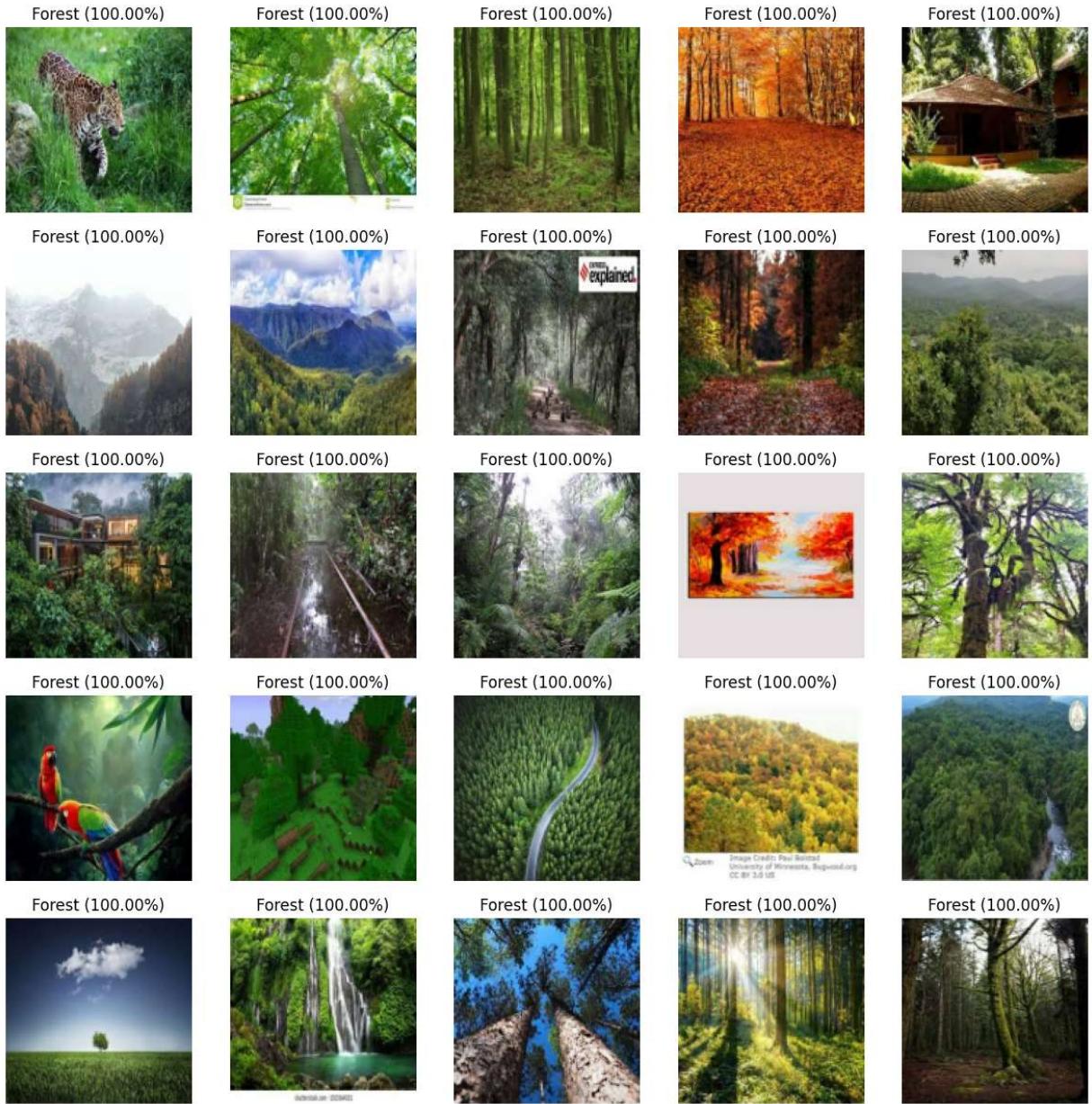


Visualize Dataset

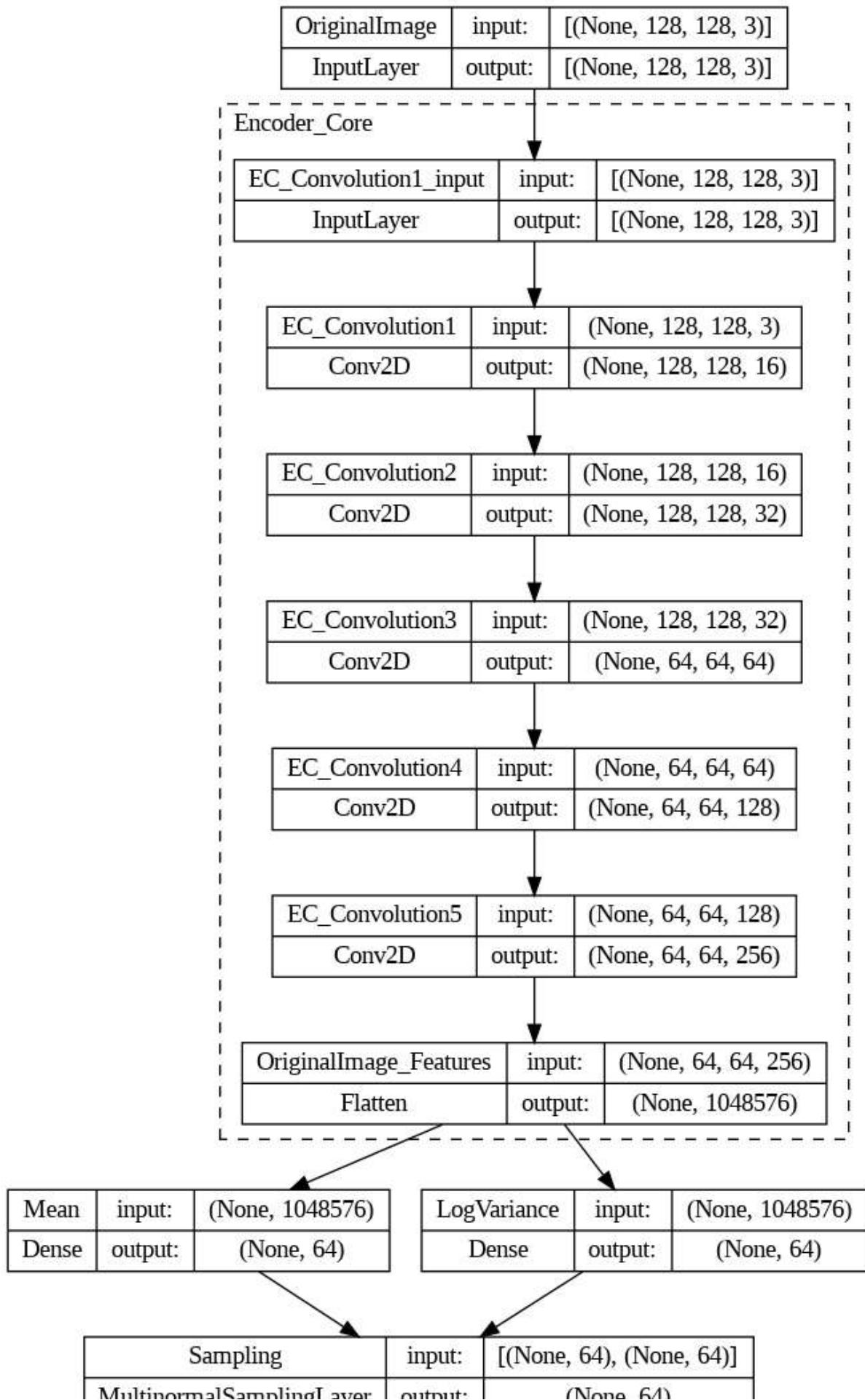


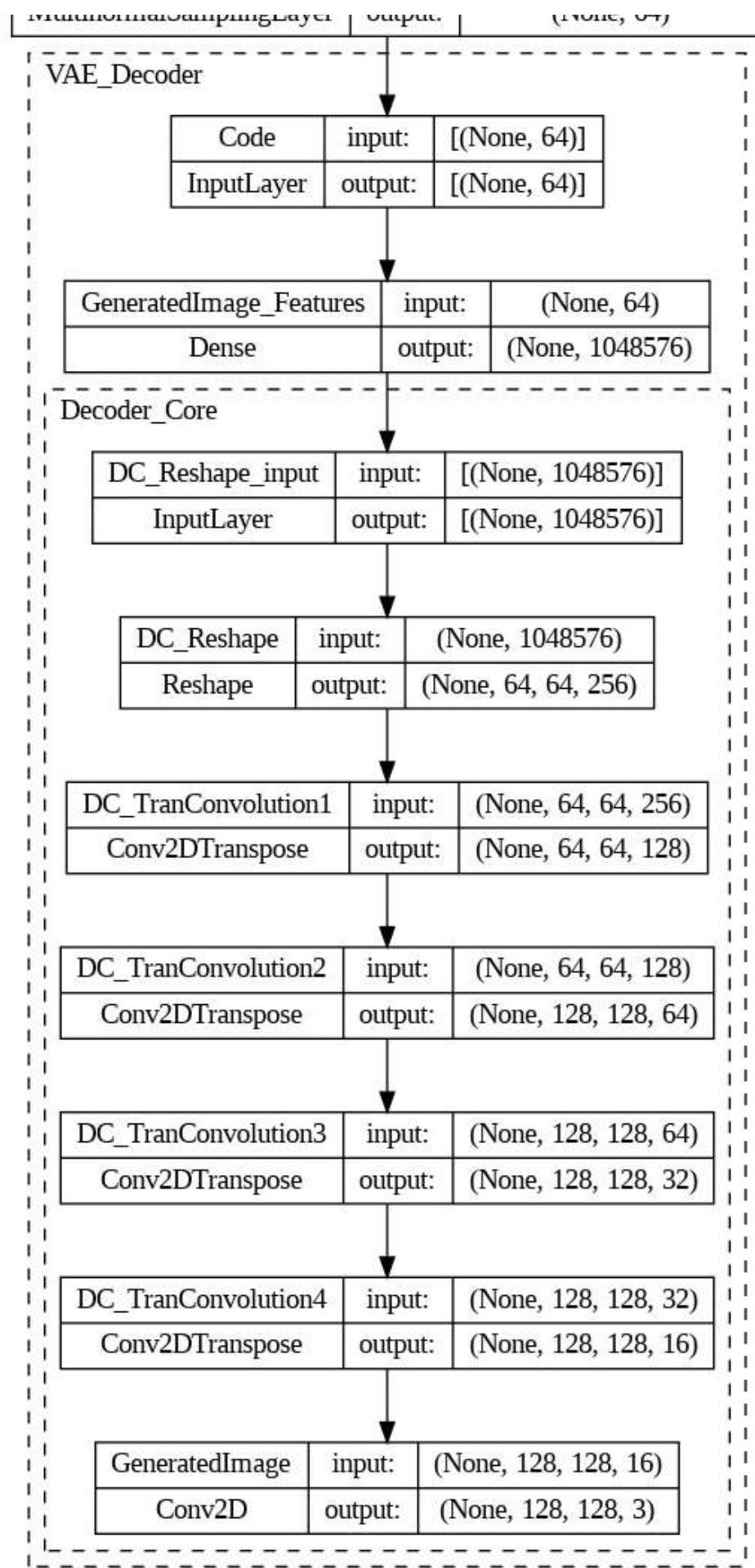
Variational AutoEncoder

Model: "VAE"

Layer (type)	Output Shape	Param #	Connected to
<hr/>			
<hr/>			
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][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[202...]





Training

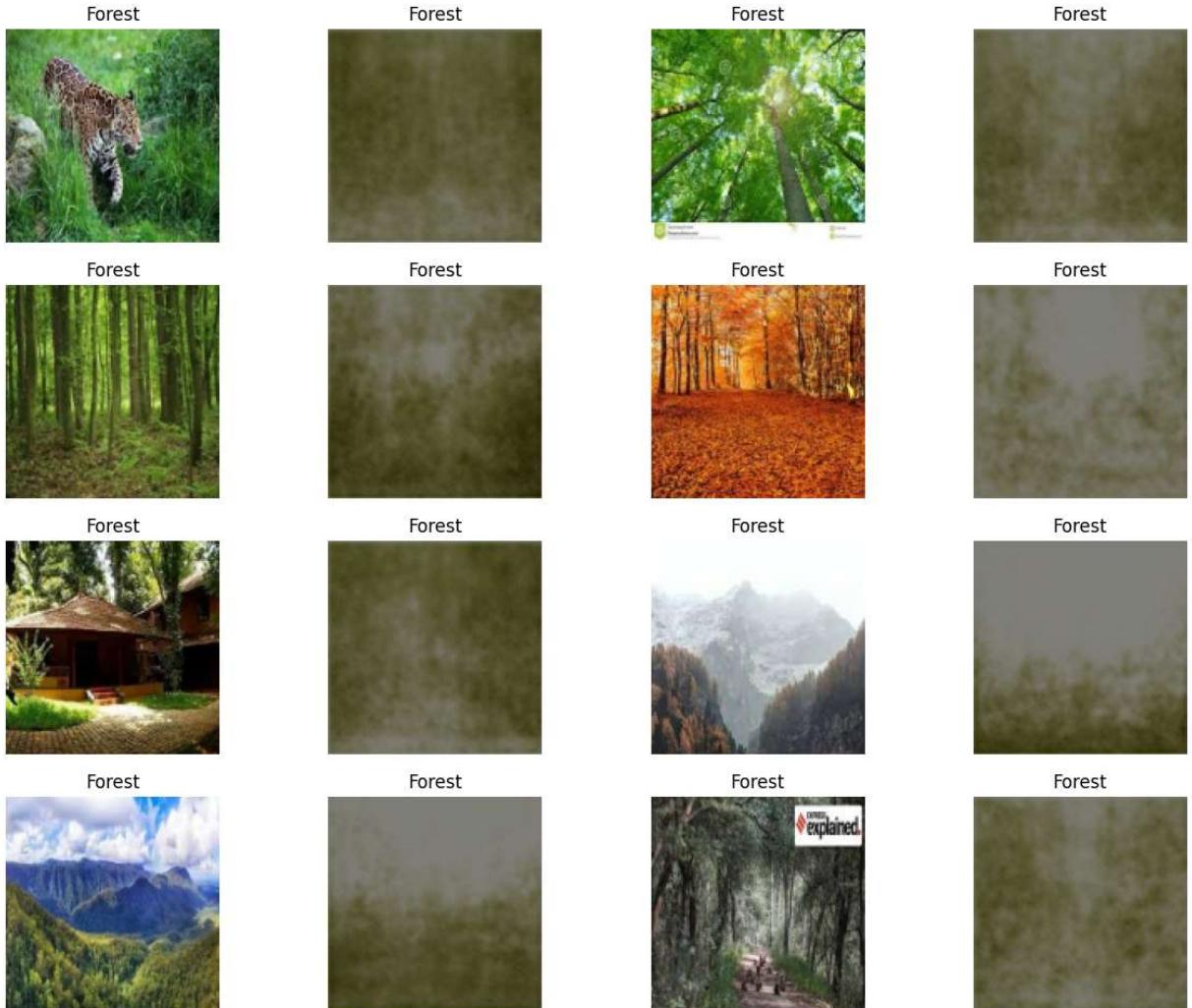
Epoch 1/1000

6/Unknown - 6s 111ms/step - loss: 212.4077 - reconstruction_error: 161.0050 - regularization_error: 51.4027

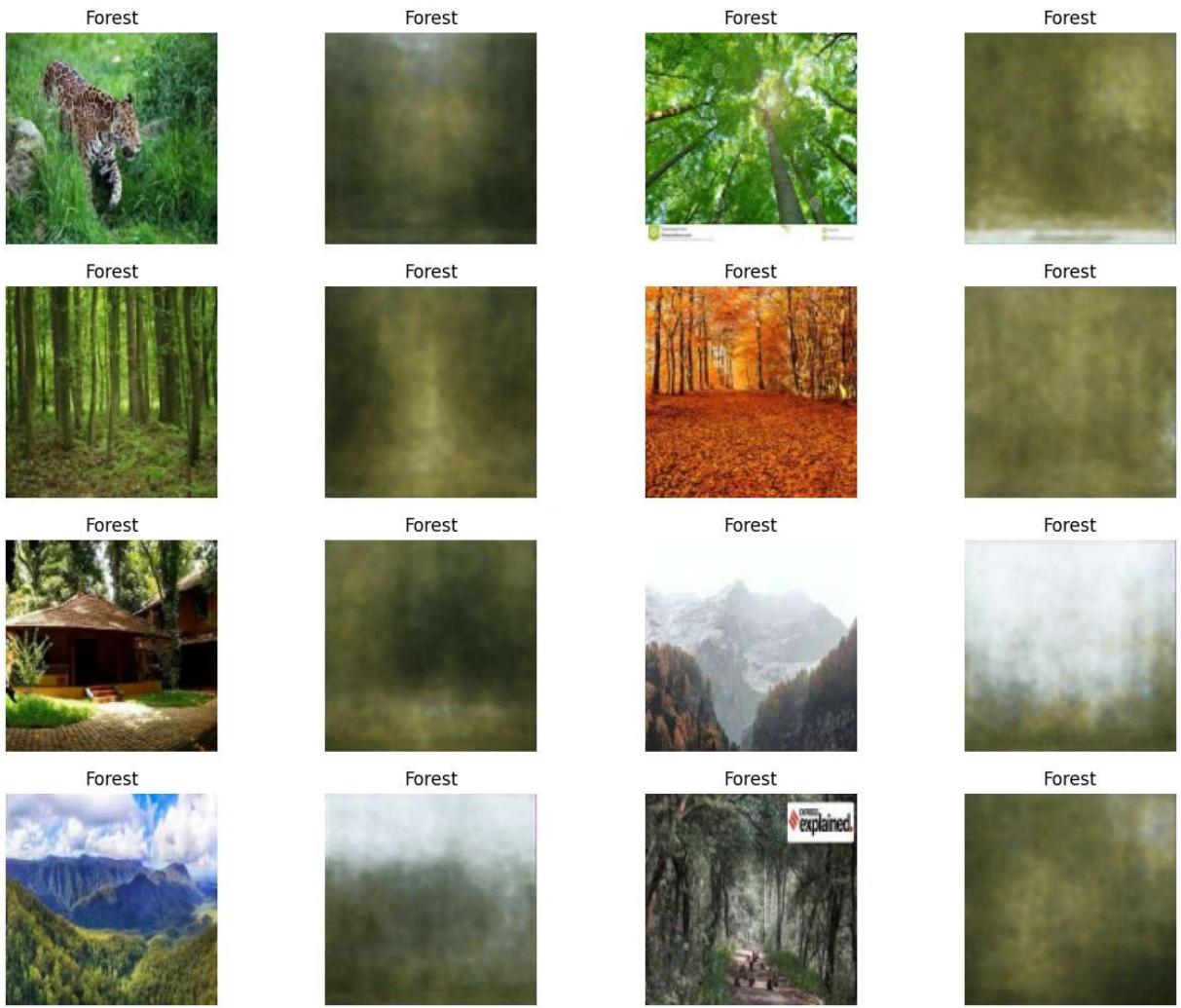
WARNING:tensorflow:Callback method `on_train_batch_end` is slow compared to the batch time (batch time: 0.0345s vs `on_train_batch_end` time: 0.0631s). Check your callbacks.

120/Unknown - 24s 159ms/step - loss: 113.2076 - reconstruction_error: 108.9981 - regularization_error: 4.2095

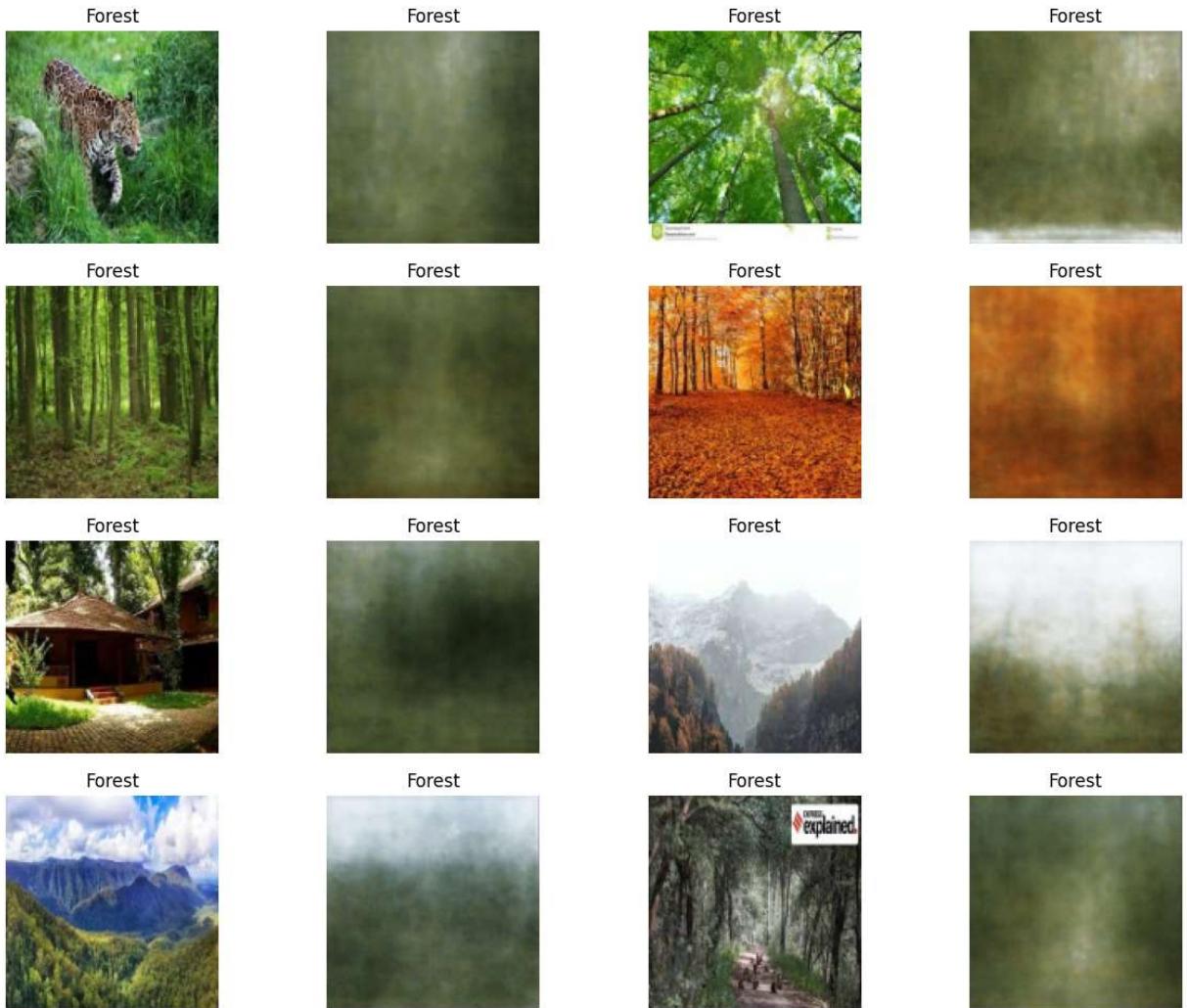
[2023-12-01 20:57:19.131821]: Reconstructing images for epoch 1 ...



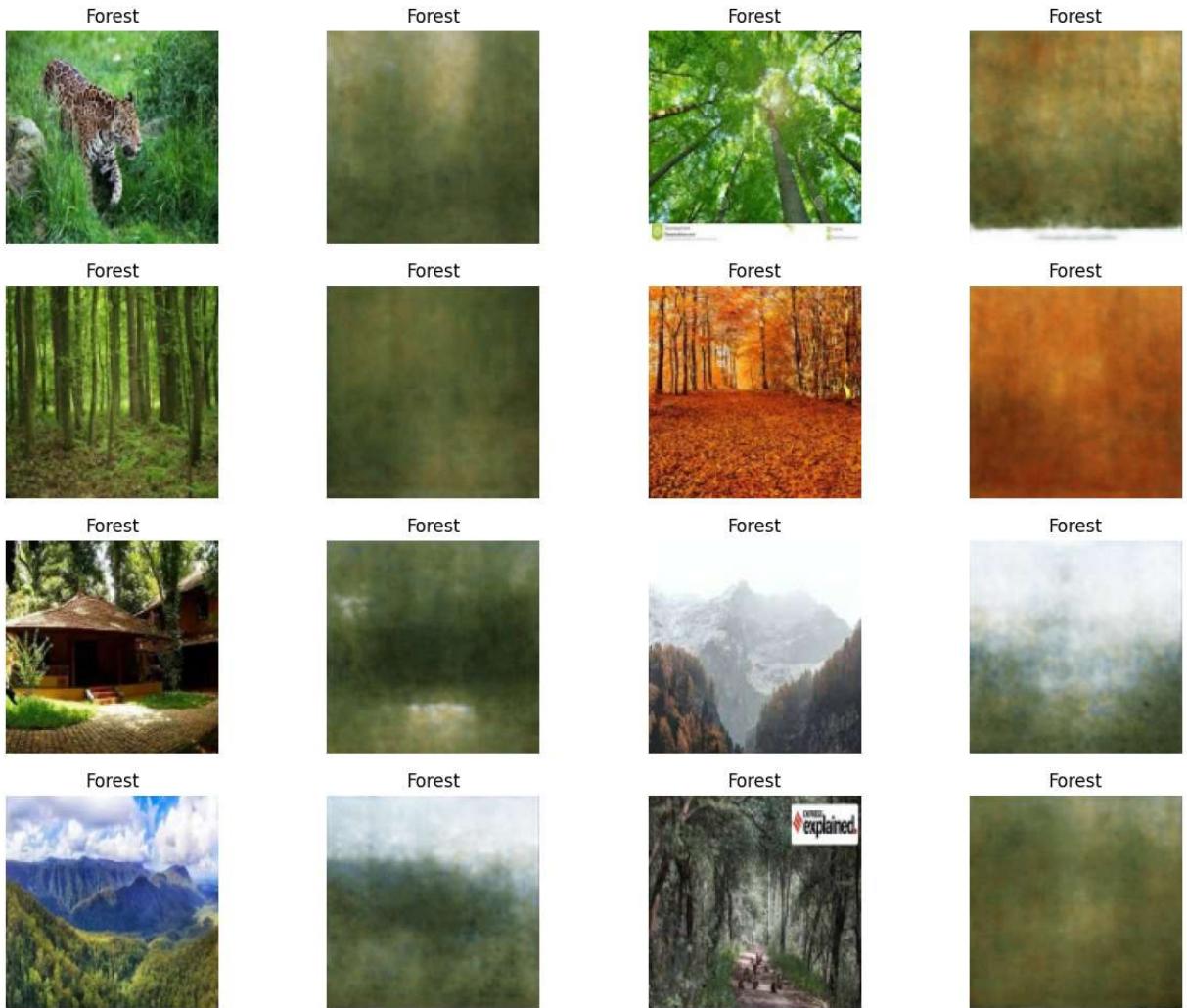
```
120/120 [=====] - 38s 276ms/step - loss: 113.2076 - reconstruction_error: 108.9981 - regularization_error: 4.2095 - val_loss: 98.8384 - val_reconstruction_error: 96.4899 - val_regularization_error: 2.3485
Epoch 2/1000
120/120 [=====] - 20s 163ms/step - loss: 87.6330 - reconstruction_error: 80.9031 - regularization_error: 6.7298 - val_loss: 85.4609 - val_reconstruction_error: 73.3854 - val_regularization_error: 12.0755
Epoch 3/1000
120/120 [=====] - 24s 196ms/step - loss: 79.9531 - reconstruction_error: 71.3367 - regularization_error: 8.6164 - val_loss: 80.1630 - val_reconstruction_error: 73.7975 - val_regularization_error: 6.3655
Epoch 4/1000
120/120 [=====] - 26s 210ms/step - loss: 75.3749 - reconstruction_error: 66.7275 - regularization_error: 8.6474 - val_loss: 75.2353 - val_reconstruction_error: 67.6266 - val_regularization_error: 7.6087
Epoch 5/1000
120/120 [=====] - 22s 181ms/step - loss: 72.8618 - reconstruction_error: 63.9893 - regularization_error: 8.8725 - val_loss: 76.6683 - val_reconstruction_error: 69.2182 - val_regularization_error: 7.4501
Epoch 6/1000
120/120 [=====] - 19s 157ms/step - loss: 72.0360 - reconstruction_error: 62.9253 - regularization_error: 9.1108 - val_loss: 72.3833 - val_reconstruction_error: 63.7479 - val_regularization_error: 8.6354
Epoch 7/1000
120/120 [=====] - 20s 165ms/step - loss: 70.7360 - reconstruction_error: 61.5019 - regularization_error: 9.2342 - val_loss: 71.1935 - val_reconstruction_error: 62.0159 - val_regularization_error: 9.1776
Epoch 8/1000
120/120 [=====] - 28s 235ms/step - loss: 69.8226 - reconstruction_error: 60.5126 - regularization_error: 9.3099 - val_loss: 71.9195 - val_reconstruction_error: 62.7242 - val_regularization_error: 9.1953
Epoch 9/1000
120/120 [=====] - 20s 171ms/step - loss: 68.8741 - reconstruction_error: 59.4270 - regularization_error: 9.4472 - val_loss: 68.9960 - val_reconstruction_error: 58.1195 - val_regularization_error: 10.8765
Epoch 10/1000
120/120 [=====] - 25s 209ms/step - loss: 67.5042 - reconstruction_error: 58.0409 - regularization_error: 9.4634 - val_loss: 68.5921 - val_reconstruction_error: 59.0857 - val_regularization_error: 9.5064
Epoch 11/1000
120/120 [=====] - ETA: 0s - loss: 66.4834 - reconstruction_error: 56.9747 - regularization_error: 9.5087
[2023-12-01 21:01:11.938645]: Reconstructing images for epoch 11 ...
```



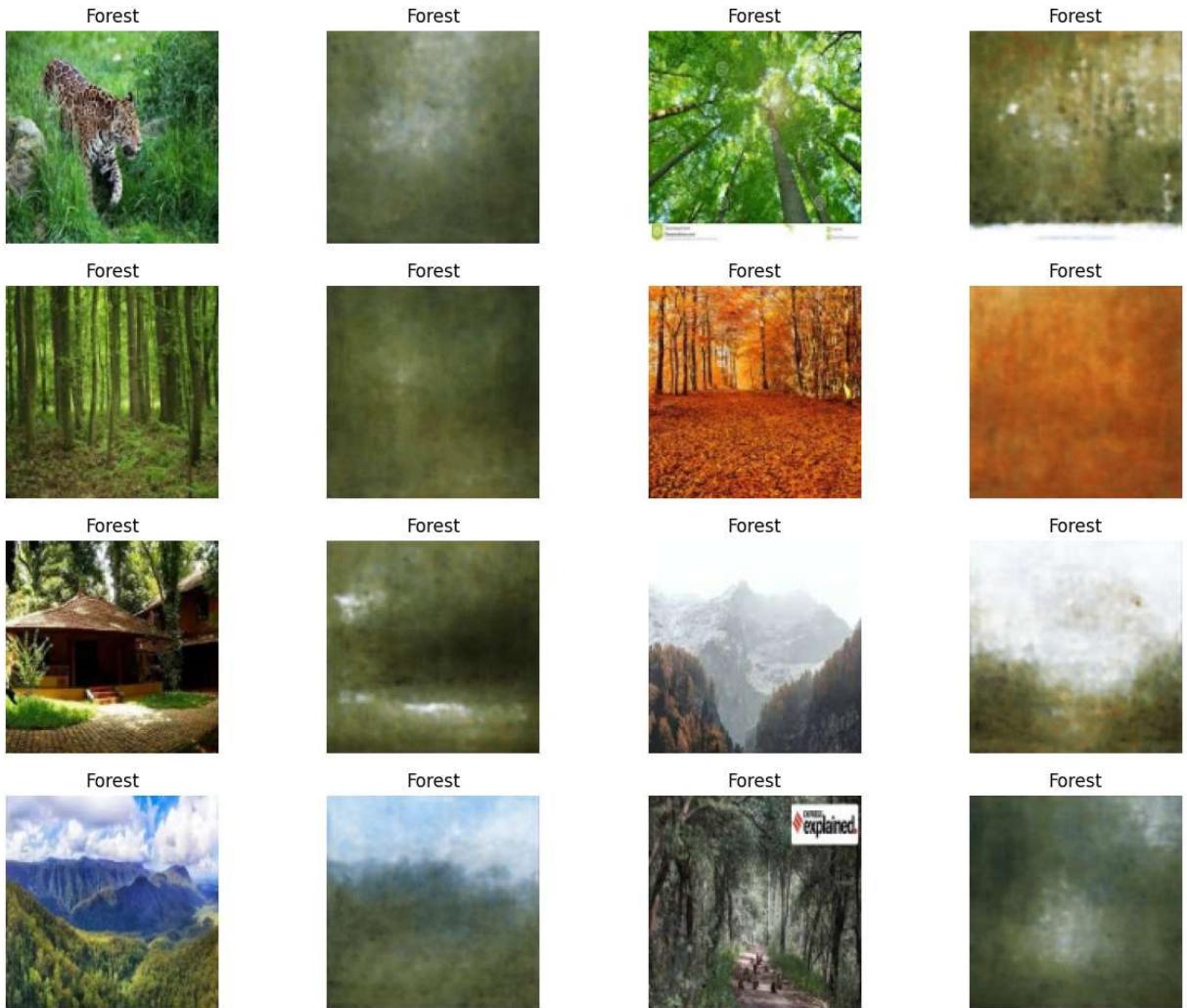
```
120/120 [=====] - 28s 231ms/step - loss: 66.4834 - reconstruction_error: 56.9747 - regularization_error: 9.5087 - val_loss: 68.5217 - val_reconstruction_error: 58.3008 - val_regularization_error: 10.2209
Epoch 12/1000
120/120 [=====] - 21s 173ms/step - loss: 65.7232 - reconstruction_error: 55.9990 - regularization_error: 9.7243 - val_loss: 66.8102 - val_reconstruction_error: 57.5451 - val_regularization_error: 9.2650
Epoch 13/1000
120/120 [=====] - 22s 180ms/step - loss: 64.4651 - reconstruction_error: 54.6559 - regularization_error: 9.8092 - val_loss: 70.2187 - val_reconstruction_error: 60.2120 - val_regularization_error: 10.0067
Epoch 14/1000
120/120 [=====] - 23s 187ms/step - loss: 64.5741 - reconstruction_error: 54.5480 - regularization_error: 10.0261 - val_loss: 66.3331 - val_reconstruction_error: 57.7279 - val_regularization_error: 8.6052
Epoch 15/1000
120/120 [=====] - 23s 193ms/step - loss: 63.7755 - reconstruction_error: 53.6335 - regularization_error: 10.1420 - val_loss: 66.1843 - val_reconstruction_error: 55.0965 - val_regularization_error: 11.0878
Epoch 16/1000
120/120 [=====] - 23s 194ms/step - loss: 63.4278 - reconstruction_error: 53.2509 - regularization_error: 10.1770 - val_loss: 65.1870 - val_reconstruction_error: 54.9646 - val_regularization_error: 10.2224
Epoch 17/1000
120/120 [=====] - 23s 191ms/step - loss: 62.6956 - reconstruction_error: 52.5397 - regularization_error: 10.1558 - val_loss: 64.9123 - val_reconstruction_error: 54.5787 - val_regularization_error: 10.3335
Epoch 18/1000
120/120 [=====] - 20s 169ms/step - loss: 62.2952 - reconstruction_error: 52.0346 - regularization_error: 10.2606 - val_loss: 64.7232 - val_reconstruction_error: 54.6843 - val_regularization_error: 10.0389
Epoch 19/1000
120/120 [=====] - 23s 190ms/step - loss: 62.4934 - reconstruction_error: 52.0733 - regularization_error: 10.4201 - val_loss: 64.5894 - val_reconstruction_error: 53.9613 - val_regularization_error: 10.6281
Epoch 20/1000
120/120 [=====] - 23s 187ms/step - loss: 61.9277 - reconstruction_error: 51.4813 - regularization_error: 10.4464 - val_loss: 63.9354 - val_reconstruction_error: 52.6555 - val_regularization_error: 11.2799
Epoch 21/1000
120/120 [=====] - ETA: 0s - loss: 61.5000 - reconstruction_error: 51.0345 - regularization_error: 10.4655
[2023-12-01 21:04:58.597592]: Reconstructing images for epoch 21 ...
```



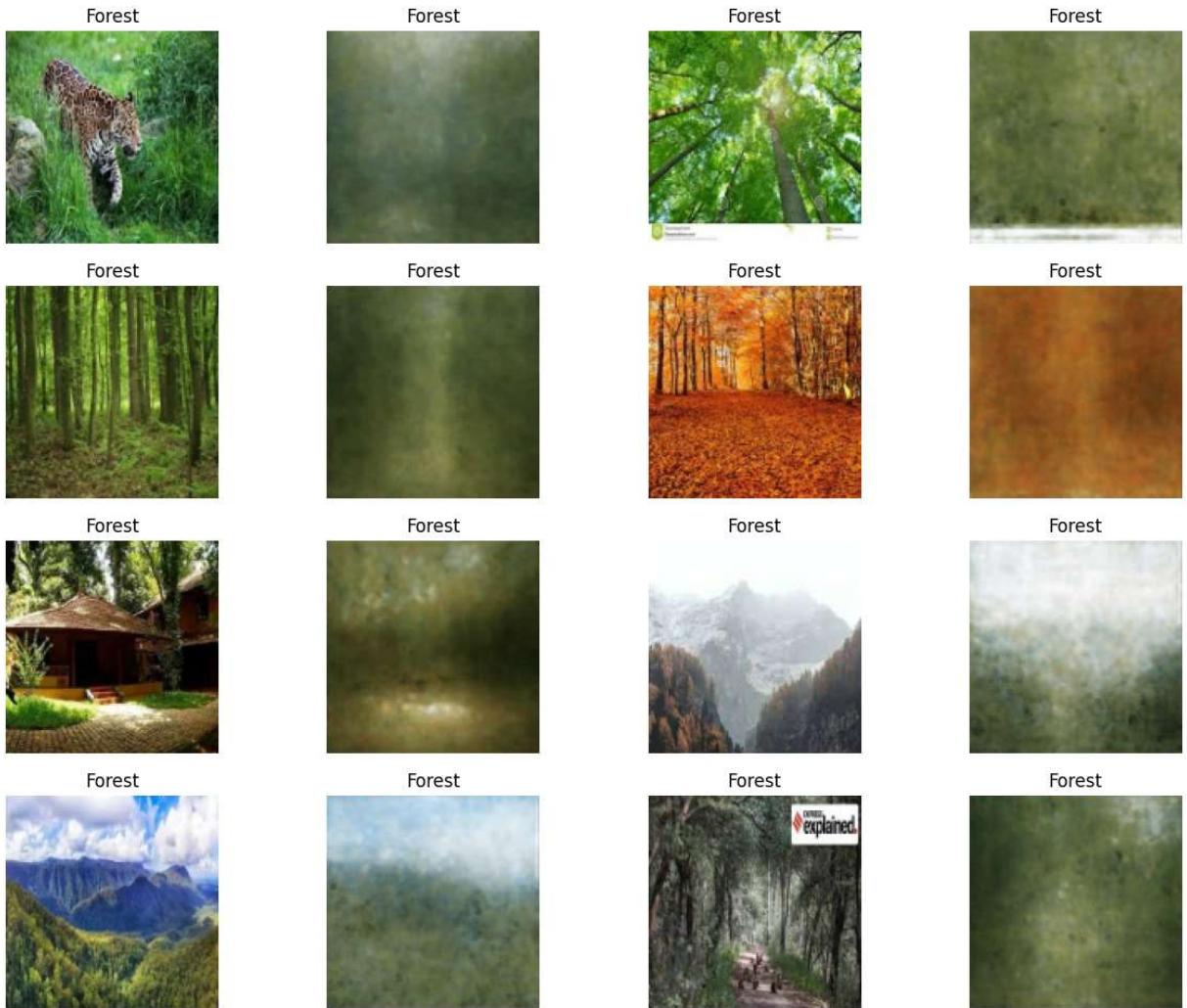
```
120/120 [=====] - 24s 199ms/step - loss: 61.5000 - reconstruction_error: 51.0345 - regularization_error: 10.4655 - val_loss: 64.3393 - val_reconstruction_error: 55.0653 - val_regularization_error: 9.2740
Epoch 22/1000
120/120 [=====] - 20s 170ms/step - loss: 61.6230 - reconstruction_error: 51.1072 - regularization_error: 10.5157 - val_loss: 64.7869 - val_reconstruction_error: 54.0801 - val_regularization_error: 10.7068
Epoch 23/1000
120/120 [=====] - 22s 180ms/step - loss: 61.6207 - reconstruction_error: 51.0999 - regularization_error: 10.5208 - val_loss: 63.3712 - val_reconstruction_error: 52.6636 - val_regularization_error: 10.7076
Epoch 24/1000
120/120 [=====] - 23s 187ms/step - loss: 61.2951 - reconstruction_error: 50.6073 - regularization_error: 10.6878 - val_loss: 63.1248 - val_reconstruction_error: 52.4741 - val_regularization_error: 10.6506
Epoch 25/1000
120/120 [=====] - 23s 190ms/step - loss: 60.9546 - reconstruction_error: 50.2671 - regularization_error: 10.6875 - val_loss: 63.6322 - val_reconstruction_error: 53.2024 - val_regularization_error: 10.4298
Epoch 26/1000
120/120 [=====] - 24s 197ms/step - loss: 60.9724 - reconstruction_error: 50.1302 - regularization_error: 10.8422 - val_loss: 63.6157 - val_reconstruction_error: 53.1897 - val_regularization_error: 10.4260
Epoch 27/1000
120/120 [=====] - 20s 168ms/step - loss: 60.5605 - reconstruction_error: 49.7249 - regularization_error: 10.8356 - val_loss: 64.3271 - val_reconstruction_error: 53.4590 - val_regularization_error: 10.8681
Epoch 28/1000
120/120 [=====] - 21s 172ms/step - loss: 60.3883 - reconstruction_error: 49.5687 - regularization_error: 10.8196 - val_loss: 63.6615 - val_reconstruction_error: 54.1562 - val_regularization_error: 9.5053
Epoch 29/1000
120/120 [=====] - 21s 174ms/step - loss: 60.4702 - reconstruction_error: 49.4999 - regularization_error: 10.9703 - val_loss: 63.3148 - val_reconstruction_error: 52.8273 - val_regularization_error: 10.4875
Epoch 30/1000
120/120 [=====] - 22s 178ms/step - loss: 60.2756 - reconstruction_error: 49.3080 - regularization_error: 10.9676 - val_loss: 63.4550 - val_reconstruction_error: 51.8076 - val_regularization_error: 11.6474
Epoch 31/1000
120/120 [=====] - ETA: 0s - loss: 60.2643 - reconstruction_error: 49.2739 - regularization_error: 10.9905
[2023-12-01 21:09:00.571202]: Reconstructing images for epoch 31 ...
```



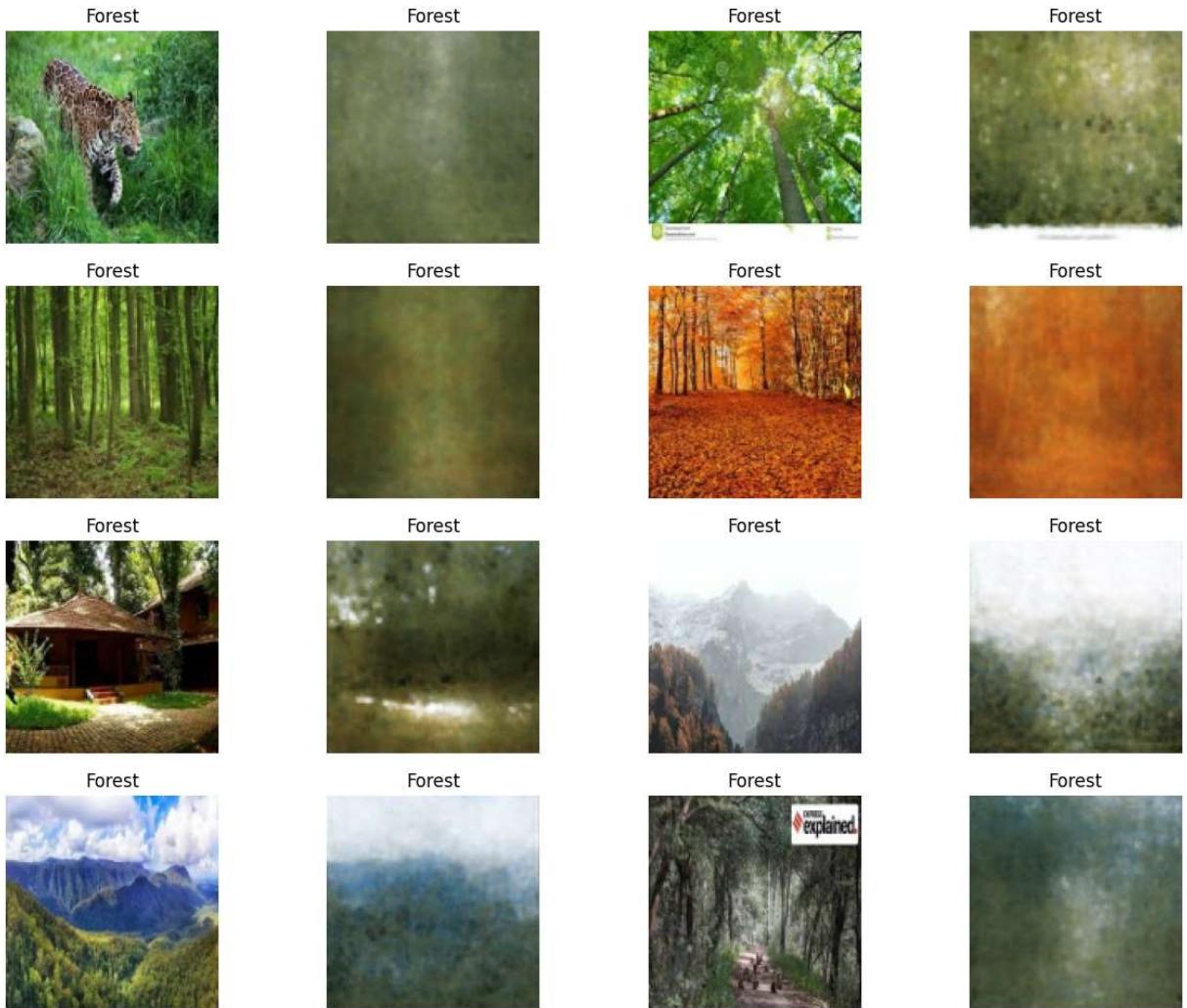
```
120/120 [=====] - 26s 217ms/step - loss: 60.2643 - reconstruction_error: 49.2739 - regularization_error: 10.9905 - val_loss: 62.8176 - val_reconstruction_error: 51.5998 - val_regularization_error: 11.2178
Epoch 32/1000
120/120 [=====] - 17s 141ms/step - loss: 60.3157 - reconstruction_error: 49.2266 - regularization_error: 11.0892 - val_loss: 65.1881 - val_reconstruction_error: 54.5708 - val_regularization_error: 10.6173
Epoch 33/1000
120/120 [=====] - 21s 170ms/step - loss: 59.8846 - reconstruction_error: 48.7639 - regularization_error: 11.1208 - val_loss: 62.5871 - val_reconstruction_error: 51.4810 - val_regularization_error: 11.1061
Epoch 34/1000
120/120 [=====] - 19s 153ms/step - loss: 59.3608 - reconstruction_error: 48.1937 - regularization_error: 11.1671 - val_loss: 62.4763 - val_reconstruction_error: 50.0343 - val_regularization_error: 12.4420
Epoch 35/1000
120/120 [=====] - 20s 168ms/step - loss: 59.3886 - reconstruction_error: 48.2032 - regularization_error: 11.1855 - val_loss: 64.0772 - val_reconstruction_error: 52.9778 - val_regularization_error: 11.0994
Epoch 36/1000
120/120 [=====] - 23s 186ms/step - loss: 59.0991 - reconstruction_error: 47.8992 - regularization_error: 11.1999 - val_loss: 62.6890 - val_reconstruction_error: 50.5586 - val_regularization_error: 12.1304
Epoch 37/1000
120/120 [=====] - 24s 197ms/step - loss: 59.0460 - reconstruction_error: 47.7390 - regularization_error: 11.3070 - val_loss: 63.9029 - val_reconstruction_error: 52.3234 - val_regularization_error: 11.5795
Epoch 38/1000
120/120 [=====] - 21s 177ms/step - loss: 59.2765 - reconstruction_error: 47.9549 - regularization_error: 11.3217 - val_loss: 63.0738 - val_reconstruction_error: 51.9768 - val_regularization_error: 11.0970
Epoch 39/1000
120/120 [=====] - 21s 170ms/step - loss: 58.9374 - reconstruction_error: 47.6524 - regularization_error: 11.2850 - val_loss: 62.9252 - val_reconstruction_error: 52.4315 - val_regularization_error: 10.4937
Epoch 40/1000
120/120 [=====] - 22s 179ms/step - loss: 58.8765 - reconstruction_error: 47.5286 - regularization_error: 11.3479 - val_loss: 63.2540 - val_reconstruction_error: 52.5356 - val_regularization_error: 10.7183
Epoch 41/1000
120/120 [=====] - ETA: 0s - loss: 58.6903 - reconstruction_error: 47.3091 - regularization_error: 11.3812
[2023-12-01 21:12:36.211728]: Reconstructing images for epoch 41 ...
```



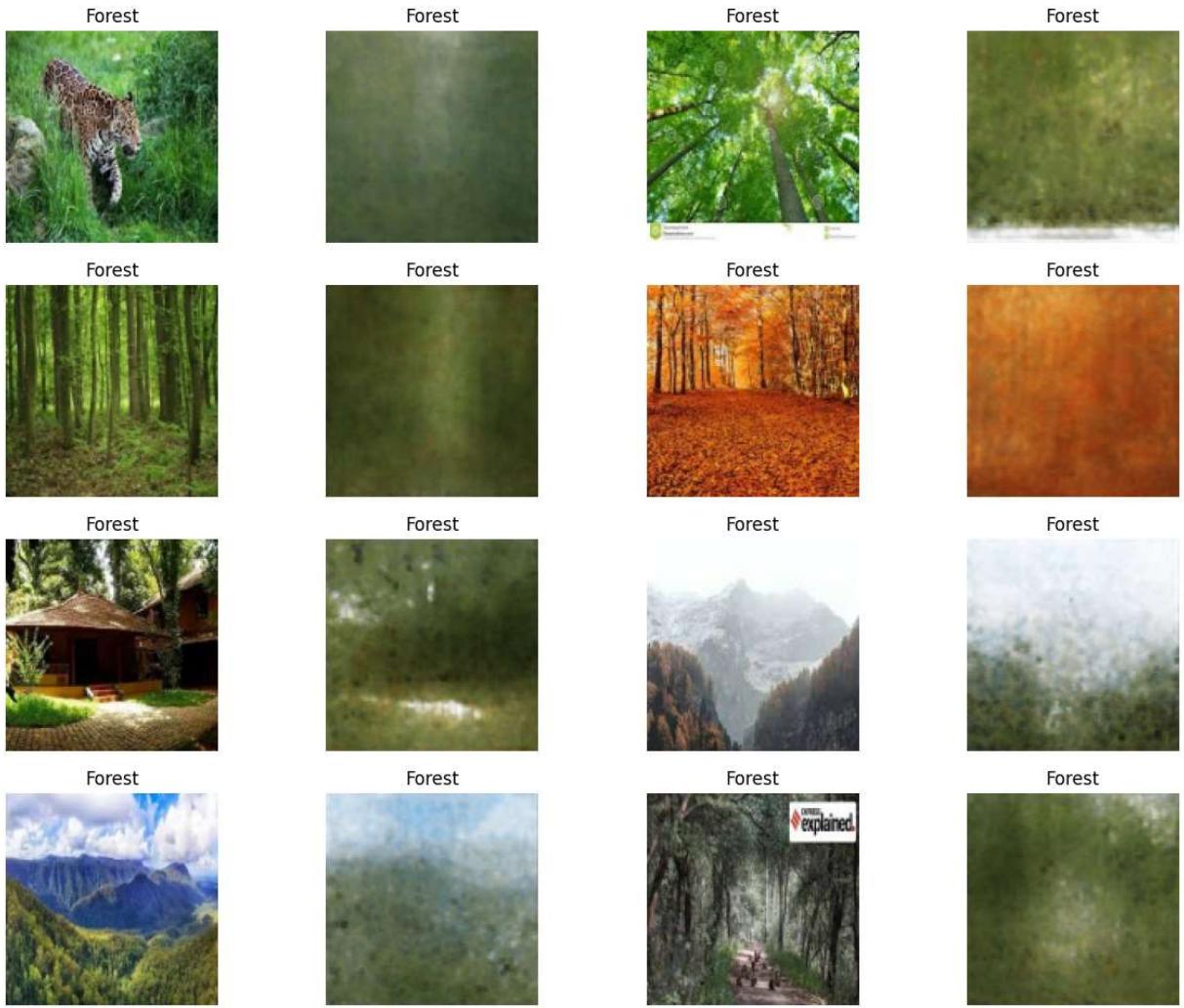
```
120/120 [=====] - 27s 223ms/step - loss: 58.6903 - reconstruction_error: 47.3091 - regularization_error: 11.3812 - val_loss: 62.5866 - val_reconstruction_error: 51.2915 - val_regularization_error: 11.2951
Epoch 42/1000
120/120 [=====] - 21s 175ms/step - loss: 58.7806 - reconstruction_error: 47.2672 - regularization_error: 11.5134 - val_loss: 63.1507 - val_reconstruction_error: 52.3568 - val_regularization_error: 10.7939
Epoch 43/1000
120/120 [=====] - 20s 164ms/step - loss: 58.3782 - reconstruction_error: 46.9133 - regularization_error: 11.4649 - val_loss: 62.5850 - val_reconstruction_error: 50.4307 - val_regularization_error: 12.1544
Epoch 44/1000
120/120 [=====] - 19s 157ms/step - loss: 58.3719 - reconstruction_error: 46.8414 - regularization_error: 11.5305 - val_loss: 61.8640 - val_reconstruction_error: 50.6248 - val_regularization_error: 11.2392
Epoch 45/1000
120/120 [=====] - 18s 144ms/step - loss: 58.4753 - reconstruction_error: 46.9375 - regularization_error: 11.5378 - val_loss: 63.7421 - val_reconstruction_error: 51.6455 - val_regularization_error: 12.0967
Epoch 46/1000
120/120 [=====] - 23s 190ms/step - loss: 58.4426 - reconstruction_error: 46.7673 - regularization_error: 11.6753 - val_loss: 61.6861 - val_reconstruction_error: 50.5523 - val_regularization_error: 11.1339
Epoch 47/1000
120/120 [=====] - 20s 162ms/step - loss: 58.2332 - reconstruction_error: 46.5748 - regularization_error: 11.6584 - val_loss: 63.7335 - val_reconstruction_error: 51.0779 - val_regularization_error: 12.6556
Epoch 48/1000
120/120 [=====] - 24s 195ms/step - loss: 58.2319 - reconstruction_error: 46.4636 - regularization_error: 11.7683 - val_loss: 62.3309 - val_reconstruction_error: 50.8324 - val_regularization_error: 11.4985
Epoch 49/1000
120/120 [=====] - 20s 166ms/step - loss: 57.9233 - reconstruction_error: 46.1091 - regularization_error: 11.8142 - val_loss: 62.3900 - val_reconstruction_error: 51.1893 - val_regularization_error: 11.2007
Epoch 50/1000
120/120 [=====] - 19s 159ms/step - loss: 57.6415 - reconstruction_error: 45.9449 - regularization_error: 11.6965 - val_loss: 62.2353 - val_reconstruction_error: 51.3087 - val_regularization_error: 10.9266
Epoch 51/1000
120/120 [=====] - ETA: 0s - loss: 58.1065 - reconstruction_error: 46.1730 - regularization_error: 11.9335
[2023-12-01 21:16:06.867293]: Reconstructing images for epoch 51 ...
```



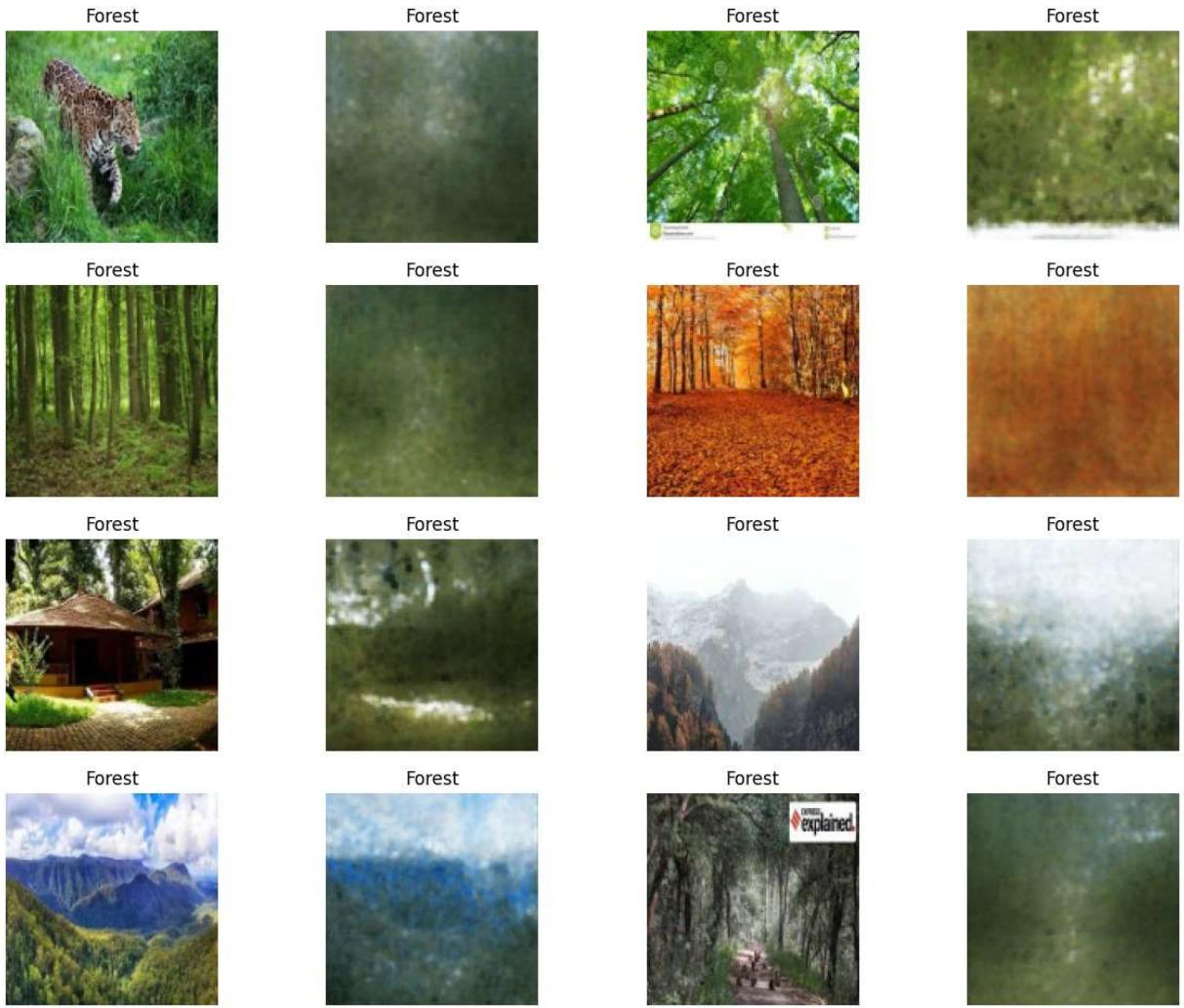
```
120/120 [=====] - 23s 189ms/step - loss: 58.1065 - reconstruction_error: 46.1730 - regularization_error: 11.9335 - val_loss: 62.8169 - val_reconstruction_error: 52.0706 - val_regularization_error: 10.7463
Epoch 52/1000
120/120 [=====] - 18s 150ms/step - loss: 57.6159 - reconstruction_error: 45.8841 - regularization_error: 11.7317 - val_loss: 62.7943 - val_reconstruction_error: 50.4947 - val_regularization_error: 12.2996
Epoch 53/1000
120/120 [=====] - 23s 194ms/step - loss: 58.1922 - reconstruction_error: 46.3700 - regularization_error: 11.8223 - val_loss: 63.1885 - val_reconstruction_error: 51.5371 - val_regularization_error: 11.6514
Epoch 54/1000
120/120 [=====] - 18s 146ms/step - loss: 57.4903 - reconstruction_error: 45.5239 - regularization_error: 11.9664 - val_loss: 62.0023 - val_reconstruction_error: 50.1543 - val_regularization_error: 11.8480
Epoch 55/1000
120/120 [=====] - 23s 191ms/step - loss: 57.1724 - reconstruction_error: 45.2501 - regularization_error: 11.9223 - val_loss: 62.1851 - val_reconstruction_error: 50.9748 - val_regularization_error: 11.2103
Epoch 56/1000
120/120 [=====] - 19s 155ms/step - loss: 57.1954 - reconstruction_error: 45.2547 - regularization_error: 11.9408 - val_loss: 63.1228 - val_reconstruction_error: 51.1401 - val_regularization_error: 11.9828
Epoch 57/1000
120/120 [=====] - 20s 164ms/step - loss: 57.2287 - reconstruction_error: 45.2333 - regularization_error: 11.9954 - val_loss: 62.5152 - val_reconstruction_error: 50.7343 - val_regularization_error: 11.7809
Epoch 58/1000
120/120 [=====] - 21s 174ms/step - loss: 56.9697 - reconstruction_error: 44.9592 - regularization_error: 12.0105 - val_loss: 62.6023 - val_reconstruction_error: 51.6012 - val_regularization_error: 11.0012
Epoch 59/1000
120/120 [=====] - 18s 150ms/step - loss: 57.5005 - reconstruction_error: 45.3556 - regularization_error: 12.1450 - val_loss: 62.5065 - val_reconstruction_error: 51.6669 - val_regularization_error: 10.8396
Epoch 60/1000
120/120 [=====] - 21s 176ms/step - loss: 56.8125 - reconstruction_error: 44.6420 - regularization_error: 12.1705 - val_loss: 62.3122 - val_reconstruction_error: 50.5325 - val_regularization_error: 11.7797
Epoch 61/1000
120/120 [=====] - ETA: 0s - loss: 56.5993 - reconstruction_error: 44.5188 - regularization_error: 12.0805
[2023-12-01 21:19:36.106228]: Reconstructing images for epoch 61 ...
```



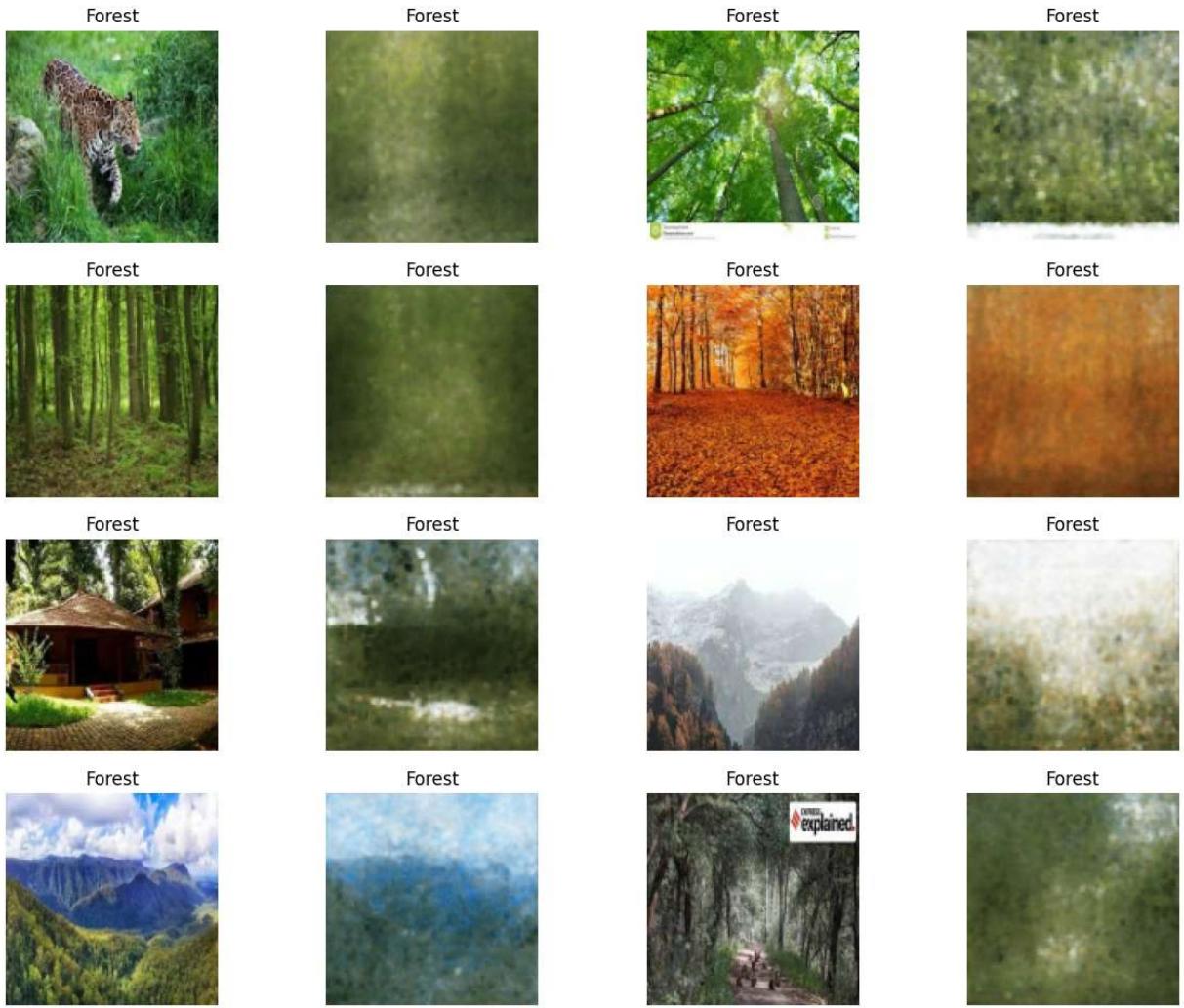
```
120/120 [=====] - 27s 226ms/step - loss: 56.5993 - reconstruction_error: 44.5188 - regularization_error: 12.0805 - val_loss: 64.5735 - val_reconstruction_error: 51.6114 - val_regularization_error: 12.9621
Epoch 62/1000
120/120 [=====] - 16s 133ms/step - loss: 56.5579 - reconstruction_error: 44.5346 - regularization_error: 12.0233 - val_loss: 62.6941 - val_reconstruction_error: 50.6522 - val_regularization_error: 12.0419
Epoch 63/1000
120/120 [=====] - 22s 183ms/step - loss: 56.6518 - reconstruction_error: 44.5202 - regularization_error: 12.1316 - val_loss: 62.4903 - val_reconstruction_error: 50.7122 - val_regularization_error: 11.7781
Epoch 64/1000
120/120 [=====] - 20s 165ms/step - loss: 56.6511 - reconstruction_error: 44.4860 - regularization_error: 12.1651 - val_loss: 62.5382 - val_reconstruction_error: 50.6185 - val_regularization_error: 11.9196
Epoch 65/1000
120/120 [=====] - 21s 175ms/step - loss: 56.4555 - reconstruction_error: 44.1715 - regularization_error: 12.2840 - val_loss: 62.6877 - val_reconstruction_error: 51.4199 - val_regularization_error: 11.2678
Epoch 66/1000
120/120 [=====] - 23s 189ms/step - loss: 56.3509 - reconstruction_error: 44.0067 - regularization_error: 12.3441 - val_loss: 62.8641 - val_reconstruction_error: 51.8237 - val_regularization_error: 11.0404
Epoch 67/1000
120/120 [=====] - 23s 189ms/step - loss: 56.1008 - reconstruction_error: 43.9175 - regularization_error: 12.1833 - val_loss: 62.9401 - val_reconstruction_error: 51.2075 - val_regularization_error: 11.7325
Epoch 68/1000
120/120 [=====] - 23s 179ms/step - loss: 56.4105 - reconstruction_error: 44.0858 - regularization_error: 12.3247 - val_loss: 62.2731 - val_reconstruction_error: 49.4725 - val_regularization_error: 12.8006
Epoch 69/1000
120/120 [=====] - 18s 150ms/step - loss: 56.0336 - reconstruction_error: 43.6909 - regularization_error: 12.3428 - val_loss: 62.9104 - val_reconstruction_error: 52.0583 - val_regularization_error: 10.8522
Epoch 70/1000
120/120 [=====] - 24s 202ms/step - loss: 56.1915 - reconstruction_error: 43.7938 - regularization_error: 12.3977 - val_loss: 62.5036 - val_reconstruction_error: 50.6758 - val_regularization_error: 11.8278
Epoch 71/1000
120/120 [=====] - ETA: 0s - loss: 55.7975 - reconstruction_error: 43.4911 - regularization_error: 12.3065
[2023-12-01 21:23:09.893159]: Reconstructing images for epoch 71 ...
```



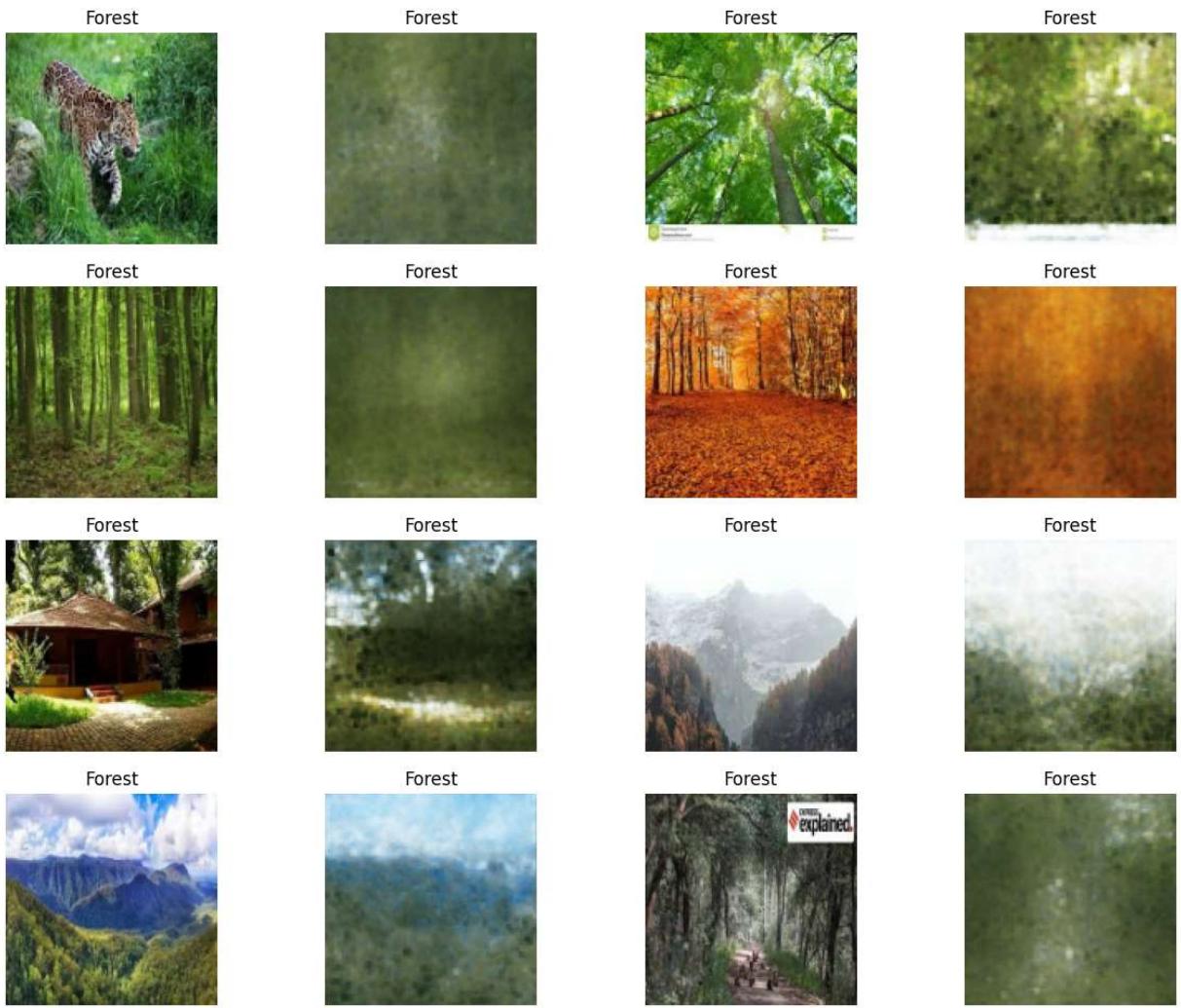
```
120/120 [=====] - 22s 181ms/step - loss: 55.7975 - reconstruction_error: 43.4911 - regularization_error: 12.3065 - val_loss: 62.7532 - val_reconstruction_error: 49.9213 - val_regularization_error: 12.8319
Epoch 72/1000
120/120 [=====] - 17s 140ms/step - loss: 55.9970 - reconstruction_error: 43.5379 - regularization_error: 12.4590 - val_loss: 63.6175 - val_reconstruction_error: 51.4171 - val_regularization_error: 12.2004
Epoch 73/1000
120/120 [=====] - 19s 161ms/step - loss: 55.9717 - reconstruction_error: 43.3988 - regularization_error: 12.5729 - val_loss: 62.3467 - val_reconstruction_error: 50.5475 - val_regularization_error: 11.7993
Epoch 74/1000
120/120 [=====] - 19s 158ms/step - loss: 55.6379 - reconstruction_error: 43.1803 - regularization_error: 12.4576 - val_loss: 62.6004 - val_reconstruction_error: 51.0888 - val_regularization_error: 11.5117
Epoch 75/1000
120/120 [=====] - 23s 192ms/step - loss: 55.4251 - reconstruction_error: 43.0060 - regularization_error: 12.4192 - val_loss: 63.5533 - val_reconstruction_error: 52.1151 - val_regularization_error: 11.4381
Epoch 76/1000
120/120 [=====] - 22s 187ms/step - loss: 55.5195 - reconstruction_error: 43.0555 - regularization_error: 12.4639 - val_loss: 62.8575 - val_reconstruction_error: 51.5825 - val_regularization_error: 11.2750
Epoch 77/1000
120/120 [=====] - 26s 217ms/step - loss: 55.4510 - reconstruction_error: 43.0136 - regularization_error: 12.4374 - val_loss: 63.2192 - val_reconstruction_error: 51.5619 - val_regularization_error: 11.6573
Epoch 78/1000
120/120 [=====] - 21s 171ms/step - loss: 55.2511 - reconstruction_error: 42.8364 - regularization_error: 12.4147 - val_loss: 63.8212 - val_reconstruction_error: 50.8618 - val_regularization_error: 12.9595
Epoch 79/1000
120/120 [=====] - 28s 233ms/step - loss: 55.3695 - reconstruction_error: 42.7481 - regularization_error: 12.6214 - val_loss: 63.7743 - val_reconstruction_error: 50.0984 - val_regularization_error: 13.6759
Epoch 80/1000
120/120 [=====] - 26s 212ms/step - loss: 55.2990 - reconstruction_error: 42.6279 - regularization_error: 12.6710 - val_loss: 62.7342 - val_reconstruction_error: 50.7283 - val_regularization_error: 12.0059
Epoch 81/1000
120/120 [=====] - ETA: 0s - loss: 54.9429 - reconstruction_error: 42.3309 - regularization_error: 12.6120
[2023-12-01 21:27:06.300883]: Reconstructing images for epoch 81 ...
```



```
120/120 [=====] - 35s 292ms/step - loss: 54.9429 - reconstruction_error: 42.3309 - regularization_error: 12.6120 - val_loss: 62.6434 - val_reconstruction_error: 50.3443 - val_regularization_error: 12.2991
Epoch 82/1000
120/120 [=====] - 286s 2s/step - loss: 55.0736 - reconstruction_error: 42.3420 - regularization_error: 12.7317 - val_loss: 63.6850 - val_reconstruction_error: 51.2312 - val_regularization_error: 12.4538
Epoch 83/1000
120/120 [=====] - 66s 545ms/step - loss: 55.0179 - reconstruction_error: 42.3015 - regularization_error: 12.7164 - val_loss: 63.6949 - val_reconstruction_error: 51.8018 - val_regularization_error: 11.8932
Epoch 84/1000
120/120 [=====] - 31s 262ms/step - loss: 54.7843 - reconstruction_error: 42.1276 - regularization_error: 12.6566 - val_loss: 63.5192 - val_reconstruction_error: 52.3728 - val_regularization_error: 11.1464
Epoch 85/1000
120/120 [=====] - 25s 207ms/step - loss: 54.9645 - reconstruction_error: 42.2059 - regularization_error: 12.7585 - val_loss: 62.7571 - val_reconstruction_error: 50.7447 - val_regularization_error: 12.0124
Epoch 86/1000
120/120 [=====] - 24s 199ms/step - loss: 54.9110 - reconstruction_error: 42.1172 - regularization_error: 12.7939 - val_loss: 63.2214 - val_reconstruction_error: 51.1247 - val_regularization_error: 12.0967
Epoch 87/1000
120/120 [=====] - 31s 255ms/step - loss: 54.7685 - reconstruction_error: 41.9981 - regularization_error: 12.7705 - val_loss: 63.4558 - val_reconstruction_error: 50.4417 - val_regularization_error: 13.0141
Epoch 88/1000
120/120 [=====] - 26s 216ms/step - loss: 54.6975 - reconstruction_error: 41.8830 - regularization_error: 12.8144 - val_loss: 63.1277 - val_reconstruction_error: 51.1325 - val_regularization_error: 11.9952
Epoch 89/1000
120/120 [=====] - 26s 214ms/step - loss: 54.5480 - reconstruction_error: 41.8910 - regularization_error: 12.6570 - val_loss: 64.0258 - val_reconstruction_error: 52.2504 - val_regularization_error: 11.7754
Epoch 90/1000
120/120 [=====] - 21s 178ms/step - loss: 54.4498 - reconstruction_error: 41.7780 - regularization_error: 12.6718 - val_loss: 63.8859 - val_reconstruction_error: 50.7550 - val_regularization_error: 13.1309
Epoch 91/1000
120/120 [=====] - ETA: 0s - loss: 54.3192 - reconstruction_error: 41.4459 - regularization_error: 12.8733
[2023-12-01 21:36:38.907961]: Reconstructing images for epoch 91 ...
```



```
120/120 [=====] - 31s 259ms/step - loss: 54.3192 - reconstruction_error: 41.4459 - regularization_error: 12.8733 - val_loss: 63.5776 - val_reconstruction_error: 51.4681 - val_regularization_error: 12.1095
Epoch 92/1000
120/120 [=====] - 31s 257ms/step - loss: 54.3951 - reconstruction_error: 41.5220 - regularization_error: 12.8731 - val_loss: 62.8892 - val_reconstruction_error: 51.3656 - val_regularization_error: 11.5236
Epoch 93/1000
120/120 [=====] - 26s 219ms/step - loss: 54.1982 - reconstruction_error: 41.3168 - regularization_error: 12.8815 - val_loss: 63.3485 - val_reconstruction_error: 52.0067 - val_regularization_error: 11.3417
Epoch 94/1000
120/120 [=====] - 26s 216ms/step - loss: 54.3474 - reconstruction_error: 41.4655 - regularization_error: 12.8818 - val_loss: 63.7051 - val_reconstruction_error: 51.1601 - val_regularization_error: 12.5450
Epoch 95/1000
120/120 [=====] - 23s 191ms/step - loss: 54.1428 - reconstruction_error: 41.1159 - regularization_error: 13.0269 - val_loss: 63.3266 - val_reconstruction_error: 51.7039 - val_regularization_error: 11.6227
Epoch 96/1000
120/120 [=====] - 104s 871ms/step - loss: 53.9325 - reconstruction_error: 41.0422 - regularization_error: 12.8903 - val_loss: 63.4036 - val_reconstruction_error: 51.4643 - val_regularization_error: 11.9393
Epoch 97/1000
120/120 [=====] - 95s 789ms/step - loss: 53.8387 - reconstruction_error: 40.8903 - regularization_error: 12.9484 - val_loss: 64.2524 - val_reconstruction_error: 51.6610 - val_regularization_error: 12.5914
Epoch 98/1000
120/120 [=====] - 68s 565ms/step - loss: 53.9365 - reconstruction_error: 41.0111 - regularization_error: 12.9254 - val_loss: 63.6729 - val_reconstruction_error: 52.2176 - val_regularization_error: 11.4553
Epoch 99/1000
120/120 [=====] - 69s 578ms/step - loss: 54.0082 - reconstruction_error: 40.8767 - regularization_error: 13.1316 - val_loss: 63.5492 - val_reconstruction_error: 50.6456 - val_regularization_error: 12.9036
Epoch 100/1000
120/120 [=====] - 74s 621ms/step - loss: 54.0438 - reconstruction_error: 40.8440 - regularization_error: 13.1998 - val_loss: 64.4177 - val_reconstruction_error: 51.8788 - val_regularization_error: 12.5389
Epoch 101/1000
120/120 [=====] - ETA: 0s - loss: 53.9997 - reconstruction_error: 40.8752 - regularization_error: 13.1244
[2023-12-01 21:46:38.826456]: Reconstructing images for epoch 101 ...
```



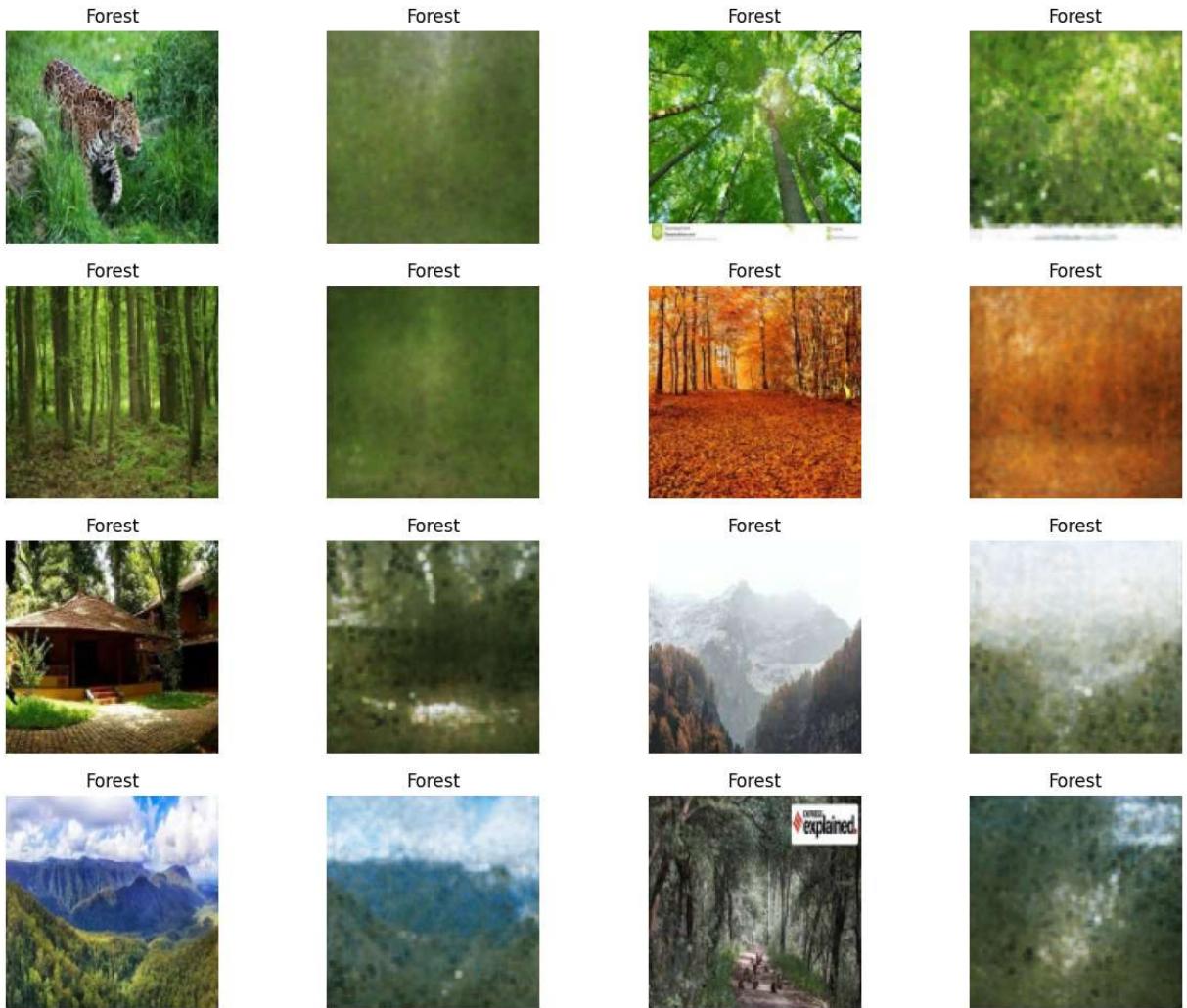
```
120/120 [=====] - 82s 684ms/step - loss: 53.9997 - reconstruction_error: 40.8752 - regularization_error: 13.1244 - val_loss: 63.2627 - val_reconstruction_error: 50.2252 - val_regularization_error: 13.0375
Epoch 102/1000
120/120 [=====] - 68s 569ms/step - loss: 53.8925 - reconstruction_error: 40.7165 - regularization_error: 13.1760 - val_loss: 63.5176 - val_reconstruction_error: 51.4429 - val_regularization_error: 12.0746
Epoch 103/1000
120/120 [=====] - 92s 772ms/step - loss: 53.4269 - reconstruction_error: 40.3015 - regularization_error: 13.1254 - val_loss: 63.8305 - val_reconstruction_error: 51.9291 - val_regularization_error: 11.9014
Epoch 104/1000
120/120 [=====] - 84s 700ms/step - loss: 53.2017 - reconstruction_error: 40.1955 - regularization_error: 13.0063 - val_loss: 63.0694 - val_reconstruction_error: 50.2306 - val_regularization_error: 12.8388
Epoch 105/1000
120/120 [=====] - 43s 354ms/step - loss: 53.3883 - reconstruction_error: 40.1679 - regularization_error: 13.2204 - val_loss: 62.7203 - val_reconstruction_error: 51.2138 - val_regularization_error: 11.5064
Epoch 106/1000
120/120 [=====] - 46s 382ms/step - loss: 53.6121 - reconstruction_error: 40.4639 - regularization_error: 13.1482 - val_loss: 63.9538 - val_reconstruction_error: 52.2546 - val_regularization_error: 11.6993
Epoch 107/1000
120/120 [=====] - 66s 549ms/step - loss: 53.5441 - reconstruction_error: 40.3815 - regularization_error: 13.1627 - val_loss: 64.8766 - val_reconstruction_error: 52.8335 - val_regularization_error: 12.0431
Epoch 108/1000
120/120 [=====] - 200s 2s/step - loss: 53.4033 - reconstruction_error: 40.2571 - regularization_error: 13.1463 - val_loss: 63.9538 - val_reconstruction_error: 52.0138 - val_regularization_error: 11.9400
Epoch 109/1000
120/120 [=====] - 231s 2s/step - loss: 53.2395 - reconstruction_error: 39.9285 - regularization_error: 13.3110 - val_loss: 63.8487 - val_reconstruction_error: 49.7941 - val_regularization_error: 14.0546
Epoch 110/1000
120/120 [=====] - 150s 1s/step - loss: 53.1546 - reconstruction_error: 39.9695 - regularization_error: 13.1852 - val_loss: 63.3964 - val_reconstruction_error: 51.1702 - val_regularization_error: 12.2262
Epoch 111/1000
120/120 [=====] - ETA: 0s - loss: 53.0325 - reconstruction_error: 39.7698 - regularization_error: 13.2627
[2023-12-01 22:04:35.108596]: Reconstructing images for epoch 111 ...
```



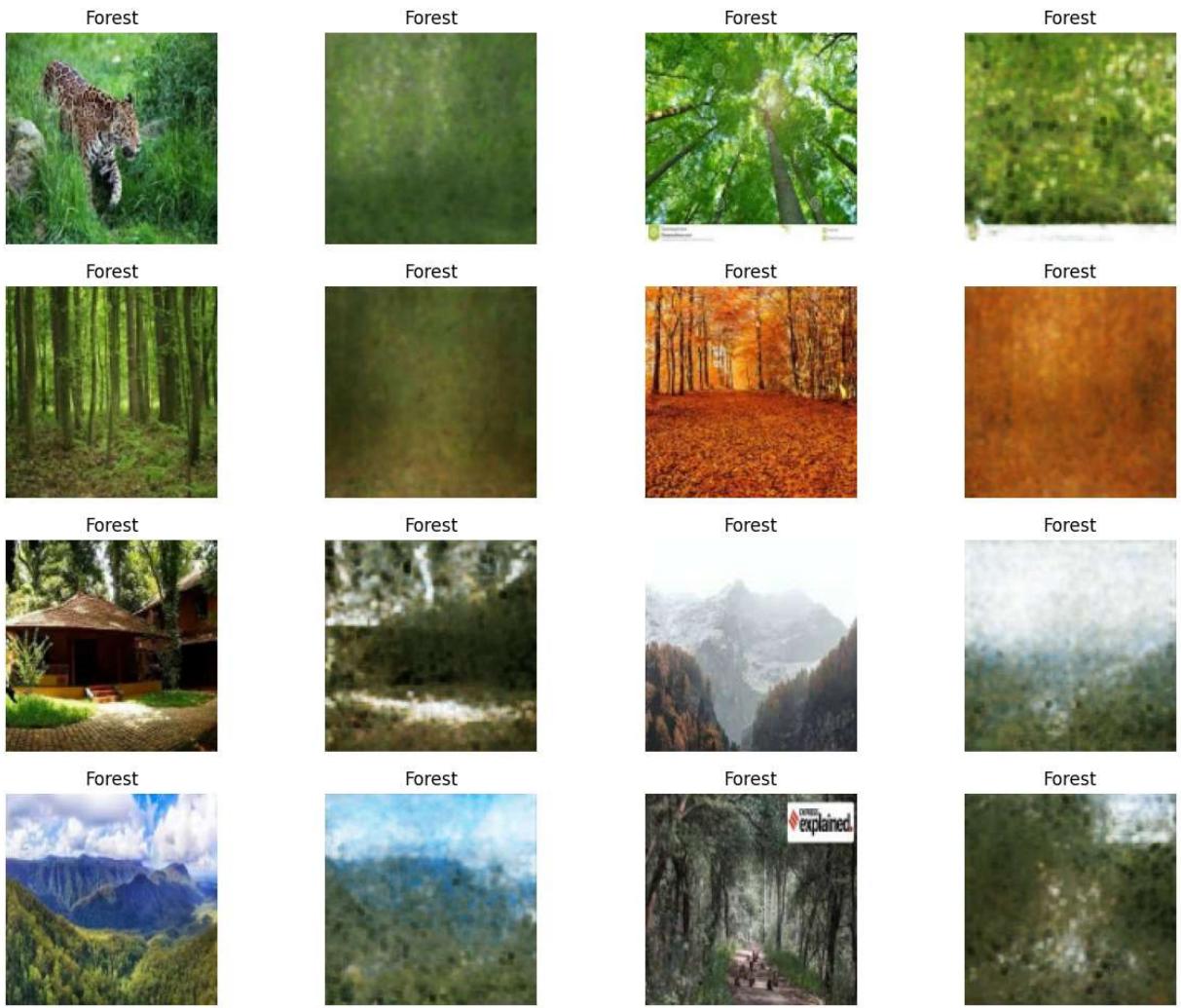
```
120/120 [=====] - 92s 769ms/step - loss: 53.0325 - reconstruction_error: 39.7698 - regularization_error: 13.2627 - val_loss: 63.9148 - val_reconstruction_error: 51.3037 - val_regularization_error: 12.6111
Epoch 112/1000
120/120 [=====] - 89s 747ms/step - loss: 53.0559 - reconstruction_error: 39.7604 - regularization_error: 13.2955 - val_loss: 63.6067 - val_reconstruction_error: 52.1774 - val_regularization_error: 11.4293
Epoch 113/1000
120/120 [=====] - 90s 752ms/step - loss: 53.1247 - reconstruction_error: 39.8577 - regularization_error: 13.2670 - val_loss: 64.2174 - val_reconstruction_error: 52.9635 - val_regularization_error: 11.2539
Epoch 114/1000
120/120 [=====] - 87s 727ms/step - loss: 53.0444 - reconstruction_error: 39.6623 - regularization_error: 13.3822 - val_loss: 63.7797 - val_reconstruction_error: 51.1210 - val_regularization_error: 12.6586
Epoch 115/1000
120/120 [=====] - 52s 431ms/step - loss: 52.9317 - reconstruction_error: 39.5715 - regularization_error: 13.3602 - val_loss: 63.7250 - val_reconstruction_error: 50.7309 - val_regularization_error: 12.9940
Epoch 116/1000
120/120 [=====] - 28s 235ms/step - loss: 52.8907 - reconstruction_error: 39.4287 - regularization_error: 13.4620 - val_loss: 64.2537 - val_reconstruction_error: 50.9436 - val_regularization_error: 13.3101
Epoch 117/1000
120/120 [=====] - 27s 228ms/step - loss: 52.8203 - reconstruction_error: 39.3852 - regularization_error: 13.4350 - val_loss: 64.7070 - val_reconstruction_error: 52.4590 - val_regularization_error: 12.2480
Epoch 118/1000
120/120 [=====] - 30s 247ms/step - loss: 52.9714 - reconstruction_error: 39.5533 - regularization_error: 13.4180 - val_loss: 63.7126 - val_reconstruction_error: 51.5544 - val_regularization_error: 12.1582
Epoch 119/1000
120/120 [=====] - 27s 223ms/step - loss: 52.6831 - reconstruction_error: 39.2248 - regularization_error: 13.4583 - val_loss: 63.7603 - val_reconstruction_error: 51.3618 - val_regularization_error: 12.3986
Epoch 120/1000
120/120 [=====] - 25s 210ms/step - loss: 52.2280 - reconstruction_error: 38.9415 - regularization_error: 13.2865 - val_loss: 64.1732 - val_reconstruction_error: 51.6693 - val_regularization_error: 12.5039
Epoch 121/1000
120/120 [=====] - ETA: 0s - loss: 52.7078 - reconstruction_error: 39.2351 - regularization_error: 13.4727
[2023-12-01 22:12:42.249561]: Reconstructing images for epoch 121 ...
```



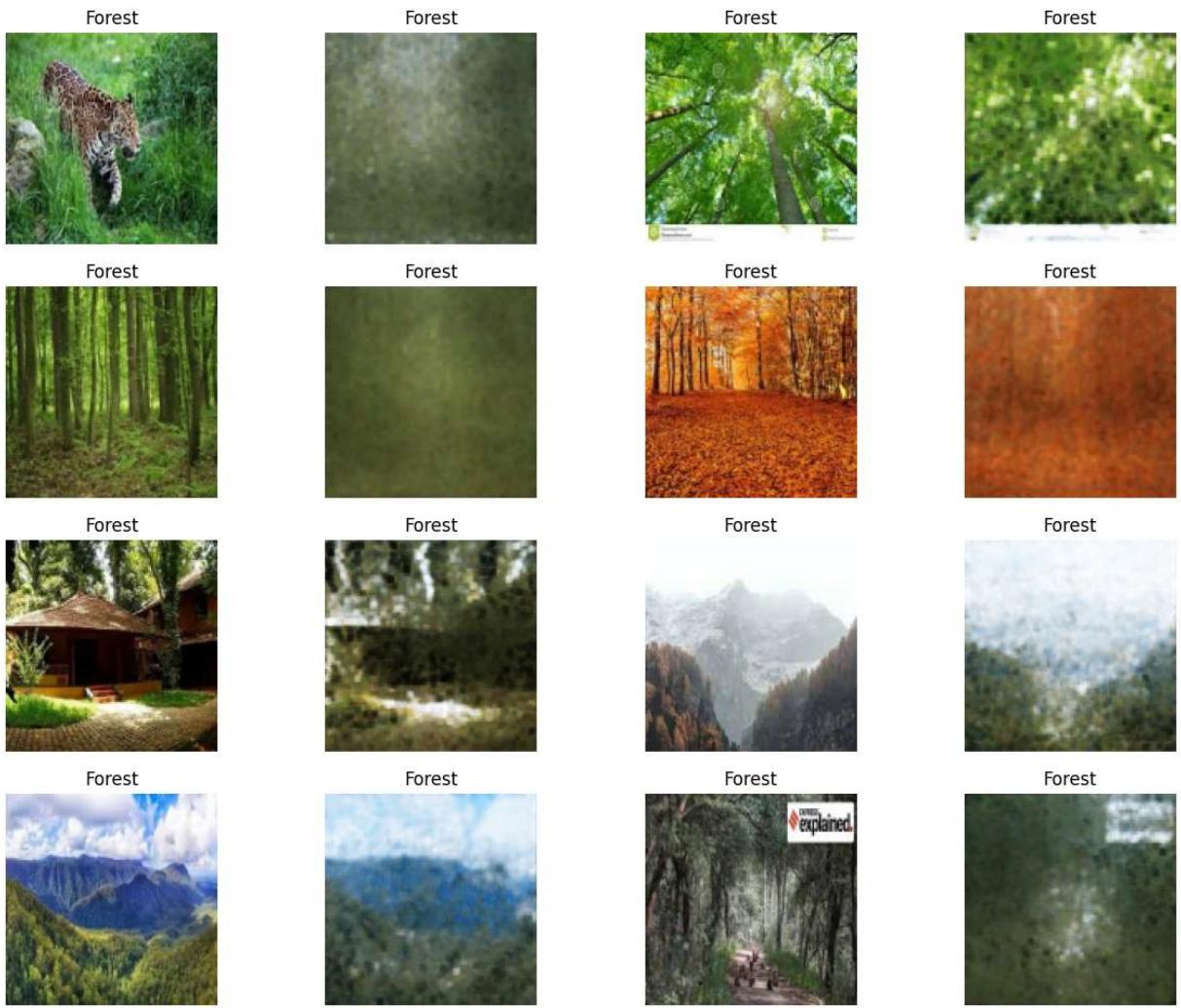
```
120/120 [=====] - 29s 242ms/step - loss: 52.7078 - reconstruction_error: 39.2351 - regularization_error: 13.4727 - val_loss: 64.4170 - val_reconstruction_error: 52.3173 - val_regularization_error: 12.0997
Epoch 122/1000
120/120 [=====] - 28s 235ms/step - loss: 52.8070 - reconstruction_error: 39.2287 - regularization_error: 13.5783 - val_loss: 64.6815 - val_reconstruction_error: 53.2775 - val_regularization_error: 11.4041
Epoch 123/1000
120/120 [=====] - 25s 211ms/step - loss: 52.5449 - reconstruction_error: 39.1116 - regularization_error: 13.4333 - val_loss: 64.0720 - val_reconstruction_error: 51.1659 - val_regularization_error: 12.9062
Epoch 124/1000
120/120 [=====] - 28s 232ms/step - loss: 52.3024 - reconstruction_error: 38.8525 - regularization_error: 13.4499 - val_loss: 64.0549 - val_reconstruction_error: 51.8564 - val_regularization_error: 12.1986
Epoch 125/1000
120/120 [=====] - 22s 186ms/step - loss: 52.3347 - reconstruction_error: 38.7012 - regularization_error: 13.6335 - val_loss: 65.0429 - val_reconstruction_error: 51.3306 - val_regularization_error: 13.7123
Epoch 126/1000
120/120 [=====] - 23s 191ms/step - loss: 52.5076 - reconstruction_error: 38.8152 - regularization_error: 13.6924 - val_loss: 64.3420 - val_reconstruction_error: 51.5277 - val_regularization_error: 12.8143
Epoch 127/1000
120/120 [=====] - 26s 214ms/step - loss: 52.0219 - reconstruction_error: 38.5201 - regularization_error: 13.5018 - val_loss: 64.0721 - val_reconstruction_error: 52.4240 - val_regularization_error: 11.6481
Epoch 128/1000
120/120 [=====] - 23s 193ms/step - loss: 52.2040 - reconstruction_error: 38.6497 - regularization_error: 13.5543 - val_loss: 63.3826 - val_reconstruction_error: 50.4378 - val_regularization_error: 12.9448
Epoch 129/1000
120/120 [=====] - 27s 227ms/step - loss: 51.9534 - reconstruction_error: 38.2827 - regularization_error: 13.6707 - val_loss: 64.7609 - val_reconstruction_error: 51.3931 - val_regularization_error: 13.3678
Epoch 130/1000
120/120 [=====] - 27s 225ms/step - loss: 52.2159 - reconstruction_error: 38.5481 - regularization_error: 13.6678 - val_loss: 65.9972 - val_reconstruction_error: 51.7818 - val_regularization_error: 14.2154
Epoch 131/1000
120/120 [=====] - ETA: 0s - loss: 52.2650 - reconstruction_error: 38.5148 - regularization_error: 13.7502
[2023-12-01 22:17:03.475264]: Reconstructing images for epoch 131 ...
```



```
120/120 [=====] - 29s 240ms/step - loss: 52.2650 - reconstruction_error: 38.5148 - regularization_error: 13.7502 - val_loss: 64.2745 - val_reconstruction_error: 51.8972 - val_regularization_error: 12.3773
Epoch 132/1000
120/120 [=====] - 28s 235ms/step - loss: 51.9857 - reconstruction_error: 38.2229 - regularization_error: 13.7628 - val_loss: 63.9645 - val_reconstruction_error: 52.0091 - val_regularization_error: 11.9554
Epoch 133/1000
120/120 [=====] - 25s 208ms/step - loss: 51.7582 - reconstruction_error: 38.0493 - regularization_error: 13.7090 - val_loss: 63.8111 - val_reconstruction_error: 51.5309 - val_regularization_error: 12.2802
Epoch 134/1000
120/120 [=====] - 23s 189ms/step - loss: 51.7847 - reconstruction_error: 38.0266 - regularization_error: 13.7580 - val_loss: 63.8941 - val_reconstruction_error: 51.3112 - val_regularization_error: 12.5829
Epoch 135/1000
120/120 [=====] - 27s 221ms/step - loss: 51.7601 - reconstruction_error: 38.1035 - regularization_error: 13.6566 - val_loss: 64.0333 - val_reconstruction_error: 52.6567 - val_regularization_error: 11.3766
Epoch 136/1000
120/120 [=====] - 26s 218ms/step - loss: 51.5185 - reconstruction_error: 37.8049 - regularization_error: 13.7136 - val_loss: 63.9308 - val_reconstruction_error: 51.7004 - val_regularization_error: 12.2305
Epoch 137/1000
120/120 [=====] - 27s 225ms/step - loss: 51.7111 - reconstruction_error: 37.9256 - regularization_error: 13.7855 - val_loss: 64.6672 - val_reconstruction_error: 52.5062 - val_regularization_error: 12.1610
Epoch 138/1000
120/120 [=====] - 28s 237ms/step - loss: 51.6624 - reconstruction_error: 37.7984 - regularization_error: 13.8641 - val_loss: 64.1579 - val_reconstruction_error: 51.3120 - val_regularization_error: 12.8459
Epoch 139/1000
120/120 [=====] - 22s 184ms/step - loss: 51.7457 - reconstruction_error: 37.8713 - regularization_error: 13.8745 - val_loss: 64.2808 - val_reconstruction_error: 51.3705 - val_regularization_error: 12.9103
Epoch 140/1000
120/120 [=====] - 28s 231ms/step - loss: 51.6269 - reconstruction_error: 37.5854 - regularization_error: 14.0415 - val_loss: 63.8767 - val_reconstruction_error: 51.1493 - val_regularization_error: 12.7274
Epoch 141/1000
120/120 [=====] - ETA: 0s - loss: 51.4314 - reconstruction_error: 37.5988 - regularization_error: 13.8326
[2023-12-01 22:21:28.648847]: Reconstructing images for epoch 141 ...
```



```
120/120 [=====] - 28s 234ms/step - loss: 51.4314 - reconstruction_error: 37.5988 - regularization_error: 13.8326 - val_loss: 64.2666 - val_reconstruction_error: 51.0618 - val_regularization_error: 13.2048
Epoch 142/1000
120/120 [=====] - 29s 245ms/step - loss: 51.2156 - reconstruction_error: 37.4704 - regularization_error: 13.7452 - val_loss: 64.6137 - val_reconstruction_error: 51.0042 - val_regularization_error: 13.6096
Epoch 143/1000
120/120 [=====] - 30s 249ms/step - loss: 51.4218 - reconstruction_error: 37.5226 - regularization_error: 13.8992 - val_loss: 64.8514 - val_reconstruction_error: 51.4785 - val_regularization_error: 13.3729
Epoch 144/1000
120/120 [=====] - 20s 169ms/step - loss: 51.7662 - reconstruction_error: 37.6999 - regularization_error: 14.0662 - val_loss: 64.1476 - val_reconstruction_error: 51.4077 - val_regularization_error: 12.7399
Epoch 145/1000
120/120 [=====] - 27s 221ms/step - loss: 51.5685 - reconstruction_error: 37.5726 - regularization_error: 13.9960 - val_loss: 64.3902 - val_reconstruction_error: 51.4756 - val_regularization_error: 12.9147
Epoch 146/1000
120/120 [=====] - 27s 225ms/step - loss: 51.0367 - reconstruction_error: 37.2011 - regularization_error: 13.8356 - val_loss: 64.2892 - val_reconstruction_error: 51.7545 - val_regularization_error: 12.5347
Epoch 147/1000
120/120 [=====] - 31s 259ms/step - loss: 50.8765 - reconstruction_error: 37.0671 - regularization_error: 13.8094 - val_loss: 65.0774 - val_reconstruction_error: 52.5785 - val_regularization_error: 12.4990
Epoch 148/1000
120/120 [=====] - 25s 206ms/step - loss: 51.0679 - reconstruction_error: 36.9787 - regularization_error: 14.0892 - val_loss: 64.1797 - val_reconstruction_error: 51.3236 - val_regularization_error: 12.8561
Epoch 149/1000
120/120 [=====] - 24s 202ms/step - loss: 51.3811 - reconstruction_error: 37.2834 - regularization_error: 14.0977 - val_loss: 64.5518 - val_reconstruction_error: 52.3575 - val_regularization_error: 12.1943
Epoch 150/1000
120/120 [=====] - 25s 210ms/step - loss: 50.9369 - reconstruction_error: 36.8757 - regularization_error: 14.0613 - val_loss: 68.0814 - val_reconstruction_error: 53.5138 - val_regularization_error: 14.5676
Epoch 151/1000
120/120 [=====] - ETA: 0s - loss: 51.3328 - reconstruction_error: 37.1555 - regularization_error: 14.1773
[2023-12-01 22:26:02.302696]: Reconstructing images for epoch 151 ...
```



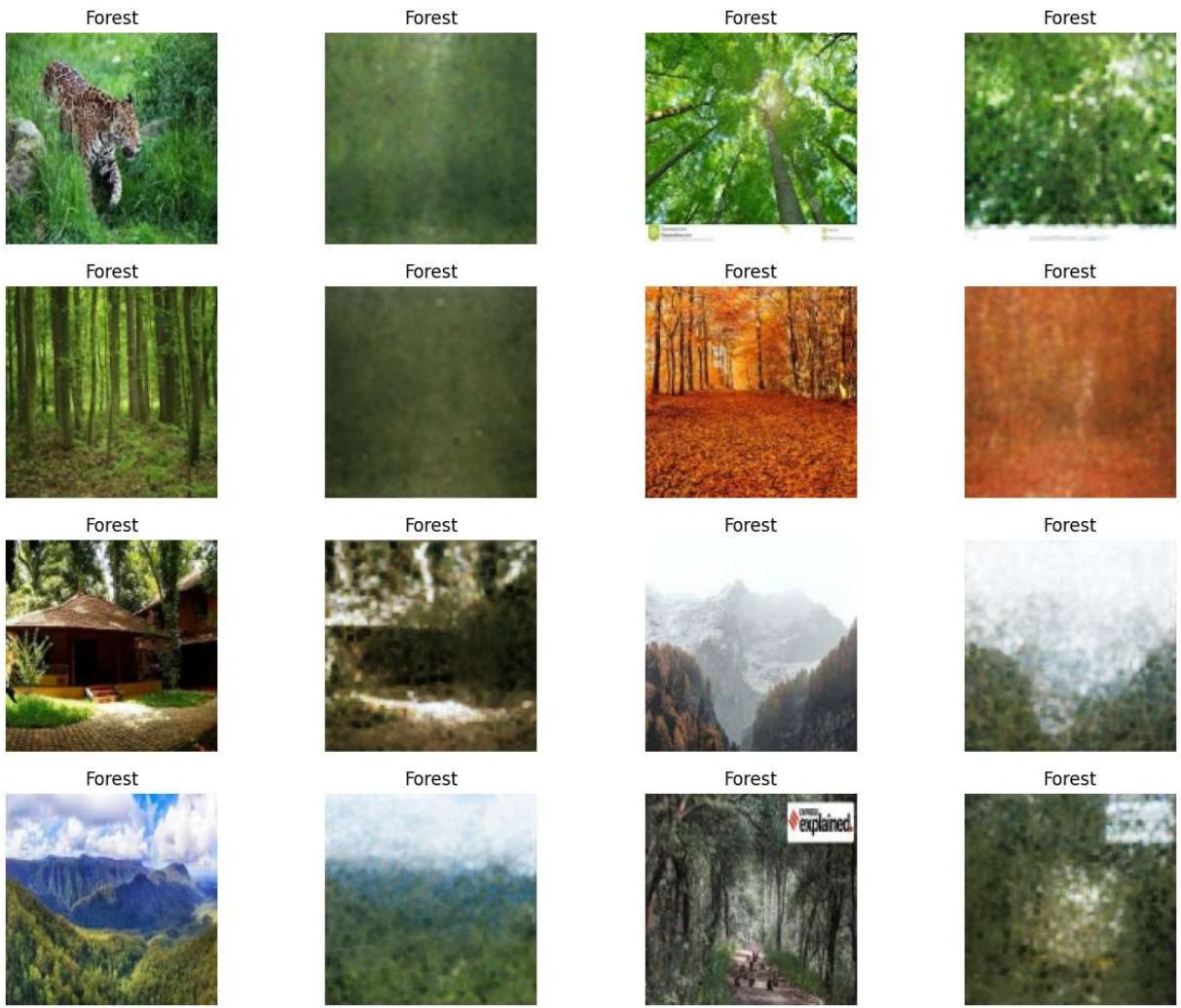
```
120/120 [=====] - 33s 275ms/step - loss: 51.3328 - reconstruction_error: 37.1555 - regularization_error: 14.1773 - val_loss: 65.0601 - val_reconstruction_error: 50.3655 - val_regularization_error: 14.6946
Epoch 152/1000
120/120 [=====] - 24s 202ms/step - loss: 50.9446 - reconstruction_error: 36.9986 - regularization_error: 13.9459 - val_loss: 66.1182 - val_reconstruction_error: 51.4350 - val_regularization_error: 14.6832
Epoch 153/1000
120/120 [=====] - 24s 196ms/step - loss: 50.7492 - reconstruction_error: 36.6929 - regularization_error: 14.0563 - val_loss: 64.8795 - val_reconstruction_error: 52.0344 - val_regularization_error: 12.8451
Epoch 154/1000
120/120 [=====] - 27s 222ms/step - loss: 50.6871 - reconstruction_error: 36.6482 - regularization_error: 14.0389 - val_loss: 65.4265 - val_reconstruction_error: 52.0533 - val_regularization_error: 13.3733
Epoch 155/1000
120/120 [=====] - 33s 276ms/step - loss: 50.7111 - reconstruction_error: 36.6377 - regularization_error: 14.0734 - val_loss: 65.0204 - val_reconstruction_error: 52.0518 - val_regularization_error: 12.9686
Epoch 156/1000
120/120 [=====] - 35s 291ms/step - loss: 50.6107 - reconstruction_error: 36.4857 - regularization_error: 14.1251 - val_loss: 64.8052 - val_reconstruction_error: 52.6706 - val_regularization_error: 12.1345
Epoch 157/1000
120/120 [=====] - 35s 288ms/step - loss: 50.8702 - reconstruction_error: 36.7263 - regularization_error: 14.1439 - val_loss: 63.5816 - val_reconstruction_error: 50.8694 - val_regularization_error: 12.7122
Epoch 158/1000
120/120 [=====] - 28s 236ms/step - loss: 50.4597 - reconstruction_error: 36.3832 - regularization_error: 14.0765 - val_loss: 65.3480 - val_reconstruction_error: 51.1462 - val_regularization_error: 14.2018
Epoch 159/1000
120/120 [=====] - 32s 262ms/step - loss: 50.7932 - reconstruction_error: 36.6082 - regularization_error: 14.1850 - val_loss: 64.6456 - val_reconstruction_error: 52.5249 - val_regularization_error: 12.1207
Epoch 160/1000
120/120 [=====] - 36s 299ms/step - loss: 50.8971 - reconstruction_error: 36.5178 - regularization_error: 14.3793 - val_loss: 65.5881 - val_reconstruction_error: 51.6463 - val_regularization_error: 13.9417
Epoch 161/1000
120/120 [=====] - ETA: 0s - loss: 50.2341 - reconstruction_error: 36.1285 - regularization_error: 14.1055
[2023-12-01 22:31:18.016058]: Reconstructing images for epoch 161 ...
```



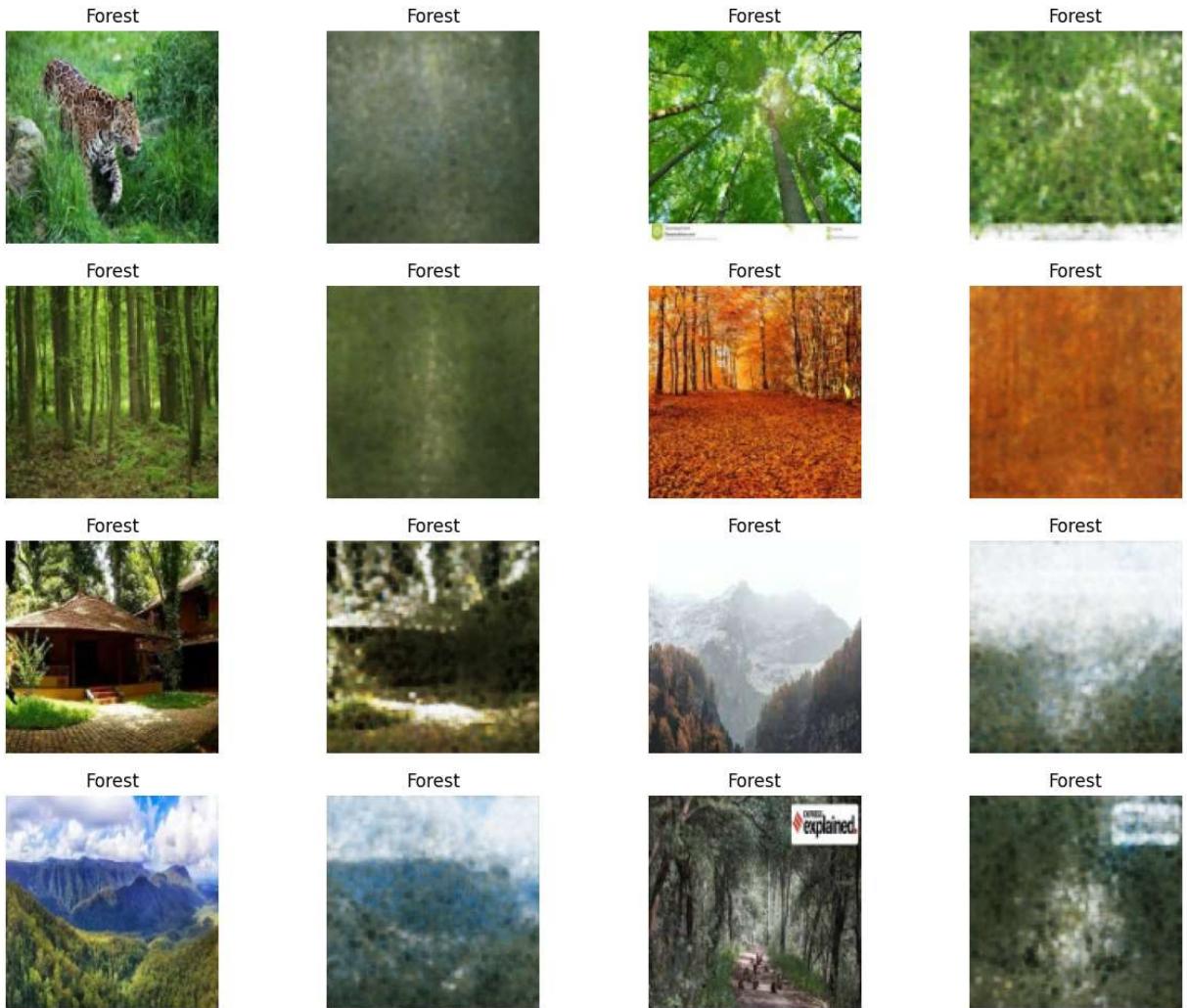
```
120/120 [=====] - 38s 316ms/step - loss: 50.2341 - reconstruction_error: 36.1285 - regularization_error: 14.1055 - val_loss: 64.7824 - val_reconstruction_error: 52.0568 - val_regularization_error: 12.7256
Epoch 162/1000
120/120 [=====] - 37s 308ms/step - loss: 50.6897 - reconstruction_error: 36.4065 - regularization_error: 14.2832 - val_loss: 64.5141 - val_reconstruction_error: 51.5613 - val_regularization_error: 12.9528
Epoch 163/1000
120/120 [=====] - 37s 310ms/step - loss: 50.3323 - reconstruction_error: 36.0930 - regularization_error: 14.2392 - val_loss: 65.3683 - val_reconstruction_error: 51.5551 - val_regularization_error: 13.8132
Epoch 164/1000
120/120 [=====] - 37s 311ms/step - loss: 50.6705 - reconstruction_error: 36.3645 - regularization_error: 14.3060 - val_loss: 64.6041 - val_reconstruction_error: 51.5847 - val_regularization_error: 13.0194
Epoch 165/1000
120/120 [=====] - 44s 371ms/step - loss: 50.4495 - reconstruction_error: 36.0845 - regularization_error: 14.3650 - val_loss: 64.7534 - val_reconstruction_error: 51.8168 - val_regularization_error: 12.9366
Epoch 166/1000
120/120 [=====] - 35s 291ms/step - loss: 50.3466 - reconstruction_error: 36.0832 - regularization_error: 14.2634 - val_loss: 65.3417 - val_reconstruction_error: 52.0718 - val_regularization_error: 13.2699
Epoch 167/1000
120/120 [=====] - 40s 334ms/step - loss: 50.3566 - reconstruction_error: 35.9788 - regularization_error: 14.3778 - val_loss: 64.5144 - val_reconstruction_error: 52.0340 - val_regularization_error: 12.4803
Epoch 168/1000
120/120 [=====] - 41s 338ms/step - loss: 50.2944 - reconstruction_error: 35.8278 - regularization_error: 14.4666 - val_loss: 64.7786 - val_reconstruction_error: 52.1436 - val_regularization_error: 12.6351
Epoch 169/1000
120/120 [=====] - 38s 316ms/step - loss: 50.3230 - reconstruction_error: 35.8935 - regularization_error: 14.4295 - val_loss: 65.4796 - val_reconstruction_error: 51.5321 - val_regularization_error: 13.9474
Epoch 170/1000
120/120 [=====] - 40s 337ms/step - loss: 50.2518 - reconstruction_error: 35.7815 - regularization_error: 14.4703 - val_loss: 65.0941 - val_reconstruction_error: 51.4271 - val_regularization_error: 13.6670
Epoch 171/1000
120/120 [=====] - ETA: 0s - loss: 49.9093 - reconstruction_error: 35.6245 - regularization_error: 14.2848
[2023-12-01 22:37:55.922265]: Reconstructing images for epoch 171 ...
```



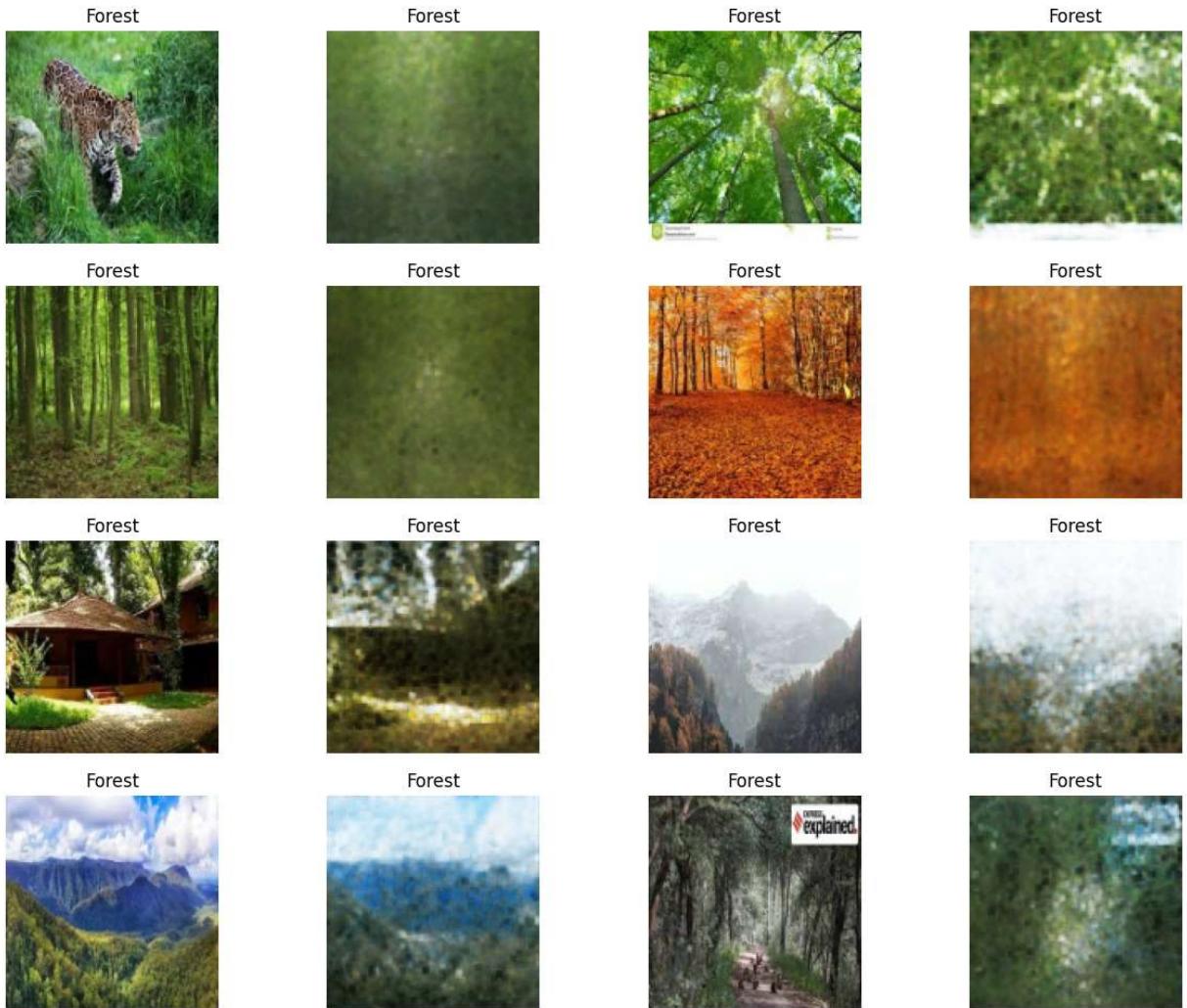
```
120/120 [=====] - 46s 383ms/step - loss: 49.9093 - reconstruction_error: 35.6245 - regularization_error: 14.2848 - val_loss: 65.6644 - val_reconstruction_error: 52.5152 - val_regularization_error: 13.1493
Epoch 172/1000
120/120 [=====] - 33s 278ms/step - loss: 49.9317 - reconstruction_error: 35.6384 - regularization_error: 14.2933 - val_loss: 65.0296 - val_reconstruction_error: 51.6014 - val_regularization_error: 13.4282
Epoch 173/1000
120/120 [=====] - 37s 309ms/step - loss: 50.1051 - reconstruction_error: 35.6007 - regularization_error: 14.5044 - val_loss: 66.2827 - val_reconstruction_error: 52.9157 - val_regularization_error: 13.3670
Epoch 174/1000
120/120 [=====] - 42s 347ms/step - loss: 49.9115 - reconstruction_error: 35.4417 - regularization_error: 14.4698 - val_loss: 64.8517 - val_reconstruction_error: 51.6503 - val_regularization_error: 13.2014
Epoch 175/1000
120/120 [=====] - 39s 329ms/step - loss: 50.2110 - reconstruction_error: 35.6280 - regularization_error: 14.5831 - val_loss: 65.3429 - val_reconstruction_error: 51.9125 - val_regularization_error: 13.4303
Epoch 176/1000
120/120 [=====] - 45s 377ms/step - loss: 49.8271 - reconstruction_error: 35.3832 - regularization_error: 14.4439 - val_loss: 65.5148 - val_reconstruction_error: 51.9925 - val_regularization_error: 13.5223
Epoch 177/1000
120/120 [=====] - 38s 308ms/step - loss: 49.8751 - reconstruction_error: 35.2930 - regularization_error: 14.5821 - val_loss: 66.9616 - val_reconstruction_error: 53.4176 - val_regularization_error: 13.5439
Epoch 178/1000
120/120 [=====] - 35s 292ms/step - loss: 49.9064 - reconstruction_error: 35.3322 - regularization_error: 14.5742 - val_loss: 64.1991 - val_reconstruction_error: 51.7086 - val_regularization_error: 12.4906
Epoch 179/1000
120/120 [=====] - 39s 322ms/step - loss: 49.6732 - reconstruction_error: 35.2094 - regularization_error: 14.4638 - val_loss: 65.2249 - val_reconstruction_error: 51.8025 - val_regularization_error: 13.4224
Epoch 180/1000
120/120 [=====] - 43s 356ms/step - loss: 49.8923 - reconstruction_error: 35.2185 - regularization_error: 14.6738 - val_loss: 65.1135 - val_reconstruction_error: 51.3420 - val_regularization_error: 13.7715
Epoch 181/1000
120/120 [=====] - ETA: 0s - loss: 49.7272 - reconstruction_error: 35.1677 - regularization_error: 14.5594
[2023-12-01 22:44:30.790267]: Reconstructing images for epoch 181 ...
```



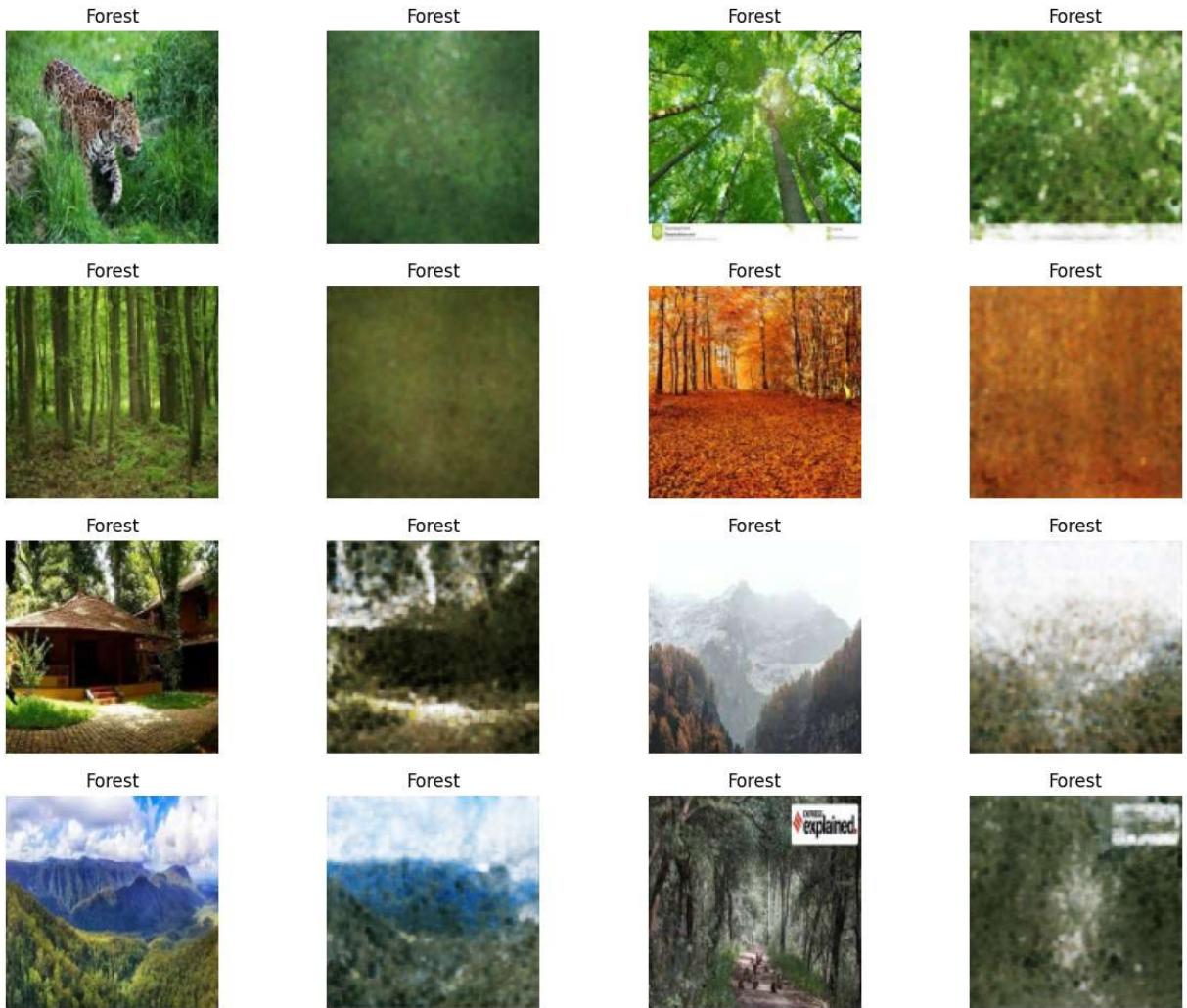
```
120/120 [=====] - 42s 352ms/step - loss: 49.7272 - reconstruction_error: 35.1677 - regularization_error: 14.5594 - val_loss: 65.5999 - val_reconstruction_error: 52.8501 - val_regularization_error: 12.7498
Epoch 182/1000
120/120 [=====] - 36s 303ms/step - loss: 49.2248 - reconstruction_error: 34.8644 - regularization_error: 14.3604 - val_loss: 65.3717 - val_reconstruction_error: 51.7290 - val_regularization_error: 13.6426
Epoch 183/1000
120/120 [=====] - 38s 319ms/step - loss: 49.4397 - reconstruction_error: 34.9805 - regularization_error: 14.4592 - val_loss: 64.6264 - val_reconstruction_error: 52.2003 - val_regularization_error: 12.4261
Epoch 184/1000
120/120 [=====] - 36s 304ms/step - loss: 49.4016 - reconstruction_error: 34.8256 - regularization_error: 14.5760 - val_loss: 65.0533 - val_reconstruction_error: 51.2462 - val_regularization_error: 13.8071
Epoch 185/1000
120/120 [=====] - 38s 320ms/step - loss: 49.4649 - reconstruction_error: 34.8696 - regularization_error: 14.5953 - val_loss: 65.4248 - val_reconstruction_error: 51.1870 - val_regularization_error: 14.2378
Epoch 186/1000
120/120 [=====] - 36s 303ms/step - loss: 49.6504 - reconstruction_error: 34.9422 - regularization_error: 14.7082 - val_loss: 66.1758 - val_reconstruction_error: 52.4836 - val_regularization_error: 13.6922
Epoch 187/1000
120/120 [=====] - 33s 278ms/step - loss: 49.6120 - reconstruction_error: 34.8946 - regularization_error: 14.7174 - val_loss: 64.7768 - val_reconstruction_error: 51.8618 - val_regularization_error: 12.9150
Epoch 188/1000
120/120 [=====] - 34s 285ms/step - loss: 49.1614 - reconstruction_error: 34.5688 - regularization_error: 14.5926 - val_loss: 65.0755 - val_reconstruction_error: 52.3178 - val_regularization_error: 12.7578
Epoch 189/1000
120/120 [=====] - 39s 323ms/step - loss: 49.2363 - reconstruction_error: 34.7275 - regularization_error: 14.5088 - val_loss: 65.2027 - val_reconstruction_error: 51.5299 - val_regularization_error: 13.6728
Epoch 190/1000
120/120 [=====] - 38s 319ms/step - loss: 49.2892 - reconstruction_error: 34.6980 - regularization_error: 14.5912 - val_loss: 64.5175 - val_reconstruction_error: 51.9610 - val_regularization_error: 12.5565
Epoch 191/1000
120/120 [=====] - ETA: 0s - loss: 49.3601 - reconstruction_error: 34.7228 - regularization_error: 14.6374
[2023-12-01 22:50:45.938577]: Reconstructing images for epoch 191 ...
```



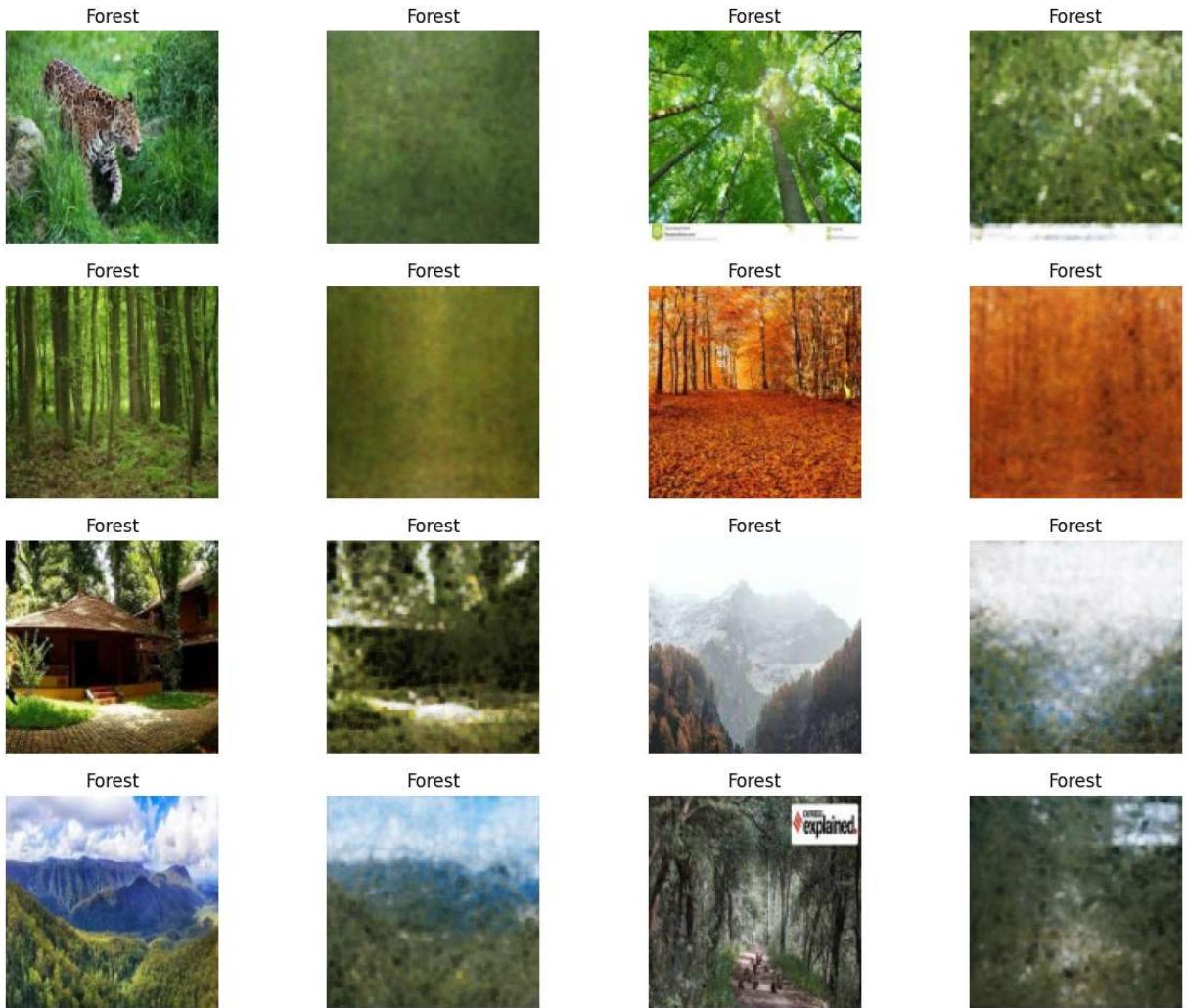
```
120/120 [=====] - 42s 353ms/step - loss: 49.3601 - reconstruction_error: 34.7228 - regularization_error: 14.6374 - val_loss: 65.6328 - val_reconstruction_error: 51.1647 - val_regularization_error: 14.4681
Epoch 192/1000
120/120 [=====] - 41s 345ms/step - loss: 49.2430 - reconstruction_error: 34.5422 - regularization_error: 14.7009 - val_loss: 65.6868 - val_reconstruction_error: 52.2965 - val_regularization_error: 13.3903
Epoch 193/1000
120/120 [=====] - 35s 291ms/step - loss: 49.1476 - reconstruction_error: 34.4068 - regularization_error: 14.7408 - val_loss: 65.3537 - val_reconstruction_error: 51.8729 - val_regularization_error: 13.4808
Epoch 194/1000
120/120 [=====] - 34s 284ms/step - loss: 48.9236 - reconstruction_error: 34.4313 - regularization_error: 14.4923 - val_loss: 65.3903 - val_reconstruction_error: 51.4377 - val_regularization_error: 13.9526
Epoch 195/1000
120/120 [=====] - 37s 307ms/step - loss: 49.0770 - reconstruction_error: 34.3260 - regularization_error: 14.7510 - val_loss: 65.2728 - val_reconstruction_error: 51.7925 - val_regularization_error: 13.4803
Epoch 196/1000
120/120 [=====] - 39s 324ms/step - loss: 48.8982 - reconstruction_error: 34.1629 - regularization_error: 14.7353 - val_loss: 66.1364 - val_reconstruction_error: 52.5876 - val_regularization_error: 13.5489
Epoch 197/1000
120/120 [=====] - 35s 288ms/step - loss: 48.6516 - reconstruction_error: 34.0927 - regularization_error: 14.5589 - val_loss: 65.2392 - val_reconstruction_error: 52.0771 - val_regularization_error: 13.1621
Epoch 198/1000
120/120 [=====] - 34s 284ms/step - loss: 48.9180 - reconstruction_error: 34.2091 - regularization_error: 14.7089 - val_loss: 66.0975 - val_reconstruction_error: 53.1661 - val_regularization_error: 12.9313
Epoch 199/1000
120/120 [=====] - 35s 294ms/step - loss: 48.9881 - reconstruction_error: 34.1721 - regularization_error: 14.8160 - val_loss: 64.7973 - val_reconstruction_error: 51.1505 - val_regularization_error: 13.6469
Epoch 200/1000
120/120 [=====] - 42s 350ms/step - loss: 48.7117 - reconstruction_error: 33.9459 - regularization_error: 14.7658 - val_loss: 65.3655 - val_reconstruction_error: 51.5810 - val_regularization_error: 13.7846
Epoch 201/1000
120/120 [=====] - ETA: 0s - loss: 48.8449 - reconstruction_error: 34.0706 - regularization_error: 14.7743
[2023-12-01 22:56:59.032190]: Reconstructing images for epoch 201 ...
```



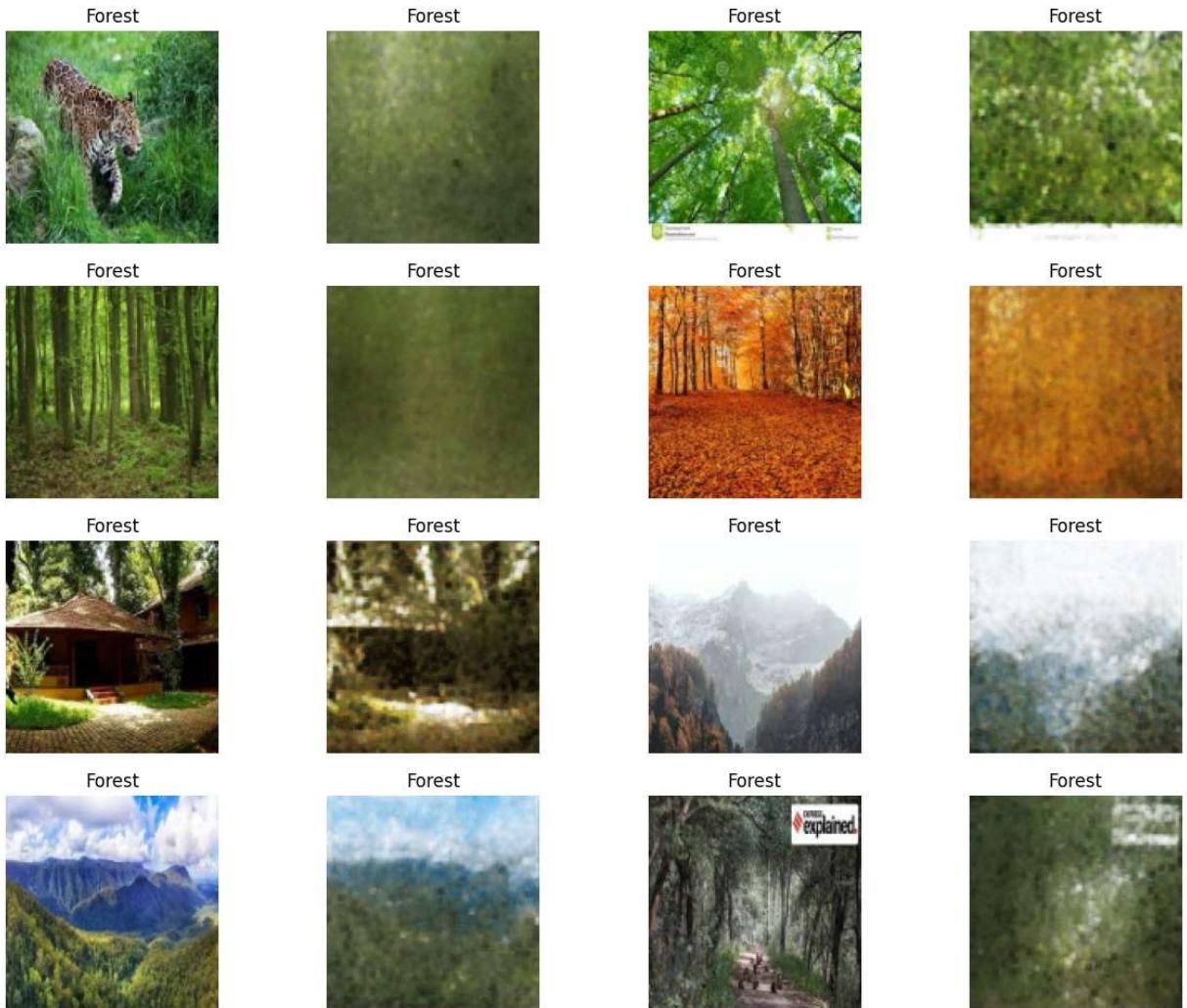
```
120/120 [=====] - 39s 325ms/step - loss: 48.8449 - reconstruction_error: 34.0706 - regularization_error: 14.7743 - val_loss: 66.3943 - val_reconstruction_error: 52.2582 - val_regularization_error: 14.1361
Epoch 202/1000
120/120 [=====] - 40s 334ms/step - loss: 48.6477 - reconstruction_error: 33.9104 - regularization_error: 14.7373 - val_loss: 65.1978 - val_reconstruction_error: 51.5482 - val_regularization_error: 13.6496
Epoch 203/1000
120/120 [=====] - 38s 318ms/step - loss: 48.7077 - reconstruction_error: 33.9368 - regularization_error: 14.7710 - val_loss: 65.5216 - val_reconstruction_error: 51.1932 - val_regularization_error: 14.3284
Epoch 204/1000
120/120 [=====] - 37s 305ms/step - loss: 48.6209 - reconstruction_error: 33.8861 - regularization_error: 14.7348 - val_loss: 66.7766 - val_reconstruction_error: 51.9928 - val_regularization_error: 14.7837
Epoch 205/1000
120/120 [=====] - 35s 295ms/step - loss: 48.6076 - reconstruction_error: 33.7985 - regularization_error: 14.8091 - val_loss: 65.4268 - val_reconstruction_error: 52.4455 - val_regularization_error: 12.9813
Epoch 206/1000
120/120 [=====] - 39s 326ms/step - loss: 48.7985 - reconstruction_error: 33.8282 - regularization_error: 14.9702 - val_loss: 65.6059 - val_reconstruction_error: 52.4817 - val_regularization_error: 13.1243
Epoch 207/1000
120/120 [=====] - 41s 341ms/step - loss: 48.3117 - reconstruction_error: 33.6329 - regularization_error: 14.6788 - val_loss: 66.1594 - val_reconstruction_error: 53.3512 - val_regularization_error: 12.8081
Epoch 208/1000
120/120 [=====] - 36s 297ms/step - loss: 48.5698 - reconstruction_error: 33.7497 - regularization_error: 14.8201 - val_loss: 65.8850 - val_reconstruction_error: 51.9630 - val_regularization_error: 13.9220
Epoch 209/1000
120/120 [=====] - 33s 271ms/step - loss: 48.8300 - reconstruction_error: 33.8901 - regularization_error: 14.9399 - val_loss: 65.5573 - val_reconstruction_error: 51.6442 - val_regularization_error: 13.9130
Epoch 210/1000
120/120 [=====] - 27s 225ms/step - loss: 48.5995 - reconstruction_error: 33.7266 - regularization_error: 14.8729 - val_loss: 66.1559 - val_reconstruction_error: 51.8096 - val_regularization_error: 14.3463
Epoch 211/1000
120/120 [=====] - ETA: 0s - loss: 48.7294 - reconstruction_error: 33.6283 - regularization_error: 15.1011
[2023-12-01 23:02:57.513732]: Reconstructing images for epoch 211 ...
```



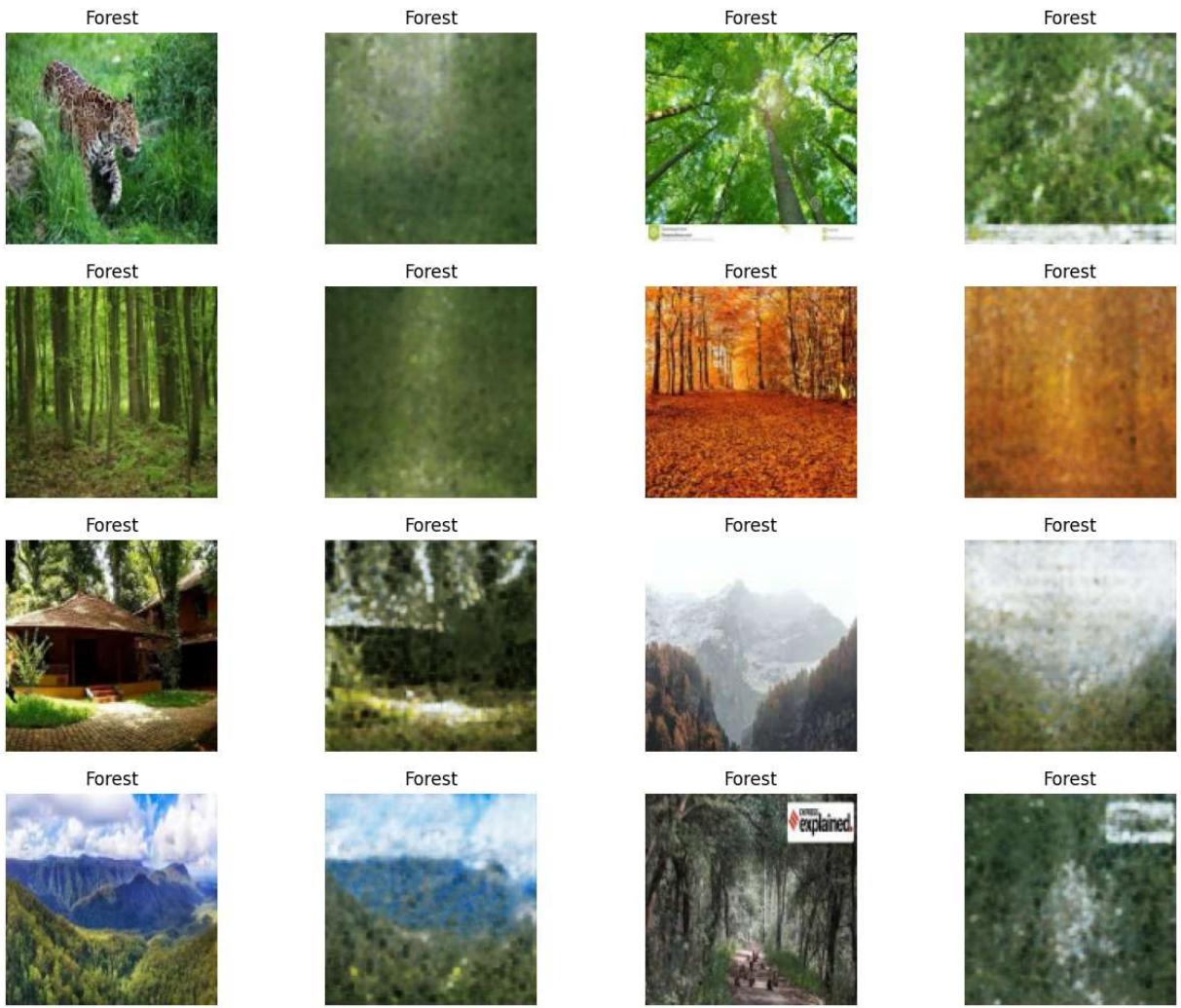
```
120/120 [=====] - 30s 249ms/step - loss: 48.7294 - reconstruction_error: 33.6283 - regularization_error: 15.1011 - val_loss: 66.0775 - val_reconstruction_error: 52.2408 - val_regularization_error: 13.8366
Epoch 212/1000
120/120 [=====] - 26s 214ms/step - loss: 48.5997 - reconstruction_error: 33.6306 - regularization_error: 14.9691 - val_loss: 67.4276 - val_reconstruction_error: 52.8261 - val_regularization_error: 14.6015
Epoch 213/1000
120/120 [=====] - 25s 204ms/step - loss: 48.7185 - reconstruction_error: 33.5649 - regularization_error: 15.1535 - val_loss: 66.3476 - val_reconstruction_error: 53.5697 - val_regularization_error: 12.7779
Epoch 214/1000
120/120 [=====] - 22s 181ms/step - loss: 48.3975 - reconstruction_error: 33.4608 - regularization_error: 14.9367 - val_loss: 65.1782 - val_reconstruction_error: 52.8049 - val_regularization_error: 12.3733
Epoch 215/1000
120/120 [=====] - 19s 155ms/step - loss: 48.5010 - reconstruction_error: 33.6211 - regularization_error: 14.8799 - val_loss: 67.3583 - val_reconstruction_error: 53.0724 - val_regularization_error: 14.2859
Epoch 216/1000
120/120 [=====] - 21s 175ms/step - loss: 48.3039 - reconstruction_error: 33.3101 - regularization_error: 14.9938 - val_loss: 66.1112 - val_reconstruction_error: 53.2782 - val_regularization_error: 12.8330
Epoch 217/1000
120/120 [=====] - 23s 194ms/step - loss: 48.2964 - reconstruction_error: 33.3896 - regularization_error: 14.9067 - val_loss: 65.9471 - val_reconstruction_error: 52.6623 - val_regularization_error: 13.2848
Epoch 218/1000
120/120 [=====] - 23s 186ms/step - loss: 48.3242 - reconstruction_error: 33.2978 - regularization_error: 15.0265 - val_loss: 65.2924 - val_reconstruction_error: 52.9743 - val_regularization_error: 12.3181
Epoch 219/1000
120/120 [=====] - 22s 186ms/step - loss: 48.2335 - reconstruction_error: 33.2949 - regularization_error: 14.9387 - val_loss: 65.7285 - val_reconstruction_error: 51.9297 - val_regularization_error: 13.7989
Epoch 220/1000
120/120 [=====] - 27s 220ms/step - loss: 48.4537 - reconstruction_error: 33.2658 - regularization_error: 15.1878 - val_loss: 65.8556 - val_reconstruction_error: 52.3324 - val_regularization_error: 13.5232
Epoch 221/1000
120/120 [=====] - ETA: 0s - loss: 48.2195 - reconstruction_error: 33.2000 - regularization_error: 15.0195
[2023-12-01 23:06:52.864305]: Reconstructing images for epoch 221 ...
```



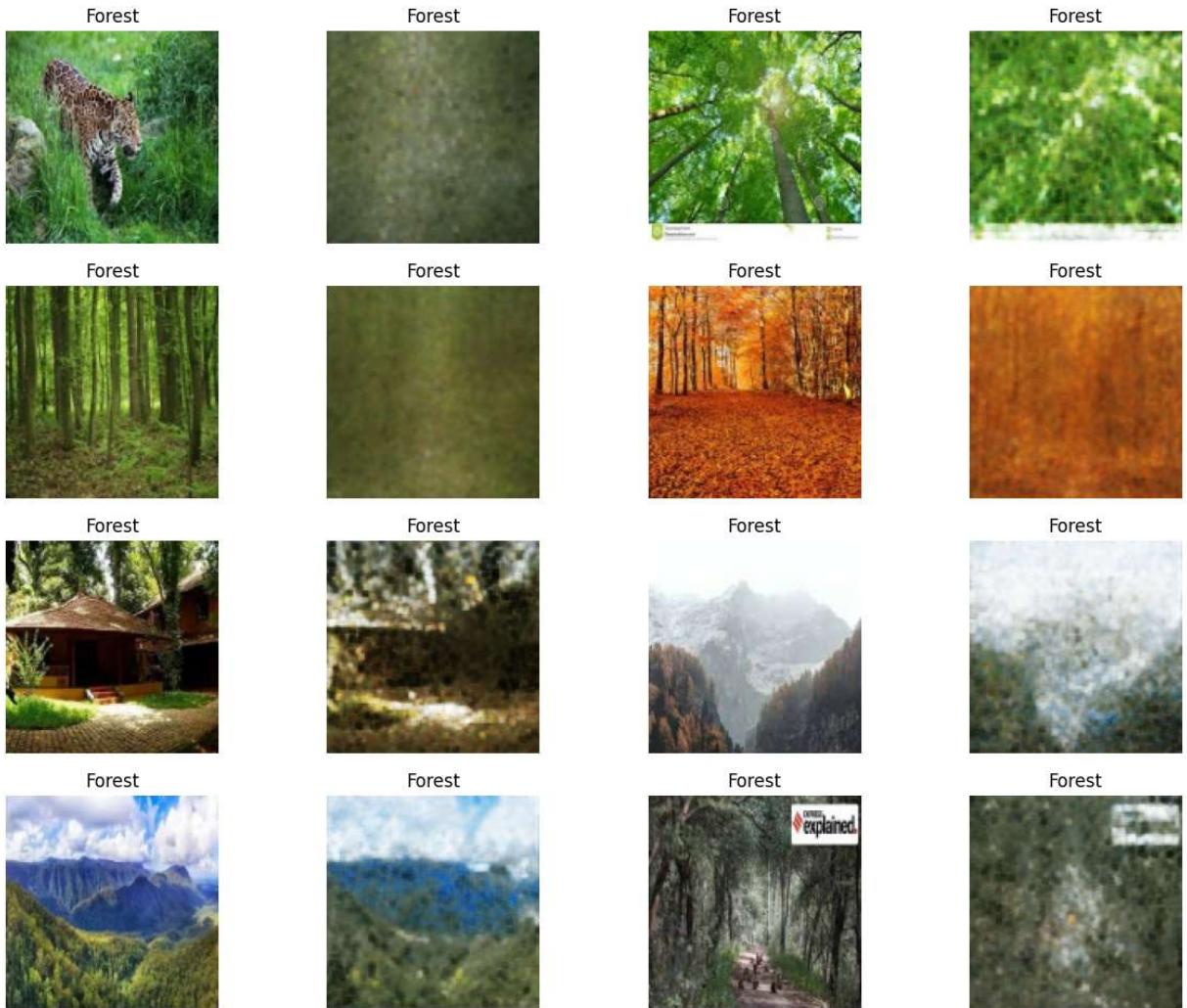
```
120/120 [=====] - 26s 219ms/step - loss: 48.2195 - reconstruction_error: 33.2000 - regularization_error: 15.0195 - val_loss: 65.7245 - val_reconstruction_error: 52.3949 - val_regularization_error: 13.3296
Epoch 222/1000
120/120 [=====] - 24s 195ms/step - loss: 48.0269 - reconstruction_error: 33.0794 - regularization_error: 14.9475 - val_loss: 65.8374 - val_reconstruction_error: 53.1642 - val_regularization_error: 12.6732
Epoch 223/1000
120/120 [=====] - 23s 192ms/step - loss: 48.1358 - reconstruction_error: 33.1081 - regularization_error: 15.0277 - val_loss: 65.8756 - val_reconstruction_error: 52.0153 - val_regularization_error: 13.8603
Epoch 224/1000
120/120 [=====] - 24s 195ms/step - loss: 47.9469 - reconstruction_error: 32.9781 - regularization_error: 14.9688 - val_loss: 65.5867 - val_reconstruction_error: 53.1943 - val_regularization_error: 12.3924
Epoch 225/1000
120/120 [=====] - 22s 185ms/step - loss: 47.8976 - reconstruction_error: 32.9075 - regularization_error: 14.9900 - val_loss: 66.3693 - val_reconstruction_error: 52.4421 - val_regularization_error: 13.9273
Epoch 226/1000
120/120 [=====] - 24s 200ms/step - loss: 47.9612 - reconstruction_error: 32.8784 - regularization_error: 15.0828 - val_loss: 66.0829 - val_reconstruction_error: 53.2699 - val_regularization_error: 12.8130
Epoch 227/1000
120/120 [=====] - 23s 189ms/step - loss: 47.8915 - reconstruction_error: 32.9064 - regularization_error: 14.9851 - val_loss: 66.1145 - val_reconstruction_error: 53.0496 - val_regularization_error: 13.0649
Epoch 228/1000
120/120 [=====] - 24s 196ms/step - loss: 48.0048 - reconstruction_error: 32.9643 - regularization_error: 15.0405 - val_loss: 65.1261 - val_reconstruction_error: 51.9941 - val_regularization_error: 13.1320
Epoch 229/1000
120/120 [=====] - 22s 181ms/step - loss: 47.9607 - reconstruction_error: 33.0573 - regularization_error: 14.9034 - val_loss: 65.8233 - val_reconstruction_error: 52.7090 - val_regularization_error: 13.1143
Epoch 230/1000
120/120 [=====] - 22s 184ms/step - loss: 47.8690 - reconstruction_error: 32.7577 - regularization_error: 15.1113 - val_loss: 67.5056 - val_reconstruction_error: 52.7718 - val_regularization_error: 14.7337
Epoch 231/1000
120/120 [=====] - ETA: 0s - loss: 47.8887 - reconstruction_error: 32.8536 - regularization_error: 15.0352
[2023-12-01 23:10:47.018244]: Reconstructing images for epoch 231 ...
```



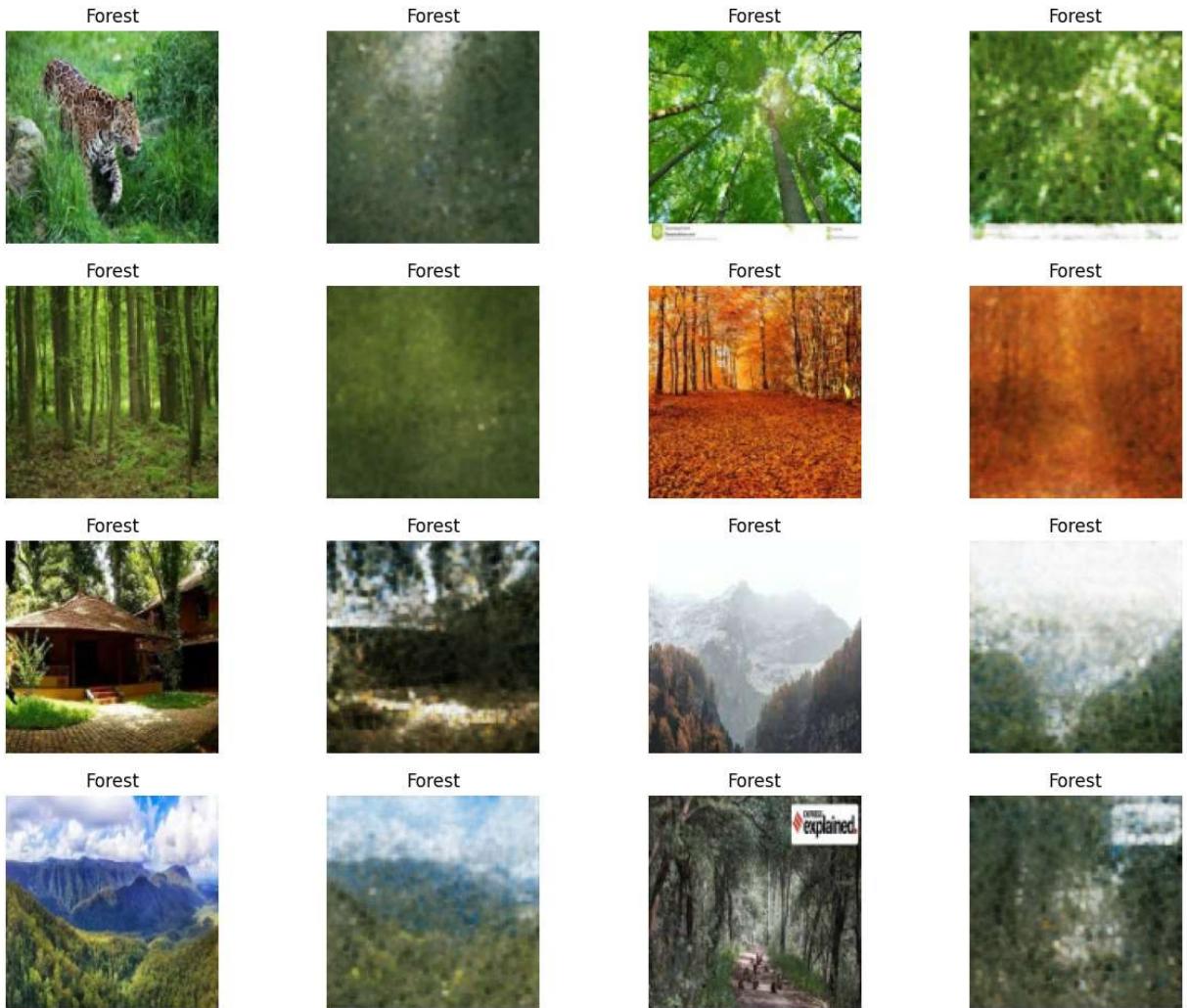
```
120/120 [=====] - 23s 189ms/step - loss: 47.8887 - reconstruction_error: 32.8536 - regularization_error: 15.0352 - val_loss: 66.2386 - val_reconstruction_error: 52.7330 - val_regularization_error: 13.5056
Epoch 232/1000
120/120 [=====] - 23s 188ms/step - loss: 47.8194 - reconstruction_error: 32.8258 - regularization_error: 14.9936 - val_loss: 66.9899 - val_reconstruction_error: 52.7270 - val_regularization_error: 14.2629
Epoch 233/1000
120/120 [=====] - 22s 182ms/step - loss: 47.9180 - reconstruction_error: 32.7008 - regularization_error: 15.2172 - val_loss: 67.3625 - val_reconstruction_error: 52.3381 - val_regularization_error: 15.0243
Epoch 234/1000
120/120 [=====] - 24s 203ms/step - loss: 47.8613 - reconstruction_error: 32.5377 - regularization_error: 15.3237 - val_loss: 66.0743 - val_reconstruction_error: 52.2204 - val_regularization_error: 13.8539
Epoch 235/1000
120/120 [=====] - 23s 194ms/step - loss: 47.7261 - reconstruction_error: 32.6781 - regularization_error: 15.0480 - val_loss: 66.0566 - val_reconstruction_error: 52.3739 - val_regularization_error: 13.6827
Epoch 236/1000
120/120 [=====] - 29s 239ms/step - loss: 47.6745 - reconstruction_error: 32.5593 - regularization_error: 15.1152 - val_loss: 66.8206 - val_reconstruction_error: 52.2593 - val_regularization_error: 14.5613
Epoch 237/1000
120/120 [=====] - 22s 185ms/step - loss: 47.4348 - reconstruction_error: 32.3261 - regularization_error: 15.1087 - val_loss: 66.1730 - val_reconstruction_error: 53.2734 - val_regularization_error: 12.8996
Epoch 238/1000
120/120 [=====] - 25s 207ms/step - loss: 47.5341 - reconstruction_error: 32.5383 - regularization_error: 14.9958 - val_loss: 65.5616 - val_reconstruction_error: 52.8536 - val_regularization_error: 12.7081
Epoch 239/1000
120/120 [=====] - 22s 181ms/step - loss: 47.7380 - reconstruction_error: 32.6023 - regularization_error: 15.1357 - val_loss: 66.0535 - val_reconstruction_error: 52.6802 - val_regularization_error: 13.3732
Epoch 240/1000
120/120 [=====] - 23s 188ms/step - loss: 47.6365 - reconstruction_error: 32.4868 - regularization_error: 15.1497 - val_loss: 66.7139 - val_reconstruction_error: 51.8563 - val_regularization_error: 14.8576
Epoch 241/1000
120/120 [=====] - ETA: 0s - loss: 47.7946 - reconstruction_error: 32.6390 - regularization_error: 15.1556
[2023-12-01 23:14:47.744527]: Reconstructing images for epoch 241 ...
```



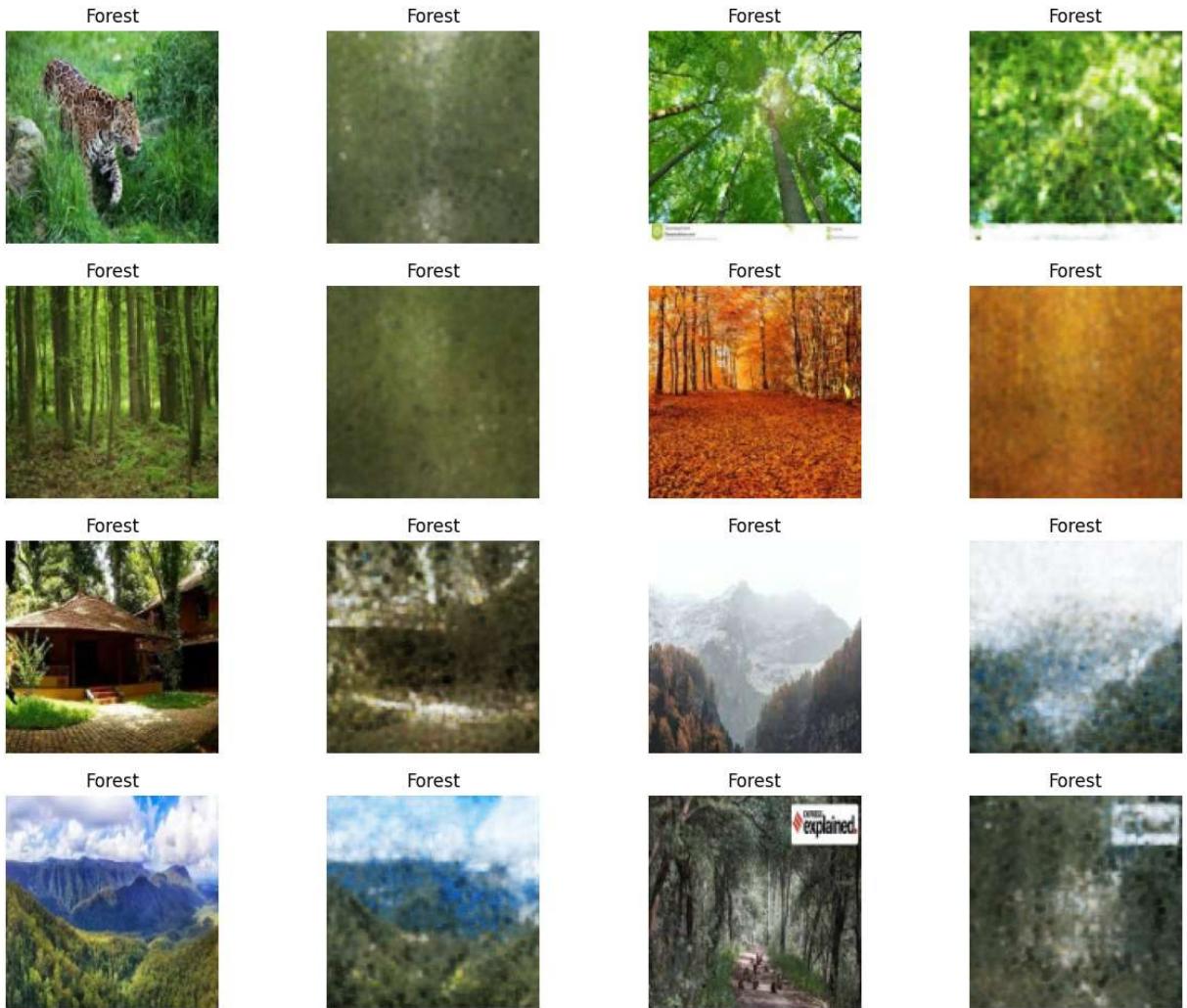
```
120/120 [=====] - 27s 221ms/step - loss: 47.7946 - reconstruction_error: 32.6390 - regularization_error: 15.1556 - val_loss: 66.3713 - val_reconstruction_error: 52.2851 - val_regularization_error: 14.0862
Epoch 242/1000
120/120 [=====] - 20s 166ms/step - loss: 47.4381 - reconstruction_error: 32.2905 - regularization_error: 15.1475 - val_loss: 65.5838 - val_reconstruction_error: 51.5644 - val_regularization_error: 14.0195
Epoch 243/1000
120/120 [=====] - 24s 196ms/step - loss: 47.3708 - reconstruction_error: 32.1961 - regularization_error: 15.1748 - val_loss: 65.5275 - val_reconstruction_error: 52.5912 - val_regularization_error: 12.9363
Epoch 244/1000
120/120 [=====] - 25s 210ms/step - loss: 47.4567 - reconstruction_error: 32.2386 - regularization_error: 15.2181 - val_loss: 66.1415 - val_reconstruction_error: 52.0628 - val_regularization_error: 14.0787
Epoch 245/1000
120/120 [=====] - 22s 183ms/step - loss: 47.3679 - reconstruction_error: 32.3099 - regularization_error: 15.0580 - val_loss: 65.4226 - val_reconstruction_error: 52.5942 - val_regularization_error: 12.8284
Epoch 246/1000
120/120 [=====] - 24s 201ms/step - loss: 47.2926 - reconstruction_error: 32.2168 - regularization_error: 15.0758 - val_loss: 65.8241 - val_reconstruction_error: 53.1620 - val_regularization_error: 12.6621
Epoch 247/1000
120/120 [=====] - 24s 201ms/step - loss: 47.1897 - reconstruction_error: 32.0096 - regularization_error: 15.1801 - val_loss: 67.4597 - val_reconstruction_error: 53.5105 - val_regularization_error: 13.9492
Epoch 248/1000
120/120 [=====] - 21s 171ms/step - loss: 47.4042 - reconstruction_error: 32.0998 - regularization_error: 15.3045 - val_loss: 67.3829 - val_reconstruction_error: 52.7785 - val_regularization_error: 14.6043
Epoch 249/1000
120/120 [=====] - 24s 196ms/step - loss: 47.2047 - reconstruction_error: 32.0028 - regularization_error: 15.2018 - val_loss: 66.3862 - val_reconstruction_error: 53.0487 - val_regularization_error: 13.3374
Epoch 250/1000
120/120 [=====] - 21s 176ms/step - loss: 47.3132 - reconstruction_error: 32.1279 - regularization_error: 15.1853 - val_loss: 66.7982 - val_reconstruction_error: 52.5555 - val_regularization_error: 14.2427
Epoch 251/1000
120/120 [=====] - ETA: 0s - loss: 47.1537 - reconstruction_error: 31.8385 - regularization_error: 15.3152
[2023-12-01 23:18:40.071141]: Reconstructing images for epoch 251 ...
```



```
120/120 [=====] - 23s 190ms/step - loss: 47.1537 - reconstruction_error: 31.8385 - regularization_error: 15.3152 - val_loss: 66.4350 - val_reconstruction_error: 52.5736 - val_regularization_error: 13.8614
Epoch 252/1000
120/120 [=====] - 20s 165ms/step - loss: 47.3080 - reconstruction_error: 32.0128 - regularization_error: 15.2952 - val_loss: 67.4071 - val_reconstruction_error: 52.7789 - val_regularization_error: 14.6282
Epoch 253/1000
120/120 [=====] - 19s 160ms/step - loss: 48.2086 - reconstruction_error: 32.7186 - regularization_error: 15.4900 - val_loss: 67.0886 - val_reconstruction_error: 52.9937 - val_regularization_error: 14.0949
Epoch 254/1000
120/120 [=====] - 26s 214ms/step - loss: 47.1816 - reconstruction_error: 31.7658 - regularization_error: 15.4158 - val_loss: 67.5197 - val_reconstruction_error: 53.1099 - val_regularization_error: 14.4098
Epoch 255/1000
120/120 [=====] - 22s 179ms/step - loss: 46.8690 - reconstruction_error: 31.8005 - regularization_error: 15.0685 - val_loss: 66.6040 - val_reconstruction_error: 52.0542 - val_regularization_error: 14.5498
Epoch 256/1000
120/120 [=====] - 22s 182ms/step - loss: 47.0434 - reconstruction_error: 31.7166 - regularization_error: 15.3267 - val_loss: 65.9118 - val_reconstruction_error: 53.0143 - val_regularization_error: 12.8974
Epoch 257/1000
120/120 [=====] - 18s 153ms/step - loss: 46.9255 - reconstruction_error: 31.6127 - regularization_error: 15.3128 - val_loss: 66.4015 - val_reconstruction_error: 52.7712 - val_regularization_error: 13.6303
Epoch 258/1000
120/120 [=====] - 24s 195ms/step - loss: 47.0054 - reconstruction_error: 31.6870 - regularization_error: 15.3184 - val_loss: 66.5889 - val_reconstruction_error: 52.7295 - val_regularization_error: 13.8595
Epoch 259/1000
120/120 [=====] - 24s 197ms/step - loss: 47.0235 - reconstruction_error: 31.7106 - regularization_error: 15.3128 - val_loss: 67.0745 - val_reconstruction_error: 52.6320 - val_regularization_error: 14.4425
Epoch 260/1000
120/120 [=====] - 23s 191ms/step - loss: 46.9955 - reconstruction_error: 31.6419 - regularization_error: 15.3535 - val_loss: 65.6181 - val_reconstruction_error: 52.8556 - val_regularization_error: 12.7626
Epoch 261/1000
120/120 [=====] - ETA: 0s - loss: 46.8708 - reconstruction_error: 31.5471 - regularization_error: 15.3237
[2023-12-01 23:22:29.014441]: Reconstructing images for epoch 261 ...
```



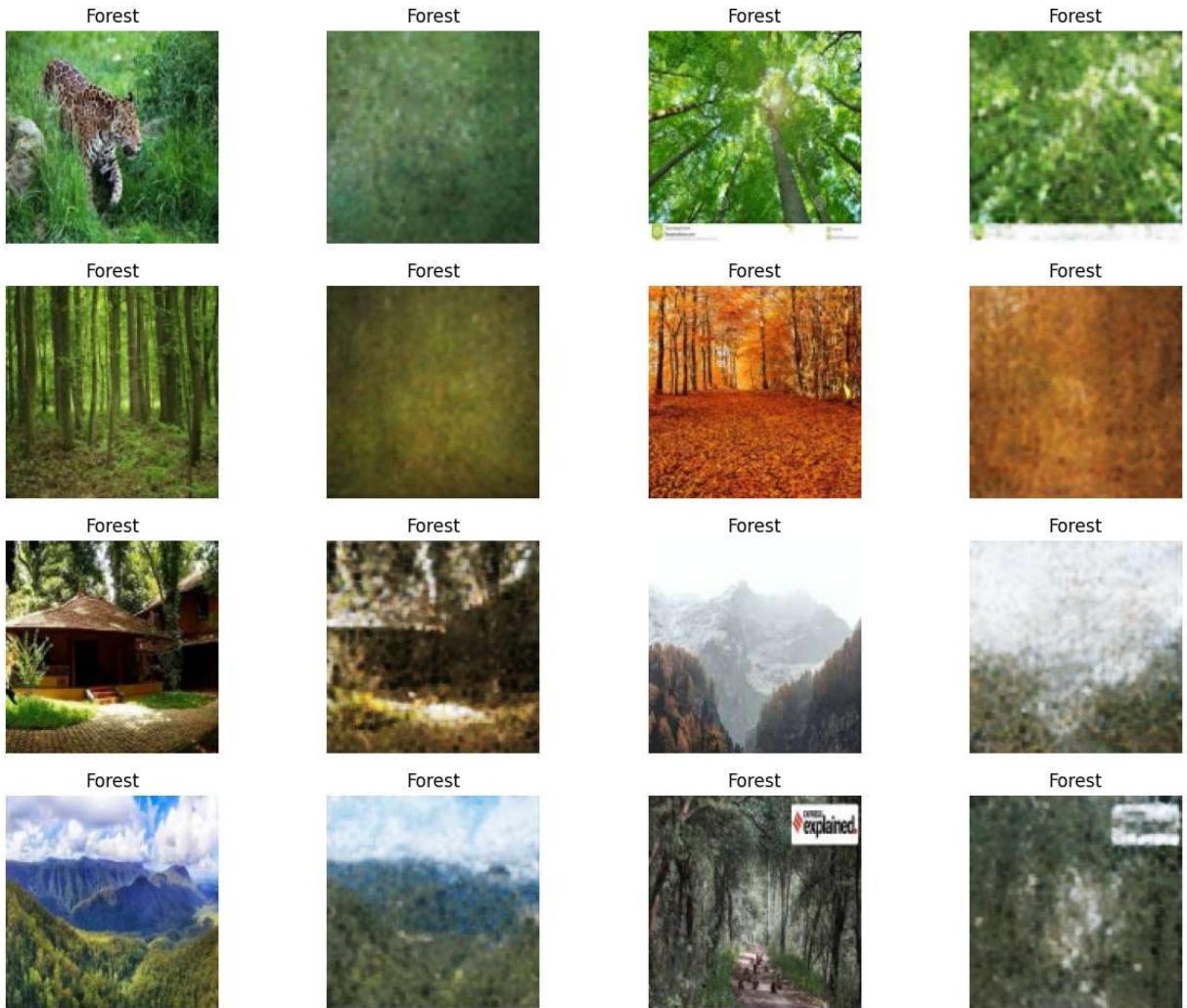
```
120/120 [=====] - 30s 248ms/step - loss: 46.8708 - reconstruction_error: 31.5471 - regularization_error: 15.3237 - val_loss: 65.5323 - val_reconstruction_error: 52.1502 - val_regularization_error: 13.3821
Epoch 262/1000
120/120 [=====] - 21s 176ms/step - loss: 46.9652 - reconstruction_error: 31.6990 - regularization_error: 15.2662 - val_loss: 67.0225 - val_reconstruction_error: 52.5794 - val_regularization_error: 14.4430
Epoch 263/1000
120/120 [=====] - 24s 199ms/step - loss: 46.7729 - reconstruction_error: 31.4892 - regularization_error: 15.2836 - val_loss: 67.7116 - val_reconstruction_error: 53.2320 - val_regularization_error: 14.4796
Epoch 264/1000
120/120 [=====] - 28s 227ms/step - loss: 46.9628 - reconstruction_error: 31.5854 - regularization_error: 15.3774 - val_loss: 66.2471 - val_reconstruction_error: 52.5094 - val_regularization_error: 13.7377
Epoch 265/1000
120/120 [=====] - 21s 177ms/step - loss: 46.9794 - reconstruction_error: 31.5390 - regularization_error: 15.4405 - val_loss: 67.0878 - val_reconstruction_error: 52.2727 - val_regularization_error: 14.8150
Epoch 266/1000
120/120 [=====] - 23s 194ms/step - loss: 46.6114 - reconstruction_error: 31.3293 - regularization_error: 15.2821 - val_loss: 66.7950 - val_reconstruction_error: 53.0319 - val_regularization_error: 13.7631
Epoch 267/1000
120/120 [=====] - 24s 197ms/step - loss: 46.9874 - reconstruction_error: 31.6191 - regularization_error: 15.3683 - val_loss: 65.5472 - val_reconstruction_error: 52.4878 - val_regularization_error: 13.0594
Epoch 268/1000
120/120 [=====] - 22s 185ms/step - loss: 46.7025 - reconstruction_error: 31.3040 - regularization_error: 15.3985 - val_loss: 66.4936 - val_reconstruction_error: 52.2875 - val_regularization_error: 14.2061
Epoch 269/1000
120/120 [=====] - 22s 185ms/step - loss: 46.7541 - reconstruction_error: 31.3972 - regularization_error: 15.3570 - val_loss: 66.3123 - val_reconstruction_error: 52.8963 - val_regularization_error: 13.4159
Epoch 270/1000
120/120 [=====] - 21s 174ms/step - loss: 46.7145 - reconstruction_error: 31.2449 - regularization_error: 15.4696 - val_loss: 66.3264 - val_reconstruction_error: 52.5750 - val_regularization_error: 13.7514
Epoch 271/1000
120/120 [=====] - ETA: 0s - loss: 46.6771 - reconstruction_error: 31.1748 - regularization_error: 15.5022
[2023-12-01 23:26:24.310544]: Reconstructing images for epoch 271 ...
```



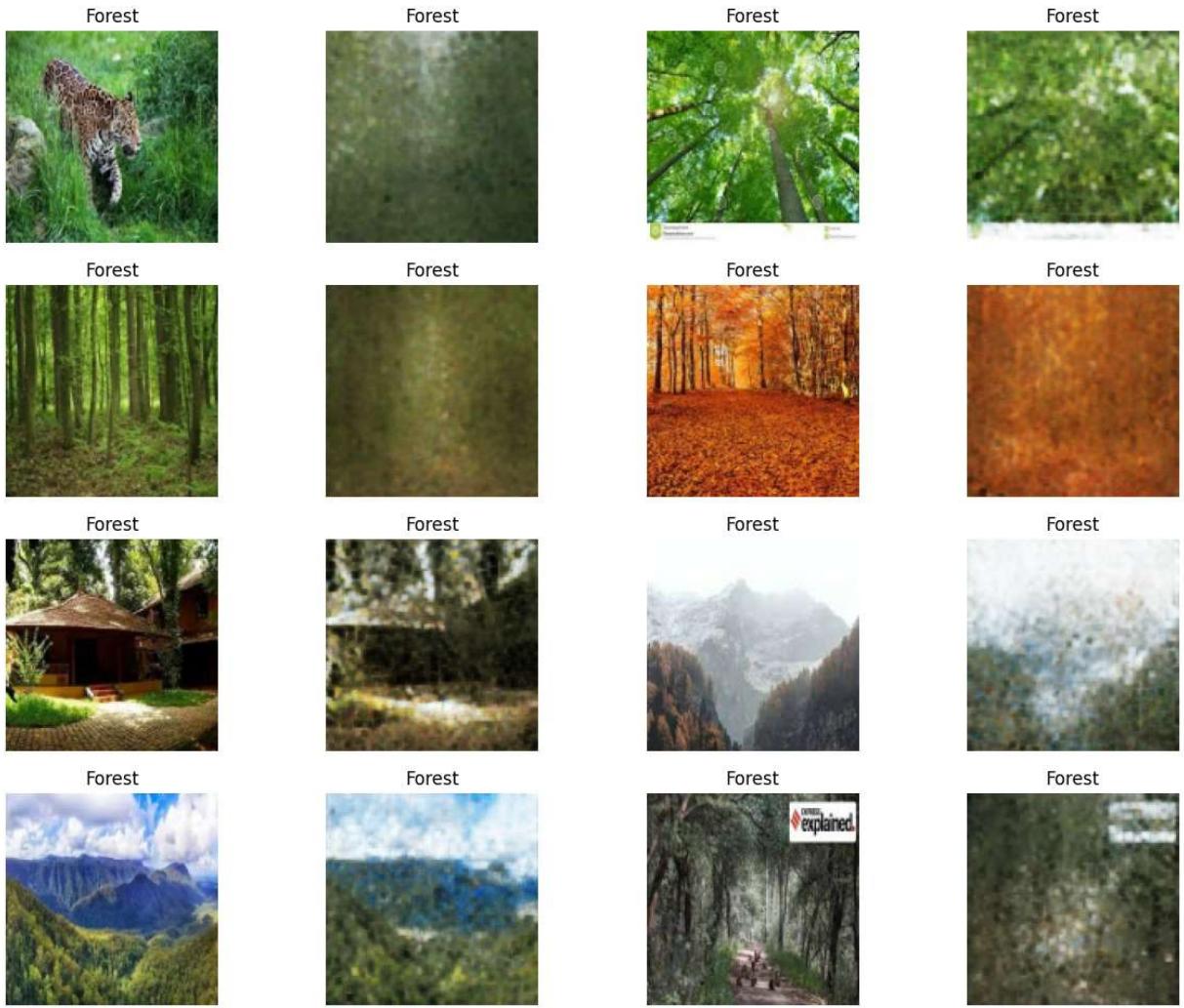
```
120/120 [=====] - 27s 227ms/step - loss: 46.6771 - reconstruction_error: 31.1748 - regularization_error: 15.5022 - val_loss: 66.4336 - val_reconstruction_error: 53.0855 - val_regularization_error: 13.3481
Epoch 272/1000
120/120 [=====] - 25s 209ms/step - loss: 46.7039 - reconstruction_error: 31.3731 - regularization_error: 15.3308 - val_loss: 66.5683 - val_reconstruction_error: 52.6301 - val_regularization_error: 13.9382
Epoch 273/1000
120/120 [=====] - 24s 196ms/step - loss: 46.6641 - reconstruction_error: 31.3437 - regularization_error: 15.3204 - val_loss: 66.4609 - val_reconstruction_error: 52.5666 - val_regularization_error: 13.8943
Epoch 274/1000
120/120 [=====] - 22s 179ms/step - loss: 46.6253 - reconstruction_error: 31.1893 - regularization_error: 15.4360 - val_loss: 66.7892 - val_reconstruction_error: 52.2354 - val_regularization_error: 14.5538
Epoch 275/1000
120/120 [=====] - 20s 168ms/step - loss: 46.3823 - reconstruction_error: 31.1674 - regularization_error: 15.2149 - val_loss: 65.9869 - val_reconstruction_error: 52.2395 - val_regularization_error: 13.7475
Epoch 276/1000
120/120 [=====] - 20s 164ms/step - loss: 46.5827 - reconstruction_error: 31.1962 - regularization_error: 15.3866 - val_loss: 68.2170 - val_reconstruction_error: 53.5317 - val_regularization_error: 14.6852
Epoch 277/1000
120/120 [=====] - 21s 175ms/step - loss: 46.6365 - reconstruction_error: 31.2651 - regularization_error: 15.3714 - val_loss: 66.8669 - val_reconstruction_error: 52.3952 - val_regularization_error: 14.4717
Epoch 278/1000
120/120 [=====] - 23s 191ms/step - loss: 46.3769 - reconstruction_error: 30.9794 - regularization_error: 15.3975 - val_loss: 65.9942 - val_reconstruction_error: 53.0799 - val_regularization_error: 12.9143
Epoch 279/1000
120/120 [=====] - 21s 176ms/step - loss: 46.6344 - reconstruction_error: 31.0693 - regularization_error: 15.5650 - val_loss: 66.3337 - val_reconstruction_error: 52.5771 - val_regularization_error: 13.7566
Epoch 280/1000
120/120 [=====] - 22s 181ms/step - loss: 46.5753 - reconstruction_error: 31.1662 - regularization_error: 15.4091 - val_loss: 66.3857 - val_reconstruction_error: 52.3387 - val_regularization_error: 14.0470
Epoch 281/1000
120/120 [=====] - ETA: 0s - loss: 46.6198 - reconstruction_error: 31.0252 - regularization_error: 15.5946
[2023-12-01 23:30:06.948475]: Reconstructing images for epoch 281 ...
```



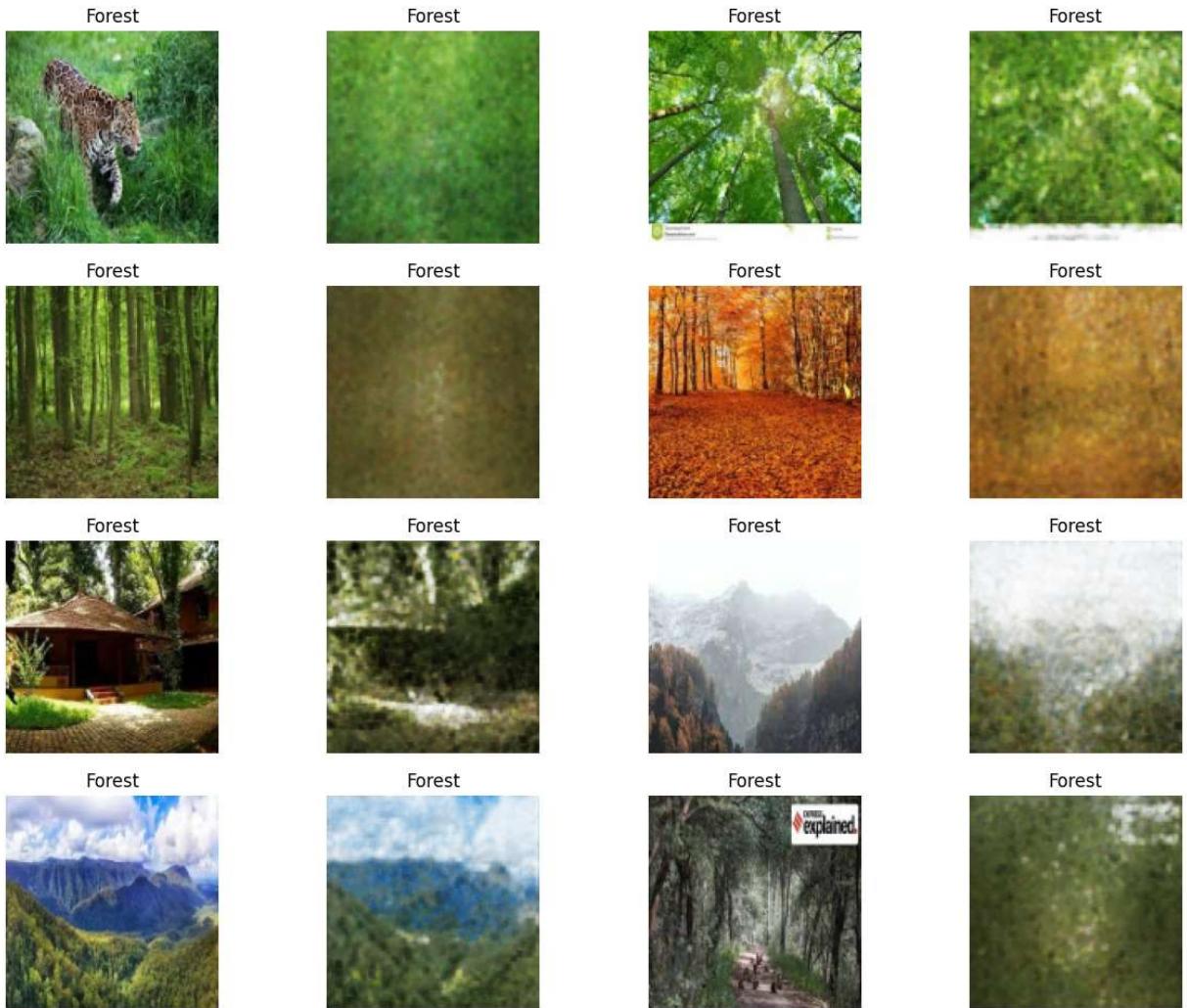
```
120/120 [=====] - 23s 192ms/step - loss: 46.6198 - reconstruction_error: 31.0252 - regularization_error: 15.5946 - val_loss: 66.4835 - val_reconstruction_error: 52.8726 - val_regularization_error: 13.6110
Epoch 282/1000
120/120 [=====] - 23s 191ms/step - loss: 46.7940 - reconstruction_error: 31.1873 - regularization_error: 15.6066 - val_loss: 67.0508 - val_reconstruction_error: 52.7774 - val_regularization_error: 14.2735
Epoch 283/1000
120/120 [=====] - 21s 170ms/step - loss: 46.6171 - reconstruction_error: 31.0268 - regularization_error: 15.5904 - val_loss: 65.6509 - val_reconstruction_error: 51.5920 - val_regularization_error: 14.0589
Epoch 284/1000
120/120 [=====] - 21s 176ms/step - loss: 46.4724 - reconstruction_error: 30.9940 - regularization_error: 15.4784 - val_loss: 67.7668 - val_reconstruction_error: 52.9753 - val_regularization_error: 14.7915
Epoch 285/1000
120/120 [=====] - 21s 174ms/step - loss: 46.1875 - reconstruction_error: 30.7729 - regularization_error: 15.4146 - val_loss: 66.7352 - val_reconstruction_error: 52.6432 - val_regularization_error: 14.0919
Epoch 286/1000
120/120 [=====] - 24s 199ms/step - loss: 46.3168 - reconstruction_error: 30.8665 - regularization_error: 15.4503 - val_loss: 66.7949 - val_reconstruction_error: 53.1979 - val_regularization_error: 13.5970
Epoch 287/1000
120/120 [=====] - 20s 169ms/step - loss: 46.5895 - reconstruction_error: 31.1422 - regularization_error: 15.4473 - val_loss: 67.2763 - val_reconstruction_error: 54.1057 - val_regularization_error: 13.1706
Epoch 288/1000
120/120 [=====] - 24s 197ms/step - loss: 46.3850 - reconstruction_error: 30.8512 - regularization_error: 15.5337 - val_loss: 65.8749 - val_reconstruction_error: 52.5710 - val_regularization_error: 13.3040
Epoch 289/1000
120/120 [=====] - 23s 190ms/step - loss: 46.0808 - reconstruction_error: 30.6614 - regularization_error: 15.4194 - val_loss: 66.0148 - val_reconstruction_error: 52.9728 - val_regularization_error: 13.0421
Epoch 290/1000
120/120 [=====] - 23s 189ms/step - loss: 46.3312 - reconstruction_error: 30.7949 - regularization_error: 15.5363 - val_loss: 66.1971 - val_reconstruction_error: 52.2951 - val_regularization_error: 13.9019
Epoch 291/1000
120/120 [=====] - ETA: 0s - loss: 46.1360 - reconstruction_error: 30.5172 - regularization_error: 15.6188
[2023-12-01 23:33:50.225259]: Reconstructing images for epoch 291 ...
```



```
120/120 [=====] - 21s 175ms/step - loss: 46.1360 - reconstruction_error: 30.5172 - regularization_error: 15.6188 - val_loss: 66.8575 - val_reconstruction_error: 52.5439 - val_regularization_error: 14.3136
Epoch 292/1000
120/120 [=====] - 23s 192ms/step - loss: 46.1813 - reconstruction_error: 30.7364 - regularization_error: 15.4449 - val_loss: 66.7020 - val_reconstruction_error: 52.9601 - val_regularization_error: 13.7418
Epoch 293/1000
120/120 [=====] - 22s 186ms/step - loss: 46.2176 - reconstruction_error: 30.7086 - regularization_error: 15.5090 - val_loss: 66.8307 - val_reconstruction_error: 52.0691 - val_regularization_error: 14.7616
Epoch 294/1000
120/120 [=====] - 22s 182ms/step - loss: 46.2402 - reconstruction_error: 30.5380 - regularization_error: 15.7022 - val_loss: 66.6969 - val_reconstruction_error: 52.8525 - val_regularization_error: 13.8444
Epoch 295/1000
120/120 [=====] - 20s 162ms/step - loss: 46.0416 - reconstruction_error: 30.5291 - regularization_error: 15.5125 - val_loss: 67.3522 - val_reconstruction_error: 53.3945 - val_regularization_error: 13.9576
Epoch 296/1000
120/120 [=====] - 24s 201ms/step - loss: 46.3282 - reconstruction_error: 30.7055 - regularization_error: 15.6227 - val_loss: 65.7622 - val_reconstruction_error: 52.6848 - val_regularization_error: 13.0775
Epoch 297/1000
120/120 [=====] - 24s 193ms/step - loss: 45.9703 - reconstruction_error: 30.4338 - regularization_error: 15.5365 - val_loss: 66.8520 - val_reconstruction_error: 53.6028 - val_regularization_error: 13.2492
Epoch 298/1000
120/120 [=====] - 23s 194ms/step - loss: 45.9021 - reconstruction_error: 30.4245 - regularization_error: 15.4775 - val_loss: 67.0795 - val_reconstruction_error: 53.3209 - val_regularization_error: 13.7586
Epoch 299/1000
120/120 [=====] - 25s 204ms/step - loss: 46.0846 - reconstruction_error: 30.5319 - regularization_error: 15.5527 - val_loss: 68.1012 - val_reconstruction_error: 54.1201 - val_regularization_error: 13.9812
Epoch 300/1000
120/120 [=====] - 22s 183ms/step - loss: 45.9537 - reconstruction_error: 30.4053 - regularization_error: 15.5484 - val_loss: 67.3083 - val_reconstruction_error: 53.9955 - val_regularization_error: 13.3128
Epoch 301/1000
120/120 [=====] - ETA: 0s - loss: 45.9122 - reconstruction_error: 30.3126 - regularization_error: 15.5996
[2023-12-01 23:37:43.173427]: Reconstructing images for epoch 301 ...
```



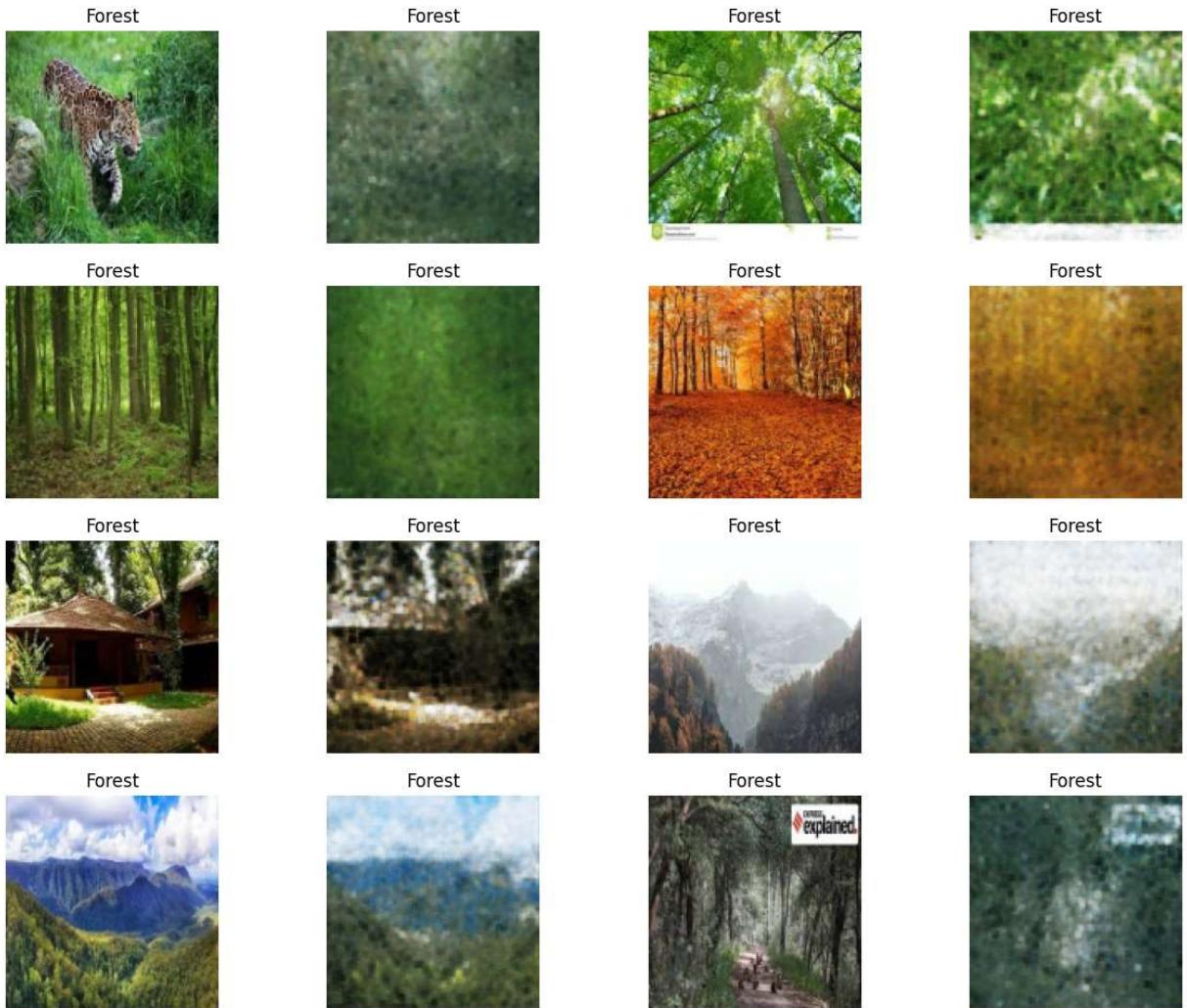
```
120/120 [=====] - 26s 214ms/step - loss: 45.9122 - reconstruction_error: 30.3126 - regularization_error: 15.5996 - val_loss: 66.7789 - val_reconstruction_error: 52.5976 - val_regularization_error: 14.1813
Epoch 302/1000
120/120 [=====] - 19s 161ms/step - loss: 45.8977 - reconstruction_error: 30.2668 - regularization_error: 15.6309 - val_loss: 66.6281 - val_reconstruction_error: 53.0357 - val_regularization_error: 13.5924
Epoch 303/1000
120/120 [=====] - 23s 189ms/step - loss: 45.8581 - reconstruction_error: 30.2957 - regularization_error: 15.5624 - val_loss: 67.3889 - val_reconstruction_error: 52.4747 - val_regularization_error: 14.9142
Epoch 304/1000
120/120 [=====] - 23s 190ms/step - loss: 45.7856 - reconstruction_error: 30.2469 - regularization_error: 15.5387 - val_loss: 66.9821 - val_reconstruction_error: 53.3660 - val_regularization_error: 13.6161
Epoch 305/1000
120/120 [=====] - 22s 184ms/step - loss: 45.9386 - reconstruction_error: 30.3875 - regularization_error: 15.5511 - val_loss: 67.3119 - val_reconstruction_error: 52.5008 - val_regularization_error: 14.8111
Epoch 306/1000
120/120 [=====] - 22s 186ms/step - loss: 45.7955 - reconstruction_error: 30.2470 - regularization_error: 15.5485 - val_loss: 67.6034 - val_reconstruction_error: 53.1185 - val_regularization_error: 14.4848
Epoch 307/1000
120/120 [=====] - 21s 176ms/step - loss: 45.9615 - reconstruction_error: 30.2849 - regularization_error: 15.6767 - val_loss: 66.8221 - val_reconstruction_error: 52.8402 - val_regularization_error: 13.9818
Epoch 308/1000
120/120 [=====] - 26s 215ms/step - loss: 45.9261 - reconstruction_error: 30.0851 - regularization_error: 15.8409 - val_loss: 66.6939 - val_reconstruction_error: 53.1570 - val_regularization_error: 13.5369
Epoch 309/1000
120/120 [=====] - 24s 197ms/step - loss: 45.5575 - reconstruction_error: 30.0419 - regularization_error: 15.5156 - val_loss: 67.2914 - val_reconstruction_error: 53.7369 - val_regularization_error: 13.5545
Epoch 310/1000
120/120 [=====] - 21s 171ms/step - loss: 45.9879 - reconstruction_error: 30.2313 - regularization_error: 15.7566 - val_loss: 66.7926 - val_reconstruction_error: 52.9106 - val_regularization_error: 13.8819
Epoch 311/1000
120/120 [=====] - ETA: 0s - loss: 45.7205 - reconstruction_error: 30.0723 - regularization_error: 15.6482
[2023-12-01 23:41:33.748264]: Reconstructing images for epoch 311 ...
```



```
120/120 [=====] - 28s 230ms/step - loss: 45.7205 - reconstruction_error: 30.0723 - regularization_error: 15.6482 - val_loss: 66.8764 - val_reconstruction_error: 54.4753 - val_regularization_error: 12.4012
Epoch 312/1000
120/120 [=====] - 22s 184ms/step - loss: 45.5698 - reconstruction_error: 29.9921 - regularization_error: 15.5777 - val_loss: 66.9306 - val_reconstruction_error: 53.4875 - val_regularization_error: 13.4432
Epoch 313/1000
120/120 [=====] - 24s 188ms/step - loss: 45.8636 - reconstruction_error: 30.2253 - regularization_error: 15.6383 - val_loss: 66.7846 - val_reconstruction_error: 53.8477 - val_regularization_error: 12.9369
Epoch 314/1000
120/120 [=====] - 19s 160ms/step - loss: 45.6361 - reconstruction_error: 30.0273 - regularization_error: 15.6088 - val_loss: 66.3241 - val_reconstruction_error: 51.7480 - val_regularization_error: 14.5762
Epoch 315/1000
120/120 [=====] - 21s 172ms/step - loss: 45.3834 - reconstruction_error: 29.8106 - regularization_error: 15.5727 - val_loss: 66.7126 - val_reconstruction_error: 52.6701 - val_regularization_error: 14.0425
Epoch 316/1000
120/120 [=====] - 26s 218ms/step - loss: 45.5942 - reconstruction_error: 29.9464 - regularization_error: 15.6478 - val_loss: 66.9099 - val_reconstruction_error: 54.3939 - val_regularization_error: 12.5159
Epoch 317/1000
120/120 [=====] - 22s 181ms/step - loss: 45.6112 - reconstruction_error: 29.8716 - regularization_error: 15.7396 - val_loss: 66.6339 - val_reconstruction_error: 53.0800 - val_regularization_error: 13.5539
Epoch 318/1000
120/120 [=====] - 22s 180ms/step - loss: 45.3893 - reconstruction_error: 29.7819 - regularization_error: 15.6074 - val_loss: 66.1368 - val_reconstruction_error: 52.0738 - val_regularization_error: 14.0630
Epoch 319/1000
120/120 [=====] - 20s 163ms/step - loss: 45.7076 - reconstruction_error: 29.8877 - regularization_error: 15.8199 - val_loss: 66.9721 - val_reconstruction_error: 53.1392 - val_regularization_error: 13.8329
Epoch 320/1000
120/120 [=====] - 21s 178ms/step - loss: 45.4386 - reconstruction_error: 29.7472 - regularization_error: 15.6913 - val_loss: 67.0395 - val_reconstruction_error: 54.4745 - val_regularization_error: 12.5650
Epoch 321/1000
120/120 [=====] - ETA: 0s - loss: 45.7379 - reconstruction_error: 29.9982 - regularization_error: 15.7396
[2023-12-01 23:45:33.032640]: Reconstructing images for epoch 321 ...
```



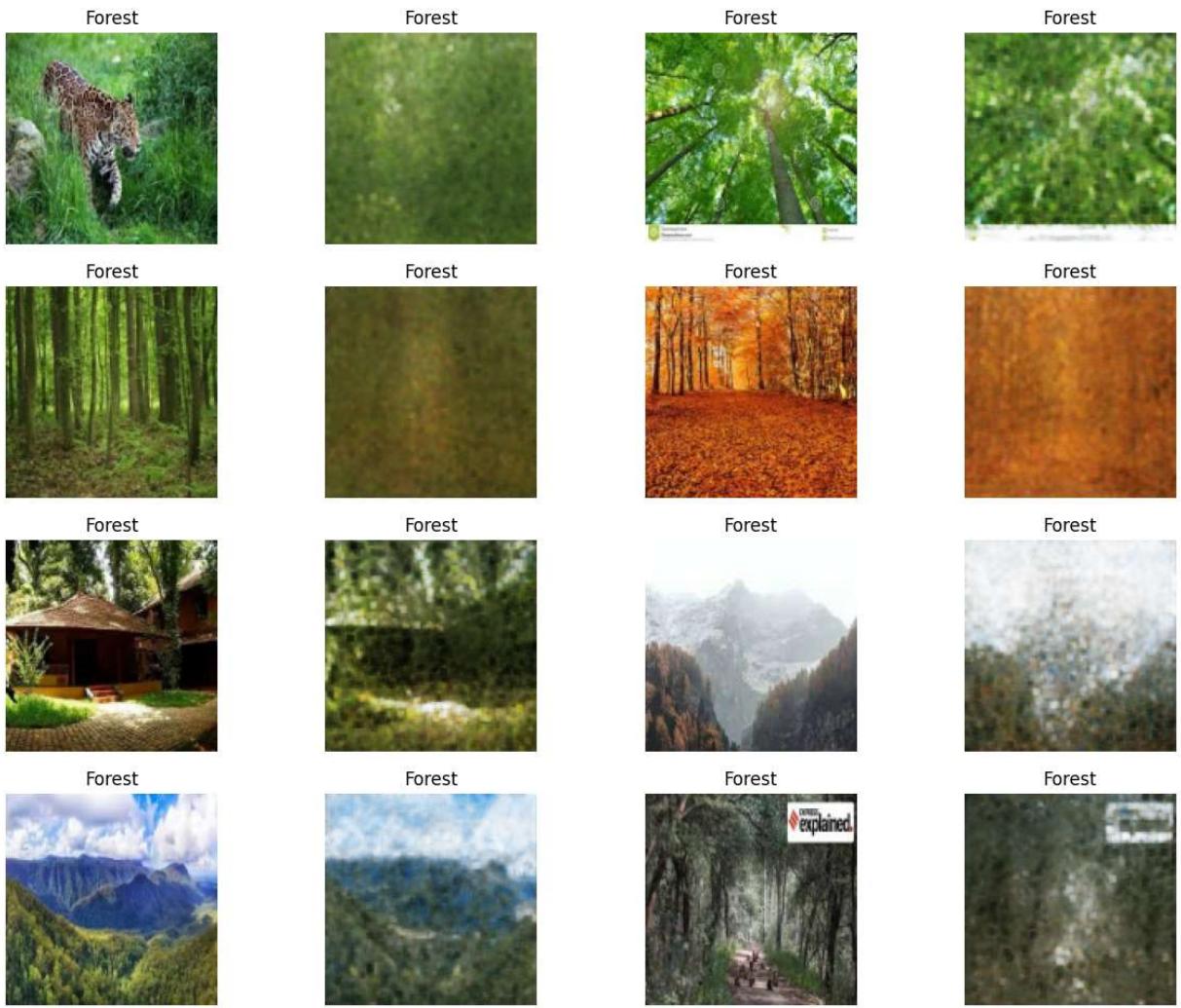
```
120/120 [=====] - 22s 185ms/step - loss: 45.7379 - reconstruction_error: 29.9982 - regularization_error: 15.7396 - val_loss: 67.3446 - val_reconstruction_error: 53.1495 - val_regularization_error: 14.1951
Epoch 322/1000
120/120 [=====] - 21s 174ms/step - loss: 45.6367 - reconstruction_error: 29.8811 - regularization_error: 15.7556 - val_loss: 66.7541 - val_reconstruction_error: 52.8105 - val_regularization_error: 13.9437
Epoch 323/1000
120/120 [=====] - 22s 180ms/step - loss: 45.2335 - reconstruction_error: 29.5725 - regularization_error: 15.6610 - val_loss: 66.7892 - val_reconstruction_error: 52.7998 - val_regularization_error: 13.9894
Epoch 324/1000
120/120 [=====] - 24s 201ms/step - loss: 45.4577 - reconstruction_error: 29.7379 - regularization_error: 15.7198 - val_loss: 67.2380 - val_reconstruction_error: 53.5387 - val_regularization_error: 13.6993
Epoch 325/1000
120/120 [=====] - 20s 164ms/step - loss: 45.6353 - reconstruction_error: 29.8069 - regularization_error: 15.8284 - val_loss: 67.6819 - val_reconstruction_error: 53.6276 - val_regularization_error: 14.0543
Epoch 326/1000
120/120 [=====] - 21s 178ms/step - loss: 45.6273 - reconstruction_error: 29.7972 - regularization_error: 15.8301 - val_loss: 67.0083 - val_reconstruction_error: 52.3863 - val_regularization_error: 14.6220
Epoch 327/1000
120/120 [=====] - 22s 180ms/step - loss: 45.2708 - reconstruction_error: 29.6792 - regularization_error: 15.5917 - val_loss: 67.8265 - val_reconstruction_error: 53.3764 - val_regularization_error: 14.4502
Epoch 328/1000
120/120 [=====] - 24s 194ms/step - loss: 45.2684 - reconstruction_error: 29.4984 - regularization_error: 15.7700 - val_loss: 65.8821 - val_reconstruction_error: 52.7480 - val_regularization_error: 13.1341
Epoch 329/1000
120/120 [=====] - 23s 186ms/step - loss: 45.2928 - reconstruction_error: 29.5345 - regularization_error: 15.7583 - val_loss: 67.7972 - val_reconstruction_error: 52.6334 - val_regularization_error: 15.1638
Epoch 330/1000
120/120 [=====] - 26s 213ms/step - loss: 45.1062 - reconstruction_error: 29.4470 - regularization_error: 15.6593 - val_loss: 66.3990 - val_reconstruction_error: 52.8727 - val_regularization_error: 13.5263
Epoch 331/1000
120/120 [=====] - ETA: 0s - loss: 45.2760 - reconstruction_error: 29.5861 - regularization_error: 15.6899
[2023-12-01 23:49:21.259879]: Reconstructing images for epoch 331 ...
```



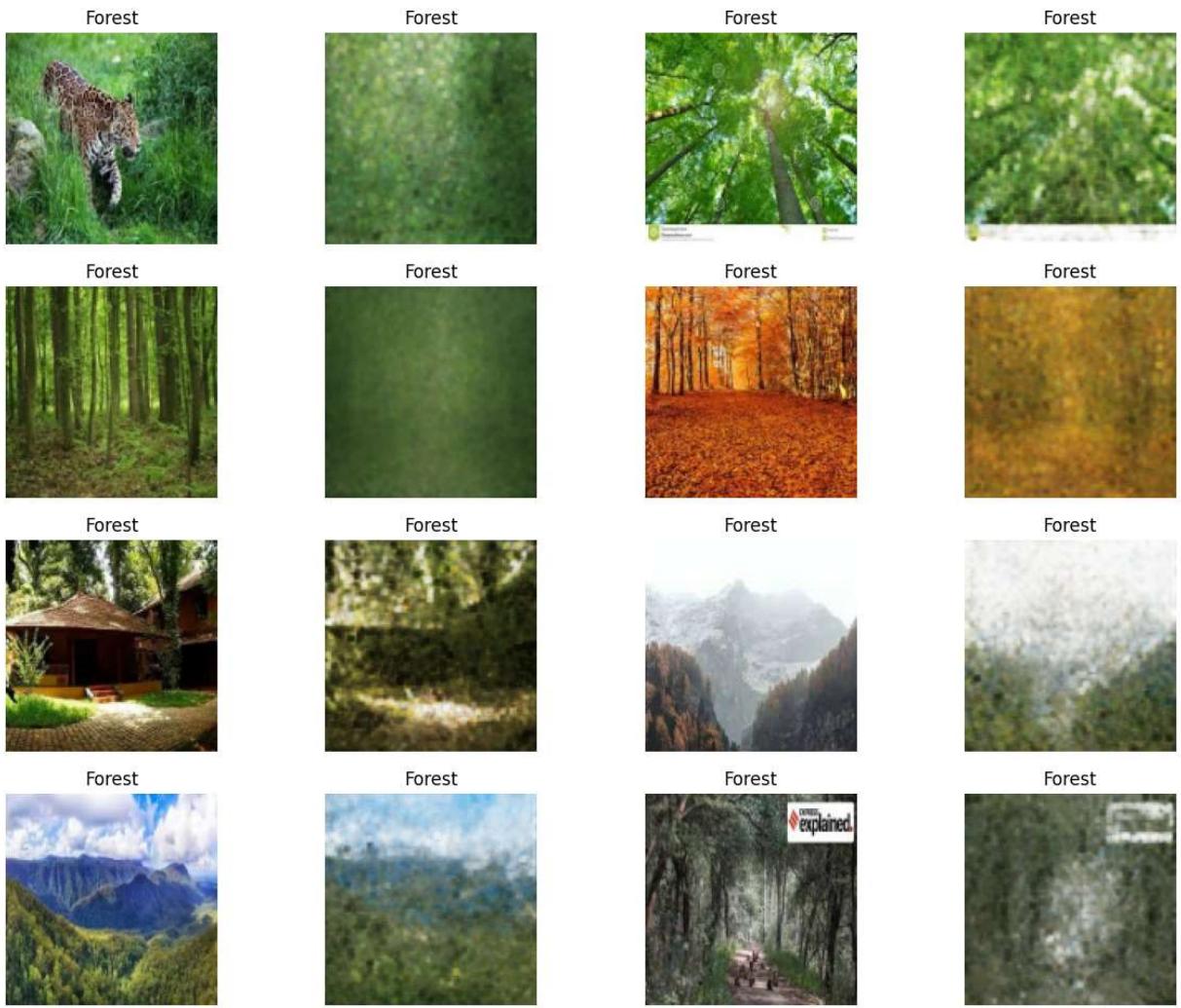
```
120/120 [=====] - 24s 202ms/step - loss: 45.2760 - reconstruction_error: 29.5861 - regularization_error: 15.6899 - val_loss: 67.4019 - val_reconstruction_error: 53.5350 - val_regularization_error: 13.8669
Epoch 332/1000
120/120 [=====] - 23s 196ms/step - loss: 45.3498 - reconstruction_error: 29.5332 - regularization_error: 15.8165 - val_loss: 65.8153 - val_reconstruction_error: 52.4330 - val_regularization_error: 13.3823
Epoch 333/1000
120/120 [=====] - 23s 188ms/step - loss: 45.4192 - reconstruction_error: 29.5699 - regularization_error: 15.8492 - val_loss: 67.1696 - val_reconstruction_error: 53.3399 - val_regularization_error: 13.8298
Epoch 334/1000
120/120 [=====] - 22s 184ms/step - loss: 45.1609 - reconstruction_error: 29.4085 - regularization_error: 15.7524 - val_loss: 67.2237 - val_reconstruction_error: 53.4041 - val_regularization_error: 13.8196
Epoch 335/1000
120/120 [=====] - 24s 202ms/step - loss: 44.8341 - reconstruction_error: 29.2361 - regularization_error: 15.5979 - val_loss: 67.6837 - val_reconstruction_error: 53.5678 - val_regularization_error: 14.1159
Epoch 336/1000
120/120 [=====] - 22s 181ms/step - loss: 45.0879 - reconstruction_error: 29.3609 - regularization_error: 15.7270 - val_loss: 67.5522 - val_reconstruction_error: 53.6393 - val_regularization_error: 13.9129
Epoch 337/1000
120/120 [=====] - 25s 206ms/step - loss: 45.1535 - reconstruction_error: 29.3236 - regularization_error: 15.8299 - val_loss: 66.2620 - val_reconstruction_error: 53.0782 - val_regularization_error: 13.1838
Epoch 338/1000
120/120 [=====] - 21s 172ms/step - loss: 45.2588 - reconstruction_error: 29.4356 - regularization_error: 15.8232 - val_loss: 66.3596 - val_reconstruction_error: 53.1833 - val_regularization_error: 13.1763
Epoch 339/1000
120/120 [=====] - 19s 160ms/step - loss: 45.0748 - reconstruction_error: 29.3948 - regularization_error: 15.6800 - val_loss: 67.9757 - val_reconstruction_error: 54.0684 - val_regularization_error: 13.9073
Epoch 340/1000
120/120 [=====] - 24s 200ms/step - loss: 45.1315 - reconstruction_error: 29.2734 - regularization_error: 15.8580 - val_loss: 67.9765 - val_reconstruction_error: 53.1923 - val_regularization_error: 14.7842
Epoch 341/1000
120/120 [=====] - ETA: 0s - loss: 44.9069 - reconstruction_error: 29.1505 - regularization_error: 15.7564
[2023-12-01 23:53:13.501929]: Reconstructing images for epoch 341 ...
```



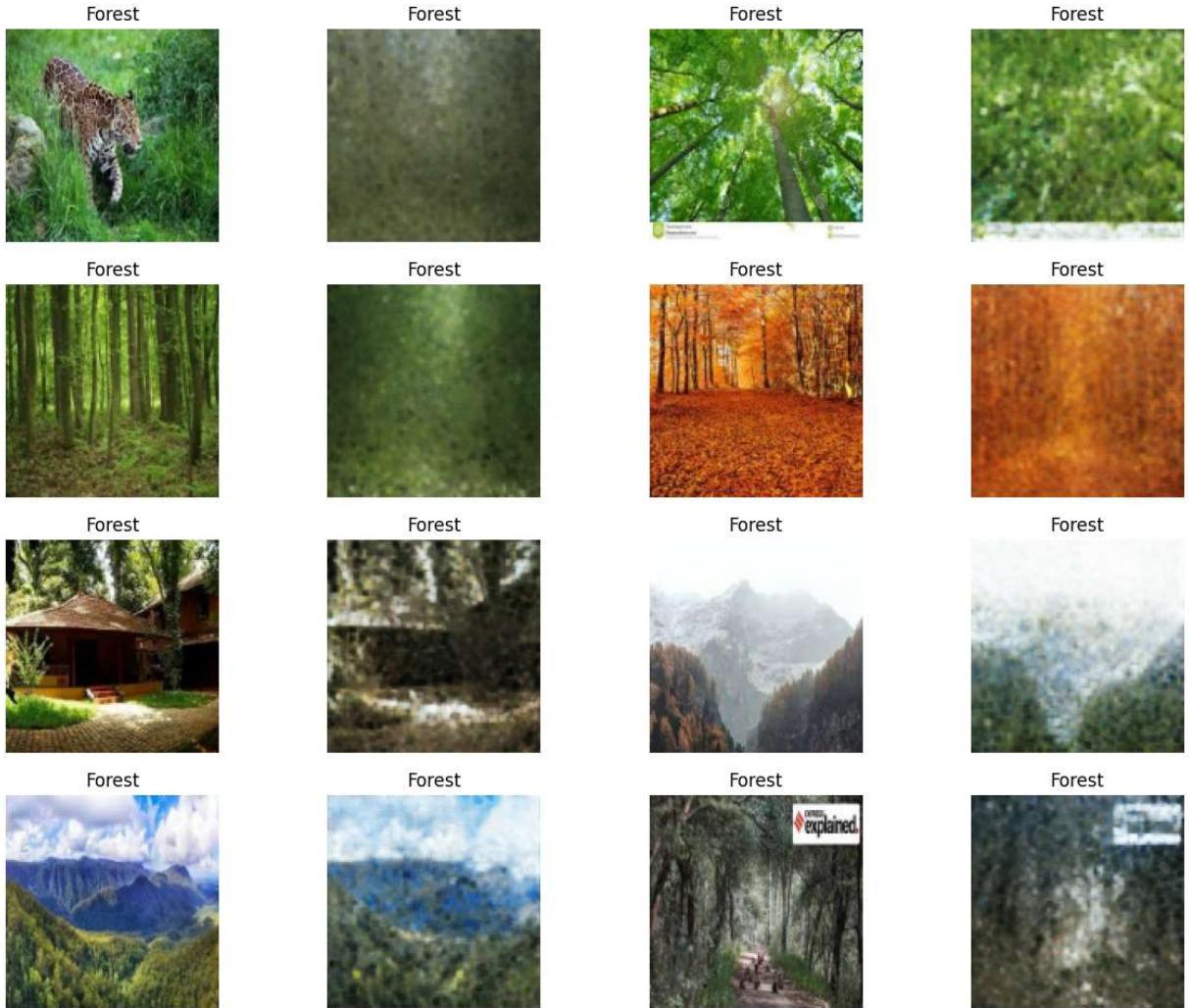
```
120/120 [=====] - 27s 222ms/step - loss: 44.9069 - reconstruction_error: 29.1505 - regularization_error: 15.7564 - val_loss: 66.7555 - val_reconstruction_error: 53.6876 - val_regularization_error: 13.0680
Epoch 342/1000
120/120 [=====] - 23s 192ms/step - loss: 44.8763 - reconstruction_error: 29.2271 - regularization_error: 15.6492 - val_loss: 67.2503 - val_reconstruction_error: 53.1440 - val_regularization_error: 14.1063
Epoch 343/1000
120/120 [=====] - 22s 179ms/step - loss: 45.0171 - reconstruction_error: 29.2122 - regularization_error: 15.8049 - val_loss: 67.6021 - val_reconstruction_error: 53.3958 - val_regularization_error: 14.2064
Epoch 344/1000
120/120 [=====] - 24s 203ms/step - loss: 45.0455 - reconstruction_error: 29.2422 - regularization_error: 15.8033 - val_loss: 67.0876 - val_reconstruction_error: 53.1584 - val_regularization_error: 13.9292
Epoch 345/1000
120/120 [=====] - 26s 215ms/step - loss: 45.0234 - reconstruction_error: 29.1194 - regularization_error: 15.9041 - val_loss: 66.7944 - val_reconstruction_error: 52.6982 - val_regularization_error: 14.0961
Epoch 346/1000
120/120 [=====] - 23s 191ms/step - loss: 44.9342 - reconstruction_error: 29.0819 - regularization_error: 15.8523 - val_loss: 66.8158 - val_reconstruction_error: 52.6982 - val_regularization_error: 14.1176
Epoch 347/1000
120/120 [=====] - 20s 168ms/step - loss: 44.9767 - reconstruction_error: 28.9974 - regularization_error: 15.9794 - val_loss: 67.0505 - val_reconstruction_error: 52.9170 - val_regularization_error: 14.1334
Epoch 348/1000
120/120 [=====] - 18s 153ms/step - loss: 44.8914 - reconstruction_error: 29.0758 - regularization_error: 15.8157 - val_loss: 66.9712 - val_reconstruction_error: 53.2831 - val_regularization_error: 13.6881
Epoch 349/1000
120/120 [=====] - 23s 193ms/step - loss: 44.7951 - reconstruction_error: 29.0271 - regularization_error: 15.7680 - val_loss: 66.4440 - val_reconstruction_error: 54.2000 - val_regularization_error: 12.2440
Epoch 350/1000
120/120 [=====] - 26s 216ms/step - loss: 44.8649 - reconstruction_error: 29.0595 - regularization_error: 15.8054 - val_loss: 67.3146 - val_reconstruction_error: 53.1370 - val_regularization_error: 14.1776
Epoch 351/1000
120/120 [=====] - ETA: 0s - loss: 44.8567 - reconstruction_error: 29.1013 - regularization_error: 15.7554
[2023-12-01 23:57:07.318598]: Reconstructing images for epoch 351 ...
```



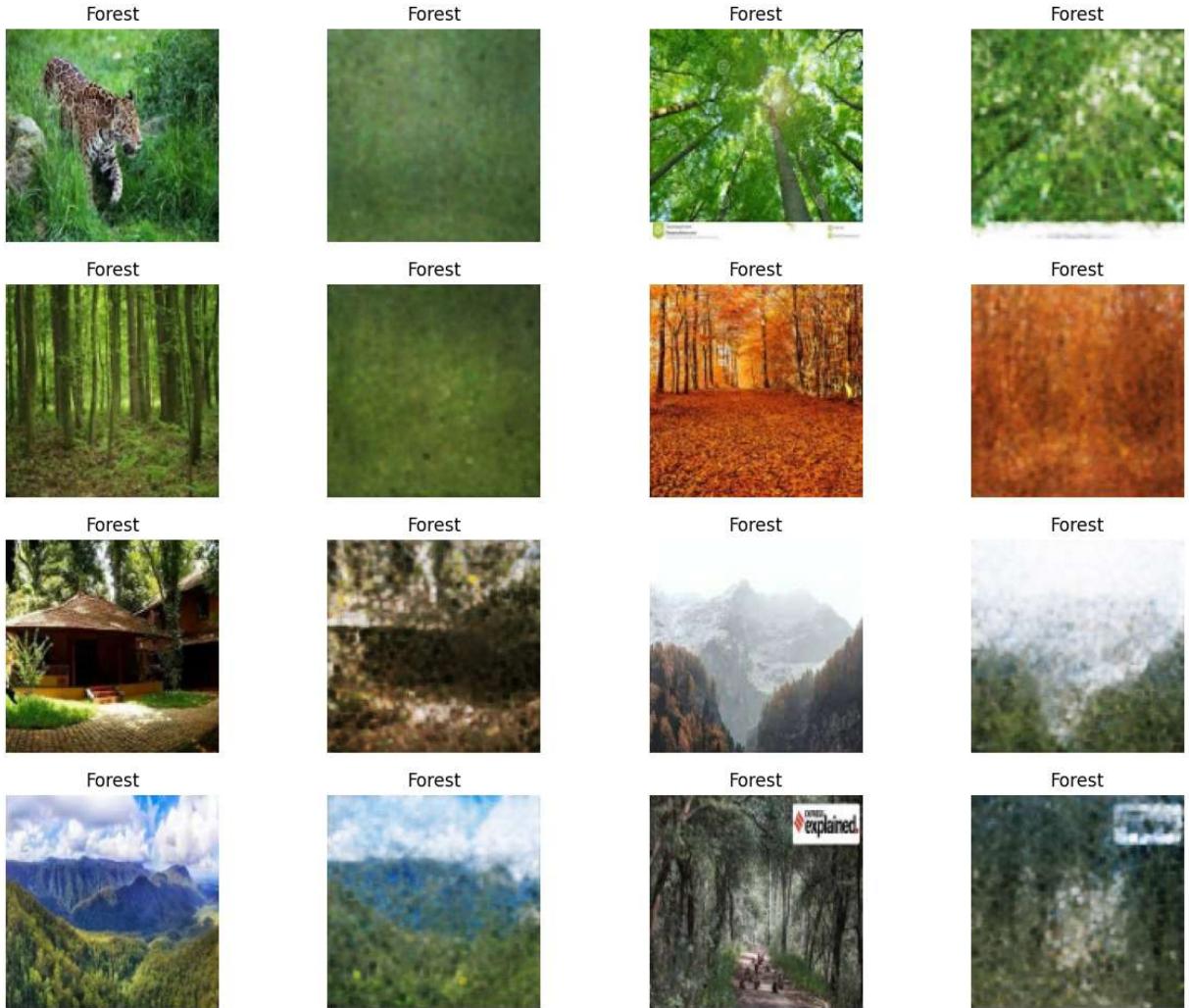
```
120/120 [=====] - 25s 210ms/step - loss: 44.8567 - reconstruction_error: 29.1013 - regularization_error: 15.7554 - val_loss: 66.5959 - val_reconstruction_error: 53.3286 - val_regularization_error: 13.2673
Epoch 352/1000
120/120 [=====] - 26s 217ms/step - loss: 45.2057 - reconstruction_error: 29.1829 - regularization_error: 16.0228 - val_loss: 68.1090 - val_reconstruction_error: 53.7935 - val_regularization_error: 14.3155
Epoch 353/1000
120/120 [=====] - 23s 188ms/step - loss: 44.7468 - reconstruction_error: 28.9347 - regularization_error: 15.8121 - val_loss: 67.4977 - val_reconstruction_error: 53.8066 - val_regularization_error: 13.6911
Epoch 354/1000
120/120 [=====] - 26s 215ms/step - loss: 44.8997 - reconstruction_error: 28.9551 - regularization_error: 15.9446 - val_loss: 69.4117 - val_reconstruction_error: 54.1440 - val_regularization_error: 15.2677
Epoch 355/1000
120/120 [=====] - 21s 176ms/step - loss: 44.8839 - reconstruction_error: 28.9139 - regularization_error: 15.9699 - val_loss: 67.9135 - val_reconstruction_error: 53.3793 - val_regularization_error: 14.5342
Epoch 356/1000
120/120 [=====] - 22s 181ms/step - loss: 44.6379 - reconstruction_error: 28.7744 - regularization_error: 15.8634 - val_loss: 68.2181 - val_reconstruction_error: 54.0123 - val_regularization_error: 14.2058
Epoch 357/1000
120/120 [=====] - 28s 237ms/step - loss: 44.6534 - reconstruction_error: 28.8181 - regularization_error: 15.8353 - val_loss: 66.3701 - val_reconstruction_error: 53.9086 - val_regularization_error: 12.4615
Epoch 358/1000
120/120 [=====] - 24s 201ms/step - loss: 44.7310 - reconstruction_error: 28.8784 - regularization_error: 15.8526 - val_loss: 67.6042 - val_reconstruction_error: 53.7626 - val_regularization_error: 13.8416
Epoch 359/1000
120/120 [=====] - 20s 164ms/step - loss: 44.8633 - reconstruction_error: 28.9927 - regularization_error: 15.8706 - val_loss: 66.9344 - val_reconstruction_error: 53.6344 - val_regularization_error: 13.3000
Epoch 360/1000
120/120 [=====] - 23s 192ms/step - loss: 44.7299 - reconstruction_error: 28.8480 - regularization_error: 15.8819 - val_loss: 67.3319 - val_reconstruction_error: 53.7205 - val_regularization_error: 13.6114
Epoch 361/1000
120/120 [=====] - ETA: 0s - loss: 44.6904 - reconstruction_error: 28.7754 - regularization_error: 15.9150
[2023-12-02 00:01:09.588827]: Reconstructing images for epoch 361 ...
```



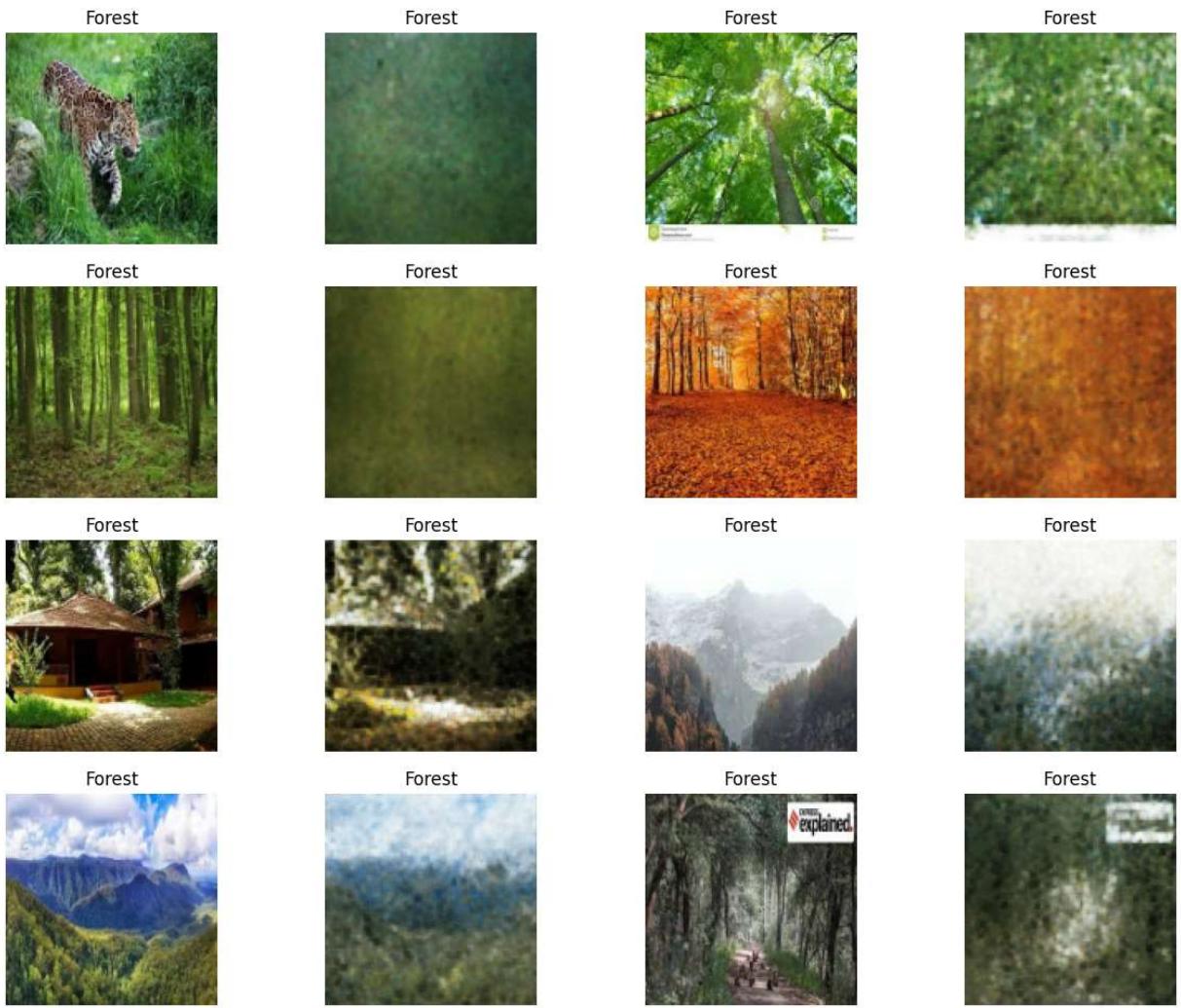
```
120/120 [=====] - 27s 222ms/step - loss: 44.6904 - reconstruction_error: 28.7754 - regularization_error: 15.9150 - val_loss: 68.3899 - val_reconstruction_error: 55.3338 - val_regularization_error: 13.0561
Epoch 362/1000
120/120 [=====] - 27s 228ms/step - loss: 44.7991 - reconstruction_error: 28.8022 - regularization_error: 15.9969 - val_loss: 67.4163 - val_reconstruction_error: 52.7490 - val_regularization_error: 14.6674
Epoch 363/1000
120/120 [=====] - 19s 157ms/step - loss: 44.6180 - reconstruction_error: 28.6845 - regularization_error: 15.9335 - val_loss: 67.2700 - val_reconstruction_error: 53.7433 - val_regularization_error: 13.5267
Epoch 364/1000
120/120 [=====] - 25s 207ms/step - loss: 44.6790 - reconstruction_error: 28.8166 - regularization_error: 15.8624 - val_loss: 66.9177 - val_reconstruction_error: 52.8766 - val_regularization_error: 14.0411
Epoch 365/1000
120/120 [=====] - 24s 198ms/step - loss: 44.6262 - reconstruction_error: 28.5584 - regularization_error: 16.0679 - val_loss: 68.2590 - val_reconstruction_error: 53.2658 - val_regularization_error: 14.9932
Epoch 366/1000
120/120 [=====] - 20s 163ms/step - loss: 44.6419 - reconstruction_error: 28.6696 - regularization_error: 15.9723 - val_loss: 67.0828 - val_reconstruction_error: 53.0773 - val_regularization_error: 14.0055
Epoch 367/1000
120/120 [=====] - 20s 169ms/step - loss: 44.5514 - reconstruction_error: 28.5966 - regularization_error: 15.9548 - val_loss: 69.1169 - val_reconstruction_error: 53.9175 - val_regularization_error: 15.1994
Epoch 368/1000
120/120 [=====] - 18s 152ms/step - loss: 44.6077 - reconstruction_error: 28.6483 - regularization_error: 15.9593 - val_loss: 67.0855 - val_reconstruction_error: 53.0455 - val_regularization_error: 14.0399
Epoch 369/1000
120/120 [=====] - 22s 186ms/step - loss: 44.6498 - reconstruction_error: 28.6114 - regularization_error: 16.0384 - val_loss: 67.6278 - val_reconstruction_error: 53.3089 - val_regularization_error: 14.3189
Epoch 370/1000
120/120 [=====] - 24s 198ms/step - loss: 44.5872 - reconstruction_error: 28.5755 - regularization_error: 16.0117 - val_loss: 67.7842 - val_reconstruction_error: 53.3050 - val_regularization_error: 14.4792
Epoch 371/1000
120/120 [=====] - ETA: 0s - loss: 44.6192 - reconstruction_error: 28.4435 - regularization_error: 16.1756
[2023-12-02 00:04:51.390300]: Reconstructing images for epoch 371 ...
```



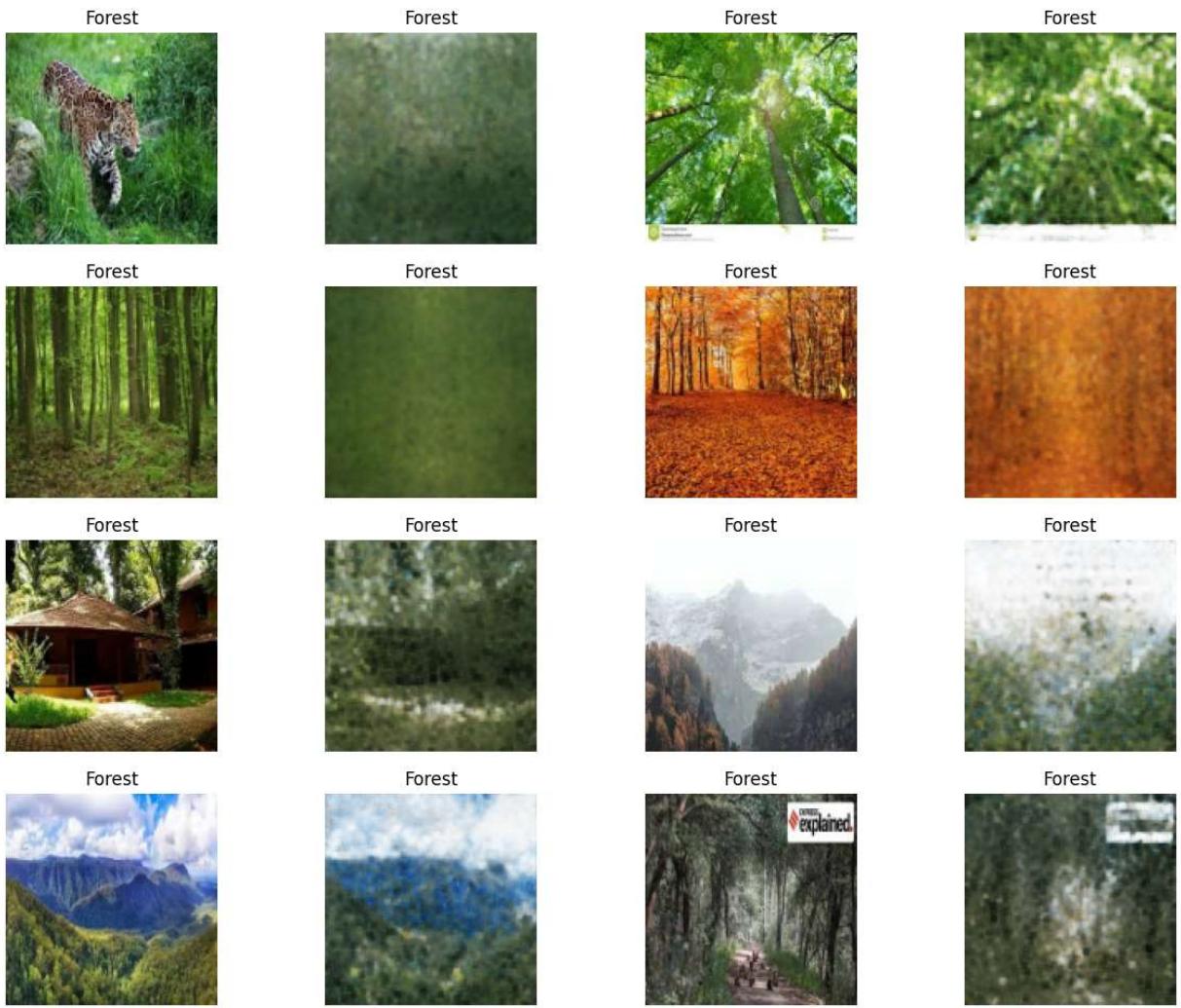
```
120/120 [=====] - 22s 182ms/step - loss: 44.6192 - reconstruction_error: 28.4435 - regularization_error: 16.1756 - val_loss: 66.9676 - val_reconstruction_error: 52.4521 - val_regularization_error: 14.5155
Epoch 372/1000
120/120 [=====] - 22s 183ms/step - loss: 44.2391 - reconstruction_error: 28.3534 - regularization_error: 15.8857 - val_loss: 67.5600 - val_reconstruction_error: 53.8638 - val_regularization_error: 13.6962
Epoch 373/1000
120/120 [=====] - 24s 196ms/step - loss: 44.3973 - reconstruction_error: 28.3985 - regularization_error: 15.9988 - val_loss: 66.0557 - val_reconstruction_error: 52.5073 - val_regularization_error: 13.5484
Epoch 374/1000
120/120 [=====] - 20s 167ms/step - loss: 44.3555 - reconstruction_error: 28.3461 - regularization_error: 16.0093 - val_loss: 67.5852 - val_reconstruction_error: 54.0321 - val_regularization_error: 13.5531
Epoch 375/1000
120/120 [=====] - 23s 187ms/step - loss: 44.3073 - reconstruction_error: 28.3617 - regularization_error: 15.9456 - val_loss: 67.2773 - val_reconstruction_error: 53.4717 - val_regularization_error: 13.8057
Epoch 376/1000
120/120 [=====] - 24s 197ms/step - loss: 44.0803 - reconstruction_error: 28.3466 - regularization_error: 15.7337 - val_loss: 68.0058 - val_reconstruction_error: 54.1867 - val_regularization_error: 13.8191
Epoch 377/1000
120/120 [=====] - 25s 206ms/step - loss: 44.5484 - reconstruction_error: 28.5290 - regularization_error: 16.0194 - val_loss: 67.0750 - val_reconstruction_error: 52.7356 - val_regularization_error: 14.3394
Epoch 378/1000
120/120 [=====] - 23s 193ms/step - loss: 44.2844 - reconstruction_error: 28.2813 - regularization_error: 16.0031 - val_loss: 67.2822 - val_reconstruction_error: 53.2902 - val_regularization_error: 13.9920
Epoch 379/1000
120/120 [=====] - 24s 203ms/step - loss: 44.3088 - reconstruction_error: 28.2443 - regularization_error: 16.0644 - val_loss: 67.1869 - val_reconstruction_error: 53.3189 - val_regularization_error: 13.8680
Epoch 380/1000
120/120 [=====] - 19s 158ms/step - loss: 44.3224 - reconstruction_error: 28.2029 - regularization_error: 16.1195 - val_loss: 67.6531 - val_reconstruction_error: 53.7639 - val_regularization_error: 13.8892
Epoch 381/1000
120/120 [=====] - ETA: 0s - loss: 44.2725 - reconstruction_error: 28.2769 - regularization_error: 15.9956
[2023-12-02 00:08:42.155971]: Reconstructing images for epoch 381 ...
```



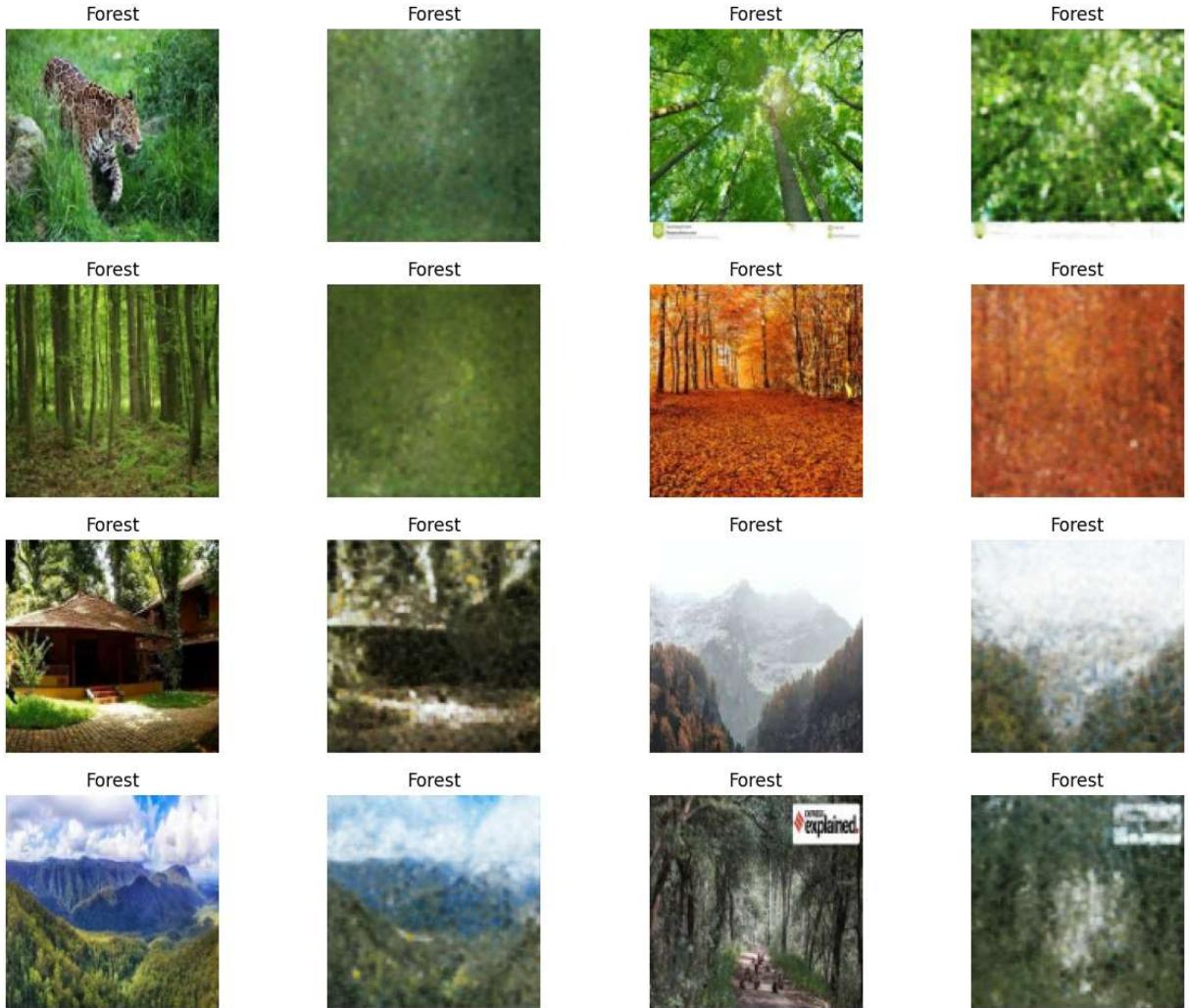
```
120/120 [=====] - 24s 203ms/step - loss: 44.2725 - reconstruction_error: 28.2769 - regularization_error: 15.9956 - val_loss: 68.2399 - val_reconstruction_error: 53.1152 - val_regularization_error: 15.1247
Epoch 382/1000
120/120 [=====] - 23s 193ms/step - loss: 44.1058 - reconstruction_error: 28.0711 - regularization_error: 16.0347 - val_loss: 67.5726 - val_reconstruction_error: 54.4301 - val_regularization_error: 13.1425
Epoch 383/1000
120/120 [=====] - 20s 163ms/step - loss: 44.3397 - reconstruction_error: 28.2961 - regularization_error: 16.0436 - val_loss: 67.2453 - val_reconstruction_error: 52.5212 - val_regularization_error: 14.7240
Epoch 384/1000
120/120 [=====] - 24s 202ms/step - loss: 44.2536 - reconstruction_error: 28.1679 - regularization_error: 16.0857 - val_loss: 67.4035 - val_reconstruction_error: 53.1791 - val_regularization_error: 14.2245
Epoch 385/1000
120/120 [=====] - 24s 201ms/step - loss: 44.4818 - reconstruction_error: 28.2702 - regularization_error: 16.2116 - val_loss: 68.3601 - val_reconstruction_error: 53.6445 - val_regularization_error: 14.7156
Epoch 386/1000
120/120 [=====] - 24s 201ms/step - loss: 44.1393 - reconstruction_error: 28.1231 - regularization_error: 16.0161 - val_loss: 67.3899 - val_reconstruction_error: 53.7243 - val_regularization_error: 13.6656
Epoch 387/1000
120/120 [=====] - 21s 170ms/step - loss: 44.4081 - reconstruction_error: 28.1981 - regularization_error: 16.2100 - val_loss: 67.4251 - val_reconstruction_error: 52.4672 - val_regularization_error: 14.9578
Epoch 388/1000
120/120 [=====] - 21s 174ms/step - loss: 44.1272 - reconstruction_error: 28.0000 - regularization_error: 16.1272 - val_loss: 67.7690 - val_reconstruction_error: 53.0642 - val_regularization_error: 14.7048
Epoch 389/1000
120/120 [=====] - 25s 205ms/step - loss: 44.0551 - reconstruction_error: 27.9879 - regularization_error: 16.0673 - val_loss: 66.7918 - val_reconstruction_error: 53.1025 - val_regularization_error: 13.6894
Epoch 390/1000
120/120 [=====] - 25s 208ms/step - loss: 44.4040 - reconstruction_error: 28.3270 - regularization_error: 16.0770 - val_loss: 66.9408 - val_reconstruction_error: 53.4664 - val_regularization_error: 13.4743
Epoch 391/1000
120/120 [=====] - ETA: 0s - loss: 44.1981 - reconstruction_error: 28.1263 - regularization_error: 16.0717
[2023-12-02 00:12:36.177810]: Reconstructing images for epoch 391 ...
```



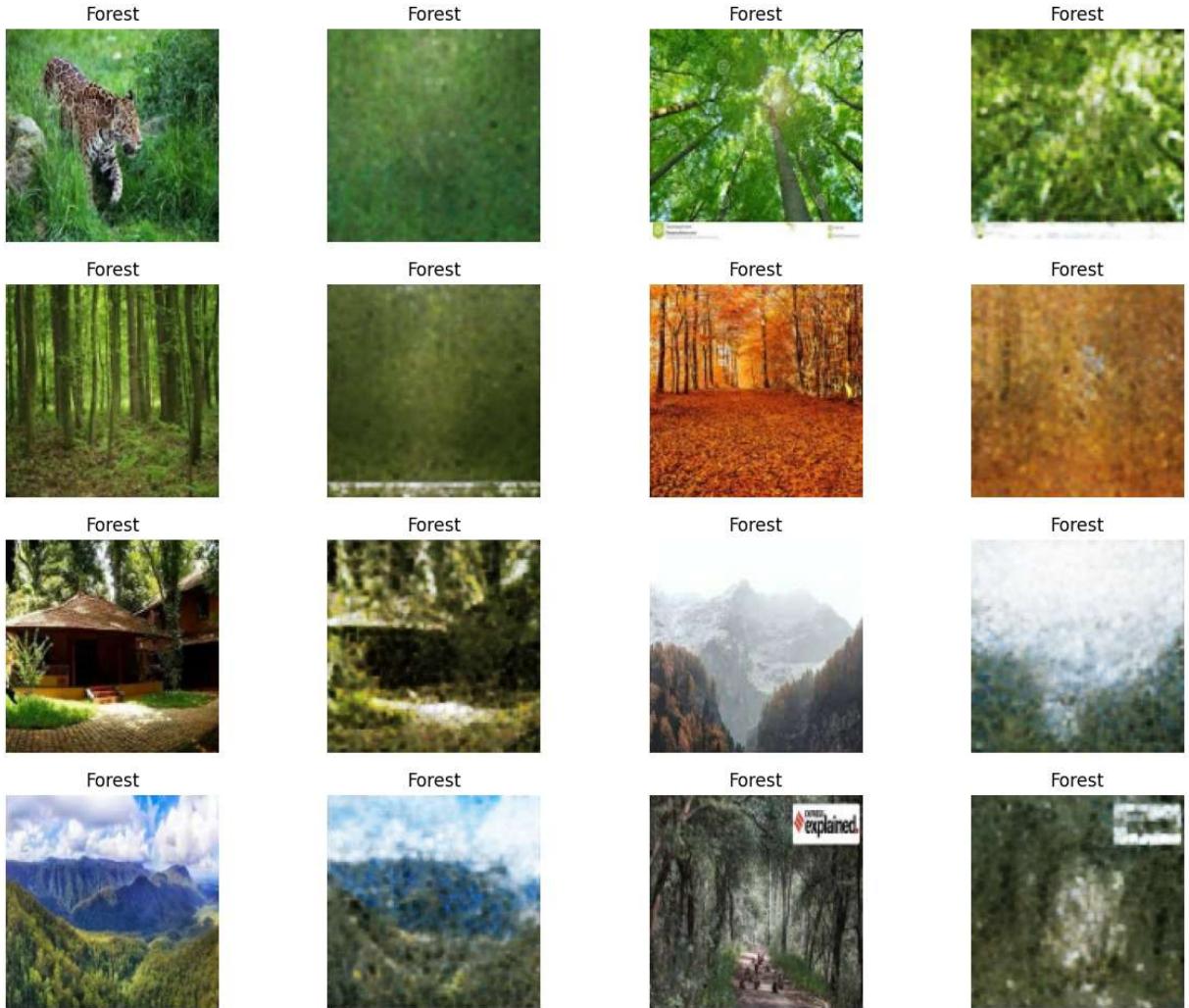
```
120/120 [=====] - 26s 214ms/step - loss: 44.1981 - reconstruction_error: 28.1263 - regularization_error: 16.0717 - val_loss: 67.5251 - val_reconstruction_error: 54.0383 - val_regularization_error: 13.4868
Epoch 392/1000
120/120 [=====] - 20s 165ms/step - loss: 44.3054 - reconstruction_error: 28.1735 - regularization_error: 16.1318 - val_loss: 68.3686 - val_reconstruction_error: 53.8096 - val_regularization_error: 14.5590
Epoch 393/1000
120/120 [=====] - 25s 207ms/step - loss: 43.9708 - reconstruction_error: 27.9938 - regularization_error: 15.9770 - val_loss: 67.4769 - val_reconstruction_error: 52.4246 - val_regularization_error: 15.0523
Epoch 394/1000
120/120 [=====] - 24s 198ms/step - loss: 43.9469 - reconstruction_error: 28.0114 - regularization_error: 15.9355 - val_loss: 67.8658 - val_reconstruction_error: 53.5199 - val_regularization_error: 14.3459
Epoch 395/1000
120/120 [=====] - 19s 161ms/step - loss: 43.8042 - reconstruction_error: 27.7760 - regularization_error: 16.0282 - val_loss: 67.9718 - val_reconstruction_error: 54.3371 - val_regularization_error: 13.6347
Epoch 396/1000
120/120 [=====] - 22s 187ms/step - loss: 43.8184 - reconstruction_error: 27.8242 - regularization_error: 15.9942 - val_loss: 67.9208 - val_reconstruction_error: 53.4159 - val_regularization_error: 14.5048
Epoch 397/1000
120/120 [=====] - 19s 157ms/step - loss: 43.9224 - reconstruction_error: 27.8165 - regularization_error: 16.1059 - val_loss: 67.4497 - val_reconstruction_error: 53.3676 - val_regularization_error: 14.0821
Epoch 398/1000
120/120 [=====] - 22s 186ms/step - loss: 44.1265 - reconstruction_error: 27.9313 - regularization_error: 16.1952 - val_loss: 67.8530 - val_reconstruction_error: 53.5963 - val_regularization_error: 14.2567
Epoch 399/1000
120/120 [=====] - 21s 176ms/step - loss: 44.1278 - reconstruction_error: 27.9717 - regularization_error: 16.1562 - val_loss: 67.8463 - val_reconstruction_error: 53.1907 - val_regularization_error: 14.6557
Epoch 400/1000
120/120 [=====] - 23s 187ms/step - loss: 43.8187 - reconstruction_error: 27.7626 - regularization_error: 16.0561 - val_loss: 67.5490 - val_reconstruction_error: 53.3231 - val_regularization_error: 14.2259
Epoch 401/1000
120/120 [=====] - ETA: 0s - loss: 44.2103 - reconstruction_error: 28.0389 - regularization_error: 16.1714
[2023-12-02 00:16:16.738766]: Reconstructing images for epoch 401 ...
```



```
120/120 [=====] - 24s 200ms/step - loss: 44.2103 - reconstruction_error: 28.0389 - regularization_error: 16.1714 - val_loss: 68.0810 - val_reconstruction_error: 53.4960 - val_regularization_error: 14.5850
Epoch 402/1000
120/120 [=====] - 25s 209ms/step - loss: 43.8610 - reconstruction_error: 27.8552 - regularization_error: 16.0059 - val_loss: 67.4357 - val_reconstruction_error: 52.7173 - val_regularization_error: 14.7185
Epoch 403/1000
120/120 [=====] - 22s 181ms/step - loss: 43.9426 - reconstruction_error: 27.7380 - regularization_error: 16.2046 - val_loss: 66.7714 - val_reconstruction_error: 52.8726 - val_regularization_error: 13.8988
Epoch 404/1000
120/120 [=====] - 26s 213ms/step - loss: 43.7004 - reconstruction_error: 27.7367 - regularization_error: 15.9637 - val_loss: 68.2929 - val_reconstruction_error: 53.3049 - val_regularization_error: 14.9879
Epoch 405/1000
120/120 [=====] - 21s 170ms/step - loss: 44.0592 - reconstruction_error: 27.7845 - regularization_error: 16.2747 - val_loss: 67.4814 - val_reconstruction_error: 53.6516 - val_regularization_error: 13.8298
Epoch 406/1000
120/120 [=====] - 21s 172ms/step - loss: 43.9124 - reconstruction_error: 27.6845 - regularization_error: 16.2279 - val_loss: 68.1053 - val_reconstruction_error: 53.0773 - val_regularization_error: 15.0280
Epoch 407/1000
120/120 [=====] - 23s 188ms/step - loss: 43.8105 - reconstruction_error: 27.6571 - regularization_error: 16.1534 - val_loss: 68.4089 - val_reconstruction_error: 53.2669 - val_regularization_error: 15.1421
Epoch 408/1000
120/120 [=====] - 24s 200ms/step - loss: 43.7569 - reconstruction_error: 27.6260 - regularization_error: 16.1309 - val_loss: 67.8656 - val_reconstruction_error: 52.8937 - val_regularization_error: 14.9719
Epoch 409/1000
120/120 [=====] - 23s 191ms/step - loss: 43.9347 - reconstruction_error: 27.8186 - regularization_error: 16.1161 - val_loss: 69.5575 - val_reconstruction_error: 54.8943 - val_regularization_error: 14.6632
Epoch 410/1000
120/120 [=====] - 22s 181ms/step - loss: 43.6697 - reconstruction_error: 27.6888 - regularization_error: 15.9810 - val_loss: 68.2617 - val_reconstruction_error: 52.9100 - val_regularization_error: 15.3517
Epoch 411/1000
120/120 [=====] - ETA: 0s - loss: 43.7799 - reconstruction_error: 27.5745 - regularization_error: 16.2054
[2023-12-02 00:20:13.626473]: Reconstructing images for epoch 411 ...
```



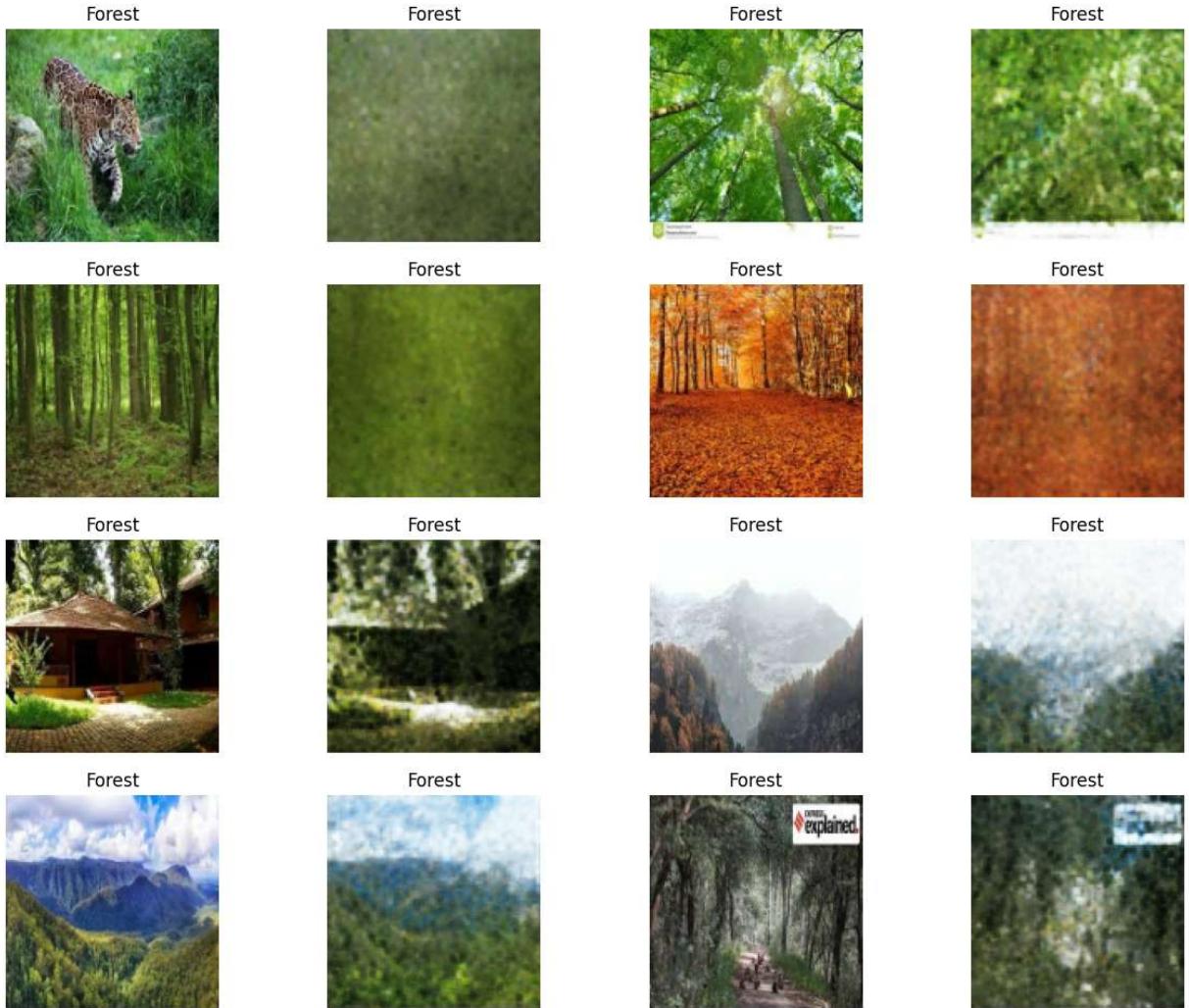
```
120/120 [=====] - 29s 236ms/step - loss: 43.7799 - reconstruction_error: 27.5745 - regularization_error: 16.2054 - val_loss: 69.1084 - val_reconstruction_error: 54.3206 - val_regularization_error: 14.7878
Epoch 412/1000
120/120 [=====] - 25s 208ms/step - loss: 43.8655 - reconstruction_error: 27.6549 - regularization_error: 16.2106 - val_loss: 66.9071 - val_reconstruction_error: 53.0488 - val_regularization_error: 13.8583
Epoch 413/1000
120/120 [=====] - 22s 186ms/step - loss: 43.4988 - reconstruction_error: 27.3524 - regularization_error: 16.1464 - val_loss: 68.0249 - val_reconstruction_error: 53.9490 - val_regularization_error: 14.0759
Epoch 414/1000
120/120 [=====] - 20s 166ms/step - loss: 43.5619 - reconstruction_error: 27.4950 - regularization_error: 16.0669 - val_loss: 68.5253 - val_reconstruction_error: 53.7886 - val_regularization_error: 14.7368
Epoch 415/1000
120/120 [=====] - 19s 152ms/step - loss: 43.5775 - reconstruction_error: 27.4677 - regularization_error: 16.1098 - val_loss: 66.8421 - val_reconstruction_error: 52.8775 - val_regularization_error: 13.9645
Epoch 416/1000
120/120 [=====] - 23s 189ms/step - loss: 43.5677 - reconstruction_error: 27.5394 - regularization_error: 16.0283 - val_loss: 67.6294 - val_reconstruction_error: 53.3809 - val_regularization_error: 14.2485
Epoch 417/1000
120/120 [=====] - 26s 218ms/step - loss: 43.4494 - reconstruction_error: 27.3480 - regularization_error: 16.1014 - val_loss: 67.1710 - val_reconstruction_error: 53.6127 - val_regularization_error: 13.5583
Epoch 418/1000
120/120 [=====] - 24s 200ms/step - loss: 43.7375 - reconstruction_error: 27.5209 - regularization_error: 16.2166 - val_loss: 68.1030 - val_reconstruction_error: 53.4790 - val_regularization_error: 14.6240
Epoch 419/1000
120/120 [=====] - 23s 193ms/step - loss: 43.5848 - reconstruction_error: 27.3965 - regularization_error: 16.1884 - val_loss: 69.6472 - val_reconstruction_error: 53.4753 - val_regularization_error: 16.1719
Epoch 420/1000
120/120 [=====] - 27s 227ms/step - loss: 43.6343 - reconstruction_error: 27.5146 - regularization_error: 16.1197 - val_loss: 68.7467 - val_reconstruction_error: 53.7809 - val_regularization_error: 14.9659
Epoch 421/1000
120/120 [=====] - ETA: 0s - loss: 43.4839 - reconstruction_error: 27.2918 - regularization_error: 16.1921
[2023-12-02 00:24:11.766749]: Reconstructing images for epoch 421 ...
```



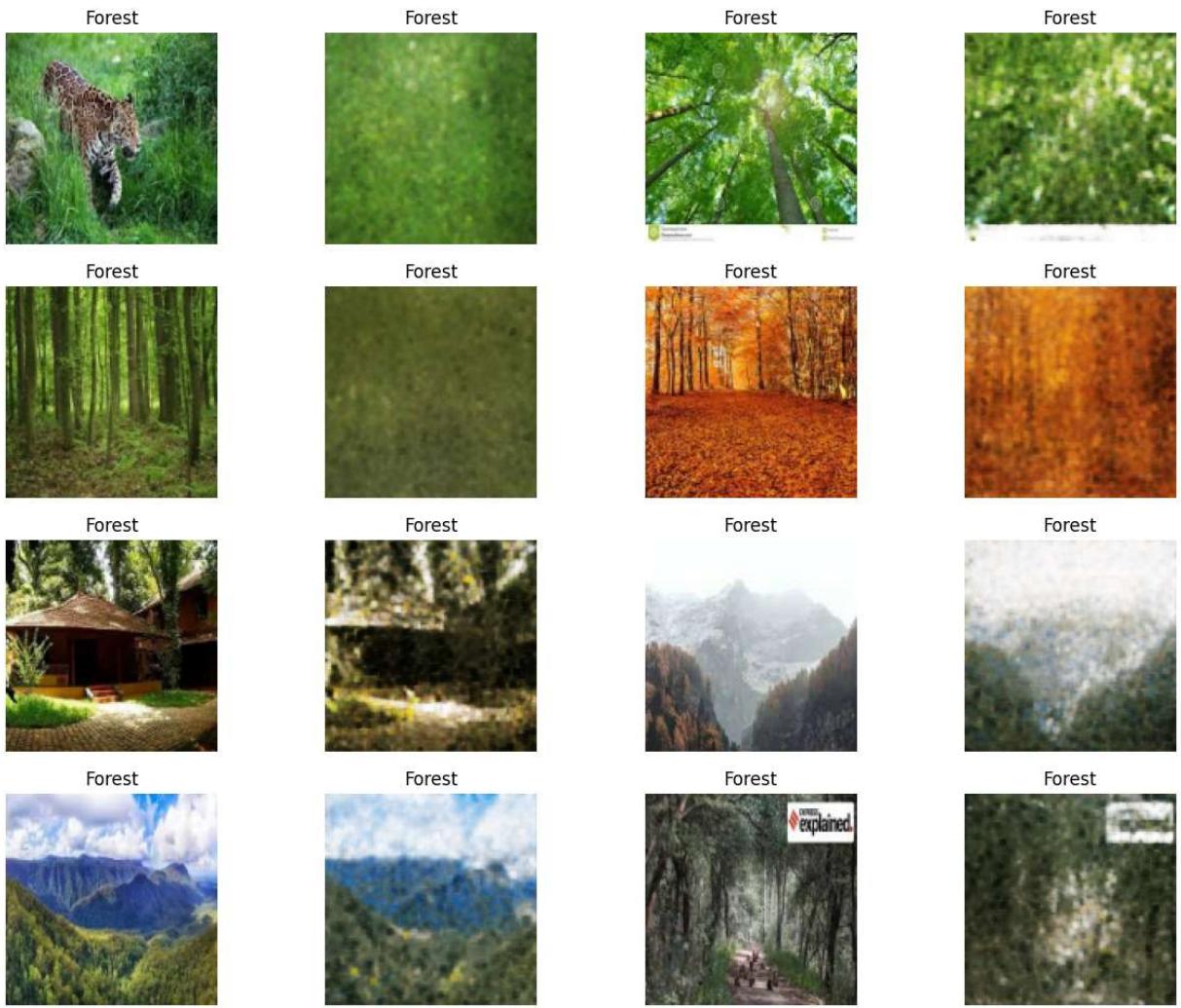
```
120/120 [=====] - 26s 216ms/step - loss: 43.4839 - reconstruction_error: 27.2918 - regularization_error: 16.1921 - val_loss: 68.5441 - val_reconstruction_error: 53.9192 - val_regularization_error: 14.6249
Epoch 422/1000
120/120 [=====] - 22s 182ms/step - loss: 43.5654 - reconstruction_error: 27.3626 - regularization_error: 16.2028 - val_loss: 67.2016 - val_reconstruction_error: 52.9599 - val_regularization_error: 14.2418
Epoch 423/1000
120/120 [=====] - 23s 193ms/step - loss: 43.5744 - reconstruction_error: 27.3383 - regularization_error: 16.2361 - val_loss: 67.4049 - val_reconstruction_error: 53.3183 - val_regularization_error: 14.0867
Epoch 424/1000
120/120 [=====] - 25s 206ms/step - loss: 43.7573 - reconstruction_error: 27.3903 - regularization_error: 16.3669 - val_loss: 68.7547 - val_reconstruction_error: 53.2367 - val_regularization_error: 15.5181
Epoch 425/1000
120/120 [=====] - 24s 202ms/step - loss: 43.4188 - reconstruction_error: 27.2286 - regularization_error: 16.1902 - val_loss: 68.3454 - val_reconstruction_error: 53.2300 - val_regularization_error: 15.1154
Epoch 426/1000
120/120 [=====] - 21s 178ms/step - loss: 43.6045 - reconstruction_error: 27.4081 - regularization_error: 16.1964 - val_loss: 70.2953 - val_reconstruction_error: 54.3416 - val_regularization_error: 15.9538
Epoch 427/1000
120/120 [=====] - 22s 185ms/step - loss: 43.6555 - reconstruction_error: 27.3443 - regularization_error: 16.3111 - val_loss: 67.0684 - val_reconstruction_error: 53.3827 - val_regularization_error: 13.6857
Epoch 428/1000
120/120 [=====] - 26s 215ms/step - loss: 43.6677 - reconstruction_error: 27.3606 - regularization_error: 16.3071 - val_loss: 71.6383 - val_reconstruction_error: 54.7652 - val_regularization_error: 16.8731
Epoch 429/1000
120/120 [=====] - 21s 177ms/step - loss: 43.4515 - reconstruction_error: 27.2159 - regularization_error: 16.2356 - val_loss: 67.6092 - val_reconstruction_error: 52.6806 - val_regularization_error: 14.9286
Epoch 430/1000
120/120 [=====] - 29s 241ms/step - loss: 43.2970 - reconstruction_error: 27.0873 - regularization_error: 16.2097 - val_loss: 67.5171 - val_reconstruction_error: 52.9469 - val_regularization_error: 14.5702
Epoch 431/1000
120/120 [=====] - ETA: 0s - loss: 43.4117 - reconstruction_error: 27.1975 - regularization_error: 16.2142
[2023-12-02 00:28:10.925161]: Reconstructing images for epoch 431 ...
```



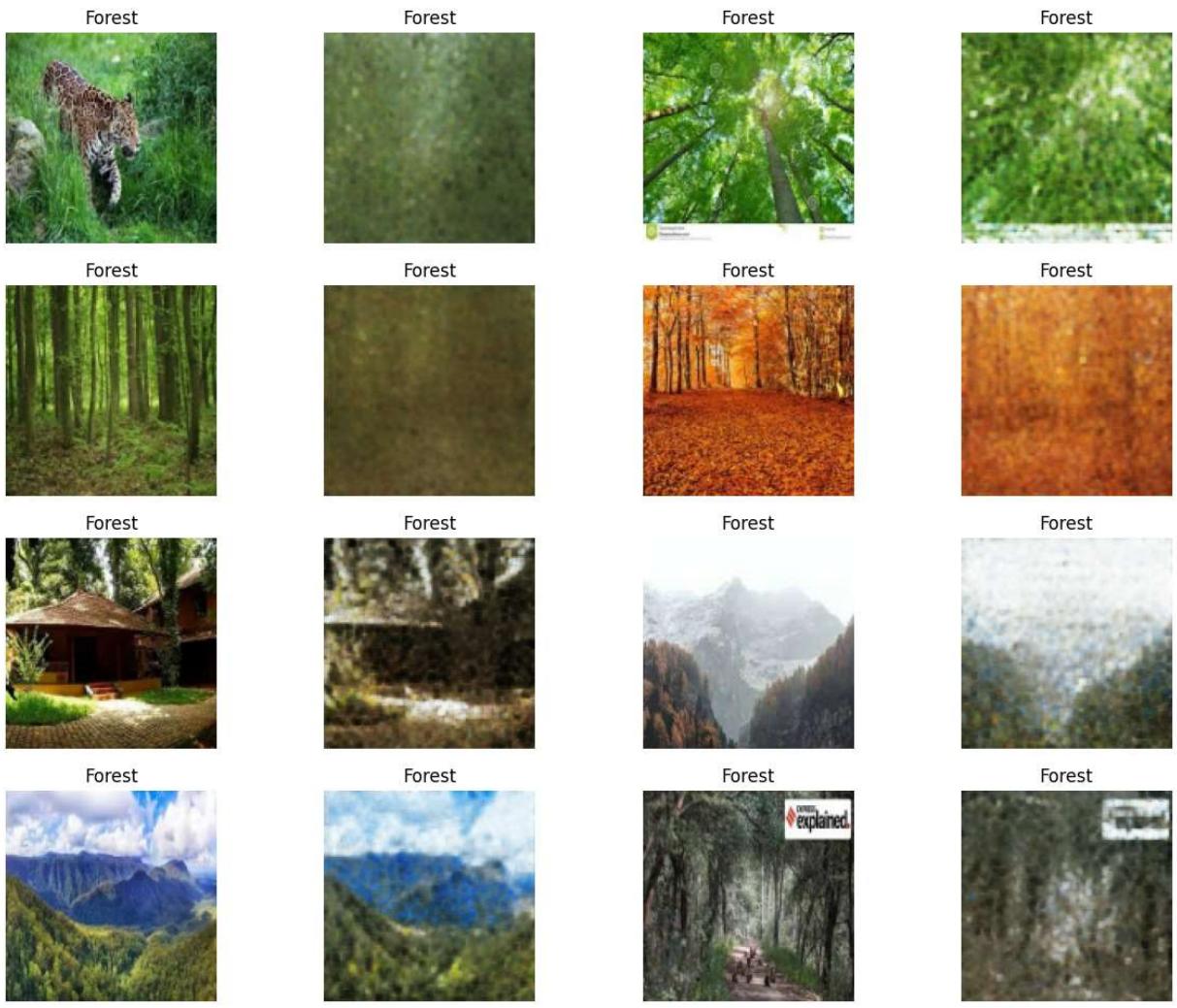
```
120/120 [=====] - 24s 198ms/step - loss: 43.4117 - reconstruction_error: 27.1975 - regularization_error: 16.2142 - val_loss: 67.0217 - val_reconstruction_error: 52.9682 - val_regularization_error: 14.0534
Epoch 432/1000
120/120 [=====] - 23s 193ms/step - loss: 43.4166 - reconstruction_error: 27.1676 - regularization_error: 16.2490 - val_loss: 67.5592 - val_reconstruction_error: 53.3809 - val_regularization_error: 14.1783
Epoch 433/1000
120/120 [=====] - 20s 167ms/step - loss: 43.4708 - reconstruction_error: 27.2426 - regularization_error: 16.2283 - val_loss: 68.1739 - val_reconstruction_error: 54.1136 - val_regularization_error: 14.0603
Epoch 434/1000
120/120 [=====] - 22s 179ms/step - loss: 43.4021 - reconstruction_error: 27.1441 - regularization_error: 16.2580 - val_loss: 67.7602 - val_reconstruction_error: 52.7153 - val_regularization_error: 15.0449
Epoch 435/1000
120/120 [=====] - 22s 181ms/step - loss: 43.1054 - reconstruction_error: 27.0088 - regularization_error: 16.0967 - val_loss: 68.1834 - val_reconstruction_error: 53.6195 - val_regularization_error: 14.5638
Epoch 436/1000
120/120 [=====] - 23s 194ms/step - loss: 43.2475 - reconstruction_error: 27.1133 - regularization_error: 16.1342 - val_loss: 67.5199 - val_reconstruction_error: 53.4134 - val_regularization_error: 14.1065
Epoch 437/1000
120/120 [=====] - 20s 167ms/step - loss: 43.1751 - reconstruction_error: 27.0992 - regularization_error: 16.0759 - val_loss: 68.5064 - val_reconstruction_error: 53.1393 - val_regularization_error: 15.3672
Epoch 438/1000
120/120 [=====] - 26s 217ms/step - loss: 43.0567 - reconstruction_error: 26.8199 - regularization_error: 16.2368 - val_loss: 68.1239 - val_reconstruction_error: 53.4075 - val_regularization_error: 14.7164
Epoch 439/1000
120/120 [=====] - 19s 155ms/step - loss: 43.4131 - reconstruction_error: 27.0110 - regularization_error: 16.4021 - val_loss: 68.0374 - val_reconstruction_error: 52.7195 - val_regularization_error: 15.3179
Epoch 440/1000
120/120 [=====] - 27s 225ms/step - loss: 43.2311 - reconstruction_error: 26.9508 - regularization_error: 16.2803 - val_loss: 67.5383 - val_reconstruction_error: 53.8400 - val_regularization_error: 13.6983
Epoch 441/1000
120/120 [=====] - ETA: 0s - loss: 43.1349 - reconstruction_error: 26.9491 - regularization_error: 16.1858
[2023-12-02 00:32:00.614004]: Reconstructing images for epoch 441 ...
```



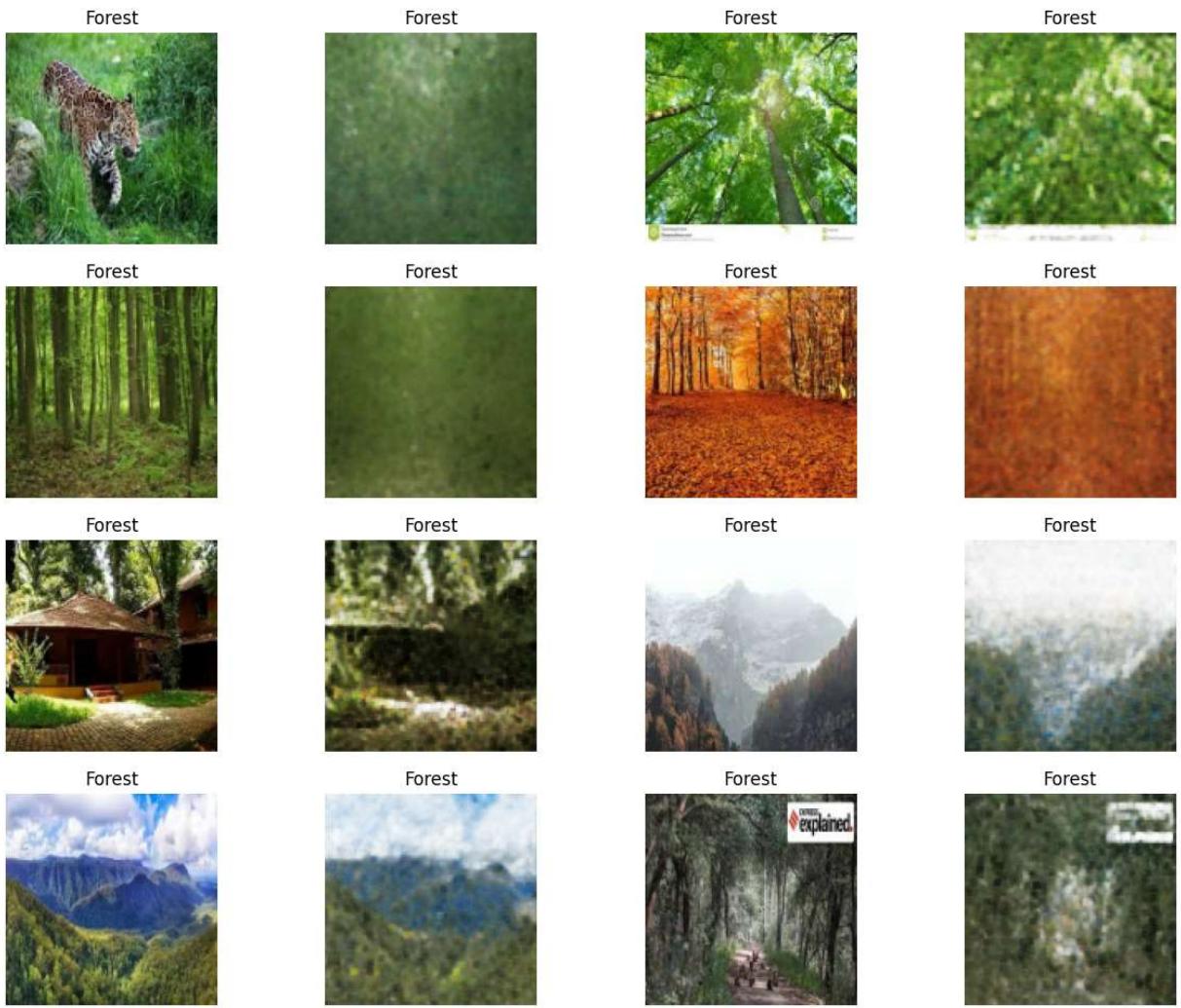
```
120/120 [=====] - 23s 189ms/step - loss: 43.1349 - reconstruction_error: 26.9491 - regularization_error: 16.1858 - val_loss: 68.0507 - val_reconstruction_error: 53.8769 - val_regularization_error: 14.1737
Epoch 442/1000
120/120 [=====] - 22s 181ms/step - loss: 43.2049 - reconstruction_error: 27.0203 - regularization_error: 16.1846 - val_loss: 68.2646 - val_reconstruction_error: 54.3921 - val_regularization_error: 13.8725
Epoch 443/1000
120/120 [=====] - 22s 186ms/step - loss: 43.6114 - reconstruction_error: 27.1460 - regularization_error: 16.4655 - val_loss: 67.4646 - val_reconstruction_error: 53.4661 - val_regularization_error: 13.9986
Epoch 444/1000
120/120 [=====] - 21s 179ms/step - loss: 42.9094 - reconstruction_error: 26.7884 - regularization_error: 16.1211 - val_loss: 69.6424 - val_reconstruction_error: 54.0869 - val_regularization_error: 15.5554
Epoch 445/1000
120/120 [=====] - 26s 213ms/step - loss: 43.0362 - reconstruction_error: 26.8132 - regularization_error: 16.2230 - val_loss: 68.4618 - val_reconstruction_error: 54.0779 - val_regularization_error: 14.3838
Epoch 446/1000
120/120 [=====] - 21s 175ms/step - loss: 43.0234 - reconstruction_error: 26.8788 - regularization_error: 16.1446 - val_loss: 68.1897 - val_reconstruction_error: 53.1046 - val_regularization_error: 15.0851
Epoch 447/1000
120/120 [=====] - 23s 187ms/step - loss: 43.2153 - reconstruction_error: 26.9266 - regularization_error: 16.2886 - val_loss: 68.0444 - val_reconstruction_error: 52.9650 - val_regularization_error: 15.0793
Epoch 448/1000
120/120 [=====] - 23s 188ms/step - loss: 43.2732 - reconstruction_error: 26.9287 - regularization_error: 16.3446 - val_loss: 67.5079 - val_reconstruction_error: 53.7171 - val_regularization_error: 13.7908
Epoch 449/1000
120/120 [=====] - 21s 178ms/step - loss: 42.7925 - reconstruction_error: 26.6375 - regularization_error: 16.1550 - val_loss: 68.6864 - val_reconstruction_error: 53.4796 - val_regularization_error: 15.2068
Epoch 450/1000
120/120 [=====] - 20s 165ms/step - loss: 43.1102 - reconstruction_error: 26.8106 - regularization_error: 16.2996 - val_loss: 67.7772 - val_reconstruction_error: 54.0131 - val_regularization_error: 13.7641
Epoch 451/1000
120/120 [=====] - ETA: 0s - loss: 43.0747 - reconstruction_error: 26.7459 - regularization_error: 16.3288
[2023-12-02 00:36:12.003131]: Reconstructing images for epoch 451 ...
```



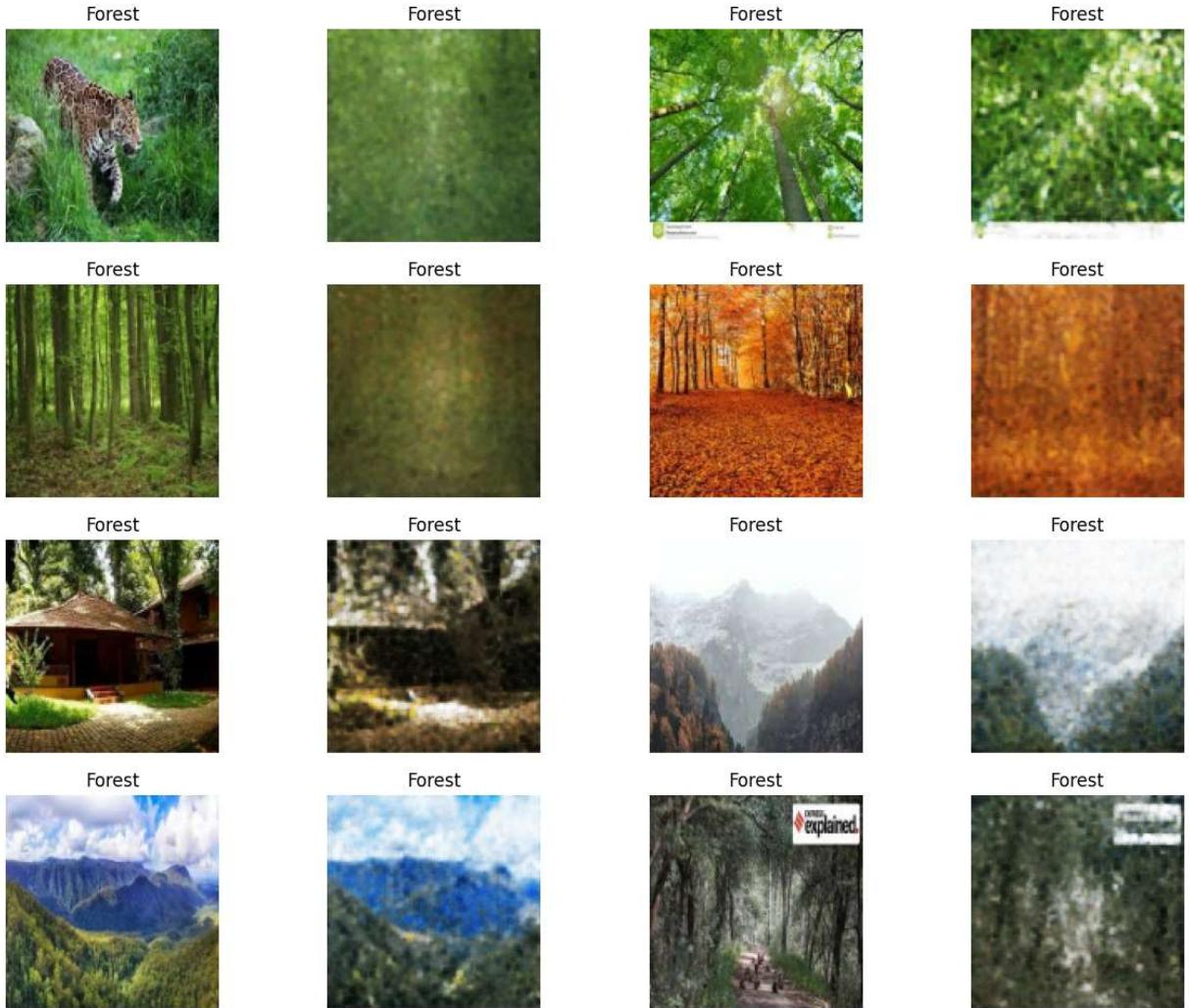
```
120/120 [=====] - 31s 259ms/step - loss: 43.0747 - reconstruction_error: 26.7459 - regularization_error: 16.3288 - val_loss: 68.8732 - val_reconstruction_error: 53.8615 - val_regularization_error: 15.0117
Epoch 452/1000
120/120 [=====] - 25s 211ms/step - loss: 43.1349 - reconstruction_error: 26.7914 - regularization_error: 16.3435 - val_loss: 69.0705 - val_reconstruction_error: 54.5735 - val_regularization_error: 14.4970
Epoch 453/1000
120/120 [=====] - 21s 173ms/step - loss: 43.2171 - reconstruction_error: 26.7845 - regularization_error: 16.4326 - val_loss: 68.7609 - val_reconstruction_error: 55.2272 - val_regularization_error: 13.5337
Epoch 454/1000
120/120 [=====] - 25s 209ms/step - loss: 43.1897 - reconstruction_error: 26.7744 - regularization_error: 16.4153 - val_loss: 67.5269 - val_reconstruction_error: 53.0813 - val_regularization_error: 14.4455
Epoch 455/1000
120/120 [=====] - 26s 217ms/step - loss: 42.8920 - reconstruction_error: 26.7076 - regularization_error: 16.1844 - val_loss: 68.7197 - val_reconstruction_error: 55.0042 - val_regularization_error: 13.7155
Epoch 456/1000
120/120 [=====] - 23s 190ms/step - loss: 42.9257 - reconstruction_error: 26.6639 - regularization_error: 16.2619 - val_loss: 70.7946 - val_reconstruction_error: 54.8774 - val_regularization_error: 15.9172
Epoch 457/1000
120/120 [=====] - 22s 181ms/step - loss: 43.1223 - reconstruction_error: 26.7556 - regularization_error: 16.3666 - val_loss: 69.0744 - val_reconstruction_error: 53.3474 - val_regularization_error: 15.7271
Epoch 458/1000
120/120 [=====] - 20s 167ms/step - loss: 43.0659 - reconstruction_error: 26.7398 - regularization_error: 16.3261 - val_loss: 68.0333 - val_reconstruction_error: 52.6967 - val_regularization_error: 15.3366
Epoch 459/1000
120/120 [=====] - 25s 209ms/step - loss: 43.0518 - reconstruction_error: 26.7525 - regularization_error: 16.2994 - val_loss: 69.2579 - val_reconstruction_error: 54.2140 - val_regularization_error: 15.0439
Epoch 460/1000
120/120 [=====] - 21s 170ms/step - loss: 43.1592 - reconstruction_error: 26.7958 - regularization_error: 16.3634 - val_loss: 68.7466 - val_reconstruction_error: 53.9031 - val_regularization_error: 14.8435
Epoch 461/1000
120/120 [=====] - ETA: 0s - loss: 43.0266 - reconstruction_error: 26.7117 - regularization_error: 16.3149
[2023-12-02 00:40:09.757386]: Reconstructing images for epoch 461 ...
```



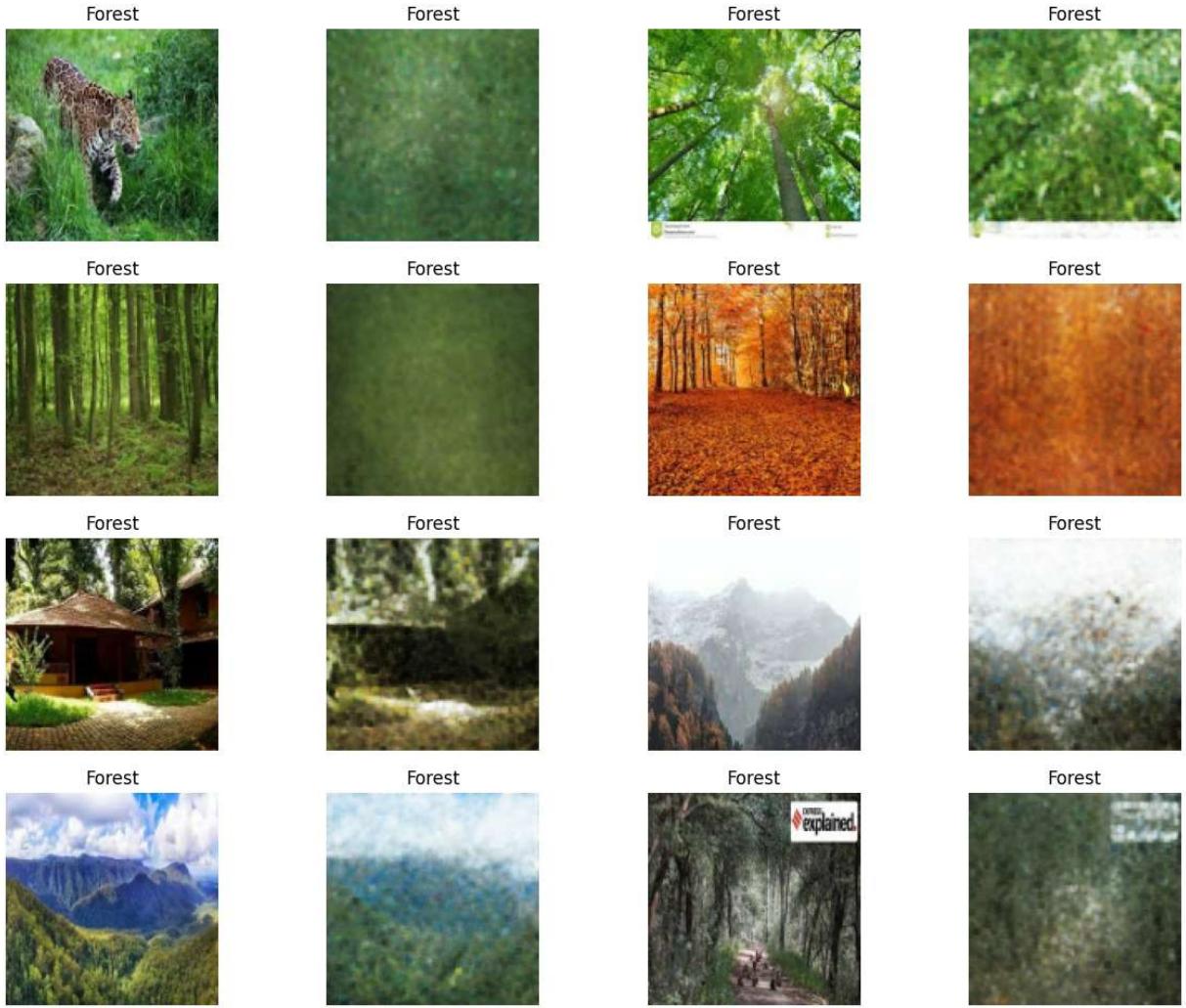
```
120/120 [=====] - 27s 224ms/step - loss: 43.0266 - reconstruction_error: 26.7117 - regularization_error: 16.3149 - val_loss: 69.4788 - val_reconstruction_error: 54.2378 - val_regularization_error: 15.2410
Epoch 462/1000
120/120 [=====] - 23s 193ms/step - loss: 42.8335 - reconstruction_error: 26.5536 - regularization_error: 16.2798 - val_loss: 69.1840 - val_reconstruction_error: 54.3193 - val_regularization_error: 14.8647
Epoch 463/1000
120/120 [=====] - 20s 168ms/step - loss: 42.8554 - reconstruction_error: 26.5778 - regularization_error: 16.2776 - val_loss: 68.3131 - val_reconstruction_error: 53.3485 - val_regularization_error: 14.9646
Epoch 464/1000
120/120 [=====] - 24s 196ms/step - loss: 42.8037 - reconstruction_error: 26.5206 - regularization_error: 16.2831 - val_loss: 69.7072 - val_reconstruction_error: 54.1750 - val_regularization_error: 15.5322
Epoch 465/1000
120/120 [=====] - 27s 225ms/step - loss: 42.7772 - reconstruction_error: 26.5125 - regularization_error: 16.2647 - val_loss: 68.2018 - val_reconstruction_error: 53.2482 - val_regularization_error: 14.9536
Epoch 466/1000
120/120 [=====] - 25s 209ms/step - loss: 42.7453 - reconstruction_error: 26.4005 - regularization_error: 16.3448 - val_loss: 68.6636 - val_reconstruction_error: 54.0029 - val_regularization_error: 14.6607
Epoch 467/1000
120/120 [=====] - 21s 175ms/step - loss: 42.8979 - reconstruction_error: 26.4956 - regularization_error: 16.4023 - val_loss: 68.8833 - val_reconstruction_error: 54.2135 - val_regularization_error: 14.6698
Epoch 468/1000
120/120 [=====] - 23s 193ms/step - loss: 42.9627 - reconstruction_error: 26.5125 - regularization_error: 16.4501 - val_loss: 68.2879 - val_reconstruction_error: 53.9559 - val_regularization_error: 14.3320
Epoch 469/1000
120/120 [=====] - 21s 171ms/step - loss: 42.8714 - reconstruction_error: 26.3903 - regularization_error: 16.4811 - val_loss: 67.5931 - val_reconstruction_error: 53.1082 - val_regularization_error: 14.4849
Epoch 470/1000
120/120 [=====] - 23s 195ms/step - loss: 42.5168 - reconstruction_error: 26.3680 - regularization_error: 16.1488 - val_loss: 68.8713 - val_reconstruction_error: 54.7152 - val_regularization_error: 14.1561
Epoch 471/1000
120/120 [=====] - ETA: 0s - loss: 42.7957 - reconstruction_error: 26.4823 - regularization_error: 16.3134
[2023-12-02 00:44:02.511312]: Reconstructing images for epoch 471 ...
```



```
120/120 [=====] - 24s 201ms/step - loss: 42.7957 - reconstruction_error: 26.4823 - regularization_error: 16.3134 - val_loss: 67.3744 - val_reconstruction_error: 53.5785 - val_regularization_error: 13.7959
Epoch 472/1000
120/120 [=====] - 19s 159ms/step - loss: 42.7420 - reconstruction_error: 26.3414 - regularization_error: 16.4006 - val_loss: 67.7026 - val_reconstruction_error: 54.1014 - val_regularization_error: 13.6012
Epoch 473/1000
120/120 [=====] - 23s 191ms/step - loss: 42.6952 - reconstruction_error: 26.4381 - regularization_error: 16.2571 - val_loss: 67.3373 - val_reconstruction_error: 53.9609 - val_regularization_error: 13.3763
Epoch 474/1000
120/120 [=====] - 23s 194ms/step - loss: 42.7593 - reconstruction_error: 26.5064 - regularization_error: 16.2529 - val_loss: 69.4298 - val_reconstruction_error: 54.1157 - val_regularization_error: 15.3141
Epoch 475/1000
120/120 [=====] - 24s 197ms/step - loss: 42.5304 - reconstruction_error: 26.2675 - regularization_error: 16.2628 - val_loss: 67.5345 - val_reconstruction_error: 52.9282 - val_regularization_error: 14.6063
Epoch 476/1000
120/120 [=====] - 25s 210ms/step - loss: 42.6059 - reconstruction_error: 26.3225 - regularization_error: 16.2834 - val_loss: 68.9438 - val_reconstruction_error: 54.2070 - val_regularization_error: 14.7368
Epoch 477/1000
120/120 [=====] - 20s 169ms/step - loss: 42.7624 - reconstruction_error: 26.3717 - regularization_error: 16.3907 - val_loss: 68.6792 - val_reconstruction_error: 53.3971 - val_regularization_error: 15.2821
Epoch 478/1000
120/120 [=====] - 24s 201ms/step - loss: 42.7827 - reconstruction_error: 26.3704 - regularization_error: 16.4124 - val_loss: 69.0491 - val_reconstruction_error: 53.7861 - val_regularization_error: 15.2630
Epoch 479/1000
120/120 [=====] - 23s 194ms/step - loss: 42.9950 - reconstruction_error: 26.5192 - regularization_error: 16.4759 - val_loss: 69.4585 - val_reconstruction_error: 54.5263 - val_regularization_error: 14.9322
Epoch 480/1000
120/120 [=====] - 22s 181ms/step - loss: 42.6815 - reconstruction_error: 26.3202 - regularization_error: 16.3613 - val_loss: 68.9986 - val_reconstruction_error: 53.6355 - val_regularization_error: 15.3631
Epoch 481/1000
120/120 [=====] - ETA: 0s - loss: 42.6877 - reconstruction_error: 26.2483 - regularization_error: 16.4394
[2023-12-02 00:47:53.332245]: Reconstructing images for epoch 481 ...
```



```
120/120 [=====] - 26s 213ms/step - loss: 42.6877 - reconstruction_error: 26.2483 - regularization_error: 16.4394 - val_loss: 69.5449 - val_reconstruction_error: 54.3753 - val_regularization_error: 15.1696
Epoch 482/1000
120/120 [=====] - 19s 158ms/step - loss: 42.6273 - reconstruction_error: 26.2946 - regularization_error: 16.3326 - val_loss: 68.8702 - val_reconstruction_error: 53.7532 - val_regularization_error: 15.1170
Epoch 483/1000
120/120 [=====] - 22s 185ms/step - loss: 42.4537 - reconstruction_error: 26.1323 - regularization_error: 16.3214 - val_loss: 67.6640 - val_reconstruction_error: 53.6047 - val_regularization_error: 14.0593
Epoch 484/1000
120/120 [=====] - 24s 199ms/step - loss: 42.3262 - reconstruction_error: 26.0291 - regularization_error: 16.2972 - val_loss: 69.1814 - val_reconstruction_error: 53.9566 - val_regularization_error: 15.2248
Epoch 485/1000
120/120 [=====] - 23s 187ms/step - loss: 42.4902 - reconstruction_error: 26.1242 - regularization_error: 16.3659 - val_loss: 67.9001 - val_reconstruction_error: 53.2234 - val_regularization_error: 14.6767
Epoch 486/1000
120/120 [=====] - 22s 183ms/step - loss: 42.6009 - reconstruction_error: 26.1844 - regularization_error: 16.4165 - val_loss: 69.6193 - val_reconstruction_error: 54.6211 - val_regularization_error: 14.9982
Epoch 487/1000
120/120 [=====] - 22s 183ms/step - loss: 42.4501 - reconstruction_error: 26.1217 - regularization_error: 16.3284 - val_loss: 68.3817 - val_reconstruction_error: 53.0090 - val_regularization_error: 15.3727
Epoch 488/1000
120/120 [=====] - 21s 171ms/step - loss: 42.5134 - reconstruction_error: 26.1201 - regularization_error: 16.3933 - val_loss: 69.7872 - val_reconstruction_error: 53.7132 - val_regularization_error: 16.0740
Epoch 489/1000
120/120 [=====] - 26s 215ms/step - loss: 42.4393 - reconstruction_error: 26.0556 - regularization_error: 16.3836 - val_loss: 68.6223 - val_reconstruction_error: 53.4189 - val_regularization_error: 15.2033
Epoch 490/1000
120/120 [=====] - 23s 192ms/step - loss: 42.4698 - reconstruction_error: 26.0282 - regularization_error: 16.4416 - val_loss: 67.6401 - val_reconstruction_error: 53.2904 - val_regularization_error: 14.3497
Epoch 491/1000
120/120 [=====] - ETA: 0s - loss: 42.5533 - reconstruction_error: 26.1423 - regularization_error: 16.4110
[2023-12-02 00:51:45.619069]: Reconstructing images for epoch 491 ...
```



```
120/120 [=====] - 27s 224ms/step - loss: 42.5533 - reconstruction_error: 26.1423 - regularization_error: 16.4110 - val_loss: 67.7420 - val_reconstruction_error: 52.9492 - val_regularization_error: 14.7928
Epoch 492/1000
120/120 [=====] - 20s 169ms/step - loss: 42.3893 - reconstruction_error: 26.0105 - regularization_error: 16.3788 - val_loss: 67.7942 - val_reconstruction_error: 52.7755 - val_regularization_error: 15.0187
Epoch 493/1000
120/120 [=====] - 21s 178ms/step - loss: 42.2798 - reconstruction_error: 26.0221 - regularization_error: 16.2577 - val_loss: 68.4168 - val_reconstruction_error: 53.7960 - val_regularization_error: 14.6209
Epoch 494/1000
120/120 [=====] - 23s 192ms/step - loss: 42.1209 - reconstruction_error: 25.9144 - regularization_error: 16.2064 - val_loss: 67.9989 - val_reconstruction_error: 53.2598 - val_regularization_error: 14.7391
Epoch 495/1000
120/120 [=====] - 21s 179ms/step - loss: 42.2860 - reconstruction_error: 26.0407 - regularization_error: 16.2453 - val_loss: 67.4331 - val_reconstruction_error: 53.1967 - val_regularization_error: 14.2364
Epoch 496/1000
120/120 [=====] - 22s 183ms/step - loss: 42.2827 - reconstruction_error: 25.9582 - regularization_error: 16.3245 - val_loss: 67.9458 - val_reconstruction_error: 53.1479 - val_regularization_error: 14.7979
Epoch 497/1000
120/120 [=====] - 24s 202ms/step - loss: 42.5497 - reconstruction_error: 25.9821 - regularization_error: 16.5676 - val_loss: 69.6603 - val_reconstruction_error: 54.0968 - val_regularization_error: 15.5635
Epoch 498/1000
120/120 [=====] - 19s 156ms/step - loss: 42.5272 - reconstruction_error: 26.0449 - regularization_error: 16.4823 - val_loss: 69.3676 - val_reconstruction_error: 54.3621 - val_regularization_error: 15.0055
Epoch 499/1000
120/120 [=====] - 22s 181ms/step - loss: 42.5056 - reconstruction_error: 25.9928 - regularization_error: 16.5129 - val_loss: 68.9451 - val_reconstruction_error: 53.6320 - val_regularization_error: 15.3131
Epoch 500/1000
120/120 [=====] - 25s 211ms/step - loss: 42.4073 - reconstruction_error: 25.9968 - regularization_error: 16.4105 - val_loss: 68.7558 - val_reconstruction_error: 53.9253 - val_regularization_error: 14.8305
Epoch 501/1000
120/120 [=====] - ETA: 0s - loss: 42.3020 - reconstruction_error: 25.8153 - regularization_error: 16.4867
[2023-12-02 00:55:32.237683]: Reconstructing images for epoch 501 ...
```

