 18s 146ms/step - loss: 177.9303 - reconstruction_error: 2.8474 - regularization_error: 92.5089 - val_loss: 821.6784 - val_reconstruction_error: 24.4274 - val_regularization_error: 88.8555
Epoch 205/1000
120/120 [=====] - 16s 131ms/step - loss: 178.8293 - reconstruction_error: 2.8845 - regularization_error: 92.2946 - val_loss: 830.7708 - val_reconstruction_error: 24.7337 - val_regularization_error: 88.7587
Epoch 206/1000
120/120 [=====] - 19s 156ms/step - loss: 180.5972 - reconstruction_error: 2.9258 - regularization_error: 92.8236 - val_loss: 843.6754 - val_reconstruction_error: 25.0385 - val_regularization_error: 92.5208
Epoch 207/1000
120/120 [=====] - 18s 146ms/step - loss: 180.0315 - reconstruction_error: 2.9249 - regularization_error: 92.2847 - val_loss: 824.4173 - val_reconstruction_error: 24.5102 - val_regularization_error: 89.1111
Epoch 208/1000
120/120 [=====] - 16s 136ms/step - loss: 174.4883 - reconstruction_error: 2.7468 - regularization_error: 92.0855 - val_loss: 812.6464 - val_reconstruction_error: 24.1474 - val_regularization_error: 88.2232
Epoch 209/1000
120/120 [=====] - 20s 160ms/step - loss: 171.9812 - reconstruction_error: 2.6820 - regularization_error: 91.5209 - val_loss: 827.0398 - val_reconstruction_error: 24.6718 - val_regularization_error: 86.8854
Epoch 210/1000
120/120 [=====] - 18s 149ms/step - loss: 177.7432 - reconstruction_error: 2.8597 - regularization_error: 91.9509 - val_loss: 826.0494 - val_reconstruction_error: 24.6206 - val_regularization_error: 87.4321
Epoch 211/1000
120/120 [=====] - ETA: 0s - loss: 174.6578 - reconstruction_error: 2.7614 - regularization_error: 91.8151
[2023-12-02 22:38:34.150926]: Reconstructing images for epoch 211 ...
```



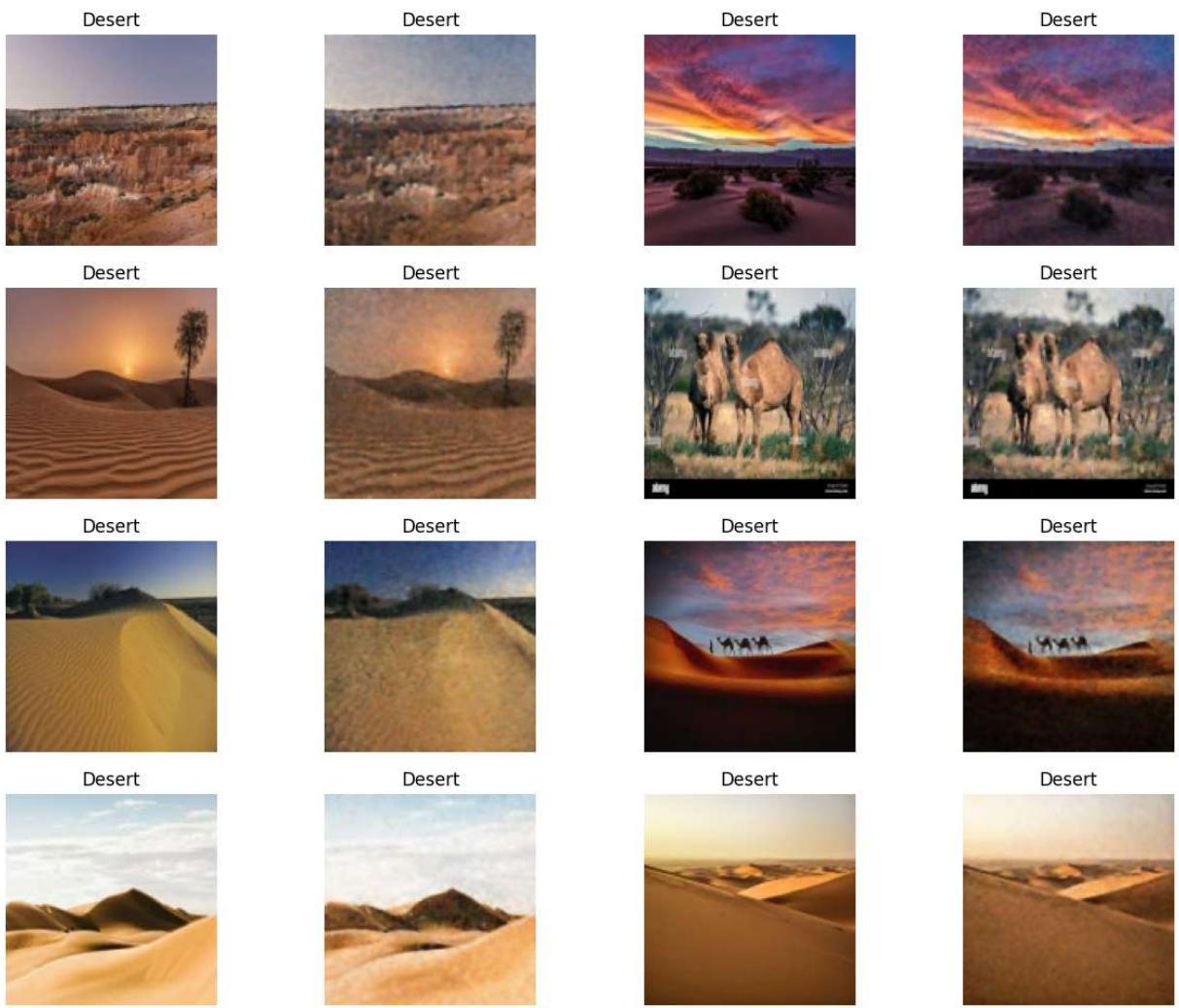
```
120/120 [=====] - 18s 154ms/step - loss: 174.6578 - reconstruction_error: 2.7614 - regularization_error: 91.8151 - val_loss: 815.3047 - val_reconstruction_error: 24.1388 - val_regularization_error: 91.1396
Epoch 212/1000
120/120 [=====] - 17s 141ms/step - loss: 173.1936 - reconstruction_error: 2.7205 - regularization_error: 91.5778 - val_loss: 829.5305 - val_reconstruction_error: 24.7076 - val_regularization_error: 88.3019
Epoch 213/1000
120/120 [=====] - 16s 136ms/step - loss: 173.9717 - reconstruction_error: 2.7403 - regularization_error: 91.7636 - val_loss: 827.0604 - val_reconstruction_error: 24.6547 - val_regularization_error: 87.4189
Epoch 214/1000
120/120 [=====] - 17s 138ms/step - loss: 175.8784 - reconstruction_error: 2.8025 - regularization_error: 91.8043 - val_loss: 821.7449 - val_reconstruction_error: 24.4420 - val_regularization_error: 88.4841
Epoch 215/1000
120/120 [=====] - 16s 132ms/step - loss: 172.1483 - reconstruction_error: 2.6938 - regularization_error: 91.3332 - val_loss: 823.1687 - val_reconstruction_error: 24.4923 - val_regularization_error: 88.3993
Epoch 216/1000
120/120 [=====] - 19s 161ms/step - loss: 172.4399 - reconstruction_error: 2.7033 - regularization_error: 91.3405 - val_loss: 831.9476 - val_reconstruction_error: 24.8715 - val_regularization_error: 85.8034
Epoch 217/1000
120/120 [=====] - 16s 138ms/step - loss: 177.2348 - reconstruction_error: 2.8315 - regularization_error: 92.2884 - val_loss: 833.5378 - val_reconstruction_error: 24.7280 - val_regularization_error: 91.6969
Epoch 218/1000
120/120 [=====] - 18s 150ms/step - loss: 176.8179 - reconstruction_error: 2.8357 - regularization_error: 91.7478 - val_loss: 822.6113 - val_reconstruction_error: 24.5003 - val_regularization_error: 87.6037
Epoch 219/1000
120/120 [=====] - 18s 147ms/step - loss: 179.2367 - reconstruction_error: 2.8985 - regularization_error: 92.2825 - val_loss: 827.8604 - val_reconstruction_error: 24.5659 - val_regularization_error: 90.8834
Epoch 220/1000
120/120 [=====] - 17s 145ms/step - loss: 171.9438 - reconstruction_error: 2.6904 - regularization_error: 91.2310 - val_loss: 810.4376 - val_reconstruction_error: 24.0719 - val_regularization_error: 88.2812
Epoch 221/1000
120/120 [=====] - ETA: 0s - loss: 171.2228 - reconstruction_error: 2.6622 - regularization_error: 91.3576
[2023-12-02 22:41:36.438567]: Reconstructing images for epoch 221 ...
```



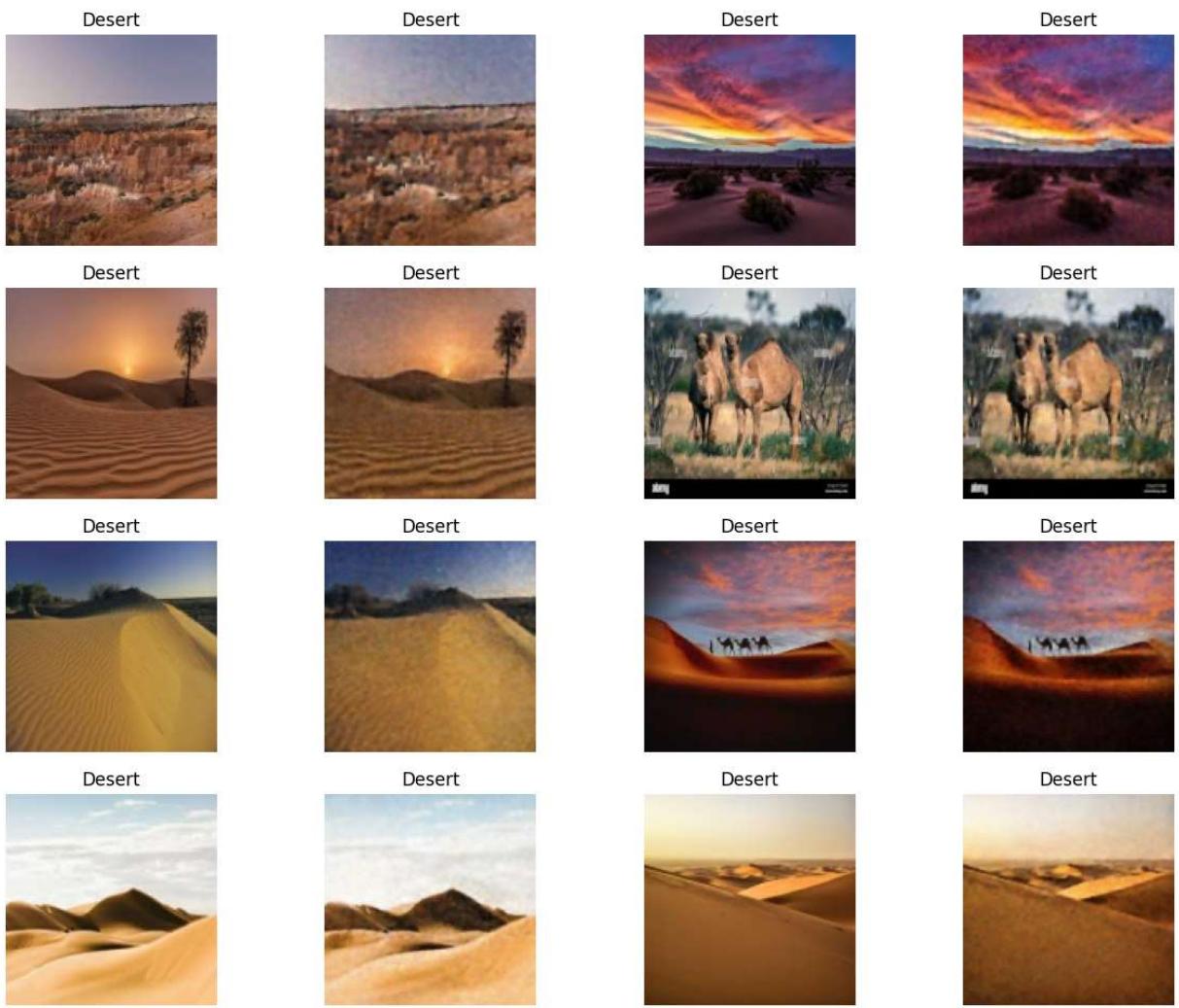
```
120/120 [=====] - 21s 177ms/step - loss: 171.2228 - reconstruction_error: 2.6622 - regularization_error: 91.3576 - val_loss: 828.2322 - val_reconstruction_error: 24.7485 - val_regularization_error: 85.7786
Epoch 222/1000
120/120 [=====] - 17s 140ms/step - loss: 169.7598 - reconstruction_error: 2.6226 - regularization_error: 91.0829 - val_loss: 826.0508 - val_reconstruction_error: 24.5305 - val_regularization_error: 90.1360
Epoch 223/1000
120/120 [=====] - 15s 126ms/step - loss: 171.8997 - reconstruction_error: 2.6817 - regularization_error: 91.4496 - val_loss: 817.0067 - val_reconstruction_error: 24.3654 - val_regularization_error: 86.0454
Epoch 224/1000
120/120 [=====] - 18s 151ms/step - loss: 171.2485 - reconstruction_error: 2.6759 - regularization_error: 90.9705 - val_loss: 835.0969 - val_reconstruction_error: 24.9080 - val_regularization_error: 87.8564
Epoch 225/1000
120/120 [=====] - 18s 145ms/step - loss: 173.6140 - reconstruction_error: 2.7329 - regularization_error: 91.6273 - val_loss: 840.7833 - val_reconstruction_error: 25.0639 - val_regularization_error: 88.8654
Epoch 226/1000
120/120 [=====] - 17s 143ms/step - loss: 182.3241 - reconstruction_error: 2.9866 - regularization_error: 92.7268 - val_loss: 826.1941 - val_reconstruction_error: 24.6360 - val_regularization_error: 87.1137
Epoch 227/1000
120/120 [=====] - 18s 151ms/step - loss: 173.2926 - reconstruction_error: 2.7232 - regularization_error: 91.5971 - val_loss: 833.0211 - val_reconstruction_error: 24.8294 - val_regularization_error: 88.1385
Epoch 228/1000
120/120 [=====] - 18s 146ms/step - loss: 169.7130 - reconstruction_error: 2.6207 - regularization_error: 91.0934 - val_loss: 827.7405 - val_reconstruction_error: 24.6296 - val_regularization_error: 88.8534
Epoch 229/1000
120/120 [=====] - 19s 155ms/step - loss: 168.0354 - reconstruction_error: 2.5765 - regularization_error: 90.7406 - val_loss: 825.5715 - val_reconstruction_error: 24.6291 - val_regularization_error: 86.6974
Epoch 230/1000
120/120 [=====] - 18s 153ms/step - loss: 170.8465 - reconstruction_error: 2.6532 - regularization_error: 91.2514 - val_loss: 824.7713 - val_reconstruction_error: 24.5573 - val_regularization_error: 88.0524
Epoch 231/1000
120/120 [=====] - ETA: 0s - loss: 172.1689 - reconstruction_error: 2.6952 - regularization_error: 91.3133
[2023-12-02 22:44:37.838365]: Reconstructing images for epoch 231 ...
```



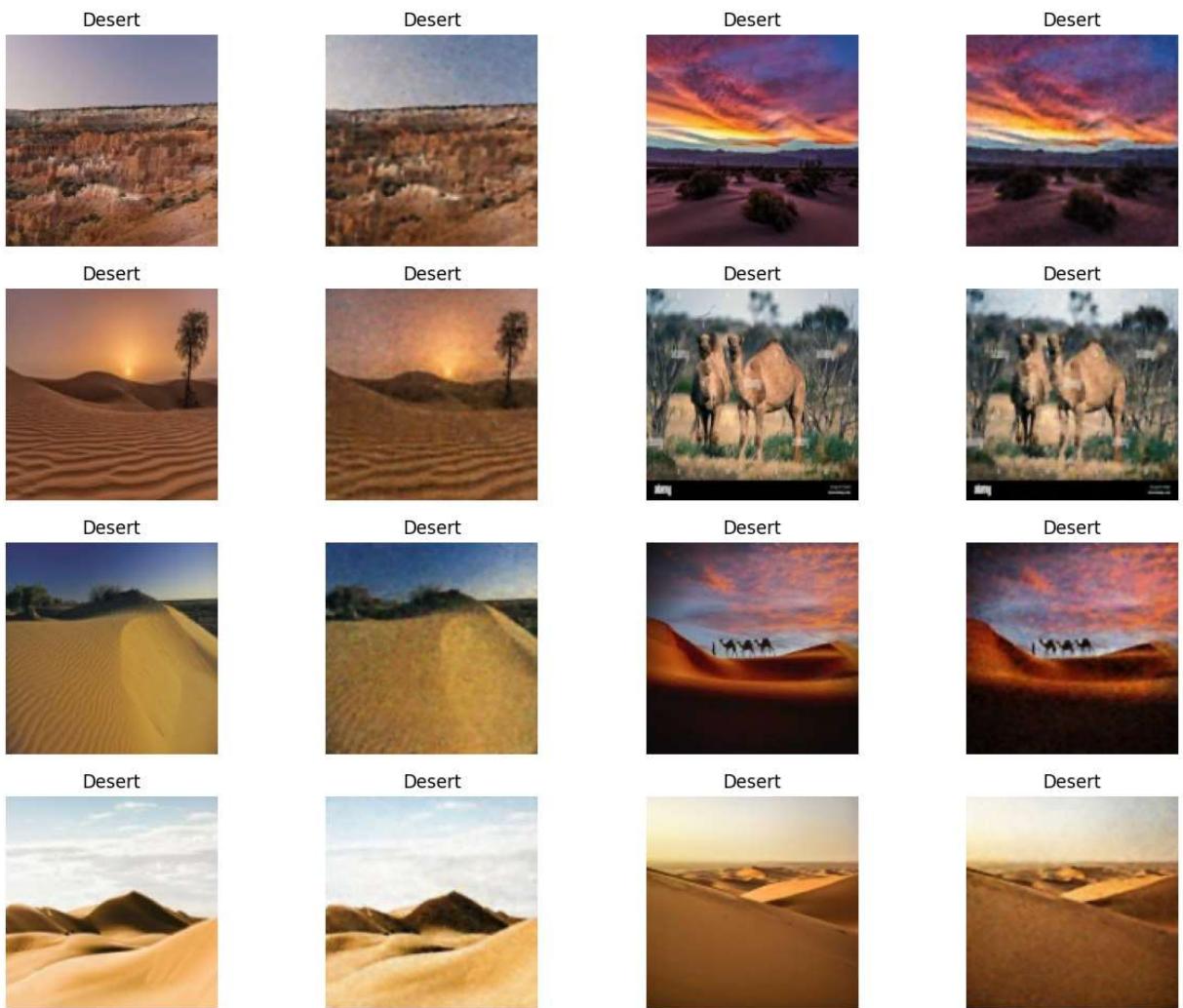
```
120/120 [=====] - 21s 174ms/step - loss: 172.1689 - reconstruction_error: 2.6952 - regularization_error: 91.3133 - val_loss: 832.4393 - val_reconstruction_error: 24.7577 - val_regularization_error: 89.7090
Epoch 232/1000
120/120 [=====] - 16s 136ms/step - loss: 168.6316 - reconstruction_error: 2.5931 - regularization_error: 90.8389 - val_loss: 822.1475 - val_reconstruction_error: 24.5417 - val_regularization_error: 85.8968
Epoch 233/1000
120/120 [=====] - 18s 151ms/step - loss: 170.5540 - reconstruction_error: 2.6479 - regularization_error: 91.1178 - val_loss: 827.5034 - val_reconstruction_error: 24.6132 - val_regularization_error: 89.1079
Epoch 234/1000
120/120 [=====] - 19s 157ms/step - loss: 170.5694 - reconstruction_error: 2.6466 - regularization_error: 91.1721 - val_loss: 818.0388 - val_reconstruction_error: 24.3533 - val_regularization_error: 87.4400
Epoch 235/1000
120/120 [=====] - 18s 151ms/step - loss: 169.7488 - reconstruction_error: 2.6201 - regularization_error: 91.1469 - val_loss: 829.3900 - val_reconstruction_error: 24.7656 - val_regularization_error: 86.4210
Epoch 236/1000
120/120 [=====] - 16s 132ms/step - loss: 172.5401 - reconstruction_error: 2.7112 - regularization_error: 91.2053 - val_loss: 827.2946 - val_reconstruction_error: 24.6428 - val_regularization_error: 88.0095
Epoch 237/1000
120/120 [=====] - 16s 134ms/step - loss: 169.6319 - reconstruction_error: 2.6265 - regularization_error: 90.8374 - val_loss: 816.2875 - val_reconstruction_error: 24.3455 - val_regularization_error: 85.9223
Epoch 238/1000
120/120 [=====] - 17s 143ms/step - loss: 169.1108 - reconstruction_error: 2.5926 - regularization_error: 91.3328 - val_loss: 846.5388 - val_reconstruction_error: 25.3271 - val_regularization_error: 86.7265
Epoch 239/1000
120/120 [=====] - 19s 157ms/step - loss: 170.9042 - reconstruction_error: 2.6635 - regularization_error: 90.9995 - val_loss: 823.1277 - val_reconstruction_error: 24.5561 - val_regularization_error: 86.4454
Epoch 240/1000
120/120 [=====] - 18s 152ms/step - loss: 171.1928 - reconstruction_error: 2.6759 - regularization_error: 90.9168 - val_loss: 834.9431 - val_reconstruction_error: 24.8258 - val_regularization_error: 90.1686
Epoch 241/1000
120/120 [=====] - ETA: 0s - loss: 173.9393 - reconstruction_error: 2.7619 - regularization_error: 91.0822
[2023-12-02 22:47:36.588570]: Reconstructing images for epoch 241 ...
```



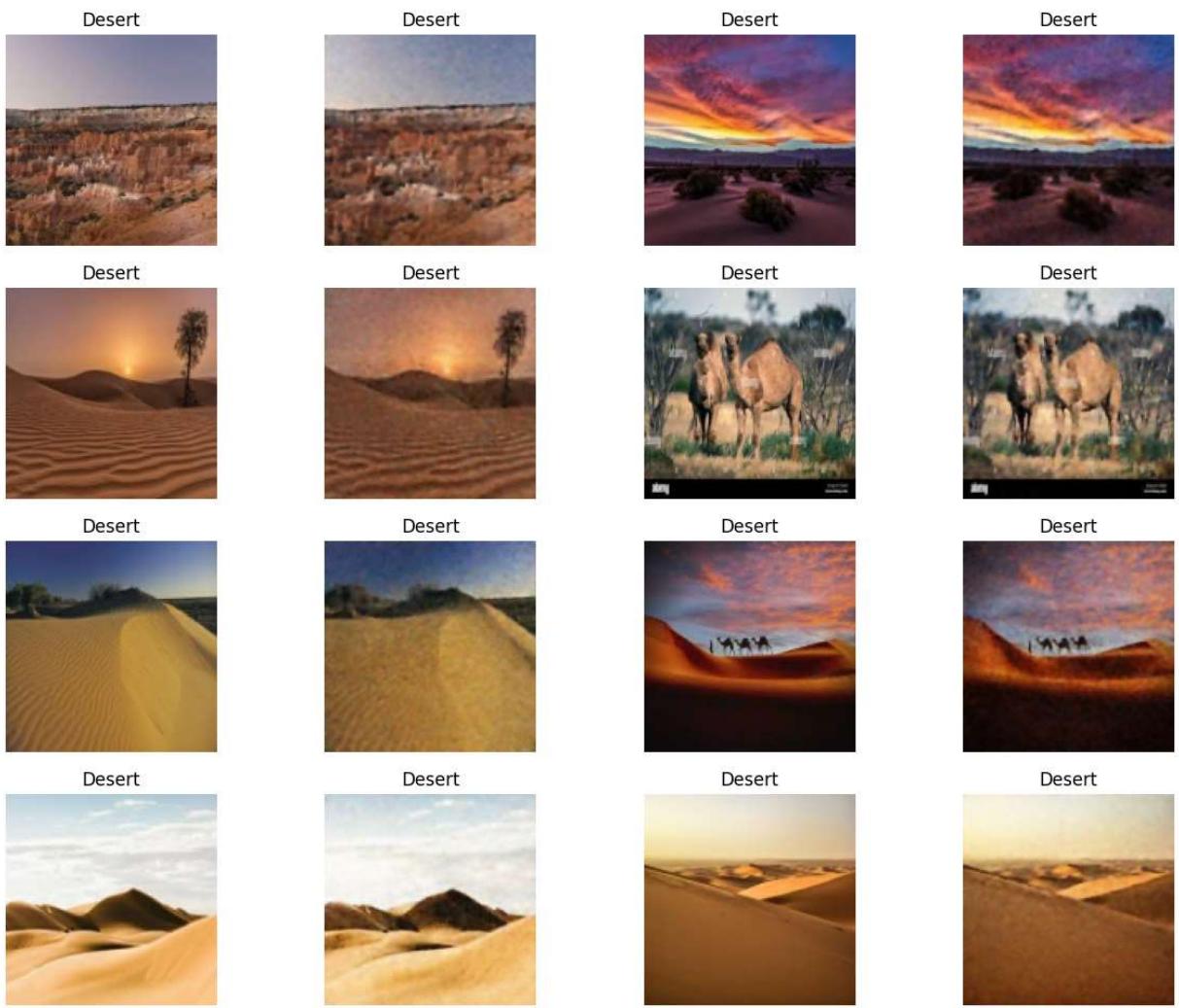
```
120/120 [=====] - 19s 156ms/step - loss: 173.9393 - reconstruction_error: 2.7619 - regularization_error: 91.0822 - val_loss: 843.1259 - val_reconstruction_error: 25.3596 - val_regularization_error: 82.3383
Epoch 242/1000
120/120 [=====] - 17s 145ms/step - loss: 168.3120 - reconstruction_error: 2.5833 - regularization_error: 90.8127 - val_loss: 823.9922 - val_reconstruction_error: 24.5041 - val_regularization_error: 88.8690
Epoch 243/1000
120/120 [=====] - 18s 151ms/step - loss: 167.3764 - reconstruction_error: 2.5588 - regularization_error: 90.6132 - val_loss: 825.5836 - val_reconstruction_error: 24.6464 - val_regularization_error: 86.1924
Epoch 244/1000
120/120 [=====] - 17s 137ms/step - loss: 170.2407 - reconstruction_error: 2.6476 - regularization_error: 90.8132 - val_loss: 829.6202 - val_reconstruction_error: 24.7556 - val_regularization_error: 86.9533
Epoch 245/1000
120/120 [=====] - 18s 149ms/step - loss: 171.9304 - reconstruction_error: 2.6941 - regularization_error: 91.1075 - val_loss: 848.5964 - val_reconstruction_error: 25.3483 - val_regularization_error: 88.1475
Epoch 246/1000
120/120 [=====] - 18s 153ms/step - loss: 171.6645 - reconstruction_error: 2.6795 - regularization_error: 91.2787 - val_loss: 822.7485 - val_reconstruction_error: 24.5796 - val_regularization_error: 85.3590
Epoch 247/1000
120/120 [=====] - 17s 140ms/step - loss: 166.9374 - reconstruction_error: 2.5486 - regularization_error: 90.4797 - val_loss: 820.9661 - val_reconstruction_error: 24.5422 - val_regularization_error: 84.7013
Epoch 248/1000
120/120 [=====] - 16s 137ms/step - loss: 167.5755 - reconstruction_error: 2.5630 - regularization_error: 90.6843 - val_loss: 833.0174 - val_reconstruction_error: 24.9266 - val_regularization_error: 85.2200
Epoch 249/1000
120/120 [=====] - 20s 167ms/step - loss: 170.8852 - reconstruction_error: 2.6557 - regularization_error: 91.2131 - val_loss: 822.9412 - val_reconstruction_error: 24.4803 - val_regularization_error: 88.5324
Epoch 250/1000
120/120 [=====] - 19s 162ms/step - loss: 167.7943 - reconstruction_error: 2.5687 - regularization_error: 90.7325 - val_loss: 824.1124 - val_reconstruction_error: 24.5667 - val_regularization_error: 87.1104
Epoch 251/1000
120/120 [=====] - ETA: 0s - loss: 167.8498 - reconstruction_error: 2.5698 - regularization_error: 90.7558
[2023-12-02 22:50:38.632318]: Reconstructing images for epoch 251 ...
```



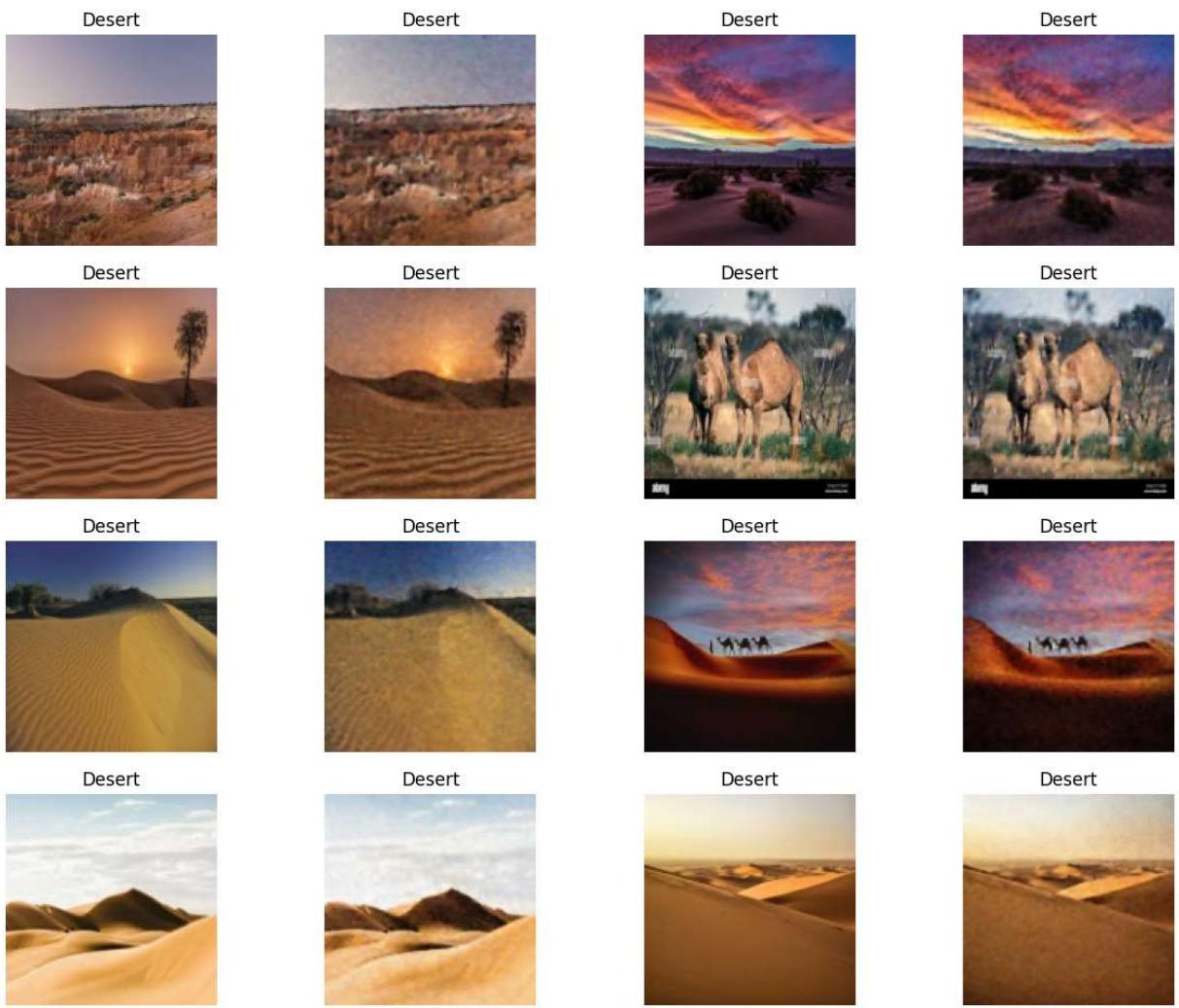
```
120/120 [=====] - 16s 133ms/step - loss: 167.8498 - reconstruction_error: 2.5698 - regularization_error: 90.7558 - val_loss: 824.4222 - val_reconstruction_error: 24.5690 - val_regularization_error: 87.3512
Epoch 252/1000
120/120 [=====] - 14s 114ms/step - loss: 168.6706 - reconstruction_error: 2.5950 - regularization_error: 90.8195 - val_loss: 843.0041 - val_reconstruction_error: 25.1597 - val_regularization_error: 88.2143
Epoch 253/1000
120/120 [=====] - 17s 145ms/step - loss: 170.0959 - reconstruction_error: 2.6362 - regularization_error: 91.0100 - val_loss: 826.7225 - val_reconstruction_error: 24.6970 - val_regularization_error: 85.8111
Epoch 254/1000
120/120 [=====] - 16s 130ms/step - loss: 168.0177 - reconstruction_error: 2.5824 - regularization_error: 90.5466 - val_loss: 839.4779 - val_reconstruction_error: 25.0804 - val_regularization_error: 87.0651
Epoch 255/1000
120/120 [=====] - 17s 143ms/step - loss: 166.9068 - reconstruction_error: 2.5561 - regularization_error: 90.2240 - val_loss: 822.1335 - val_reconstruction_error: 24.5189 - val_regularization_error: 86.5662
Epoch 256/1000
120/120 [=====] - 15s 126ms/step - loss: 168.5355 - reconstruction_error: 2.5966 - regularization_error: 90.6379 - val_loss: 831.6495 - val_reconstruction_error: 24.8664 - val_regularization_error: 85.6587
Epoch 257/1000
120/120 [=====] - 18s 146ms/step - loss: 168.8807 - reconstruction_error: 2.6179 - regularization_error: 90.3431 - val_loss: 838.3093 - val_reconstruction_error: 25.1311 - val_regularization_error: 84.3762
Epoch 258/1000
120/120 [=====] - 15s 129ms/step - loss: 168.9525 - reconstruction_error: 2.6124 - regularization_error: 90.5809 - val_loss: 833.5272 - val_reconstruction_error: 24.8889 - val_regularization_error: 86.8605
Epoch 259/1000
120/120 [=====] - 17s 143ms/step - loss: 169.7250 - reconstruction_error: 2.6294 - regularization_error: 90.8427 - val_loss: 834.7656 - val_reconstruction_error: 24.7837 - val_regularization_error: 91.2559
Epoch 260/1000
120/120 [=====] - 19s 156ms/step - loss: 167.3796 - reconstruction_error: 2.5639 - regularization_error: 90.4620 - val_loss: 825.6542 - val_reconstruction_error: 24.6362 - val_regularization_error: 86.5677
Epoch 261/1000
120/120 [=====] - ETA: 0s - loss: 169.0786 - reconstruction_error: 2.6211 - regularization_error: 90.4465
[2023-12-02 22:53:28.060980]: Reconstructing images for epoch 261 ...
```



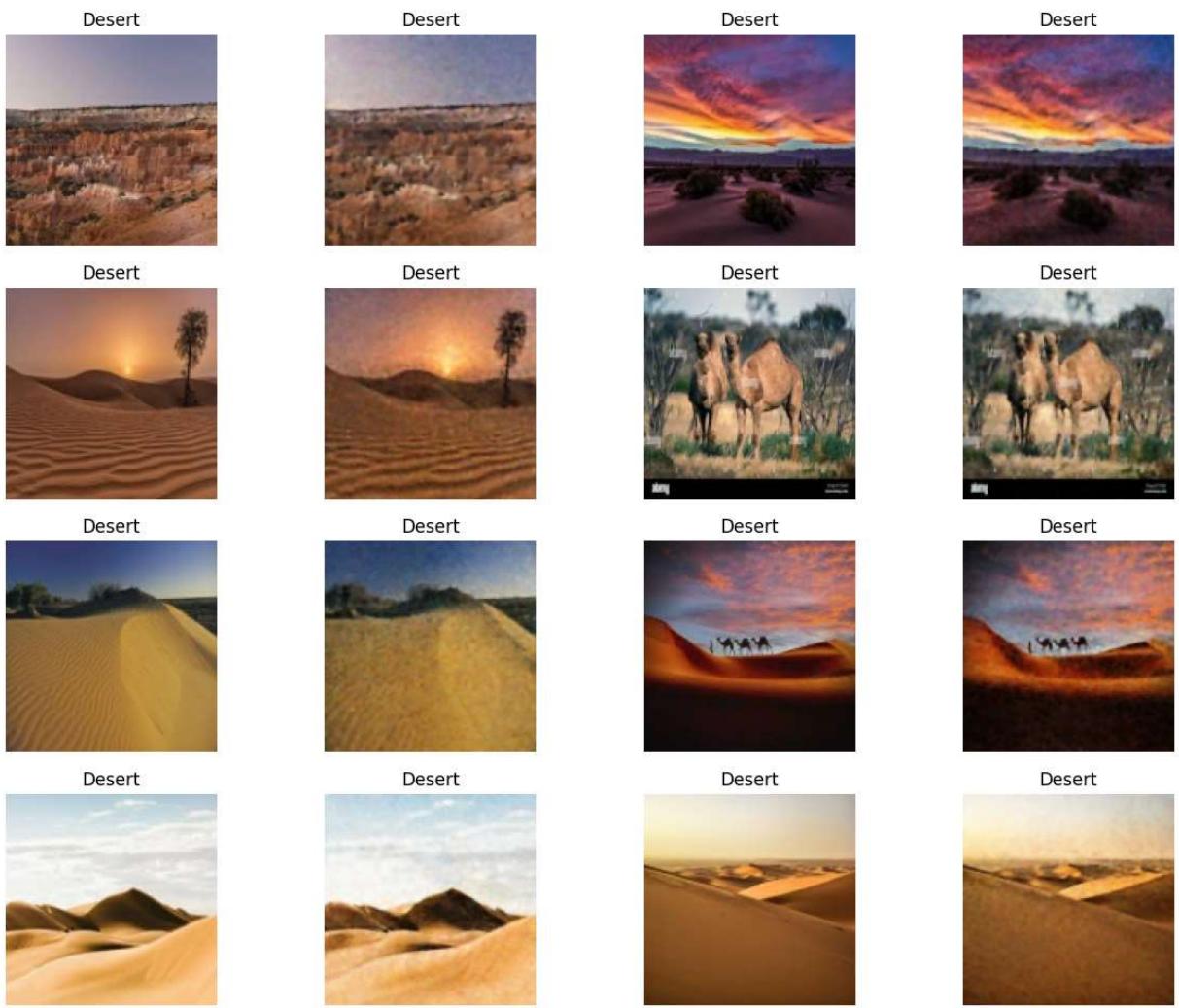
```
120/120 [=====] - 21s 171ms/step - loss: 169.0786 - reconstruction_error: 2.6211 - regularization_error: 90.4465 - val_loss: 830.6219 - val_reconstruction_error: 24.7629 - val_regularization_error: 87.7346
Epoch 262/1000
120/120 [=====] - 19s 155ms/step - loss: 166.9102 - reconstruction_error: 2.5534 - regularization_error: 90.3081 - val_loss: 826.0521 - val_reconstruction_error: 24.6125 - val_regularization_error: 87.6778
Epoch 263/1000
120/120 [=====] - 18s 147ms/step - loss: 166.3360 - reconstruction_error: 2.5306 - regularization_error: 90.4182 - val_loss: 825.5372 - val_reconstruction_error: 24.7038 - val_regularization_error: 84.4228
Epoch 264/1000
120/120 [=====] - 16s 131ms/step - loss: 167.9546 - reconstruction_error: 2.5756 - regularization_error: 90.6857 - val_loss: 836.3917 - val_reconstruction_error: 25.0374 - val_regularization_error: 85.2712
Epoch 265/1000
120/120 [=====] - 18s 151ms/step - loss: 167.1792 - reconstruction_error: 2.5545 - regularization_error: 90.5442 - val_loss: 832.7966 - val_reconstruction_error: 24.8314 - val_regularization_error: 87.8550
Epoch 266/1000
120/120 [=====] - 20s 170ms/step - loss: 163.7552 - reconstruction_error: 2.4654 - regularization_error: 89.7937 - val_loss: 827.1042 - val_reconstruction_error: 24.6380 - val_regularization_error: 87.9647
Epoch 267/1000
120/120 [=====] - 19s 162ms/step - loss: 167.6333 - reconstruction_error: 2.5662 - regularization_error: 90.6463 - val_loss: 837.3061 - val_reconstruction_error: 24.9802 - val_regularization_error: 87.8989
Epoch 268/1000
120/120 [=====] - 21s 167ms/step - loss: 165.3329 - reconstruction_error: 2.5097 - regularization_error: 90.0429 - val_loss: 831.8674 - val_reconstruction_error: 24.9020 - val_regularization_error: 84.8068
Epoch 269/1000
120/120 [=====] - 20s 166ms/step - loss: 166.8147 - reconstruction_error: 2.5527 - regularization_error: 90.2342 - val_loss: 828.0500 - val_reconstruction_error: 24.6986 - val_regularization_error: 87.0910
Epoch 270/1000
120/120 [=====] - 15s 118ms/step - loss: 167.6716 - reconstruction_error: 2.5690 - regularization_error: 90.6014 - val_loss: 831.0678 - val_reconstruction_error: 24.9173 - val_regularization_error: 83.5484
Epoch 271/1000
120/120 [=====] - ETA: 0s - loss: 165.2843 - reconstruction_error: 2.5164 - regularization_error: 89.7932
[2023-12-02 22:56:38.012208]: Reconstructing images for epoch 271 ...
```



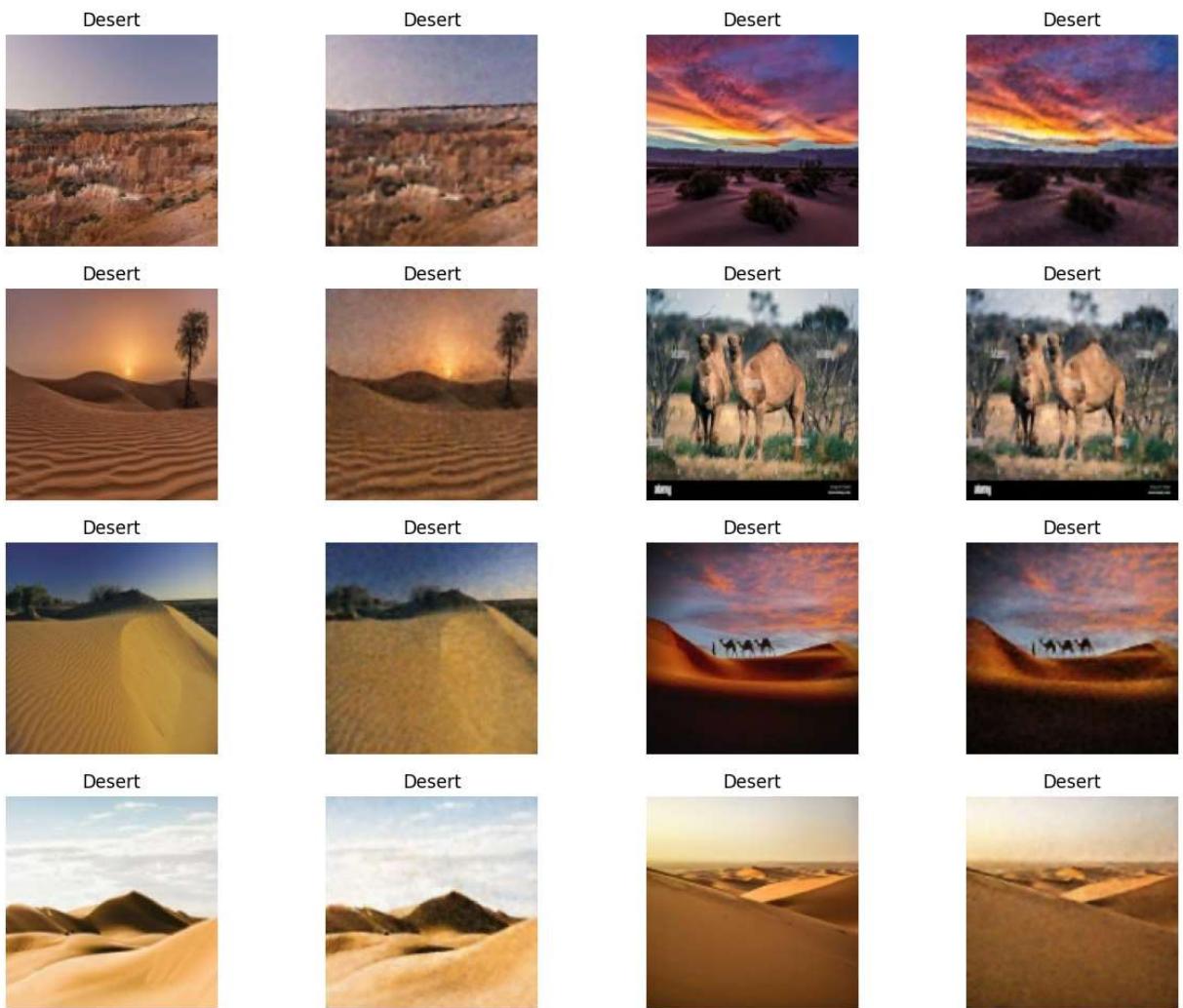
```
120/120 [=====] - 22s 186ms/step - loss: 165.2843 - reconstruction_error: 2.5164 - regularization_error: 89.7932 - val_loss: 825.9278 - val_reconstruction_error: 24.6579 - val_regularization_error: 86.1918
Epoch 272/1000
120/120 [=====] - 19s 157ms/step - loss: 168.3833 - reconstruction_error: 2.5938 - regularization_error: 90.5686 - val_loss: 836.5547 - val_reconstruction_error: 25.0457 - val_regularization_error: 85.1831
Epoch 273/1000
120/120 [=====] - 18s 150ms/step - loss: 167.4990 - reconstruction_error: 2.5737 - regularization_error: 90.2878 - val_loss: 831.0992 - val_reconstruction_error: 24.7997 - val_regularization_error: 87.1090
Epoch 274/1000
120/120 [=====] - 18s 150ms/step - loss: 166.9941 - reconstruction_error: 2.5559 - regularization_error: 90.3165 - val_loss: 822.8773 - val_reconstruction_error: 24.6315 - val_regularization_error: 83.9330
Epoch 275/1000
120/120 [=====] - 16s 137ms/step - loss: 165.8644 - reconstruction_error: 2.5302 - regularization_error: 89.9587 - val_loss: 842.5703 - val_reconstruction_error: 25.2533 - val_regularization_error: 84.9705
Epoch 276/1000
120/120 [=====] - 19s 155ms/step - loss: 163.7615 - reconstruction_error: 2.4608 - regularization_error: 89.9381 - val_loss: 831.4121 - val_reconstruction_error: 24.8934 - val_regularization_error: 84.6116
Epoch 277/1000
120/120 [=====] - 14s 119ms/step - loss: 166.1417 - reconstruction_error: 2.5361 - regularization_error: 90.0579 - val_loss: 822.5898 - val_reconstruction_error: 24.5266 - val_regularization_error: 86.7921
Epoch 278/1000
120/120 [=====] - 17s 143ms/step - loss: 164.7594 - reconstruction_error: 2.4905 - regularization_error: 90.0447 - val_loss: 831.7966 - val_reconstruction_error: 24.8622 - val_regularization_error: 85.9300
Epoch 279/1000
120/120 [=====] - 18s 151ms/step - loss: 169.2786 - reconstruction_error: 2.6273 - regularization_error: 90.4590 - val_loss: 831.6950 - val_reconstruction_error: 24.9144 - val_regularization_error: 84.2644
Epoch 280/1000
120/120 [=====] - 19s 157ms/step - loss: 167.6637 - reconstruction_error: 2.5763 - regularization_error: 90.3742 - val_loss: 837.6508 - val_reconstruction_error: 25.1218 - val_regularization_error: 83.9961
Epoch 281/1000
120/120 [=====] - ETA: 0s - loss: 164.6679 - reconstruction_error: 2.4877 - regularization_error: 90.0362
[2023-12-02 22:59:37.415810]: Reconstructing images for epoch 281 ...
```



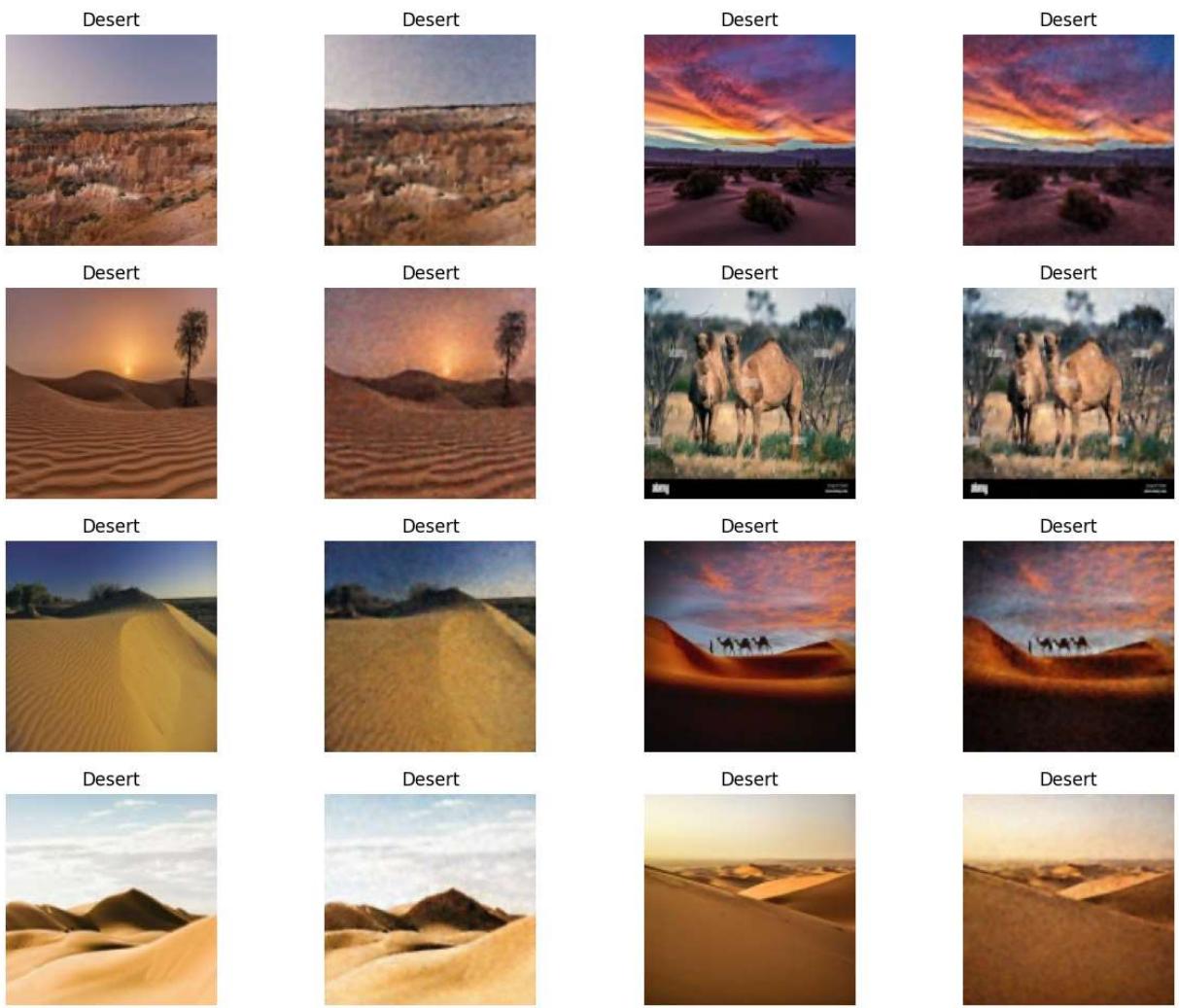
```
120/120 [=====] - 20s 163ms/step - loss: 164.6679 - reconstruction_error: 2.4877 - regularization_error: 90.0362 - val_loss: 839.5865 - val_reconstruction_error: 25.1192 - val_regularization_error: 86.0112
Epoch 282/1000
120/120 [=====] - 20s 168ms/step - loss: 165.7646 - reconstruction_error: 2.5179 - regularization_error: 90.2285 - val_loss: 840.0332 - val_reconstruction_error: 25.0877 - val_regularization_error: 87.4018
Epoch 283/1000
120/120 [=====] - 18s 145ms/step - loss: 168.7854 - reconstruction_error: 2.6065 - regularization_error: 90.5893 - val_loss: 836.6360 - val_reconstruction_error: 25.0563 - val_regularization_error: 84.9467
Epoch 284/1000
120/120 [=====] - 21s 177ms/step - loss: 166.1875 - reconstruction_error: 2.5291 - regularization_error: 90.3136 - val_loss: 847.4921 - val_reconstruction_error: 25.3485 - val_regularization_error: 87.0358
Epoch 285/1000
120/120 [=====] - 19s 162ms/step - loss: 165.7892 - reconstruction_error: 2.5213 - regularization_error: 90.1495 - val_loss: 827.9451 - val_reconstruction_error: 24.6867 - val_regularization_error: 87.3438
Epoch 286/1000
120/120 [=====] - 15s 123ms/step - loss: 163.2817 - reconstruction_error: 2.4587 - regularization_error: 89.5218 - val_loss: 834.0237 - val_reconstruction_error: 24.8766 - val_regularization_error: 87.7246
Epoch 287/1000
120/120 [=====] - 20s 163ms/step - loss: 164.1164 - reconstruction_error: 2.4664 - regularization_error: 90.1249 - val_loss: 831.5511 - val_reconstruction_error: 24.7841 - val_regularization_error: 88.0269
Epoch 288/1000
120/120 [=====] - 16s 130ms/step - loss: 162.5322 - reconstruction_error: 2.4358 - regularization_error: 89.4567 - val_loss: 831.7469 - val_reconstruction_error: 24.8154 - val_regularization_error: 87.2840
Epoch 289/1000
120/120 [=====] - 18s 148ms/step - loss: 167.5313 - reconstruction_error: 2.5813 - regularization_error: 90.0913 - val_loss: 828.3906 - val_reconstruction_error: 24.7730 - val_regularization_error: 85.2000
Epoch 290/1000
120/120 [=====] - 20s 168ms/step - loss: 163.7634 - reconstruction_error: 2.4655 - regularization_error: 89.7979 - val_loss: 835.1127 - val_reconstruction_error: 24.9708 - val_regularization_error: 85.9882
Epoch 291/1000
120/120 [=====] - ETA: 0s - loss: 168.7057 - reconstruction_error: 2.6193 - regularization_error: 90.1259
[2023-12-02 23:02:47.509754]: Reconstructing images for epoch 291 ...
```



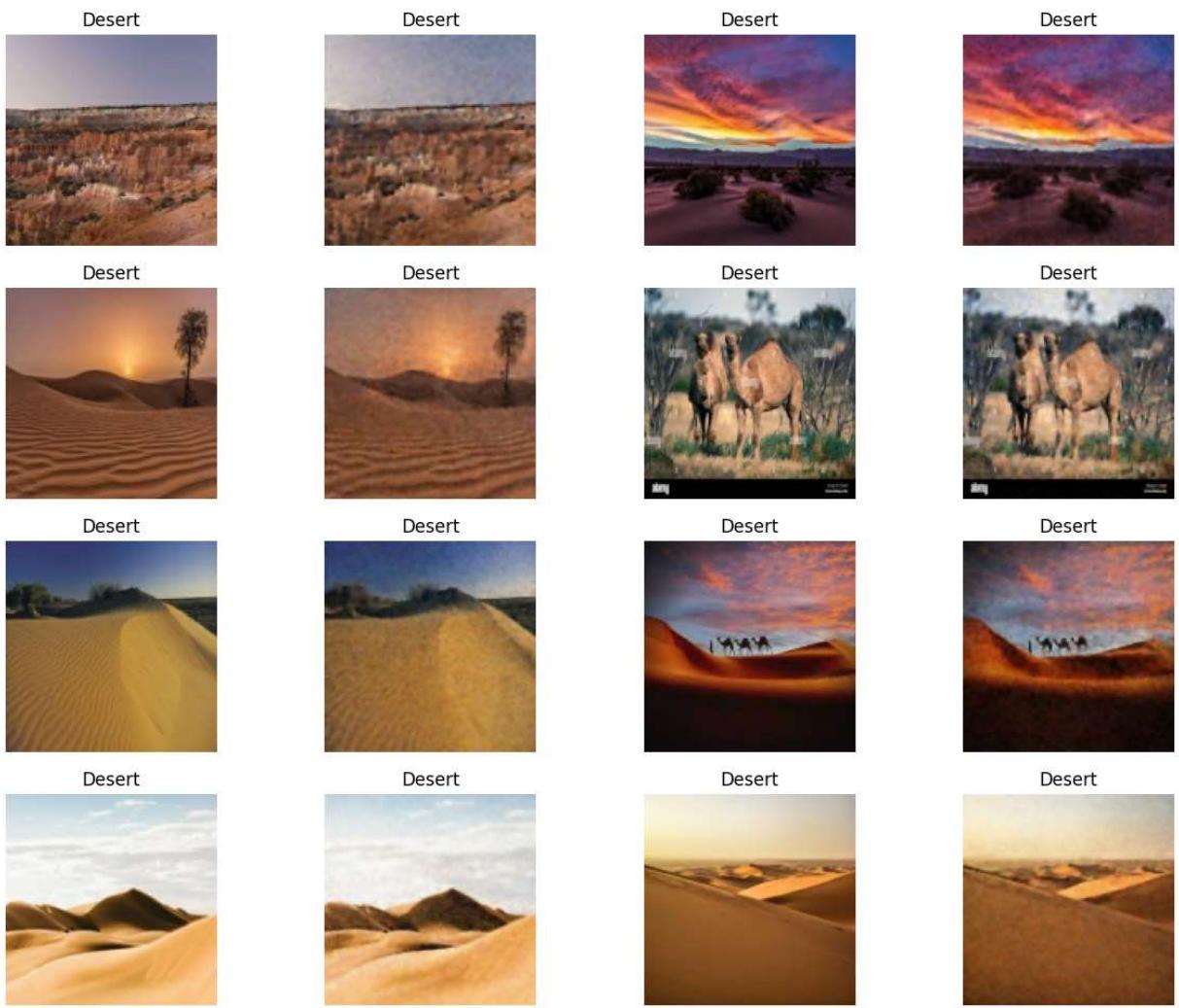
```
120/120 [=====] - 21s 172ms/step - loss: 168.7057 - reconstruction_error: 2.6193 - regularization_error: 90.1259 - val_loss: 827.0106 - val_reconstruction_error: 24.7472 - val_regularization_error: 84.5954
Epoch 292/1000
120/120 [=====] - 16s 130ms/step - loss: 164.8177 - reconstruction_error: 2.4945 - regularization_error: 89.9826 - val_loss: 826.6096 - val_reconstruction_error: 24.7497 - val_regularization_error: 84.1187
Epoch 293/1000
120/120 [=====] - 19s 158ms/step - loss: 161.1004 - reconstruction_error: 2.3915 - regularization_error: 89.3541 - val_loss: 836.1727 - val_reconstruction_error: 24.9804 - val_regularization_error: 86.7616
Epoch 294/1000
120/120 [=====] - 20s 166ms/step - loss: 162.1764 - reconstruction_error: 2.4282 - regularization_error: 89.3314 - val_loss: 832.1819 - val_reconstruction_error: 24.9583 - val_regularization_error: 83.4341
Epoch 295/1000
120/120 [=====] - 15s 128ms/step - loss: 164.0730 - reconstruction_error: 2.4899 - regularization_error: 89.3760 - val_loss: 828.6241 - val_reconstruction_error: 24.6618 - val_regularization_error: 88.7715
Epoch 296/1000
120/120 [=====] - 18s 146ms/step - loss: 167.3311 - reconstruction_error: 2.5656 - regularization_error: 90.3644 - val_loss: 842.7751 - val_reconstruction_error: 25.2023 - val_regularization_error: 86.7074
Epoch 297/1000
120/120 [=====] - 13s 111ms/step - loss: 163.2154 - reconstruction_error: 2.4608 - regularization_error: 89.3906 - val_loss: 832.7315 - val_reconstruction_error: 24.9668 - val_regularization_error: 83.7279
Epoch 298/1000
120/120 [=====] - 19s 162ms/step - loss: 161.9139 - reconstruction_error: 2.4251 - regularization_error: 89.1607 - val_loss: 833.7150 - val_reconstruction_error: 24.9106 - val_regularization_error: 86.3981
Epoch 299/1000
120/120 [=====] - 19s 159ms/step - loss: 160.4650 - reconstruction_error: 2.3753 - regularization_error: 89.2074 - val_loss: 835.3890 - val_reconstruction_error: 24.9350 - val_regularization_error: 87.3393
Epoch 300/1000
120/120 [=====] - 17s 143ms/step - loss: 164.5699 - reconstruction_error: 2.4926 - regularization_error: 89.7929 - val_loss: 832.5075 - val_reconstruction_error: 24.9387 - val_regularization_error: 84.3479
Epoch 301/1000
120/120 [=====] - ETA: 0s - loss: 164.7532 - reconstruction_error: 2.4916 - regularization_error: 90.0067
[2023-12-02 23:05:47.108831]: Reconstructing images for epoch 301 ...
```



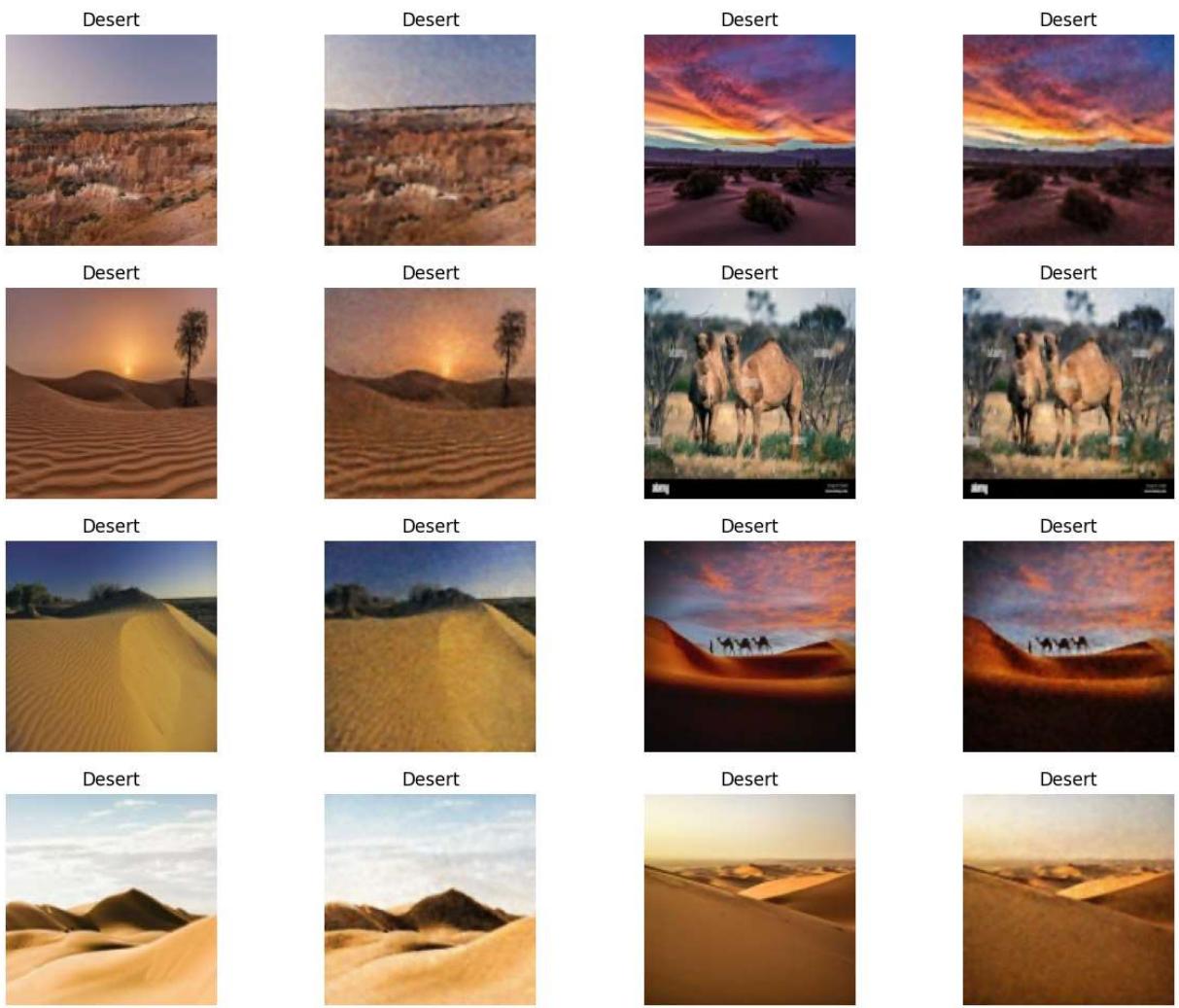
```
120/120 [=====] - 21s 174ms/step - loss: 164.7532 - reconstruction_error: 2.4916 - regularization_error: 90.0067 - val_loss: 837.8019 - val_reconstruction_error: 25.0796 - val_regularization_error: 85.4150
Epoch 302/1000
120/120 [=====] - 18s 149ms/step - loss: 160.5923 - reconstruction_error: 2.3679 - regularization_error: 89.5555 - val_loss: 824.6116 - val_reconstruction_error: 24.6160 - val_regularization_error: 86.1322
Epoch 303/1000
120/120 [=====] - 17s 142ms/step - loss: 161.6568 - reconstruction_error: 2.4093 - regularization_error: 89.3780 - val_loss: 834.8093 - val_reconstruction_error: 24.9859 - val_regularization_error: 85.2316
Epoch 304/1000
120/120 [=====] - 19s 159ms/step - loss: 160.9106 - reconstruction_error: 2.3862 - regularization_error: 89.3232 - val_loss: 834.8076 - val_reconstruction_error: 24.9730 - val_regularization_error: 85.6173
Epoch 305/1000
120/120 [=====] - 17s 142ms/step - loss: 165.3111 - reconstruction_error: 2.5113 - regularization_error: 89.9724 - val_loss: 839.9301 - val_reconstruction_error: 25.0836 - val_regularization_error: 87.4223
Epoch 306/1000
120/120 [=====] - 17s 145ms/step - loss: 163.8658 - reconstruction_error: 2.4719 - regularization_error: 89.7090 - val_loss: 835.9659 - val_reconstruction_error: 25.0536 - val_regularization_error: 84.3573
Epoch 307/1000
120/120 [=====] - 19s 160ms/step - loss: 161.6647 - reconstruction_error: 2.4117 - regularization_error: 89.3124 - val_loss: 830.3345 - val_reconstruction_error: 24.8109 - val_regularization_error: 86.0090
Epoch 308/1000
120/120 [=====] - 16s 130ms/step - loss: 161.6156 - reconstruction_error: 2.4111 - regularization_error: 89.2821 - val_loss: 831.2010 - val_reconstruction_error: 24.8473 - val_regularization_error: 85.7820
Epoch 309/1000
120/120 [=====] - 15s 127ms/step - loss: 162.7698 - reconstruction_error: 2.4438 - regularization_error: 89.4557 - val_loss: 836.9369 - val_reconstruction_error: 25.0598 - val_regularization_error: 85.1424
Epoch 310/1000
120/120 [=====] - 18s 145ms/step - loss: 164.8484 - reconstruction_error: 2.5086 - regularization_error: 89.5896 - val_loss: 835.6477 - val_reconstruction_error: 25.0123 - val_regularization_error: 85.2783
Epoch 311/1000
120/120 [=====] - ETA: 0s - loss: 162.3926 - reconstruction_error: 2.4293 - regularization_error: 89.5124
[2023-12-02 23:08:45.372659]: Reconstructing images for epoch 311 ...
```



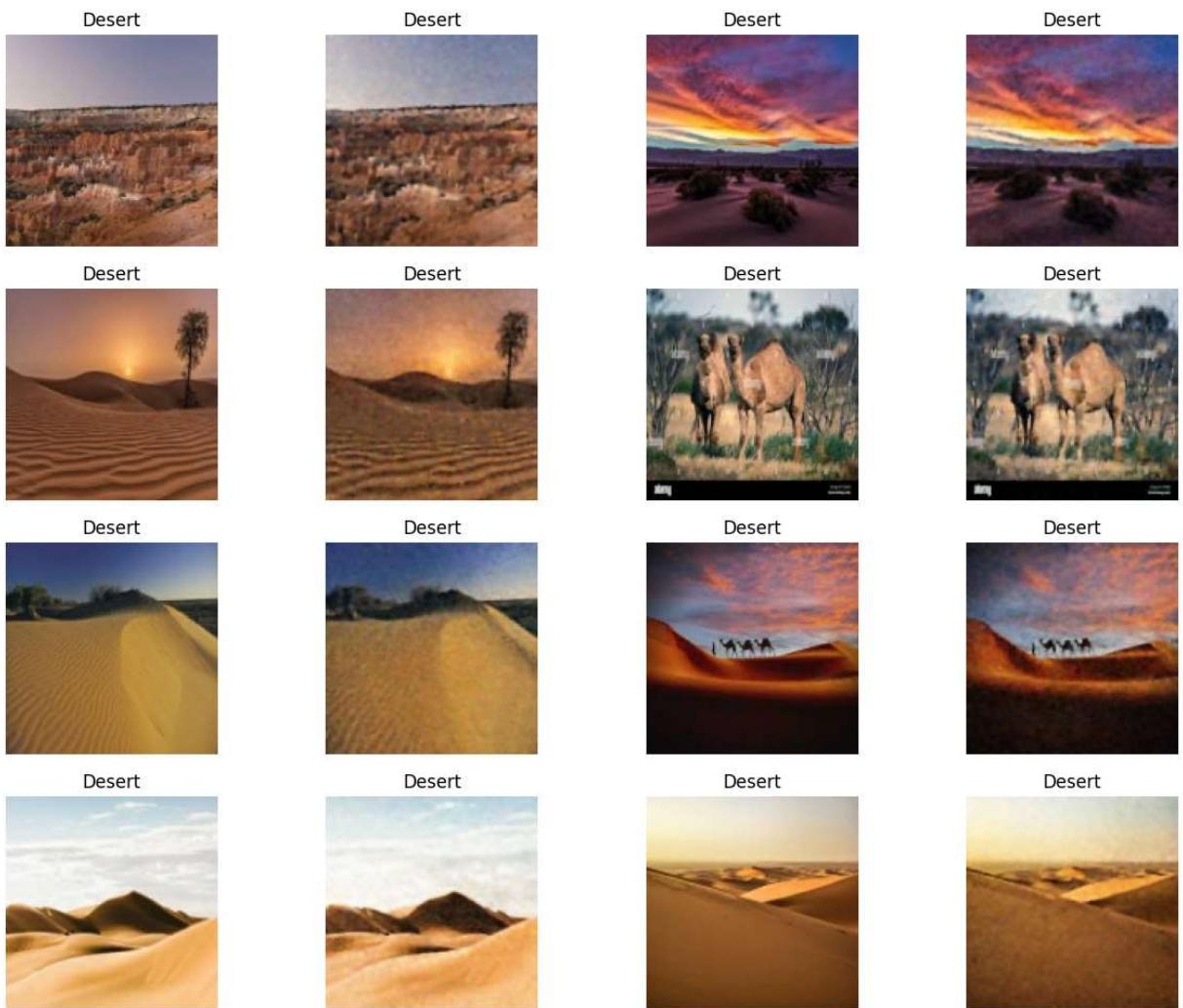
```
120/120 [=====] - 19s 158ms/step - loss: 162.3926 - reconstruction_error: 2.4293 - regularization_error: 89.5124 - val_loss: 837.3864 - val_reconstruction_error: 25.0387 - val_regularization_error: 86.2248
Epoch 312/1000
120/120 [=====] - 17s 143ms/step - loss: 161.8581 - reconstruction_error: 2.4188 - regularization_error: 89.2947 - val_loss: 831.5196 - val_reconstruction_error: 24.7887 - val_regularization_error: 87.8587
Epoch 313/1000
120/120 [=====] - 17s 138ms/step - loss: 160.9453 - reconstruction_error: 2.3881 - regularization_error: 89.3029 - val_loss: 857.4171 - val_reconstruction_error: 25.6551 - val_regularization_error: 87.7650
Epoch 314/1000
120/120 [=====] - 17s 140ms/step - loss: 162.2821 - reconstruction_error: 2.4300 - regularization_error: 89.3821 - val_loss: 835.7067 - val_reconstruction_error: 25.1645 - val_regularization_error: 80.7726
Epoch 315/1000
120/120 [=====] - 19s 155ms/step - loss: 163.0601 - reconstruction_error: 2.4555 - regularization_error: 89.3946 - val_loss: 829.8904 - val_reconstruction_error: 24.8415 - val_regularization_error: 84.6460
Epoch 316/1000
120/120 [=====] - 15s 124ms/step - loss: 166.4952 - reconstruction_error: 2.5520 - regularization_error: 89.9355 - val_loss: 834.4153 - val_reconstruction_error: 24.8367 - val_regularization_error: 89.3138
Epoch 317/1000
120/120 [=====] - 18s 153ms/step - loss: 160.5410 - reconstruction_error: 2.3721 - regularization_error: 89.3778 - val_loss: 828.5279 - val_reconstruction_error: 24.7765 - val_regularization_error: 85.2334
Epoch 318/1000
120/120 [=====] - 19s 156ms/step - loss: 166.1026 - reconstruction_error: 2.5407 - regularization_error: 89.8802 - val_loss: 845.1064 - val_reconstruction_error: 25.3456 - val_regularization_error: 84.7389
Epoch 319/1000
120/120 [=====] - 15s 126ms/step - loss: 162.7181 - reconstruction_error: 2.4456 - regularization_error: 89.3502 - val_loss: 838.7461 - val_reconstruction_error: 25.1347 - val_regularization_error: 84.7041
Epoch 320/1000
120/120 [=====] - 19s 158ms/step - loss: 160.8043 - reconstruction_error: 2.3826 - regularization_error: 89.3266 - val_loss: 839.6292 - val_reconstruction_error: 25.0934 - val_regularization_error: 86.8275
Epoch 321/1000
120/120 [=====] - ETA: 0s - loss: 164.8501 - reconstruction_error: 2.5040 - regularization_error: 89.7306
[2023-12-02 23:11:43.353041]: Reconstructing images for epoch 321 ...
```



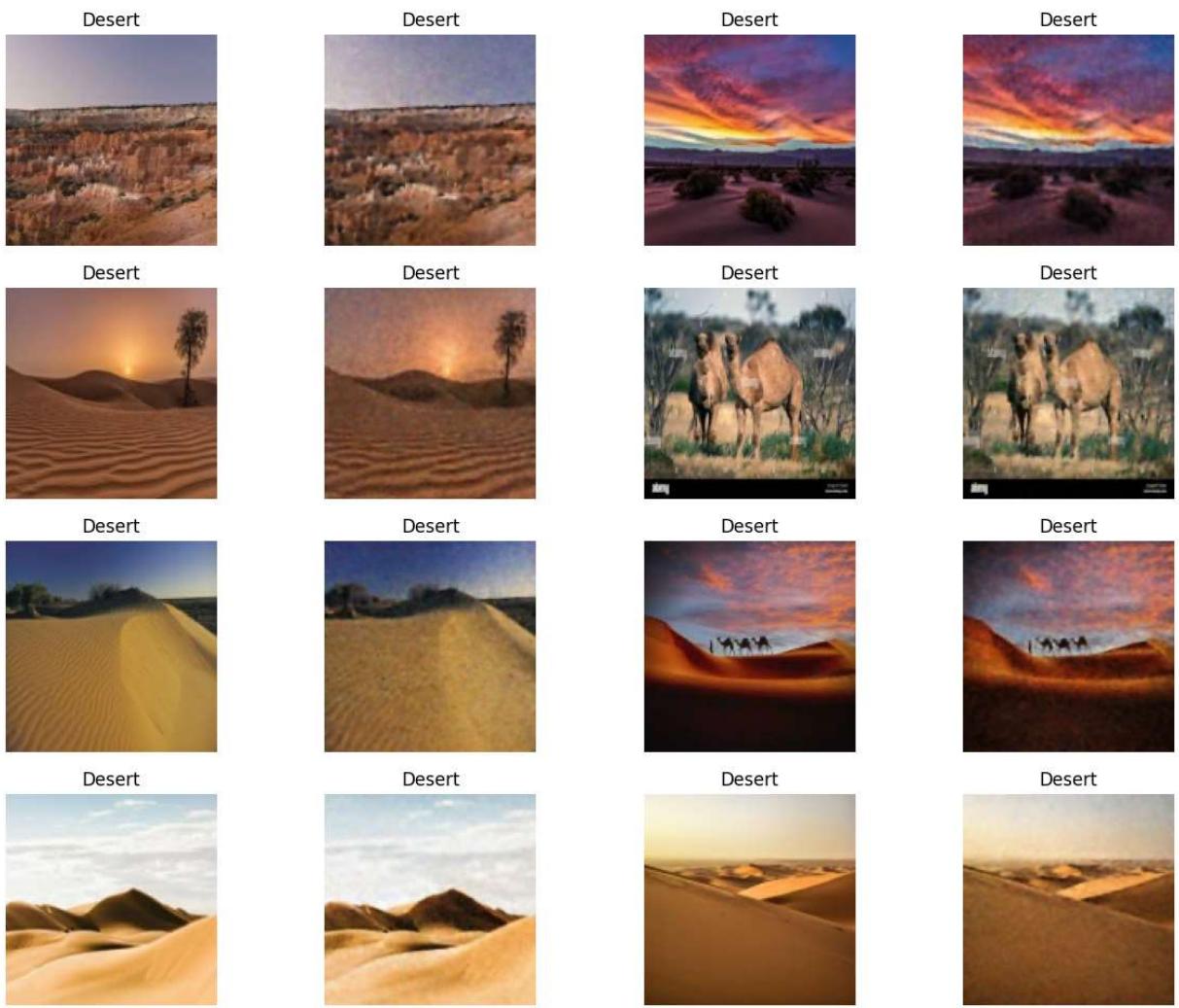
```
120/120 [=====] - 20s 169ms/step - loss: 164.8501 - reconstruction_error: 2.5040 - regularization_error: 89.7306 - val_loss: 834.7087 - val_reconstruction_error: 24.9626 - val_regularization_error: 85.8294
Epoch 322/1000
120/120 [=====] - 16s 133ms/step - loss: 162.0830 - reconstruction_error: 2.4267 - regularization_error: 89.2815 - val_loss: 827.9531 - val_reconstruction_error: 24.8496 - val_regularization_error: 82.4666
Epoch 323/1000
120/120 [=====] - 15s 123ms/step - loss: 164.1093 - reconstruction_error: 2.4855 - regularization_error: 89.5452 - val_loss: 844.3260 - val_reconstruction_error: 25.2411 - val_regularization_error: 87.0939
Epoch 324/1000
120/120 [=====] - 17s 143ms/step - loss: 163.0638 - reconstruction_error: 2.4603 - regularization_error: 89.2562 - val_loss: 834.3077 - val_reconstruction_error: 25.0308 - val_regularization_error: 83.3847
Epoch 325/1000
120/120 [=====] - 17s 143ms/step - loss: 159.8180 - reconstruction_error: 2.3577 - regularization_error: 89.0880 - val_loss: 846.6833 - val_reconstruction_error: 25.4667 - val_regularization_error: 82.6812
Epoch 326/1000
120/120 [=====] - 15s 121ms/step - loss: 161.7920 - reconstruction_error: 2.4267 - regularization_error: 88.9897 - val_loss: 835.8987 - val_reconstruction_error: 25.0914 - val_regularization_error: 83.1574
Epoch 327/1000
120/120 [=====] - 20s 165ms/step - loss: 159.9611 - reconstruction_error: 2.3775 - regularization_error: 88.6368 - val_loss: 842.4089 - val_reconstruction_error: 25.2569 - val_regularization_error: 84.7027
Epoch 328/1000
120/120 [=====] - 16s 133ms/step - loss: 160.3144 - reconstruction_error: 2.3802 - regularization_error: 88.9093 - val_loss: 827.5903 - val_reconstruction_error: 24.8235 - val_regularization_error: 82.8850
Epoch 329/1000
120/120 [=====] - 19s 158ms/step - loss: 159.2370 - reconstruction_error: 2.3518 - regularization_error: 88.6829 - val_loss: 840.1476 - val_reconstruction_error: 25.1551 - val_regularization_error: 85.4943
Epoch 330/1000
120/120 [=====] - 16s 137ms/step - loss: 161.0535 - reconstruction_error: 2.4112 - regularization_error: 88.7166 - val_loss: 861.8084 - val_reconstruction_error: 25.8543 - val_regularization_error: 86.1806
Epoch 331/1000
120/120 [=====] - ETA: 0s - loss: 161.5679 - reconstruction_error: 2.4229 - regularization_error: 88.8801
[2023-12-02 23:14:38.179315]: Reconstructing images for epoch 331 ...
```



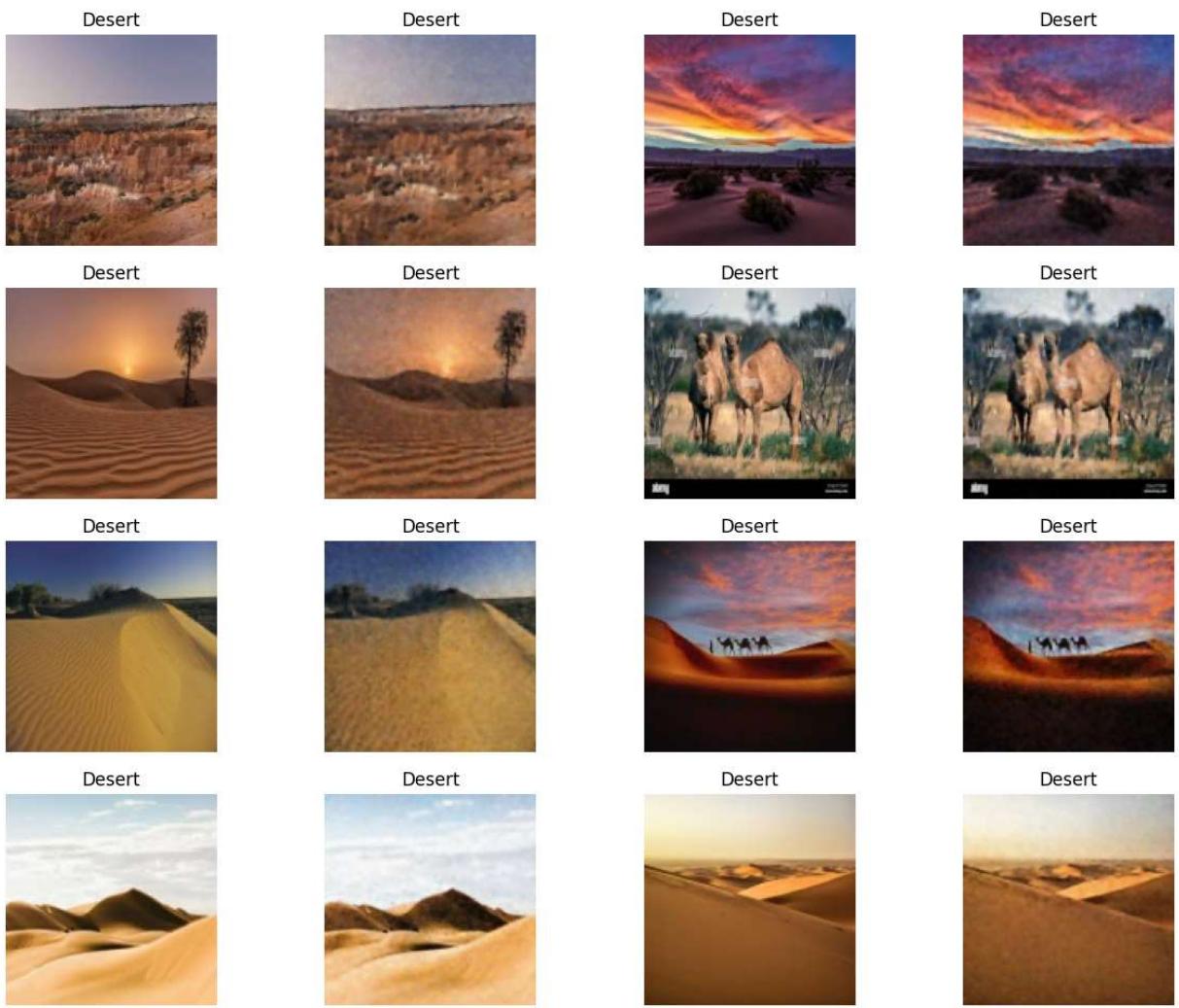
```
120/120 [=====] - 21s 172ms/step - loss: 161.5679 - reconstruction_error: 2.4229 - regularization_error: 88.8801 - val_loss: 829.4927 - val_reconstruction_error: 24.8551 - val_regularization_error: 83.8392
Epoch 332/1000
120/120 [=====] - 20s 163ms/step - loss: 158.9981 - reconstruction_error: 2.3372 - regularization_error: 88.8815 - val_loss: 833.7484 - val_reconstruction_error: 24.9486 - val_regularization_error: 85.2896
Epoch 333/1000
120/120 [=====] - 16s 130ms/step - loss: 161.6464 - reconstruction_error: 2.4167 - regularization_error: 89.1450 - val_loss: 836.7733 - val_reconstruction_error: 24.9859 - val_regularization_error: 87.1967
Epoch 334/1000
120/120 [=====] - 17s 138ms/step - loss: 161.0544 - reconstruction_error: 2.4096 - regularization_error: 88.7657 - val_loss: 833.5778 - val_reconstruction_error: 25.0268 - val_regularization_error: 82.7740
Epoch 335/1000
120/120 [=====] - 14s 120ms/step - loss: 160.9014 - reconstruction_error: 2.3972 - regularization_error: 88.9854 - val_loss: 835.6720 - val_reconstruction_error: 25.0471 - val_regularization_error: 84.2582
Epoch 336/1000
120/120 [=====] - 18s 149ms/step - loss: 160.0477 - reconstruction_error: 2.3825 - regularization_error: 88.5729 - val_loss: 834.7293 - val_reconstruction_error: 25.0007 - val_regularization_error: 84.7069
Epoch 337/1000
120/120 [=====] - 18s 150ms/step - loss: 160.0380 - reconstruction_error: 2.3672 - regularization_error: 89.0220 - val_loss: 841.1207 - val_reconstruction_error: 25.1971 - val_regularization_error: 85.2086
Epoch 338/1000
120/120 [=====] - 16s 133ms/step - loss: 162.0215 - reconstruction_error: 2.4180 - regularization_error: 89.4812 - val_loss: 831.5397 - val_reconstruction_error: 24.9407 - val_regularization_error: 83.3188
Epoch 339/1000
120/120 [=====] - 16s 134ms/step - loss: 164.1273 - reconstruction_error: 2.4922 - regularization_error: 89.3610 - val_loss: 845.4512 - val_reconstruction_error: 25.3178 - val_regularization_error: 85.9174
Epoch 340/1000
120/120 [=====] - 18s 148ms/step - loss: 158.7602 - reconstruction_error: 2.3296 - regularization_error: 88.8730 - val_loss: 846.4152 - val_reconstruction_error: 25.3852 - val_regularization_error: 84.8599
Epoch 341/1000
120/120 [=====] - ETA: 0s - loss: 160.9973 - reconstruction_error: 2.3972 - regularization_error: 89.0821
[2023-12-02 23:17:35.164192]: Reconstructing images for epoch 341 ...
```



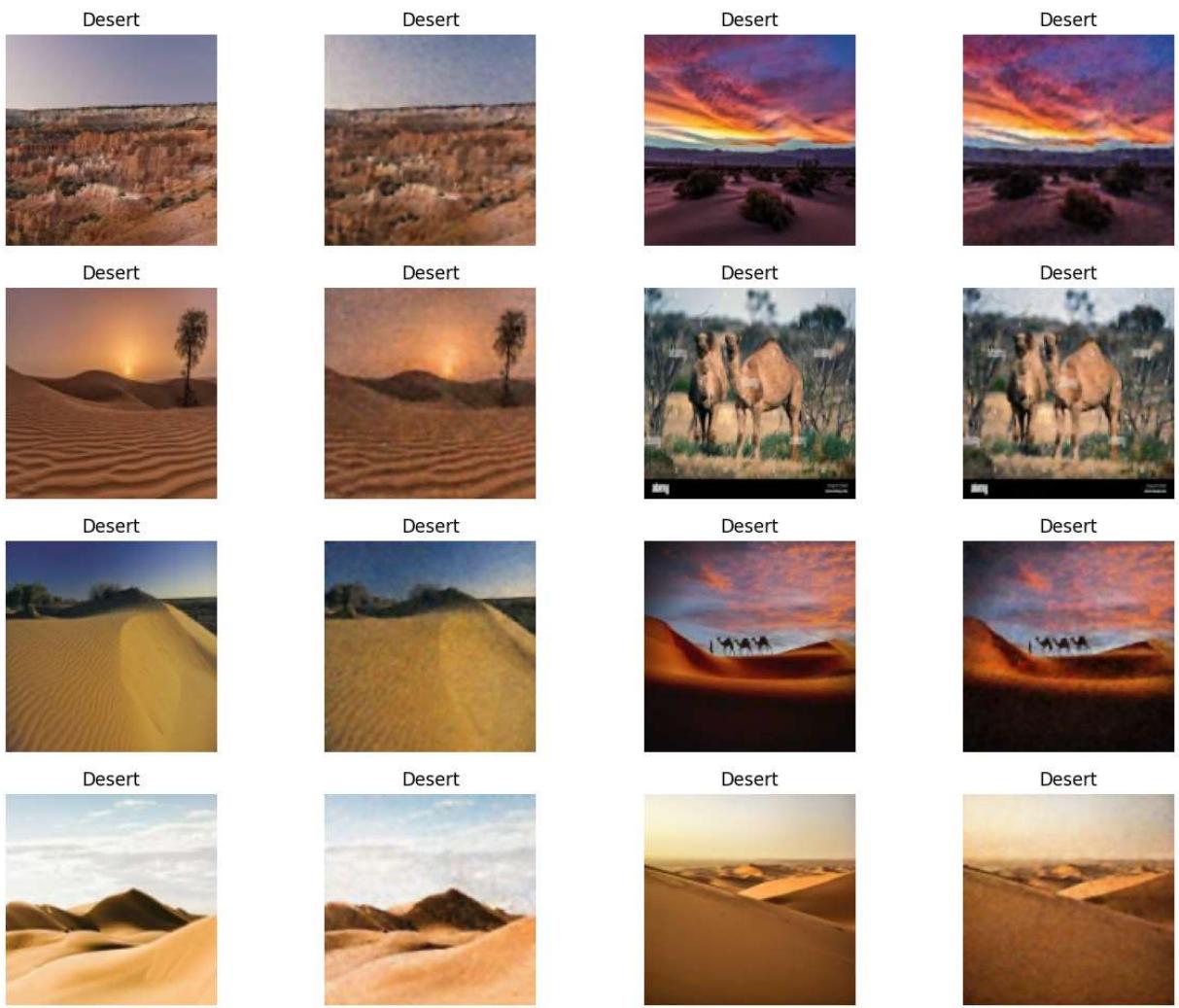
```
120/120 [=====] - 21s 179ms/step - loss: 160.9973 - reconstruction_error: 2.3972 - regularization_error: 89.0821 - val_loss: 850.3934 - val_reconstruction_error: 25.5195 - val_regularization_error: 84.8095
Epoch 342/1000
120/120 [=====] - 17s 146ms/step - loss: 159.6006 - reconstruction_error: 2.3543 - regularization_error: 88.9726 - val_loss: 843.7663 - val_reconstruction_error: 25.2738 - val_regularization_error: 85.5532
Epoch 343/1000
120/120 [=====] - 19s 160ms/step - loss: 158.0833 - reconstruction_error: 2.3181 - regularization_error: 88.5401 - val_loss: 837.4777 - val_reconstruction_error: 25.0601 - val_regularization_error: 85.6752
Epoch 344/1000
120/120 [=====] - 17s 141ms/step - loss: 159.6953 - reconstruction_error: 2.3624 - regularization_error: 88.8231 - val_loss: 838.0359 - val_reconstruction_error: 25.0540 - val_regularization_error: 86.4174
Epoch 345/1000
120/120 [=====] - 17s 142ms/step - loss: 159.4069 - reconstruction_error: 2.3537 - regularization_error: 88.7971 - val_loss: 835.5081 - val_reconstruction_error: 25.0748 - val_regularization_error: 83.2643
Epoch 346/1000
120/120 [=====] - 18s 149ms/step - loss: 161.6647 - reconstruction_error: 2.4230 - regularization_error: 88.9744 - val_loss: 841.2819 - val_reconstruction_error: 25.2704 - val_regularization_error: 83.1706
Epoch 347/1000
120/120 [=====] - 17s 137ms/step - loss: 161.6229 - reconstruction_error: 2.4165 - regularization_error: 89.1291 - val_loss: 833.6133 - val_reconstruction_error: 24.9328 - val_regularization_error: 85.6301
Epoch 348/1000
120/120 [=====] - 16s 134ms/step - loss: 163.7122 - reconstruction_error: 2.4759 - regularization_error: 89.4359 - val_loss: 835.5842 - val_reconstruction_error: 25.0303 - val_regularization_error: 84.6749
Epoch 349/1000
120/120 [=====] - 20s 165ms/step - loss: 160.6807 - reconstruction_error: 2.3900 - regularization_error: 88.9810 - val_loss: 837.2484 - val_reconstruction_error: 25.0566 - val_regularization_error: 85.5509
Epoch 350/1000
120/120 [=====] - 18s 146ms/step - loss: 159.0923 - reconstruction_error: 2.3381 - regularization_error: 88.9502 - val_loss: 840.2337 - val_reconstruction_error: 25.1383 - val_regularization_error: 86.0837
Epoch 351/1000
120/120 [=====] - ETA: 0s - loss: 158.0016 - reconstruction_error: 2.3149 - regularization_error: 88.5556
[2023-12-02 23:20:36.130570]: Reconstructing images for epoch 351 ...
```



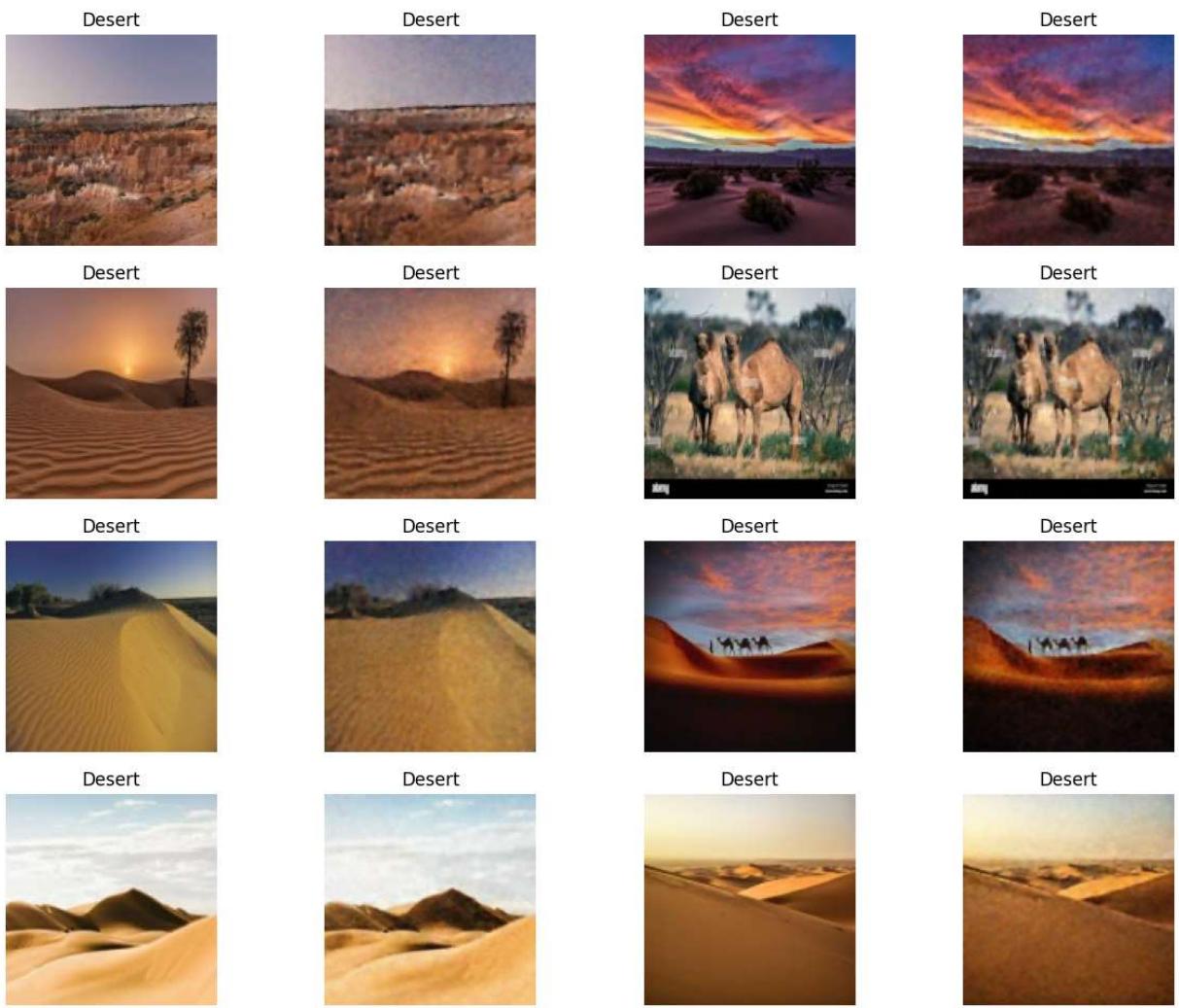
```
120/120 [=====] - 19s 159ms/step - loss: 158.0016 - reconstruction_error: 2.3149 - regularization_error: 88.5556 - val_loss: 845.5602 - val_reconstruction_error: 25.2982 - val_regularization_error: 86.6142
Epoch 352/1000
120/120 [=====] - 17s 143ms/step - loss: 158.1696 - reconstruction_error: 2.3139 - regularization_error: 88.7511 - val_loss: 836.4223 - val_reconstruction_error: 25.0151 - val_regularization_error: 85.9703
Epoch 353/1000
120/120 [=====] - 17s 144ms/step - loss: 157.2985 - reconstruction_error: 2.2949 - regularization_error: 88.4503 - val_loss: 845.2153 - val_reconstruction_error: 25.3679 - val_regularization_error: 84.1787
Epoch 354/1000
120/120 [=====] - 16s 134ms/step - loss: 157.6183 - reconstruction_error: 2.3103 - regularization_error: 88.3098 - val_loss: 839.5695 - val_reconstruction_error: 25.1781 - val_regularization_error: 84.2263
Epoch 355/1000
120/120 [=====] - 16s 131ms/step - loss: 156.6265 - reconstruction_error: 2.2752 - regularization_error: 88.3695 - val_loss: 836.4109 - val_reconstruction_error: 25.0945 - val_regularization_error: 83.5768
Epoch 356/1000
120/120 [=====] - 18s 150ms/step - loss: 158.3952 - reconstruction_error: 2.3245 - regularization_error: 88.6599 - val_loss: 853.5609 - val_reconstruction_error: 25.6983 - val_regularization_error: 82.6129
Epoch 357/1000
120/120 [=====] - 19s 157ms/step - loss: 158.0679 - reconstruction_error: 2.3201 - regularization_error: 88.4641 - val_loss: 845.6796 - val_reconstruction_error: 25.4374 - val_regularization_error: 82.5580
Epoch 358/1000
120/120 [=====] - 20s 164ms/step - loss: 164.0914 - reconstruction_error: 2.4949 - regularization_error: 89.2442 - val_loss: 854.1833 - val_reconstruction_error: 25.6585 - val_regularization_error: 84.4274
Epoch 359/1000
120/120 [=====] - 19s 154ms/step - loss: 165.7025 - reconstruction_error: 2.5314 - regularization_error: 89.7592 - val_loss: 842.5728 - val_reconstruction_error: 25.2592 - val_regularization_error: 84.7969
Epoch 360/1000
120/120 [=====] - 16s 132ms/step - loss: 158.6751 - reconstruction_error: 2.3381 - regularization_error: 88.5325 - val_loss: 830.4547 - val_reconstruction_error: 24.8510 - val_regularization_error: 84.9249
Epoch 361/1000
120/120 [=====] - ETA: 0s - loss: 158.7344 - reconstruction_error: 2.3430 - regularization_error: 88.4452
[2023-12-02 23:23:37.967870]: Reconstructing images for epoch 361 ...
```



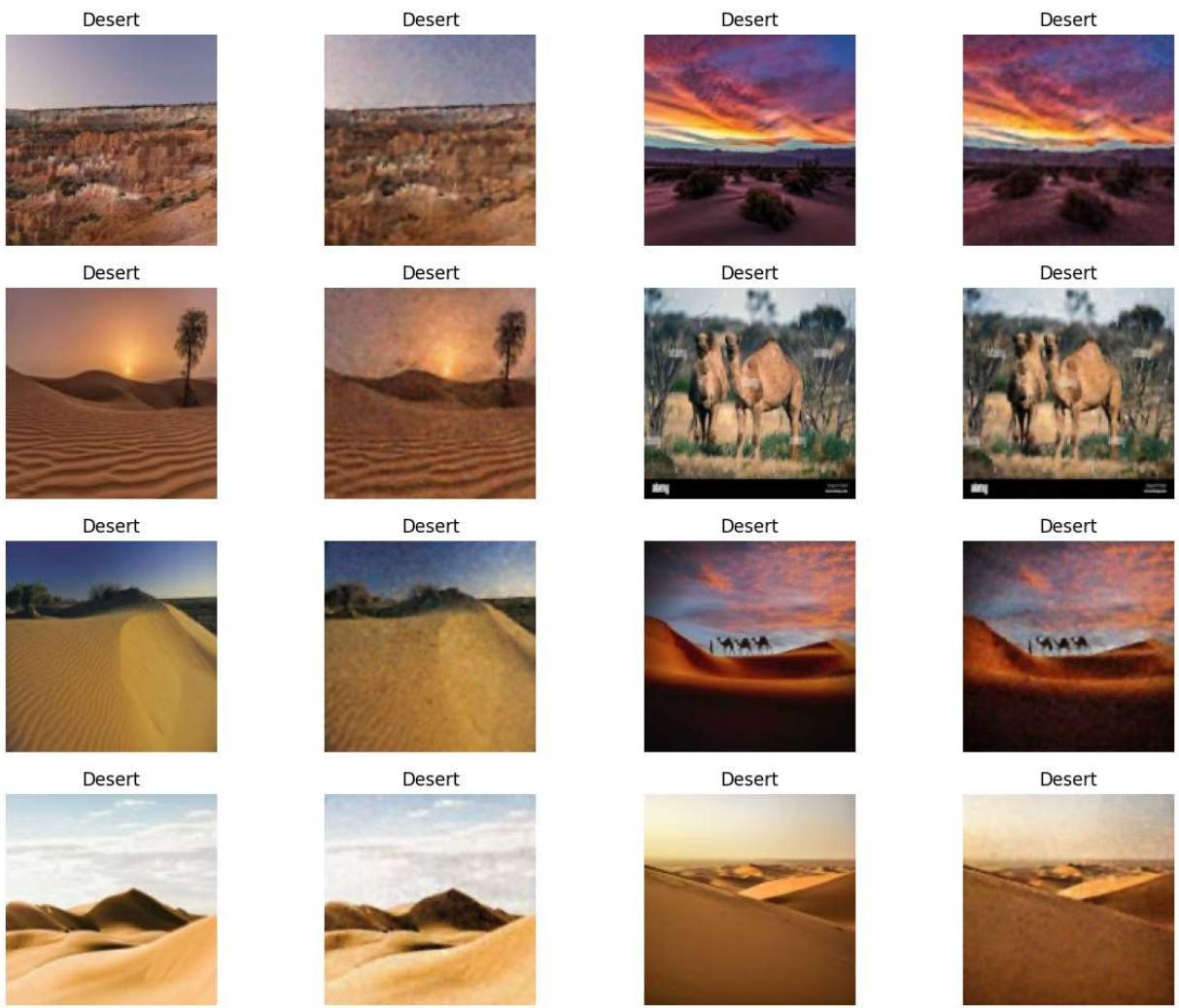
```
120/120 [=====] - 23s 191ms/step - loss: 158.7344 - reconstruction_error: 2.3430 - regularization_error: 88.4452 - val_loss: 848.5263 - val_reconstruction_error: 25.5194 - val_regularization_error: 82.9439
Epoch 362/1000
120/120 [=====] - 21s 172ms/step - loss: 157.9374 - reconstruction_error: 2.3166 - regularization_error: 88.4404 - val_loss: 846.7243 - val_reconstruction_error: 25.3980 - val_regularization_error: 84.7857
Epoch 363/1000
120/120 [=====] - 17s 139ms/step - loss: 158.9845 - reconstruction_error: 2.3429 - regularization_error: 88.6964 - val_loss: 840.6511 - val_reconstruction_error: 25.1626 - val_regularization_error: 85.7741
Epoch 364/1000
120/120 [=====] - 17s 145ms/step - loss: 157.3523 - reconstruction_error: 2.3012 - regularization_error: 88.3172 - val_loss: 849.6681 - val_reconstruction_error: 25.5502 - val_regularization_error: 83.1620
Epoch 365/1000
120/120 [=====] - 16s 137ms/step - loss: 160.7145 - reconstruction_error: 2.3997 - regularization_error: 88.7225 - val_loss: 838.4052 - val_reconstruction_error: 25.2026 - val_regularization_error: 82.3274
Epoch 366/1000
120/120 [=====] - 16s 134ms/step - loss: 156.5647 - reconstruction_error: 2.2752 - regularization_error: 88.3085 - val_loss: 836.5439 - val_reconstruction_error: 25.0595 - val_regularization_error: 84.7588
Epoch 367/1000
120/120 [=====] - 16s 131ms/step - loss: 158.3288 - reconstruction_error: 2.3242 - regularization_error: 88.6019 - val_loss: 845.1277 - val_reconstruction_error: 25.4172 - val_regularization_error: 82.6115
Epoch 368/1000
120/120 [=====] - 18s 147ms/step - loss: 157.6448 - reconstruction_error: 2.3164 - regularization_error: 88.1517 - val_loss: 849.7776 - val_reconstruction_error: 25.4431 - val_regularization_error: 86.4833
Epoch 369/1000
120/120 [=====] - 18s 150ms/step - loss: 159.6351 - reconstruction_error: 2.3646 - regularization_error: 88.6985 - val_loss: 843.7751 - val_reconstruction_error: 25.3557 - val_regularization_error: 83.1037
Epoch 370/1000
120/120 [=====] - 20s 163ms/step - loss: 158.9447 - reconstruction_error: 2.3450 - regularization_error: 88.5933 - val_loss: 843.2261 - val_reconstruction_error: 25.2689 - val_regularization_error: 85.1577
Epoch 371/1000
120/120 [=====] - ETA: 0s - loss: 158.7944 - reconstruction_error: 2.3409 - regularization_error: 88.5680
[2023-12-02 23:26:37.997082]: Reconstructing images for epoch 371 ...
```



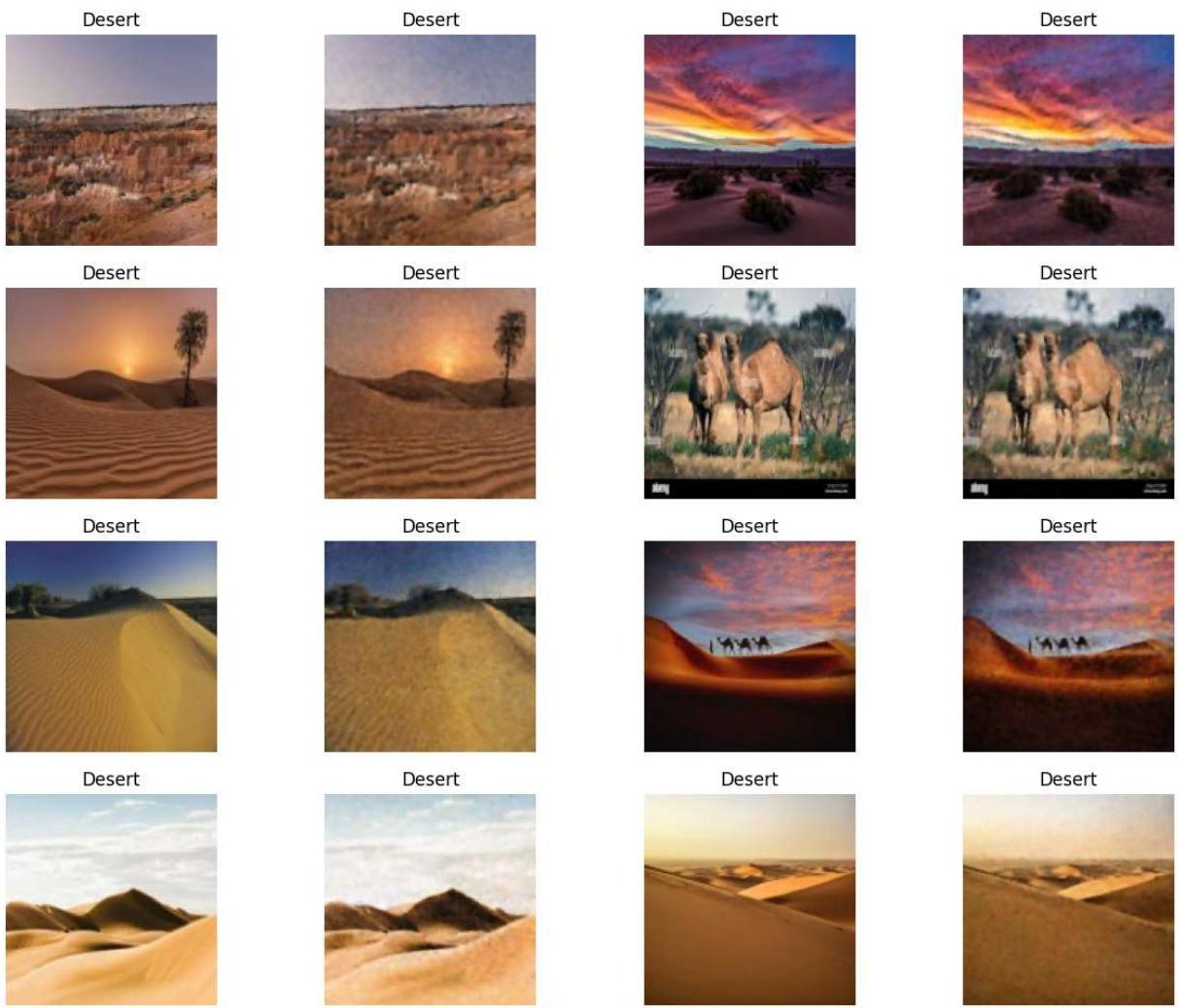
```
120/120 [=====] - 20s 166ms/step - loss: 158.7944 - reconstruction_error: 2.3409 - regularization_error: 88.5680 - val_loss: 849.6139 - val_reconstruction_error: 25.5351 - val_regularization_error: 83.5613
Epoch 372/1000
120/120 [=====] - 17s 138ms/step - loss: 158.3777 - reconstruction_error: 2.3266 - regularization_error: 88.5791 - val_loss: 836.7135 - val_reconstruction_error: 25.0488 - val_regularization_error: 85.2486
Epoch 373/1000
120/120 [=====] - 20s 162ms/step - loss: 157.8067 - reconstruction_error: 2.3102 - regularization_error: 88.4997 - val_loss: 852.0871 - val_reconstruction_error: 25.5546 - val_regularization_error: 85.4492
Epoch 374/1000
120/120 [=====] - 17s 143ms/step - loss: 157.3443 - reconstruction_error: 2.3045 - regularization_error: 88.2079 - val_loss: 853.3851 - val_reconstruction_error: 25.5897 - val_regularization_error: 85.6933
Epoch 375/1000
120/120 [=====] - 19s 156ms/step - loss: 156.9457 - reconstruction_error: 2.2975 - regularization_error: 88.0204 - val_loss: 836.0742 - val_reconstruction_error: 25.0593 - val_regularization_error: 84.2963
Epoch 376/1000
120/120 [=====] - 16s 134ms/step - loss: 155.0579 - reconstruction_error: 2.2397 - regularization_error: 87.8680 - val_loss: 839.0850 - val_reconstruction_error: 25.1785 - val_regularization_error: 83.7295
Epoch 377/1000
120/120 [=====] - 18s 147ms/step - loss: 159.0233 - reconstruction_error: 2.3448 - regularization_error: 88.6803 - val_loss: 839.9019 - val_reconstruction_error: 25.2143 - val_regularization_error: 83.4718
Epoch 378/1000
120/120 [=====] - 18s 145ms/step - loss: 156.8111 - reconstruction_error: 2.2866 - regularization_error: 88.2128 - val_loss: 844.2937 - val_reconstruction_error: 25.4302 - val_regularization_error: 81.3868
Epoch 379/1000
120/120 [=====] - 18s 149ms/step - loss: 158.6771 - reconstruction_error: 2.3381 - regularization_error: 88.5338 - val_loss: 843.4016 - val_reconstruction_error: 25.3558 - val_regularization_error: 82.7277
Epoch 380/1000
120/120 [=====] - 20s 165ms/step - loss: 158.8350 - reconstruction_error: 2.3402 - regularization_error: 88.6294 - val_loss: 840.5087 - val_reconstruction_error: 25.3031 - val_regularization_error: 81.4171
Epoch 381/1000
120/120 [=====] - ETA: 0s - loss: 156.1055 - reconstruction_error: 2.2636 - regularization_error: 88.1978
[2023-12-02 23:29:42.604357]: Reconstructing images for epoch 381 ...
```



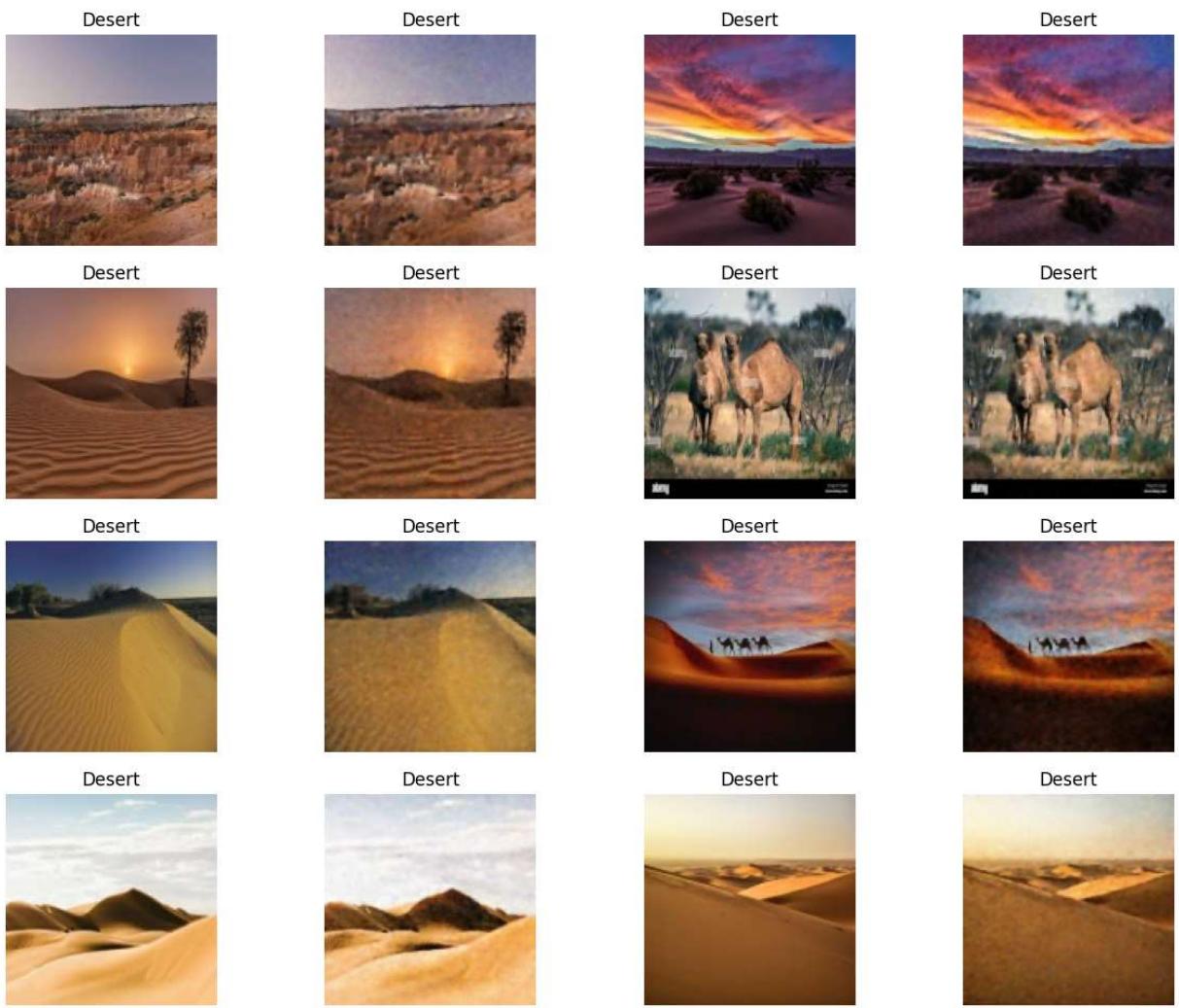
```
120/120 [=====] - 20s 166ms/step - loss: 156.1055 - reconstruction_error: 2.2636 - regularization_error: 88.1978 - val_loss: 839.4559 - val_reconstruction_error: 25.2405 - val_regularization_error: 82.2394
Epoch 382/1000
120/120 [=====] - 16s 130ms/step - loss: 158.3432 - reconstruction_error: 2.3285 - regularization_error: 88.4876 - val_loss: 843.5919 - val_reconstruction_error: 25.2586 - val_regularization_error: 85.8323
Epoch 383/1000
120/120 [=====] - 20s 166ms/step - loss: 156.5339 - reconstruction_error: 2.2765 - regularization_error: 88.2397 - val_loss: 849.7585 - val_reconstruction_error: 25.6055 - val_regularization_error: 81.5925
Epoch 384/1000
120/120 [=====] - 18s 144ms/step - loss: 157.6871 - reconstruction_error: 2.3153 - regularization_error: 88.2286 - val_loss: 839.5560 - val_reconstruction_error: 25.1778 - val_regularization_error: 84.2233
Epoch 385/1000
120/120 [=====] - 17s 143ms/step - loss: 157.3822 - reconstruction_error: 2.3061 - regularization_error: 88.2002 - val_loss: 853.1236 - val_reconstruction_error: 25.5768 - val_regularization_error: 85.8188
Epoch 386/1000
120/120 [=====] - 17s 138ms/step - loss: 155.9511 - reconstruction_error: 2.2555 - regularization_error: 88.2846 - val_loss: 845.5705 - val_reconstruction_error: 25.2847 - val_regularization_error: 87.0282
Epoch 387/1000
120/120 [=====] - 19s 156ms/step - loss: 157.7957 - reconstruction_error: 2.3214 - regularization_error: 88.1548 - val_loss: 841.2754 - val_reconstruction_error: 25.2219 - val_regularization_error: 84.6178
Epoch 388/1000
120/120 [=====] - 15s 128ms/step - loss: 156.7599 - reconstruction_error: 2.2884 - regularization_error: 88.1085 - val_loss: 843.5931 - val_reconstruction_error: 25.3529 - val_regularization_error: 83.0063
Epoch 389/1000
120/120 [=====] - 17s 139ms/step - loss: 156.9378 - reconstruction_error: 2.2958 - regularization_error: 88.0639 - val_loss: 843.4931 - val_reconstruction_error: 25.3748 - val_regularization_error: 82.2486
Epoch 390/1000
120/120 [=====] - 16s 136ms/step - loss: 156.3313 - reconstruction_error: 2.2755 - regularization_error: 88.0674 - val_loss: 852.8640 - val_reconstruction_error: 25.6554 - val_regularization_error: 83.2009
Epoch 391/1000
120/120 [=====] - ETA: 0s - loss: 156.9650 - reconstruction_error: 2.2924 - regularization_error: 88.1931
[2023-12-02 23:32:37.854789]: Reconstructing images for epoch 391 ...
```



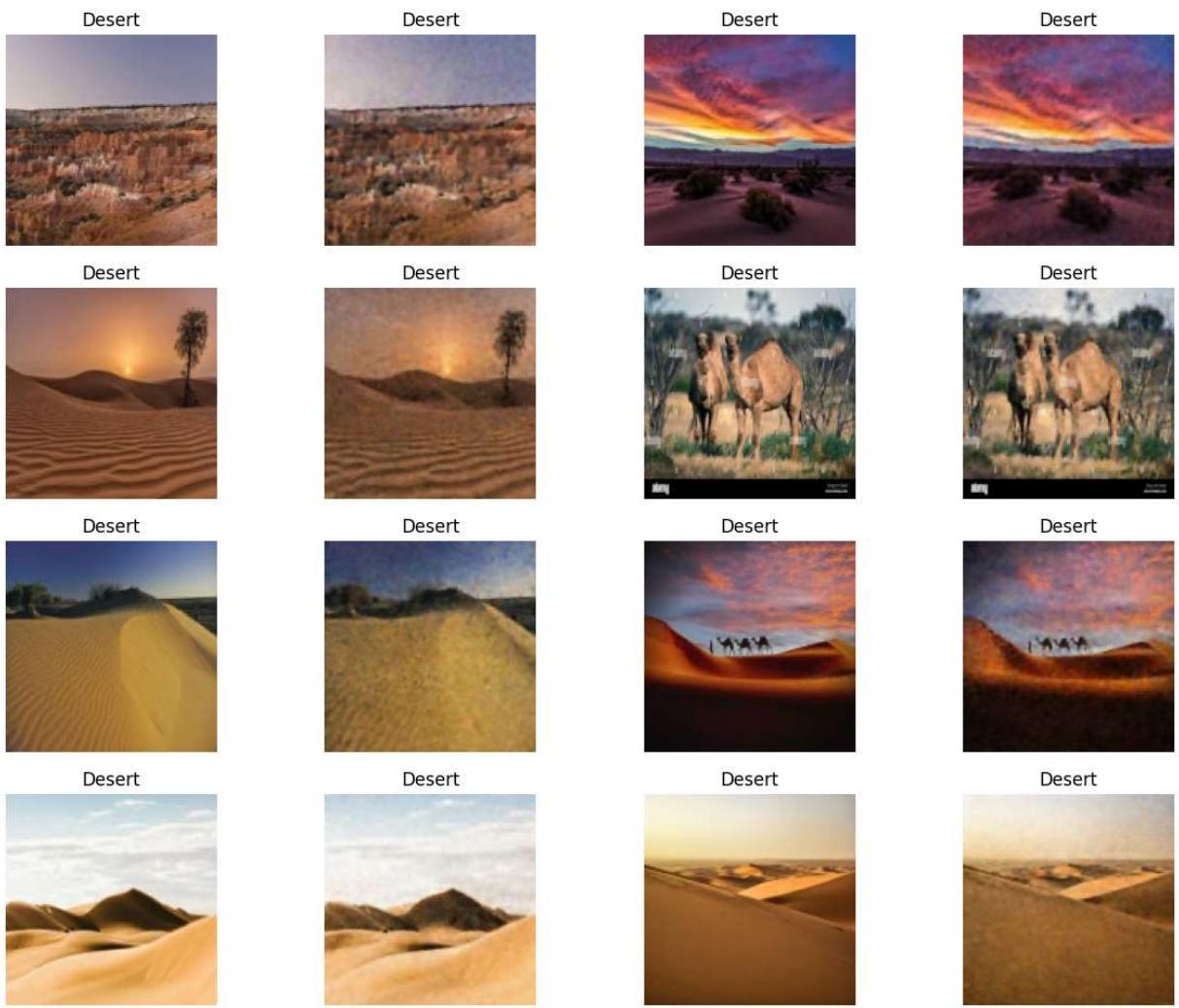
```
120/120 [=====] - 20s 162ms/step - loss: 156.9650 - reconstruction_error: 2.2924 - regularization_error: 88.1931 - val_loss: 846.7274 - val_reconstruction_error: 25.4813 - val_regularization_error: 82.2888
Epoch 392/1000
120/120 [=====] - 19s 155ms/step - loss: 155.7615 - reconstruction_error: 2.2626 - regularization_error: 87.8823 - val_loss: 837.2262 - val_reconstruction_error: 25.0903 - val_regularization_error: 84.5182
Epoch 393/1000
120/120 [=====] - 19s 157ms/step - loss: 157.7647 - reconstruction_error: 2.3166 - regularization_error: 88.2671 - val_loss: 841.5966 - val_reconstruction_error: 25.2753 - val_regularization_error: 83.3377
Epoch 394/1000
120/120 [=====] - 17s 141ms/step - loss: 156.7393 - reconstruction_error: 2.2887 - regularization_error: 88.0785 - val_loss: 846.1592 - val_reconstruction_error: 25.3942 - val_regularization_error: 84.3325
Epoch 395/1000
120/120 [=====] - 16s 128ms/step - loss: 158.7770 - reconstruction_error: 2.3378 - regularization_error: 88.6426 - val_loss: 844.0040 - val_reconstruction_error: 25.3286 - val_regularization_error: 84.1461
Epoch 396/1000
120/120 [=====] - 19s 154ms/step - loss: 157.3291 - reconstruction_error: 2.3153 - regularization_error: 87.8693 - val_loss: 852.7891 - val_reconstruction_error: 25.5328 - val_regularization_error: 86.8054
Epoch 397/1000
120/120 [=====] - 16s 133ms/step - loss: 158.9234 - reconstruction_error: 2.3546 - regularization_error: 88.2853 - val_loss: 842.1426 - val_reconstruction_error: 25.3466 - val_regularization_error: 81.7455
Epoch 398/1000
120/120 [=====] - 16s 131ms/step - loss: 157.1769 - reconstruction_error: 2.2942 - regularization_error: 88.3512 - val_loss: 862.5662 - val_reconstruction_error: 25.9052 - val_regularization_error: 85.4103
Epoch 399/1000
120/120 [=====] - 15s 125ms/step - loss: 155.3220 - reconstruction_error: 2.2424 - regularization_error: 88.0512 - val_loss: 865.1428 - val_reconstruction_error: 26.1522 - val_regularization_error: 80.5761
Epoch 400/1000
120/120 [=====] - 18s 145ms/step - loss: 155.6492 - reconstruction_error: 2.2550 - regularization_error: 87.9980 - val_loss: 842.6454 - val_reconstruction_error: 25.2408 - val_regularization_error: 85.4205
Epoch 401/1000
120/120 [=====] - ETA: 0s - loss: 156.3171 - reconstruction_error: 2.2719 - regularization_error: 88.1592
[2023-12-02 23:35:34.895276]: Reconstructing images for epoch 401 ...
```



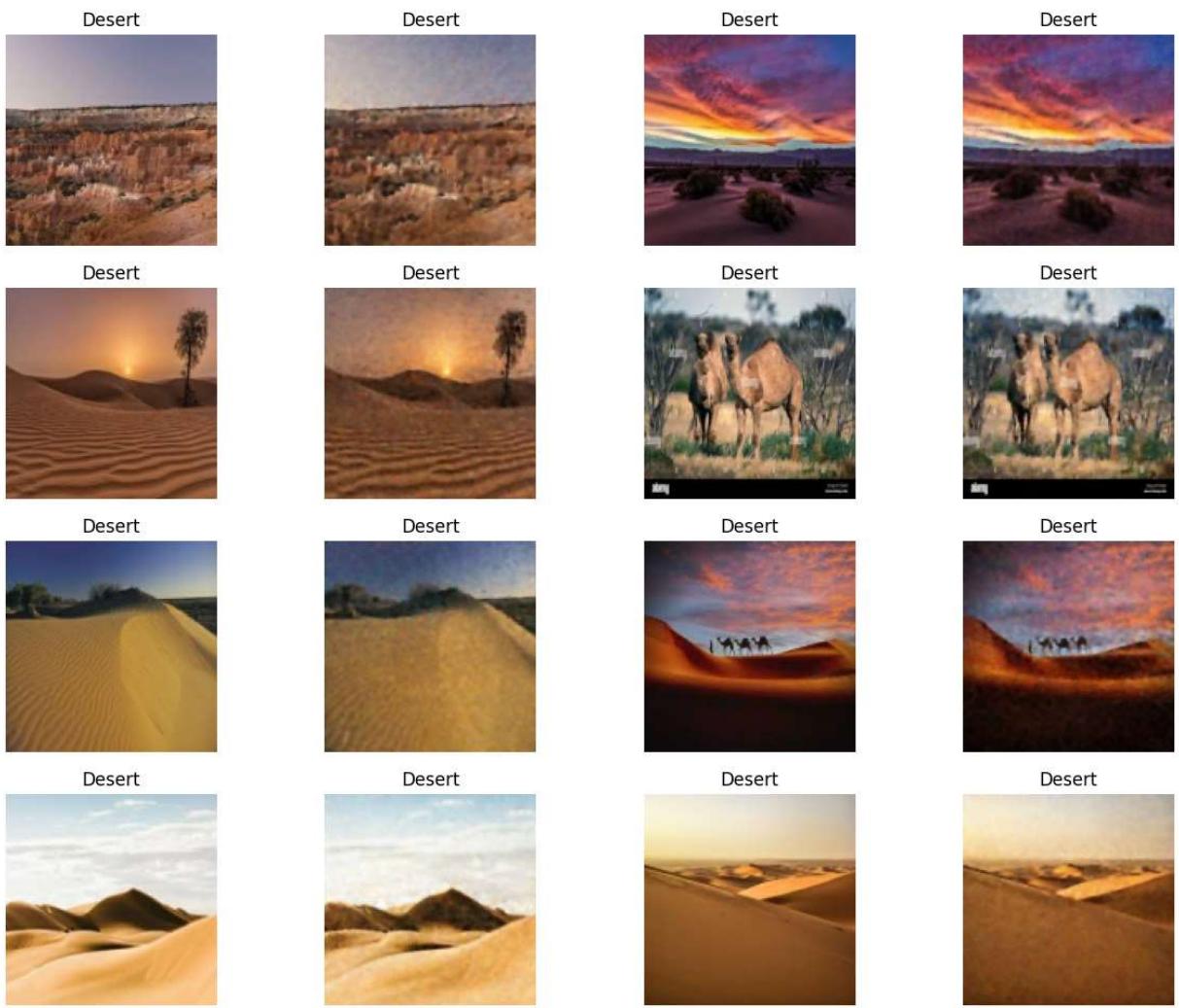
```
120/120 [=====] - 22s 183ms/step - loss: 156.3171 - reconstruction_error: 2.2719 - regularization_error: 88.1592 - val_loss: 853.5038 - val_reconstruction_error: 25.7640 - val_regularization_error: 80.5846
Epoch 402/1000
120/120 [=====] - 18s 150ms/step - loss: 156.9227 - reconstruction_error: 2.2957 - regularization_error: 88.0506 - val_loss: 850.9653 - val_reconstruction_error: 25.4858 - val_regularization_error: 86.3915
Epoch 403/1000
120/120 [=====] - 19s 156ms/step - loss: 158.4640 - reconstruction_error: 2.3314 - regularization_error: 88.5231 - val_loss: 845.1501 - val_reconstruction_error: 25.3658 - val_regularization_error: 84.1762
Epoch 404/1000
120/120 [=====] - 21s 178ms/step - loss: 155.9075 - reconstruction_error: 2.2726 - regularization_error: 87.7282 - val_loss: 847.7552 - val_reconstruction_error: 25.4233 - val_regularization_error: 85.0556
Epoch 405/1000
120/120 [=====] - 19s 159ms/step - loss: 154.9693 - reconstruction_error: 2.2372 - regularization_error: 87.8525 - val_loss: 866.8010 - val_reconstruction_error: 26.1179 - val_regularization_error: 83.2631
Epoch 406/1000
120/120 [=====] - 19s 155ms/step - loss: 155.6883 - reconstruction_error: 2.2529 - regularization_error: 88.1016 - val_loss: 851.5504 - val_reconstruction_error: 25.5440 - val_regularization_error: 85.2300
Epoch 407/1000
120/120 [=====] - 16s 128ms/step - loss: 155.1316 - reconstruction_error: 2.2459 - regularization_error: 87.7555 - val_loss: 846.8085 - val_reconstruction_error: 25.2999 - val_regularization_error: 87.8103
Epoch 408/1000
120/120 [=====] - 17s 143ms/step - loss: 154.8933 - reconstruction_error: 2.2344 - regularization_error: 87.8622 - val_loss: 852.4872 - val_reconstruction_error: 25.6873 - val_regularization_error: 81.8669
Epoch 409/1000
120/120 [=====] - 17s 139ms/step - loss: 156.4165 - reconstruction_error: 2.2826 - regularization_error: 87.9394 - val_loss: 846.5539 - val_reconstruction_error: 25.4684 - val_regularization_error: 82.5026
Epoch 410/1000
120/120 [=====] - 15s 122ms/step - loss: 154.6076 - reconstruction_error: 2.2318 - regularization_error: 87.6551 - val_loss: 855.0947 - val_reconstruction_error: 25.6771 - val_regularization_error: 84.7824
Epoch 411/1000
120/120 [=====] - ETA: 0s - loss: 155.6720 - reconstruction_error: 2.2568 - regularization_error: 87.9674
[2023-12-02 23:38:36.710625]: Reconstructing images for epoch 411 ...
```



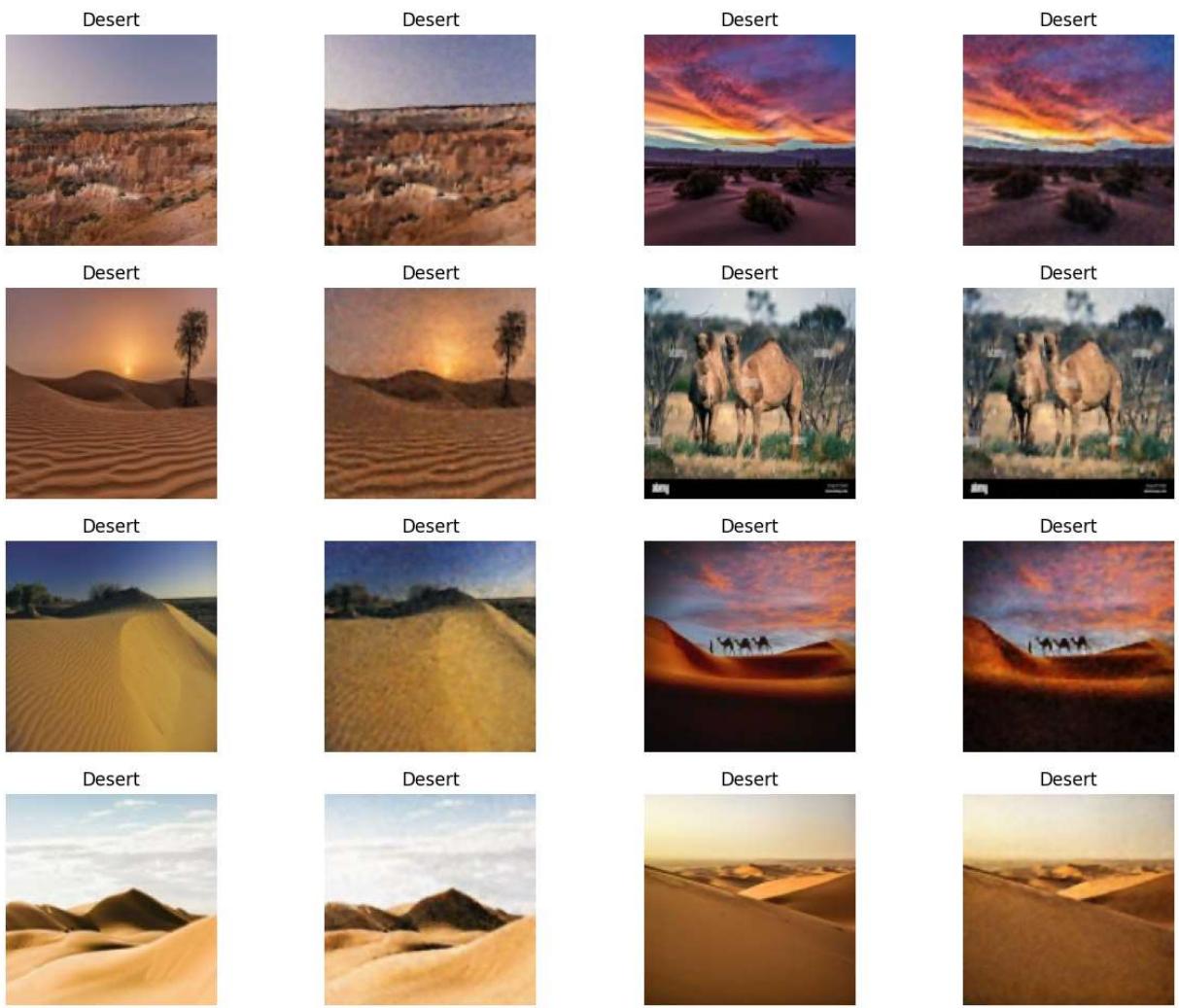
```
120/120 [=====] - 19s 157ms/step - loss: 155.6720 - reconstruction_error: 2.2568 - regularization_error: 87.9674 - val_loss: 846.1361 - val_reconstruction_error: 25.3787 - val_regularization_error: 84.7749
Epoch 412/1000
120/120 [=====] - 15s 124ms/step - loss: 155.1792 - reconstruction_error: 2.2381 - regularization_error: 88.0359 - val_loss: 845.4786 - val_reconstruction_error: 25.4003 - val_regularization_error: 83.4702
Epoch 413/1000
120/120 [=====] - 15s 122ms/step - loss: 154.5395 - reconstruction_error: 2.2242 - regularization_error: 87.8127 - val_loss: 859.6426 - val_reconstruction_error: 25.9009 - val_regularization_error: 82.6164
Epoch 414/1000
120/120 [=====] - 20s 164ms/step - loss: 154.4052 - reconstruction_error: 2.2172 - regularization_error: 87.8884 - val_loss: 851.1306 - val_reconstruction_error: 25.5642 - val_regularization_error: 84.2052
Epoch 415/1000
120/120 [=====] - 16s 134ms/step - loss: 155.3685 - reconstruction_error: 2.2454 - regularization_error: 88.0078 - val_loss: 846.4358 - val_reconstruction_error: 25.4094 - val_regularization_error: 84.1544
Epoch 416/1000
120/120 [=====] - 18s 145ms/step - loss: 155.6660 - reconstruction_error: 2.2519 - regularization_error: 88.1095 - val_loss: 861.8483 - val_reconstruction_error: 25.7571 - val_regularization_error: 89.1346
Epoch 417/1000
120/120 [=====] - 18s 145ms/step - loss: 155.8778 - reconstruction_error: 2.2704 - regularization_error: 87.7665 - val_loss: 840.9579 - val_reconstruction_error: 25.2382 - val_regularization_error: 83.8133
Epoch 418/1000
120/120 [=====] - 14s 119ms/step - loss: 157.1641 - reconstruction_error: 2.3034 - regularization_error: 88.0625 - val_loss: 846.1379 - val_reconstruction_error: 25.3922 - val_regularization_error: 84.3710
Epoch 419/1000
120/120 [=====] - 19s 155ms/step - loss: 155.1885 - reconstruction_error: 2.2537 - regularization_error: 87.5768 - val_loss: 851.5403 - val_reconstruction_error: 25.6554 - val_regularization_error: 81.8780
Epoch 420/1000
120/120 [=====] - 17s 138ms/step - loss: 157.1334 - reconstruction_error: 2.2956 - regularization_error: 88.2645 - val_loss: 838.7304 - val_reconstruction_error: 25.2660 - val_regularization_error: 80.7498
Epoch 421/1000
120/120 [=====] - ETA: 0s - loss: 157.1592 - reconstruction_error: 2.3068 - regularization_error: 87.9542
[2023-12-02 23:41:27.140836]: Reconstructing images for epoch 421 ...
```



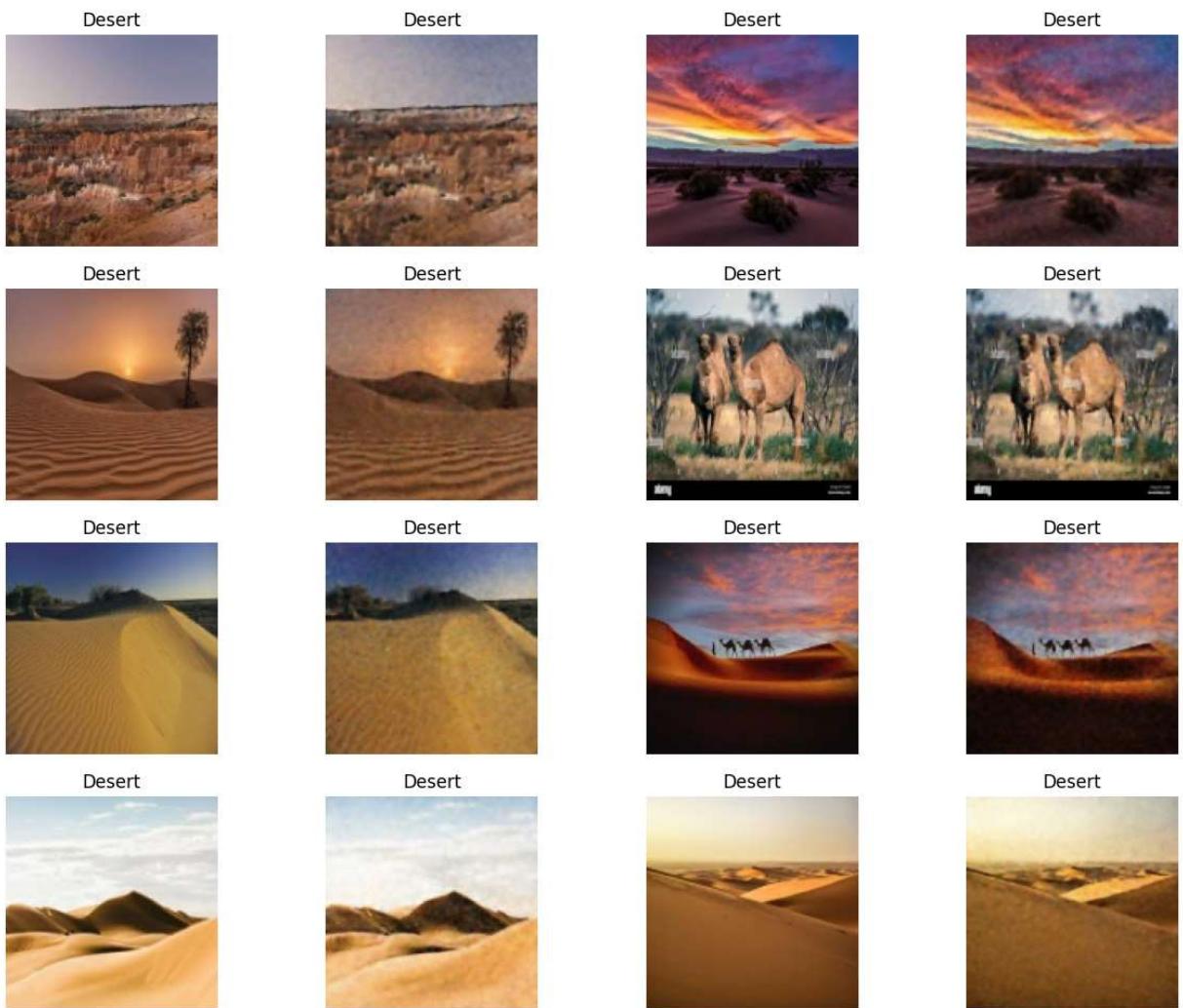
```
120/120 [=====] - 18s 153ms/step - loss: 157.1592 - reconstruction_error: 2.3068 - regularization_error: 87.9542 - val_loss: 867.0927 - val_reconstruction_error: 26.2454 - val_regularization_error: 79.7292
Epoch 422/1000
120/120 [=====] - 16s 137ms/step - loss: 160.0707 - reconstruction_error: 2.3947 - regularization_error: 88.2310 - val_loss: 847.4197 - val_reconstruction_error: 25.5091 - val_regularization_error: 82.1473
Epoch 423/1000
120/120 [=====] - 16s 133ms/step - loss: 157.9625 - reconstruction_error: 2.3215 - regularization_error: 88.3177 - val_loss: 852.9405 - val_reconstruction_error: 25.6571 - val_regularization_error: 83.2282
Epoch 424/1000
120/120 [=====] - 17s 145ms/step - loss: 153.4271 - reconstruction_error: 2.2001 - regularization_error: 87.4243 - val_loss: 851.8984 - val_reconstruction_error: 25.7199 - val_regularization_error: 80.3025
Epoch 425/1000
120/120 [=====] - 14s 118ms/step - loss: 154.5300 - reconstruction_error: 2.2304 - regularization_error: 87.6187 - val_loss: 846.5486 - val_reconstruction_error: 25.4099 - val_regularization_error: 84.2532
Epoch 426/1000
120/120 [=====] - 19s 159ms/step - loss: 152.8052 - reconstruction_error: 2.1800 - regularization_error: 87.4066 - val_loss: 850.4250 - val_reconstruction_error: 25.5406 - val_regularization_error: 84.2083
Epoch 427/1000
120/120 [=====] - 18s 144ms/step - loss: 153.1914 - reconstruction_error: 2.1837 - regularization_error: 87.6798 - val_loss: 850.0641 - val_reconstruction_error: 25.5490 - val_regularization_error: 83.5934
Epoch 428/1000
120/120 [=====] - 16s 135ms/step - loss: 154.0675 - reconstruction_error: 2.2170 - regularization_error: 87.5590 - val_loss: 869.6406 - val_reconstruction_error: 26.2063 - val_regularization_error: 83.4522
Epoch 429/1000
120/120 [=====] - 17s 137ms/step - loss: 158.0370 - reconstruction_error: 2.3353 - regularization_error: 87.9770 - val_loss: 841.3640 - val_reconstruction_error: 25.2633 - val_regularization_error: 83.4635
Epoch 430/1000
120/120 [=====] - 17s 139ms/step - loss: 153.8506 - reconstruction_error: 2.2114 - regularization_error: 87.5088 - val_loss: 845.4337 - val_reconstruction_error: 25.5457 - val_regularization_error: 79.0616
Epoch 431/1000
120/120 [=====] - ETA: 0s - loss: 154.4301 - reconstruction_error: 2.2392 - regularization_error: 87.2540
[2023-12-02 23:44:18.883360]: Reconstructing images for epoch 431 ...
```



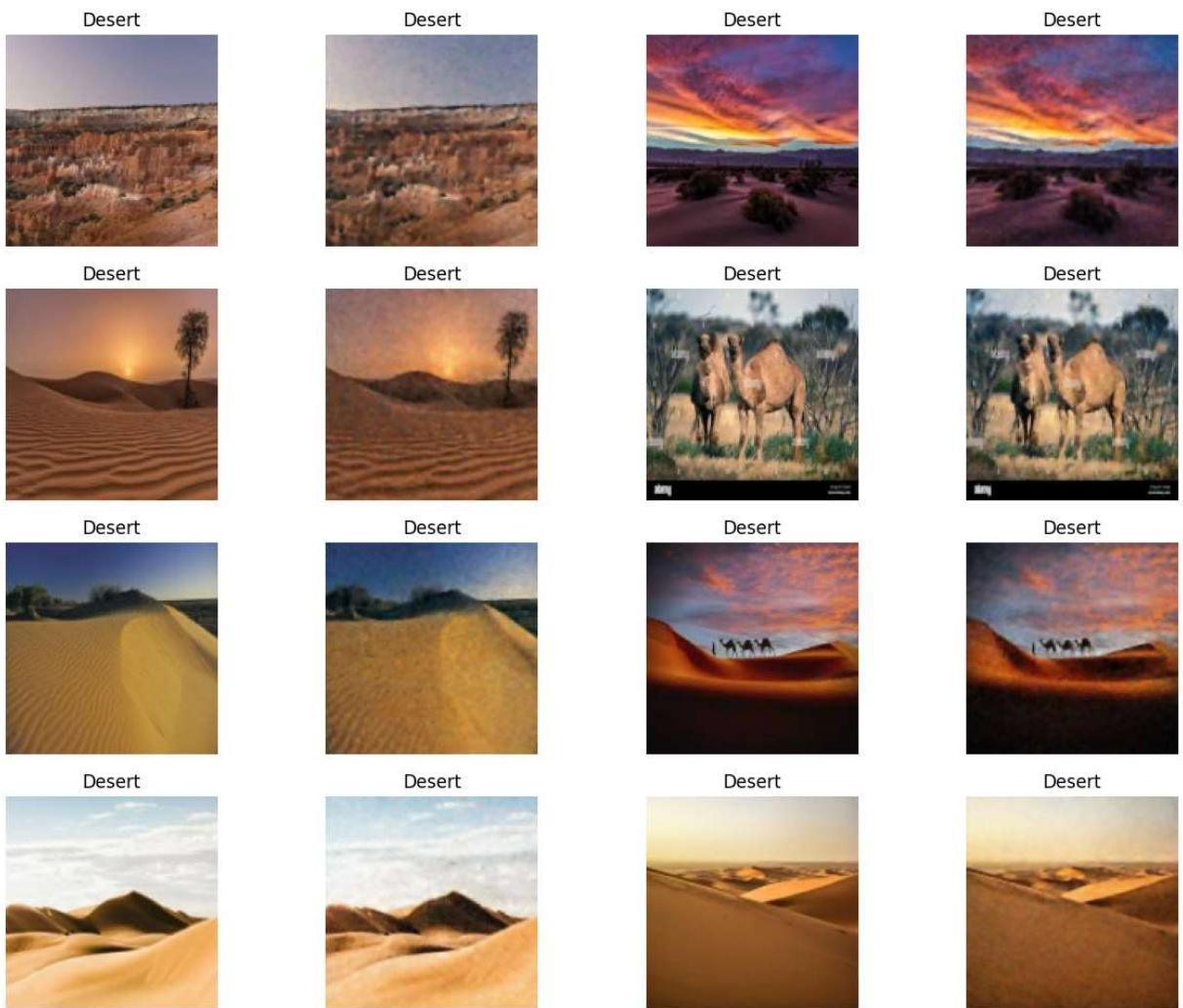
```
120/120 [=====] - 18s 151ms/step - loss: 154.4301 - reconstruction_error: 2.2392 - regularization_error: 87.2540 - val_loss: 842.0410 - val_reconstruction_error: 25.4136 - val_regularization_error: 79.6327
Epoch 432/1000
120/120 [=====] - 15s 125ms/step - loss: 154.8156 - reconstruction_error: 2.2404 - regularization_error: 87.6030 - val_loss: 849.6279 - val_reconstruction_error: 25.5328 - val_regularization_error: 83.6430
Epoch 433/1000
120/120 [=====] - 17s 140ms/step - loss: 153.0298 - reconstruction_error: 2.1878 - regularization_error: 87.3954 - val_loss: 848.6425 - val_reconstruction_error: 25.5336 - val_regularization_error: 82.6331
Epoch 434/1000
120/120 [=====] - 15s 127ms/step - loss: 153.8519 - reconstruction_error: 2.2084 - regularization_error: 87.5991 - val_loss: 850.3904 - val_reconstruction_error: 25.6374 - val_regularization_error: 81.2680
Epoch 435/1000
120/120 [=====] - 16s 135ms/step - loss: 155.1452 - reconstruction_error: 2.2562 - regularization_error: 87.4596 - val_loss: 848.2755 - val_reconstruction_error: 25.5770 - val_regularization_error: 80.9655
Epoch 436/1000
120/120 [=====] - 18s 149ms/step - loss: 155.1584 - reconstruction_error: 2.2432 - regularization_error: 87.8623 - val_loss: 857.8666 - val_reconstruction_error: 25.7729 - val_regularization_error: 84.6795
Epoch 437/1000
120/120 [=====] - 18s 150ms/step - loss: 154.4124 - reconstruction_error: 2.2271 - regularization_error: 87.5996 - val_loss: 854.2956 - val_reconstruction_error: 25.5843 - val_regularization_error: 86.7661
Epoch 438/1000
120/120 [=====] - 16s 137ms/step - loss: 154.5330 - reconstruction_error: 2.2253 - regularization_error: 87.7752 - val_loss: 849.3665 - val_reconstruction_error: 25.5727 - val_regularization_error: 82.1864
Epoch 439/1000
120/120 [=====] - 19s 155ms/step - loss: 155.1777 - reconstruction_error: 2.2507 - regularization_error: 87.6567 - val_loss: 849.5317 - val_reconstruction_error: 25.5119 - val_regularization_error: 84.1750
Epoch 440/1000
120/120 [=====] - 16s 137ms/step - loss: 153.5626 - reconstruction_error: 2.2079 - regularization_error: 87.3267 - val_loss: 855.3494 - val_reconstruction_error: 25.8049 - val_regularization_error: 81.2030
Epoch 441/1000
120/120 [=====] - ETA: 0s - loss: 155.6138 - reconstruction_error: 2.2609 - regularization_error: 87.7880
[2023-12-02 23:47:09.431298]: Reconstructing images for epoch 441 ...
```



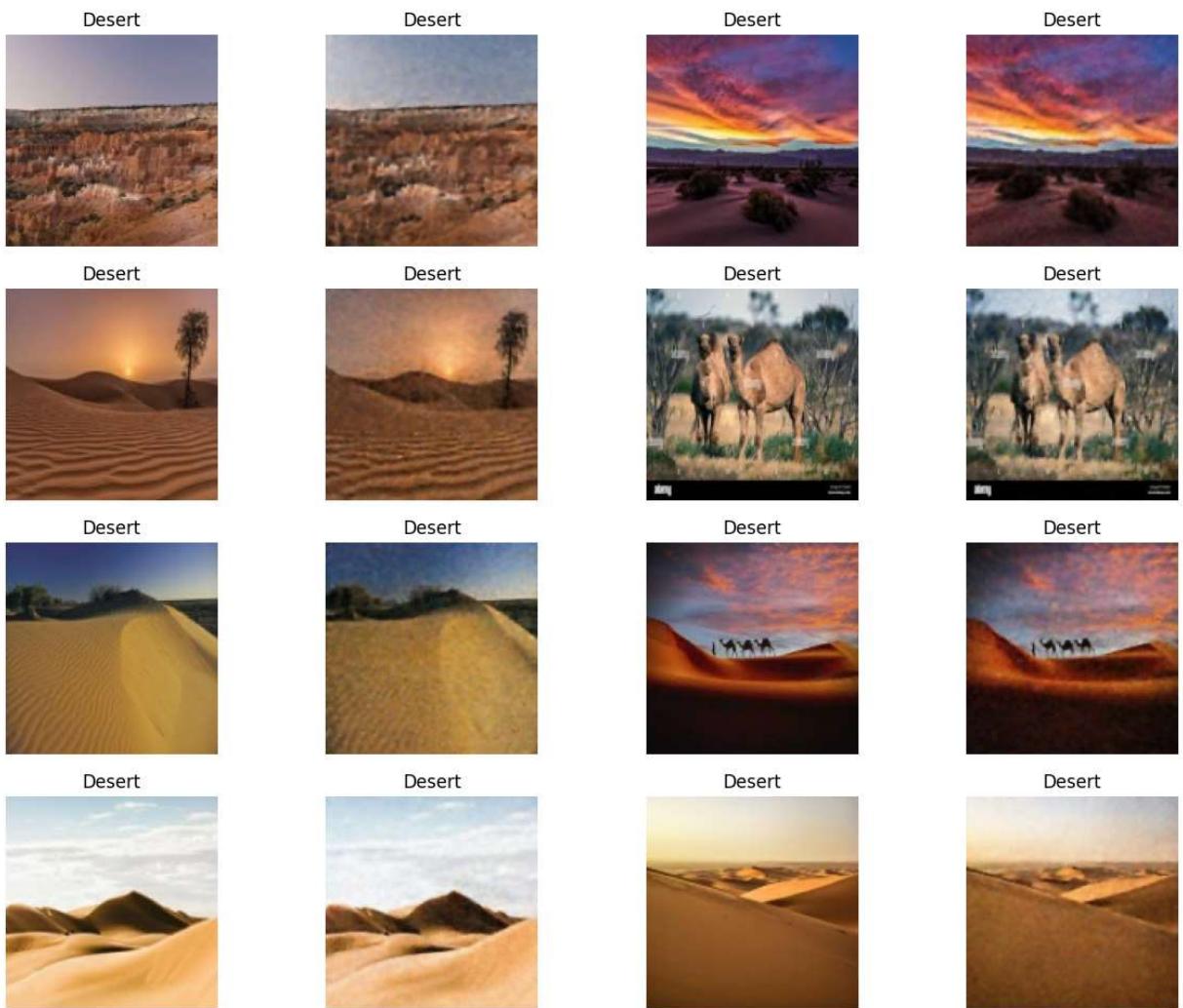
```
120/120 [=====] - 20s 170ms/step - loss: 155.6138 - reconstruction_error: 2.2609 - regularization_error: 87.7880 - val_loss: 858.7015 - val_reconstruction_error: 25.8731 - val_regularization_error: 82.5073
Epoch 442/1000
120/120 [=====] - 14s 119ms/step - loss: 154.5771 - reconstruction_error: 2.2397 - regularization_error: 87.3852 - val_loss: 853.2211 - val_reconstruction_error: 25.6601 - val_regularization_error: 83.4181
Epoch 443/1000
120/120 [=====] - 17s 142ms/step - loss: 154.7302 - reconstruction_error: 2.2340 - regularization_error: 87.7091 - val_loss: 855.9453 - val_reconstruction_error: 25.6952 - val_regularization_error: 85.0895
Epoch 444/1000
120/120 [=====] - 18s 147ms/step - loss: 154.0560 - reconstruction_error: 2.2218 - regularization_error: 87.4011 - val_loss: 853.6326 - val_reconstruction_error: 25.6337 - val_regularization_error: 84.6214
Epoch 445/1000
120/120 [=====] - 17s 140ms/step - loss: 154.7259 - reconstruction_error: 2.2335 - regularization_error: 87.7220 - val_loss: 846.1295 - val_reconstruction_error: 25.3786 - val_regularization_error: 84.7710
Epoch 446/1000
120/120 [=====] - 16s 132ms/step - loss: 153.4833 - reconstruction_error: 2.2020 - regularization_error: 87.4220 - val_loss: 853.0628 - val_reconstruction_error: 25.6372 - val_regularization_error: 83.9470
Epoch 447/1000
120/120 [=====] - 16s 132ms/step - loss: 153.6180 - reconstruction_error: 2.1988 - regularization_error: 87.6553 - val_loss: 846.6611 - val_reconstruction_error: 25.5108 - val_regularization_error: 81.3364
Epoch 448/1000
120/120 [=====] - 15s 126ms/step - loss: 154.2359 - reconstruction_error: 2.2306 - regularization_error: 87.3177 - val_loss: 850.4154 - val_reconstruction_error: 25.5086 - val_regularization_error: 85.1567
Epoch 449/1000
120/120 [=====] - 14s 120ms/step - loss: 152.6129 - reconstruction_error: 2.1799 - regularization_error: 87.2167 - val_loss: 854.1492 - val_reconstruction_error: 25.8139 - val_regularization_error: 79.7337
Epoch 450/1000
120/120 [=====] - 17s 142ms/step - loss: 153.4360 - reconstruction_error: 2.1986 - regularization_error: 87.4773 - val_loss: 850.9060 - val_reconstruction_error: 25.6049 - val_regularization_error: 82.7601
Epoch 451/1000
120/120 [=====] - ETA: 0s - loss: 154.6154 - reconstruction_error: 2.2459 - regularization_error: 87.2371
[2023-12-02 23:49:55.911727]: Reconstructing images for epoch 451 ...
```



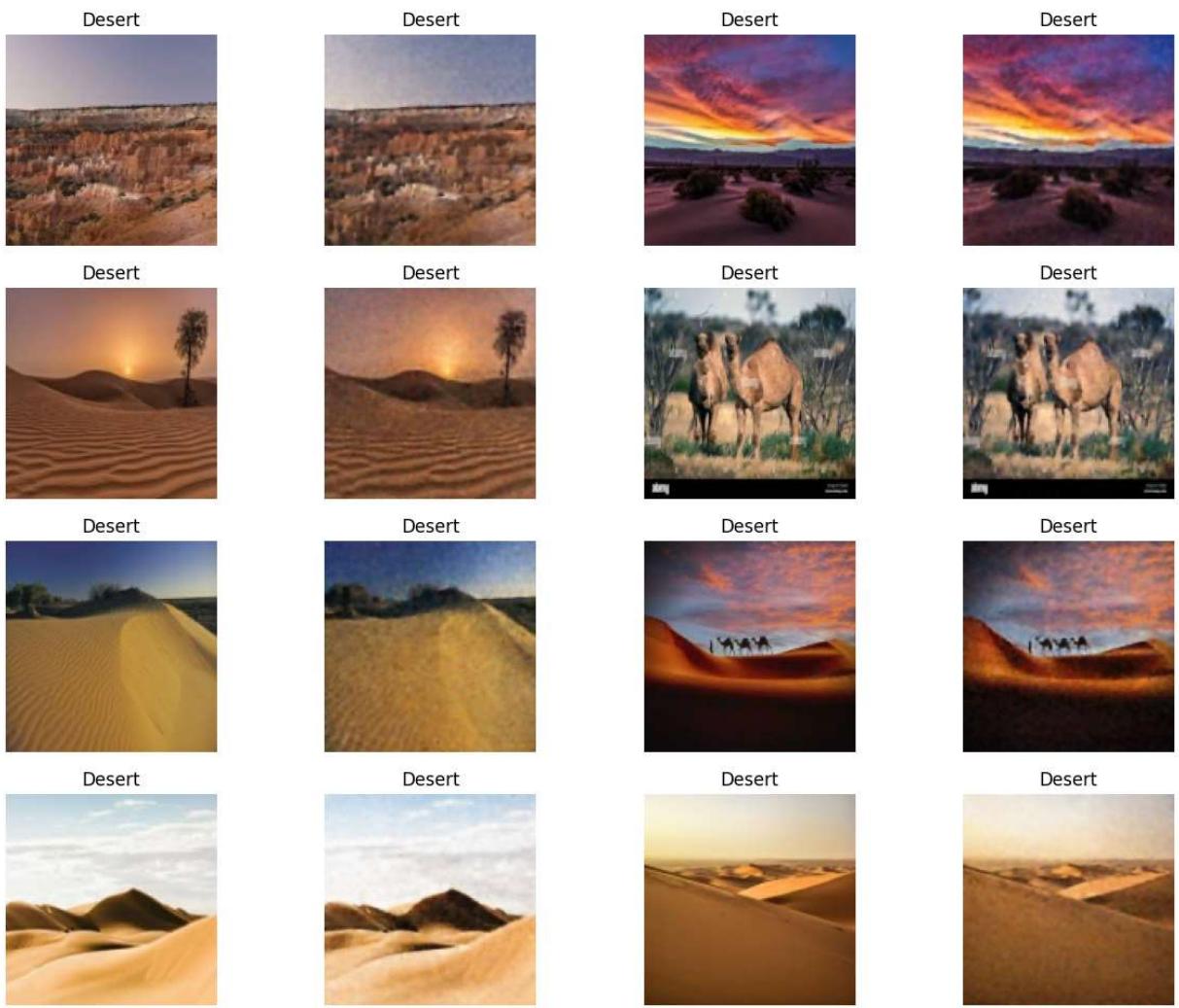
```
120/120 [=====] - 19s 156ms/step - loss: 154.6154 - reconstruction_error: 2.2459 - regularization_error: 87.2371 - val_loss: 844.4155 - val_reconstruction_error: 25.4544 - val_regularization_error: 80.7835
Epoch 452/1000
120/120 [=====] - 14s 117ms/step - loss: 154.1155 - reconstruction_error: 2.2245 - regularization_error: 87.3794 - val_loss: 846.7122 - val_reconstruction_error: 25.5053 - val_regularization_error: 81.5520
Epoch 453/1000
120/120 [=====] - 17s 141ms/step - loss: 152.2359 - reconstruction_error: 2.1670 - regularization_error: 87.2265 - val_loss: 845.3327 - val_reconstruction_error: 25.4739 - val_regularization_error: 81.1163
Epoch 454/1000
120/120 [=====] - 15s 123ms/step - loss: 150.9567 - reconstruction_error: 2.1300 - regularization_error: 87.0564 - val_loss: 846.1829 - val_reconstruction_error: 25.4143 - val_regularization_error: 83.7527
Epoch 455/1000
120/120 [=====] - 17s 142ms/step - loss: 153.0155 - reconstruction_error: 2.1851 - regularization_error: 87.4620 - val_loss: 852.3100 - val_reconstruction_error: 25.6865 - val_regularization_error: 81.7145
Epoch 456/1000
120/120 [=====] - 16s 133ms/step - loss: 152.7037 - reconstruction_error: 2.1796 - regularization_error: 87.3155 - val_loss: 850.4719 - val_reconstruction_error: 25.5820 - val_regularization_error: 83.0116
Epoch 457/1000
120/120 [=====] - 14s 120ms/step - loss: 153.3838 - reconstruction_error: 2.1980 - regularization_error: 87.4424 - val_loss: 851.5948 - val_reconstruction_error: 25.7260 - val_regularization_error: 79.8136
Epoch 458/1000
120/120 [=====] - 16s 133ms/step - loss: 153.9883 - reconstruction_error: 2.2195 - regularization_error: 87.4030 - val_loss: 860.2457 - val_reconstruction_error: 25.8769 - val_regularization_error: 83.9393
Epoch 459/1000
120/120 [=====] - 16s 131ms/step - loss: 154.6038 - reconstruction_error: 2.2333 - regularization_error: 87.6057 - val_loss: 850.0809 - val_reconstruction_error: 25.5967 - val_regularization_error: 82.1811
Epoch 460/1000
120/120 [=====] - 17s 139ms/step - loss: 153.6199 - reconstruction_error: 2.2034 - regularization_error: 87.5165 - val_loss: 856.2488 - val_reconstruction_error: 25.8564 - val_regularization_error: 80.5567
Epoch 461/1000
120/120 [=====] - ETA: 0s - loss: 153.7141 - reconstruction_error: 2.2073 - regularization_error: 87.4947
[2023-12-02 23:52:39.639838]: Reconstructing images for epoch 461 ...
```



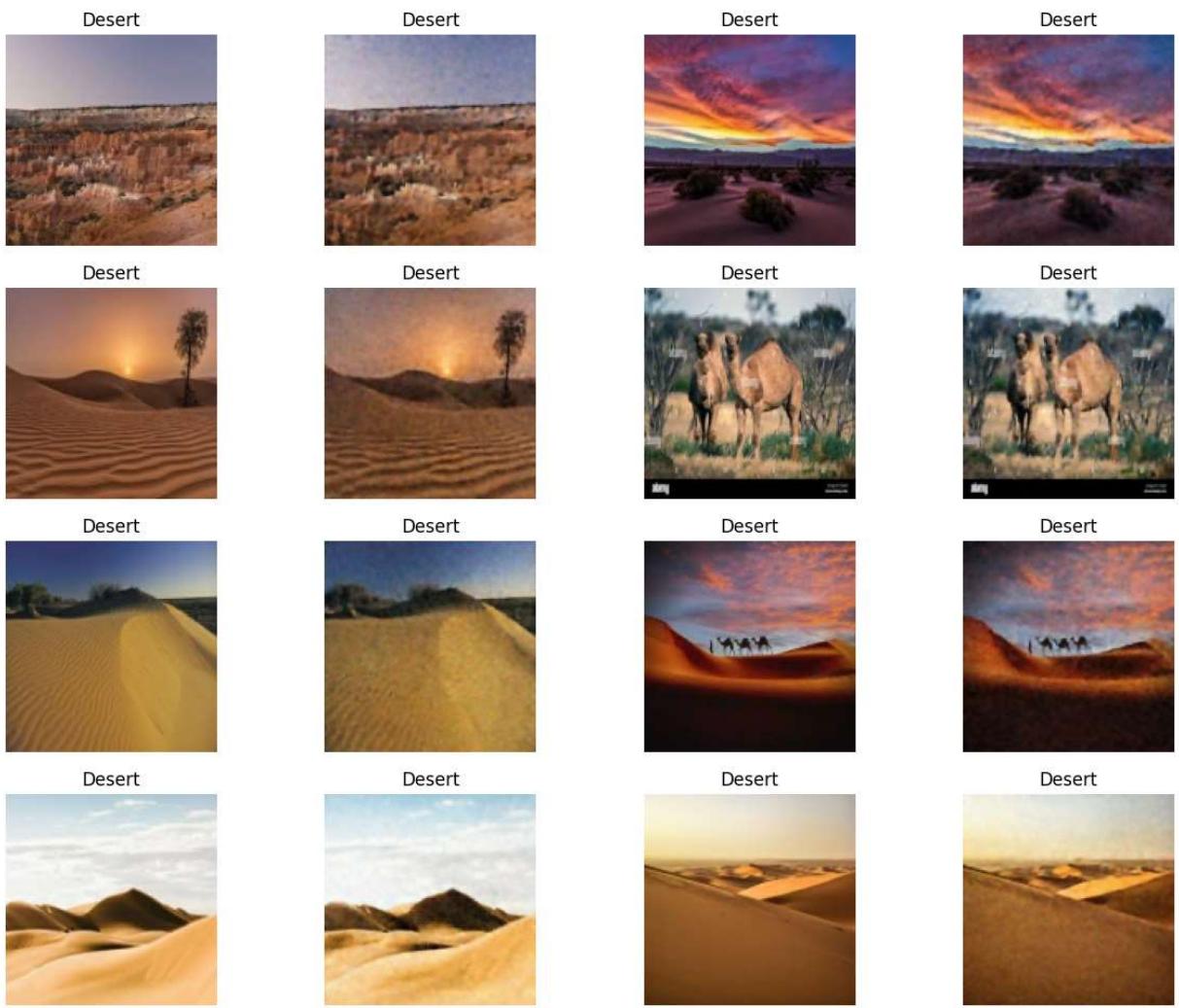
```
120/120 [=====] - 19s 158ms/step - loss: 153.7141 - reconstruction_error: 2.2073 - regularization_error: 87.4947 - val_loss: 848.1191 - val_reconstruction_error: 25.5046 - val_regularization_error: 82.9799
Epoch 462/1000
120/120 [=====] - 16s 136ms/step - loss: 154.8176 - reconstruction_error: 2.2368 - regularization_error: 87.7144 - val_loss: 865.2551 - val_reconstruction_error: 25.9172 - val_regularization_error: 87.7389
Epoch 463/1000
120/120 [=====] - 18s 152ms/step - loss: 157.7546 - reconstruction_error: 2.3238 - regularization_error: 88.0395 - val_loss: 853.5703 - val_reconstruction_error: 25.4974 - val_regularization_error: 88.6492
Epoch 464/1000
120/120 [=====] - 18s 151ms/step - loss: 158.2915 - reconstruction_error: 2.3331 - regularization_error: 88.2989 - val_loss: 870.8699 - val_reconstruction_error: 26.1659 - val_regularization_error: 85.8927
Epoch 465/1000
120/120 [=====] - 16s 130ms/step - loss: 155.3420 - reconstruction_error: 2.2539 - regularization_error: 87.7254 - val_loss: 864.7960 - val_reconstruction_error: 26.0720 - val_regularization_error: 82.6351
Epoch 466/1000
120/120 [=====] - 16s 129ms/step - loss: 155.3035 - reconstruction_error: 2.2586 - regularization_error: 87.5459 - val_loss: 861.7440 - val_reconstruction_error: 25.8863 - val_regularization_error: 85.1546
Epoch 467/1000
120/120 [=====] - 16s 132ms/step - loss: 153.8703 - reconstruction_error: 2.2193 - regularization_error: 87.2909 - val_loss: 866.0695 - val_reconstruction_error: 26.0421 - val_regularization_error: 84.8058
Epoch 468/1000
120/120 [=====] - 18s 144ms/step - loss: 152.3875 - reconstruction_error: 2.1724 - regularization_error: 87.2140 - val_loss: 850.3178 - val_reconstruction_error: 25.4718 - val_regularization_error: 86.1653
Epoch 469/1000
120/120 [=====] - 14s 118ms/step - loss: 152.7635 - reconstruction_error: 2.1795 - regularization_error: 87.3772 - val_loss: 849.8415 - val_reconstruction_error: 25.6339 - val_regularization_error: 80.8231
Epoch 470/1000
120/120 [=====] - 18s 145ms/step - loss: 151.7228 - reconstruction_error: 2.1548 - regularization_error: 87.0791 - val_loss: 843.2006 - val_reconstruction_error: 25.3530 - val_regularization_error: 82.6096
Epoch 471/1000
120/120 [=====] - ETA: 0s - loss: 151.7310 - reconstruction_error: 2.1483 - regularization_error: 87.2810
[2023-12-02 23:55:32.376742]: Reconstructing images for epoch 471 ...
```



```
120/120 [=====] - 21s 171ms/step - loss: 151.7310 - reconstruction_error: 2.1483 - regularization_error: 87.2810 - val_loss: 854.5094 - val_reconstruction_error: 25.7662 - val_regularization_error: 81.5238
Epoch 472/1000
120/120 [=====] - 19s 161ms/step - loss: 152.3049 - reconstruction_error: 2.1725 - regularization_error: 87.1308 - val_loss: 850.0204 - val_reconstruction_error: 25.5581 - val_regularization_error: 83.2775
Epoch 473/1000
120/120 [=====] - 15s 120ms/step - loss: 152.3801 - reconstruction_error: 2.1738 - regularization_error: 87.1674 - val_loss: 857.1935 - val_reconstruction_error: 25.8211 - val_regularization_error: 82.5607
Epoch 474/1000
120/120 [=====] - 17s 139ms/step - loss: 153.1390 - reconstruction_error: 2.1987 - regularization_error: 87.1778 - val_loss: 856.1868 - val_reconstruction_error: 25.8110 - val_regularization_error: 81.8553
Epoch 475/1000
120/120 [=====] - 17s 138ms/step - loss: 151.4373 - reconstruction_error: 2.1466 - regularization_error: 87.0381 - val_loss: 852.2521 - val_reconstruction_error: 25.6592 - val_regularization_error: 82.4754
Epoch 476/1000
120/120 [=====] - 17s 136ms/step - loss: 153.7992 - reconstruction_error: 2.2203 - regularization_error: 87.1894 - val_loss: 851.7108 - val_reconstruction_error: 25.5521 - val_regularization_error: 85.1465
Epoch 477/1000
120/120 [=====] - 15s 122ms/step - loss: 150.7712 - reconstruction_error: 2.1309 - regularization_error: 86.8451 - val_loss: 855.1951 - val_reconstruction_error: 25.7595 - val_regularization_error: 82.4096
Epoch 478/1000
120/120 [=====] - 16s 129ms/step - loss: 151.1764 - reconstruction_error: 2.1426 - regularization_error: 86.8975 - val_loss: 844.8399 - val_reconstruction_error: 25.4658 - val_regularization_error: 80.8646
Epoch 479/1000
120/120 [=====] - 15s 127ms/step - loss: 152.1487 - reconstruction_error: 2.1740 - regularization_error: 86.9289 - val_loss: 854.2007 - val_reconstruction_error: 25.6986 - val_regularization_error: 83.2437
Epoch 480/1000
120/120 [=====] - 15s 123ms/step - loss: 154.8614 - reconstruction_error: 2.2484 - regularization_error: 87.4105 - val_loss: 850.1098 - val_reconstruction_error: 25.6557 - val_regularization_error: 80.4394
Epoch 481/1000
120/120 [=====] - ETA: 0s - loss: 152.6512 - reconstruction_error: 2.1966 - regularization_error: 86.7545
[2023-12-02 23:58:18.263783]: Reconstructing images for epoch 481 ...
```



```
120/120 [=====] - 18s 152ms/step - loss: 152.6512 - reconstruction_error: 2.1966 - regularization_error: 86.7545 - val_loss: 854.0684 - val_reconstruction_error: 25.6876 - val_regularization_error: 83.4418
Epoch 482/1000
120/120 [=====] - 17s 140ms/step - loss: 154.1820 - reconstruction_error: 2.2235 - regularization_error: 87.4768 - val_loss: 855.4190 - val_reconstruction_error: 25.6601 - val_regularization_error: 85.6172
Epoch 483/1000
120/120 [=====] - 18s 146ms/step - loss: 151.9904 - reconstruction_error: 2.1620 - regularization_error: 87.1318 - val_loss: 854.3814 - val_reconstruction_error: 25.7069 - val_regularization_error: 83.1759
Epoch 484/1000
120/120 [=====] - 14s 112ms/step - loss: 152.5927 - reconstruction_error: 2.1850 - regularization_error: 87.0420 - val_loss: 852.8685 - val_reconstruction_error: 25.7337 - val_regularization_error: 80.8585
Epoch 485/1000
120/120 [=====] - 18s 148ms/step - loss: 151.1196 - reconstruction_error: 2.1400 - regularization_error: 86.9199 - val_loss: 857.2921 - val_reconstruction_error: 25.9333 - val_regularization_error: 79.2936
Epoch 486/1000
120/120 [=====] - 20s 166ms/step - loss: 151.4922 - reconstruction_error: 2.1518 - regularization_error: 86.9371 - val_loss: 854.6254 - val_reconstruction_error: 25.7999 - val_regularization_error: 80.6277
Epoch 487/1000
120/120 [=====] - 15s 122ms/step - loss: 152.2311 - reconstruction_error: 2.1715 - regularization_error: 87.0854 - val_loss: 849.6590 - val_reconstruction_error: 25.5840 - val_regularization_error: 82.1398
Epoch 488/1000
120/120 [=====] - 18s 146ms/step - loss: 152.9610 - reconstruction_error: 2.1975 - regularization_error: 87.0371 - val_loss: 864.5003 - val_reconstruction_error: 26.0254 - val_regularization_error: 83.7390
Epoch 489/1000
120/120 [=====] - 15s 124ms/step - loss: 152.1553 - reconstruction_error: 2.1713 - regularization_error: 87.0160 - val_loss: 845.3134 - val_reconstruction_error: 25.4686 - val_regularization_error: 81.2565
Epoch 490/1000
120/120 [=====] - 16s 134ms/step - loss: 151.5179 - reconstruction_error: 2.1513 - regularization_error: 86.9780 - val_loss: 861.7763 - val_reconstruction_error: 25.9599 - val_regularization_error: 82.9800
Epoch 491/1000
120/120 [=====] - ETA: 0s - loss: 154.1493 - reconstruction_error: 2.2178 - regularization_error: 87.6156
[2023-12-03 00:01:09.026359]: Reconstructing images for epoch 491 ...
```



```
120/120 [=====] - 19s 155ms/step - loss: 154.1493 - reconstruction_error: 2.2178 - regularization_error: 87.6156 - val_loss: 859.8674 - val_reconstruction_error: 25.9147 - val_regularization_error: 82.4269
Epoch 492/1000
120/120 [=====] - 17s 138ms/step - loss: 153.7898 - reconstruction_error: 2.2230 - regularization_error: 87.0997 - val_loss: 851.3533 - val_reconstruction_error: 25.4930 - val_regularization_error: 86.5643
Epoch 493/1000
120/120 [=====] - 16s 133ms/step - loss: 151.6281 - reconstruction_error: 2.1579 - regularization_error: 86.8923 - val_loss: 852.4407 - val_reconstruction_error: 25.6191 - val_regularization_error: 83.8671
Epoch 494/1000
120/120 [=====] - 18s 147ms/step - loss: 150.8310 - reconstruction_error: 2.1270 - regularization_error: 87.0203 - val_loss: 856.6324 - val_reconstruction_error: 25.7916 - val_regularization_error: 82.8857
Epoch 495/1000
120/120 [=====] - 17s 138ms/step - loss: 150.9424 - reconstruction_error: 2.1339 - regularization_error: 86.9242 - val_loss: 854.7147 - val_reconstruction_error: 25.7650 - val_regularization_error: 81.7660
Epoch 496/1000
120/120 [=====] - 14s 115ms/step - loss: 150.7599 - reconstruction_error: 2.1139 - regularization_error: 87.3428 - val_loss: 852.3141 - val_reconstruction_error: 25.5920 - val_regularization_error: 84.5548
Epoch 497/1000
120/120 [=====] - 16s 131ms/step - loss: 150.5450 - reconstruction_error: 2.1261 - regularization_error: 86.7628 - val_loss: 854.3080 - val_reconstruction_error: 25.7322 - val_regularization_error: 82.3422
Epoch 498/1000
120/120 [=====] - 16s 136ms/step - loss: 152.1537 - reconstruction_error: 2.1706 - regularization_error: 87.0369 - val_loss: 864.4668 - val_reconstruction_error: 26.0793 - val_regularization_error: 82.0867
Epoch 499/1000
120/120 [=====] - 14s 120ms/step - loss: 151.8083 - reconstruction_error: 2.1630 - regularization_error: 86.9189 - val_loss: 867.3476 - val_reconstruction_error: 26.1309 - val_regularization_error: 83.4192
Epoch 500/1000
120/120 [=====] - 16s 137ms/step - loss: 152.3337 - reconstruction_error: 2.1703 - regularization_error: 87.2232 - val_loss: 866.7901 - val_reconstruction_error: 26.2234 - val_regularization_error: 80.0888
Epoch 501/1000
120/120 [=====] - ETA: 0s - loss: 152.0831 - reconstruction_error: 2.1695 - regularization_error: 86.9983
[2023-12-03 00:03:53.422568]: Reconstructing images for epoch 501 ...
```

