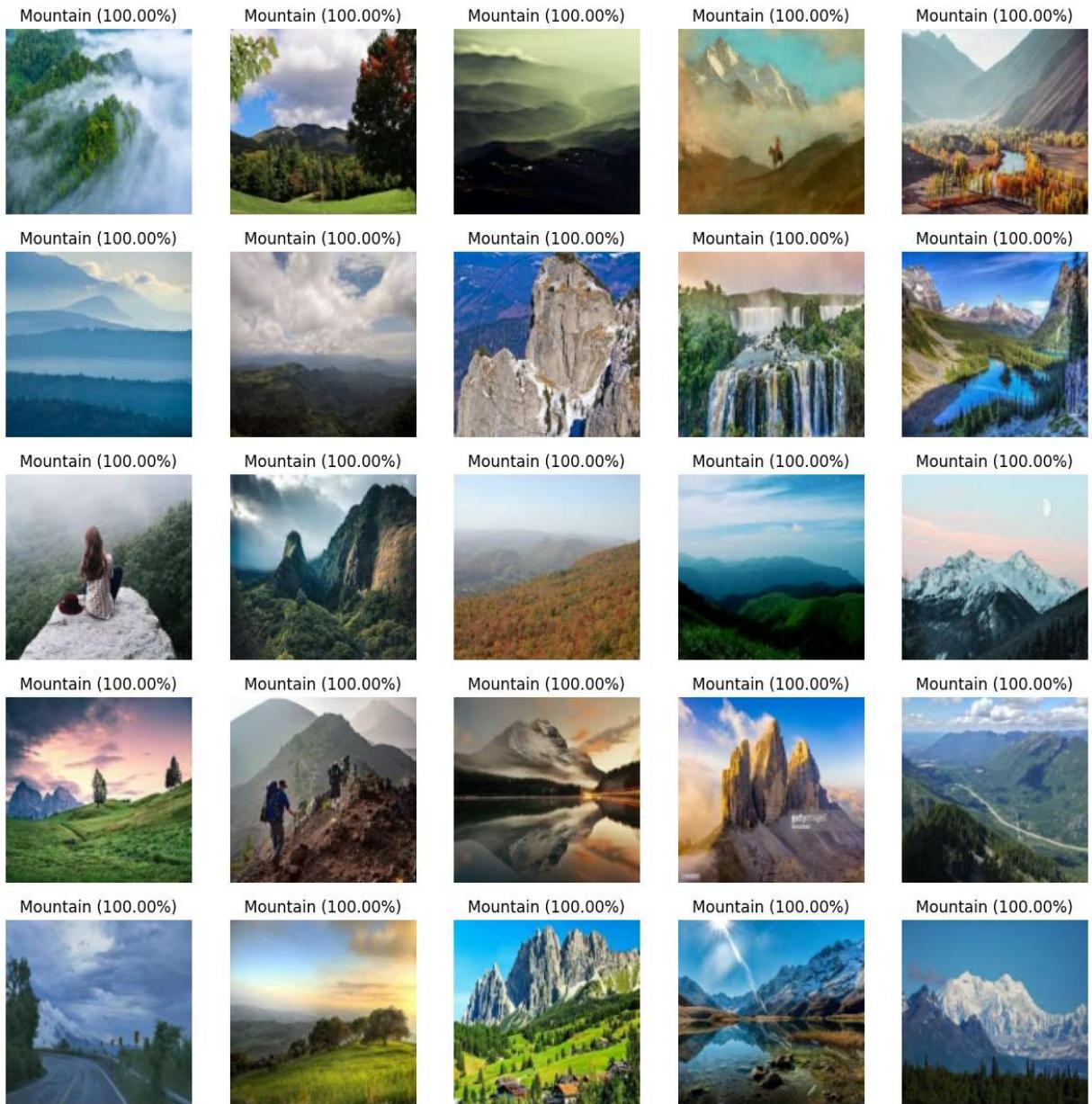


Visualize Dataset

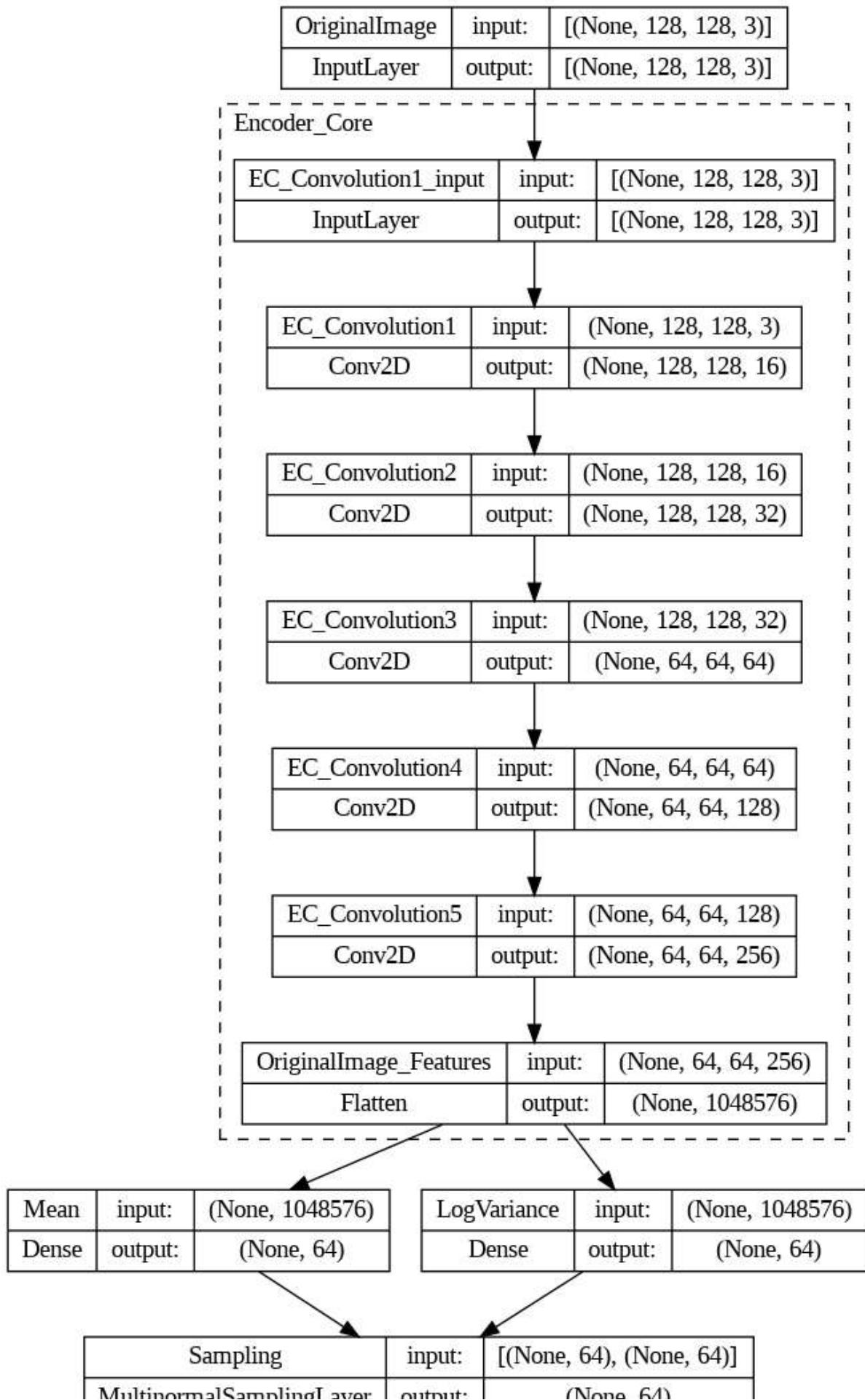


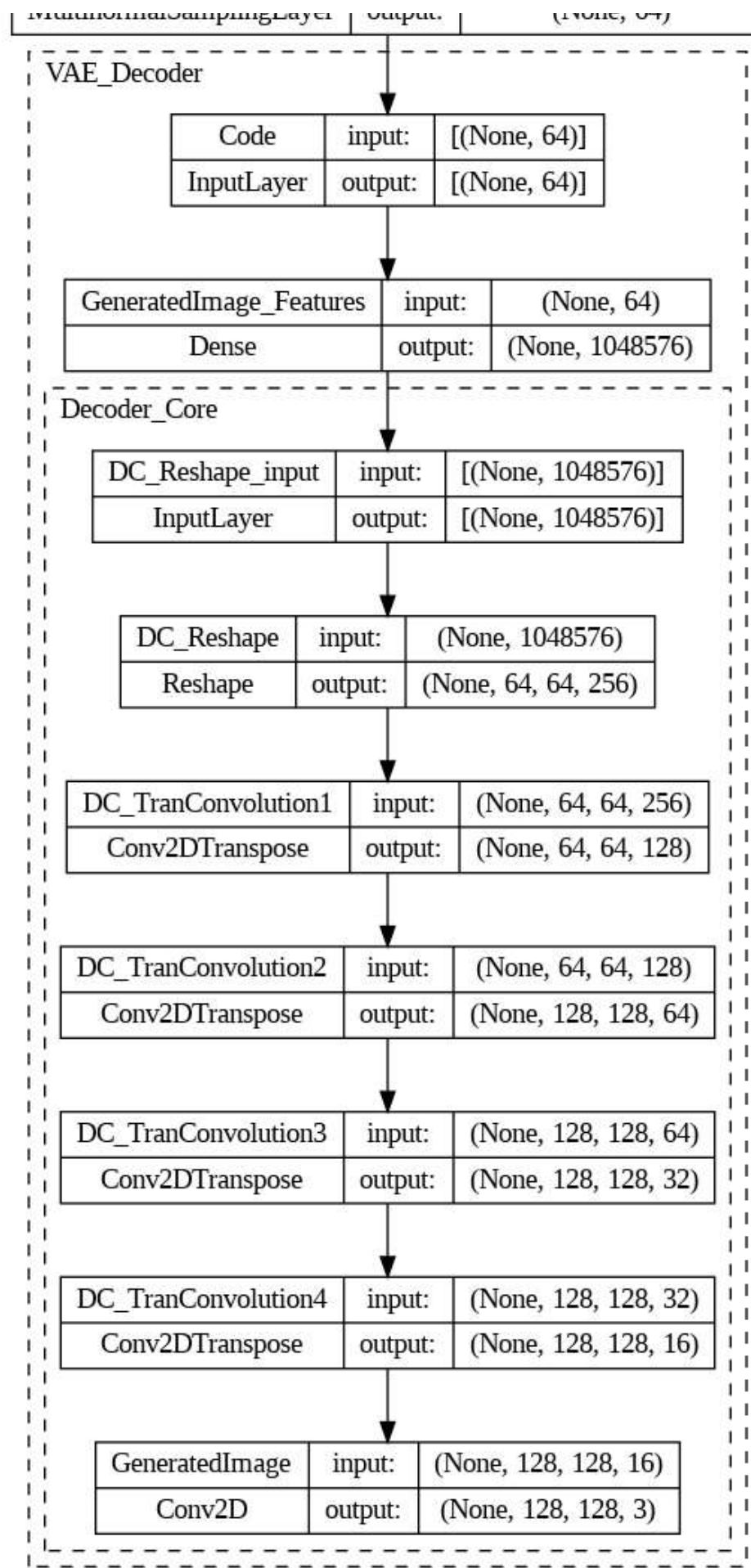
Variational AutoEncoder

Model: "VAE"

Layer (type)	Output Shape	Param #	Connected to
OriginalImage (InputLayer)	[(None, 128, 128, 3)]	0	[]
Encoder_Core (Sequential)	(None, 1048576)	392608	['OriginalImage[0][0]']
Mean (Dense)	(None, 64)	6710892	['Encoder_Core[0][0]']
LogVariance (Dense)	(None, 64)	6710892	['Encoder_Core[0][0]']
Sampling (MultinormalSamplingLayer)	(None, 64)	0	['Mean[0][0]', 'LogVariance[0][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[85]:





Training

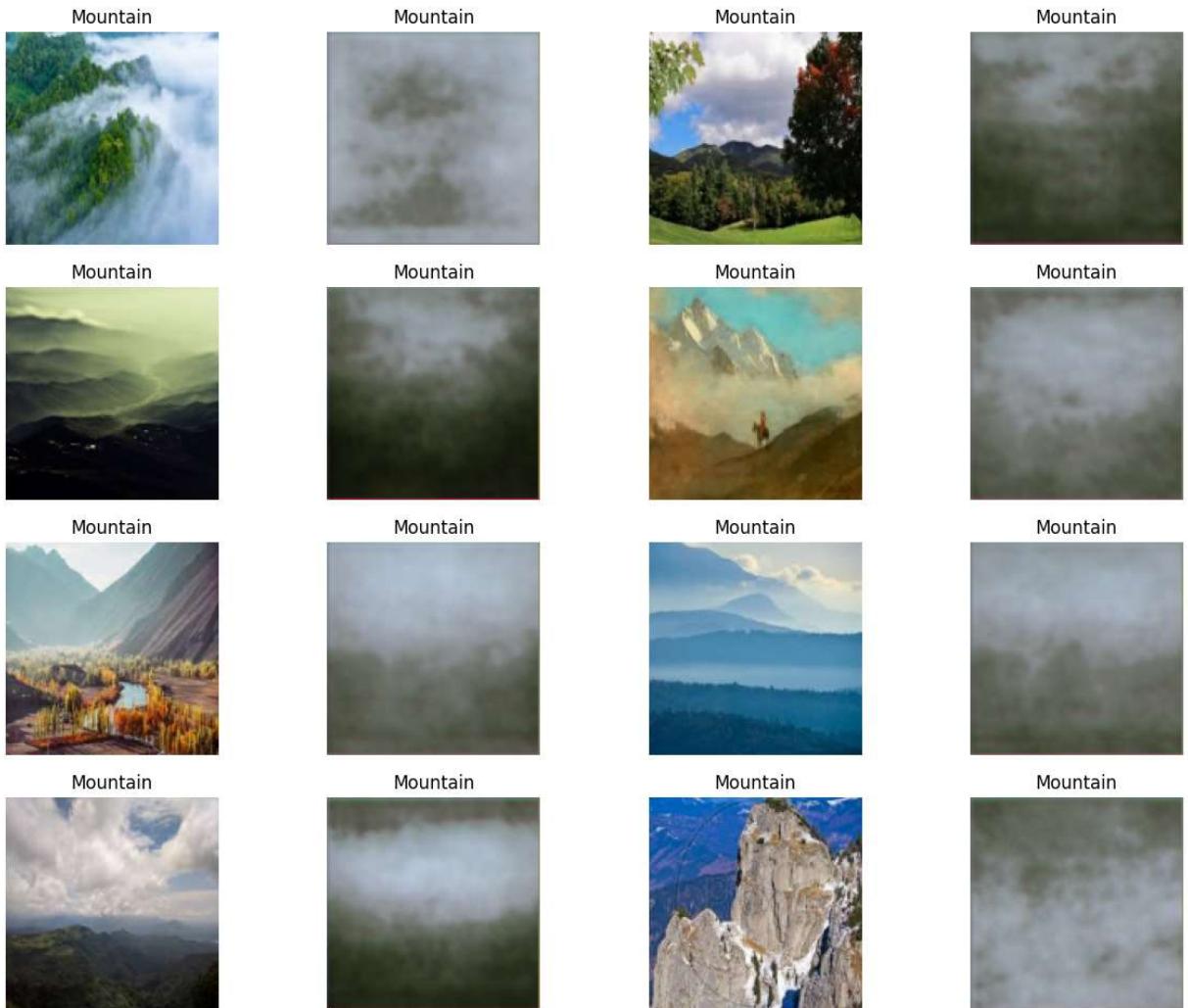
Epoch 1/1000

6/Unknown - 10s 179ms/step - loss: 689806.8750 - reconstruction_error: 168.127
3 - regularization_error: 689638.8125

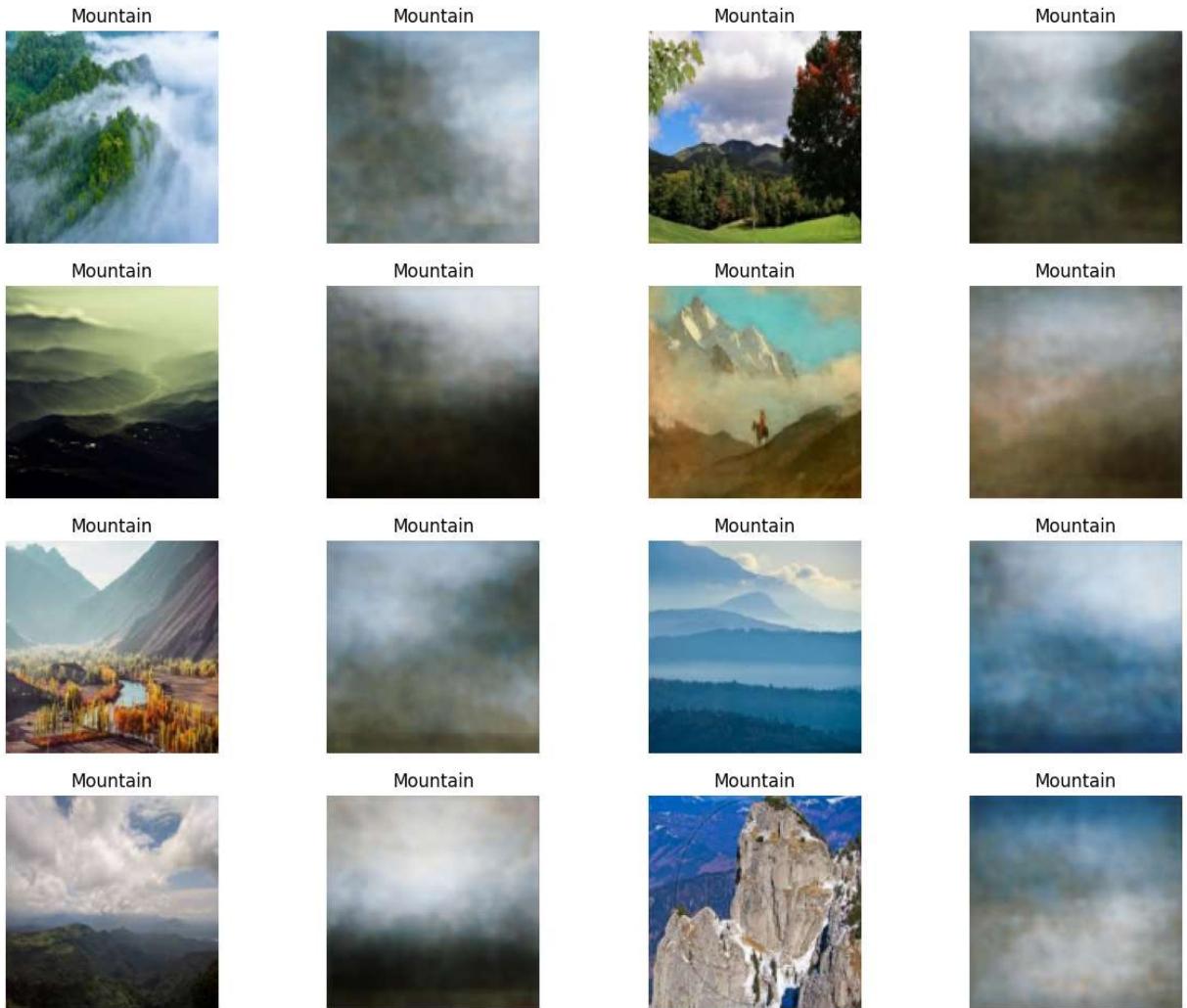
WARNING:tensorflow:Callback method `on_train_batch_end` is slow compared to the batch time (batch time: 0.0201s vs `on_train_batch_end` time: 0.1320s). Check your callbacks.

120/Unknown - 24s 121ms/step - loss: 34603.5000 - reconstruction_error: 117.0747
- regularization_error: 34486.4297

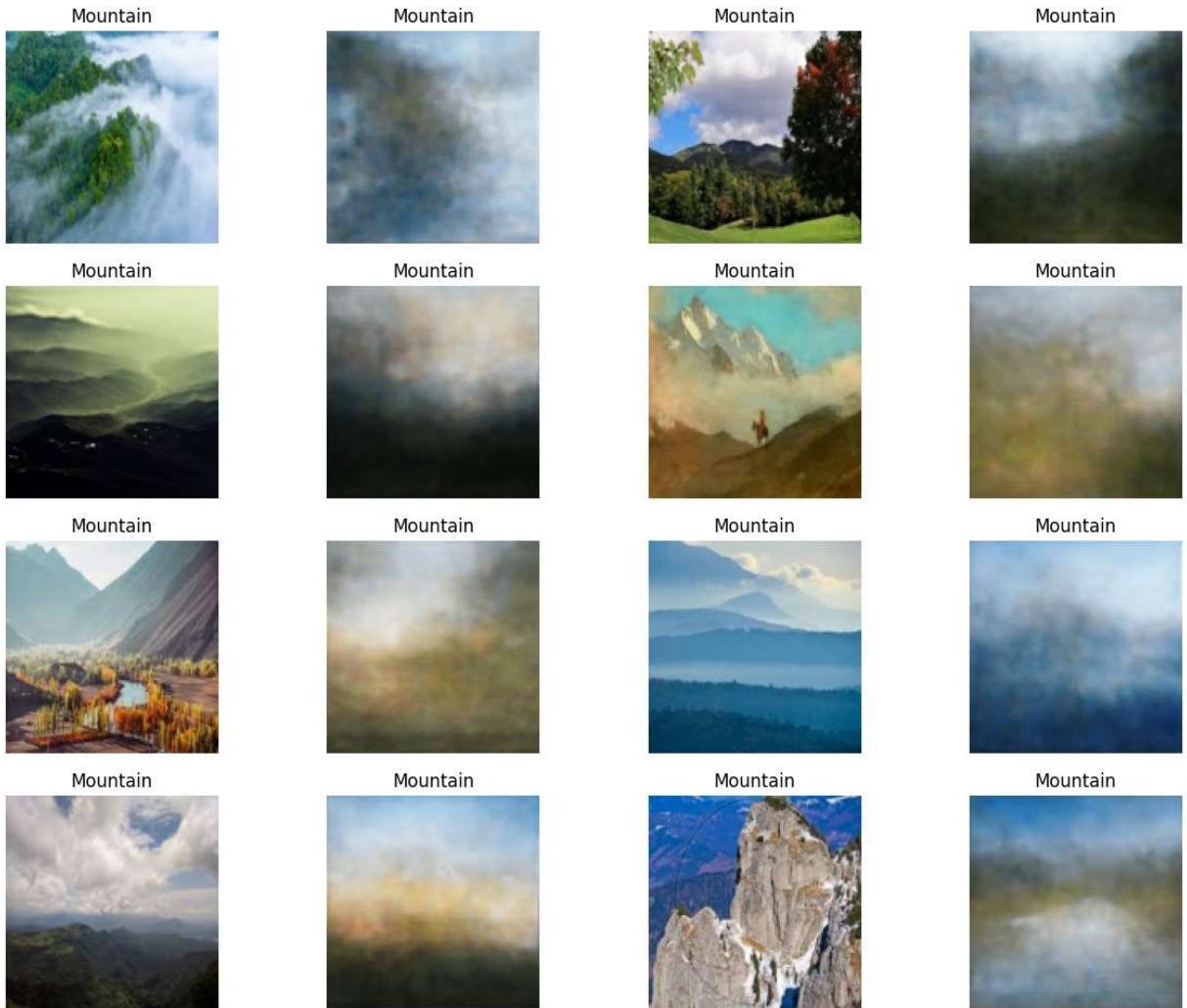
[2023-12-02 16:40:35.088814]: Reconstructing images for epoch 1 ...



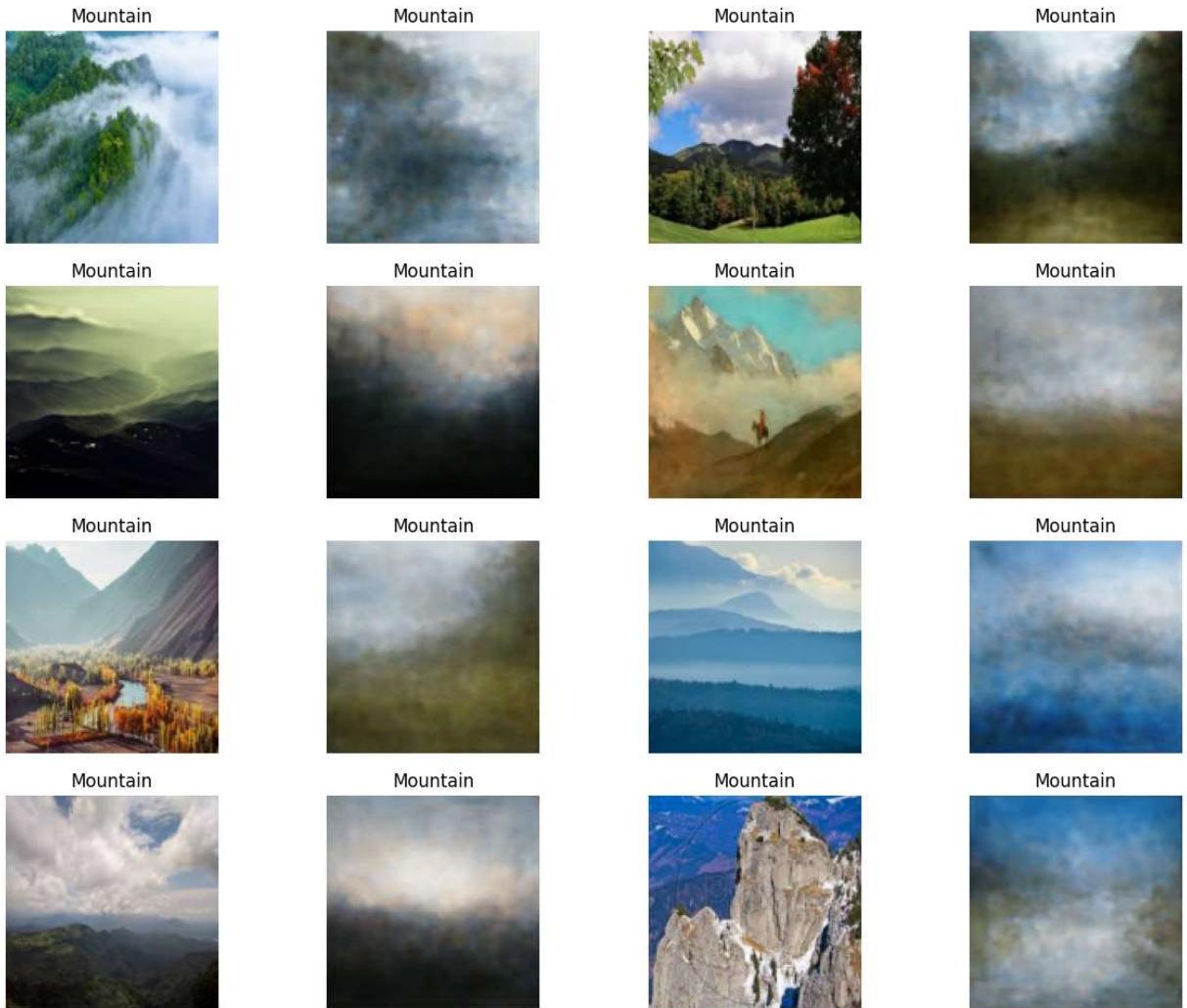
```
120/120 [=====] - 34s 208ms/step - loss: 34603.5000 - reconstruction_error: 117.0747 - regularization_error: 34486.4297 - val_loss: 98.4380 - val_reconstruction_error: 92.3333 - val_regularization_error: 6.1048
Epoch 2/1000
120/120 [=====] - 15s 127ms/step - loss: 86.7493 - reconstruction_error: 76.4295 - regularization_error: 10.3199 - val_loss: 84.0801 - val_reconstruction_error: 73.8767 - val_regularization_error: 10.2034
Epoch 3/1000
120/120 [=====] - 19s 156ms/step - loss: 79.6588 - reconstruction_error: 68.3399 - regularization_error: 11.3189 - val_loss: 78.9822 - val_reconstruction_error: 68.1259 - val_regularization_error: 10.8563
Epoch 4/1000
120/120 [=====] - 14s 117ms/step - loss: 75.4788 - reconstruction_error: 63.8418 - regularization_error: 11.6370 - val_loss: 75.4486 - val_reconstruction_error: 64.0970 - val_regularization_error: 11.3516
Epoch 5/1000
120/120 [=====] - 18s 152ms/step - loss: 72.3848 - reconstruction_error: 60.6473 - regularization_error: 11.7375 - val_loss: 73.7603 - val_reconstruction_error: 60.5758 - val_regularization_error: 13.1845
Epoch 6/1000
120/120 [=====] - 16s 136ms/step - loss: 70.0905 - reconstruction_error: 57.8642 - regularization_error: 12.2263 - val_loss: 70.9879 - val_reconstruction_error: 58.6156 - val_regularization_error: 12.3723
Epoch 7/1000
120/120 [=====] - 15s 121ms/step - loss: 68.7281 - reconstruction_error: 56.2845 - regularization_error: 12.4436 - val_loss: 69.5272 - val_reconstruction_error: 57.3926 - val_regularization_error: 12.1346
Epoch 8/1000
120/120 [=====] - 17s 139ms/step - loss: 67.1916 - reconstruction_error: 54.3285 - regularization_error: 12.8631 - val_loss: 68.0223 - val_reconstruction_error: 54.6862 - val_regularization_error: 13.3361
Epoch 9/1000
120/120 [=====] - 16s 133ms/step - loss: 65.2467 - reconstruction_error: 51.9965 - regularization_error: 13.2502 - val_loss: 67.9308 - val_reconstruction_error: 55.1531 - val_regularization_error: 12.7778
Epoch 10/1000
120/120 [=====] - 18s 149ms/step - loss: 64.3706 - reconstruction_error: 51.0968 - regularization_error: 13.2737 - val_loss: 67.4118 - val_reconstruction_error: 55.1287 - val_regularization_error: 12.2830
Epoch 11/1000
120/120 [=====] - ETA: 0s - loss: 64.0601 - reconstruction_error: 50.4791 - regularization_error: 13.5810
[2023-12-02 16:43:23.642603]: Reconstructing images for epoch 11 ...
```



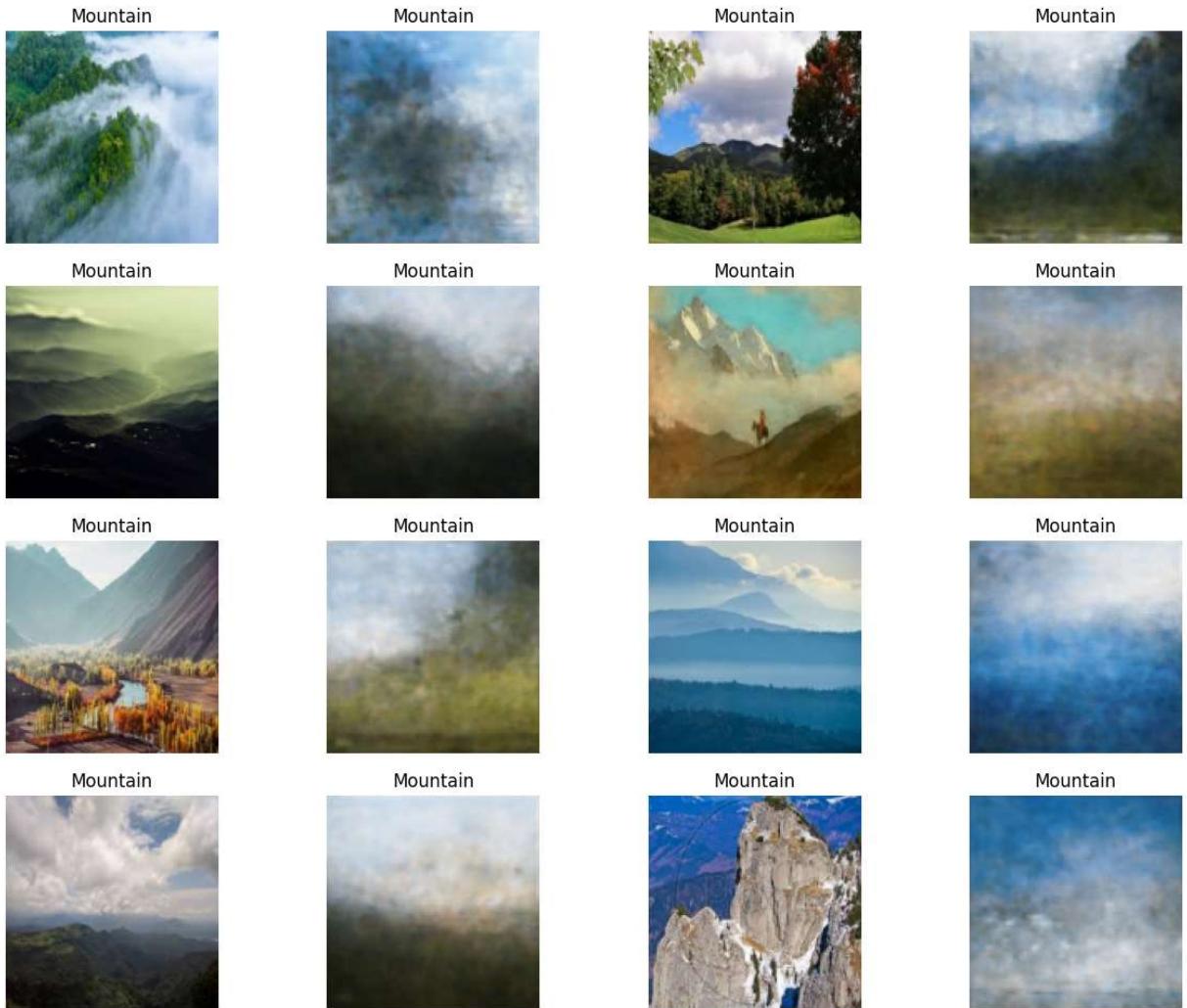
```
120/120 [=====] - 18s 151ms/step - loss: 64.0601 - reconstruction_error: 50.4791 - regularization_error: 13.5810 - val_loss: 66.4789 - val_reconstruction_error: 53.3392 - val_regularization_error: 13.1396
Epoch 12/1000
120/120 [=====] - 16s 132ms/step - loss: 63.2303 - reconstruction_error: 49.6268 - regularization_error: 13.6036 - val_loss: 65.2928 - val_reconstruction_error: 51.3565 - val_regularization_error: 13.9363
Epoch 13/1000
120/120 [=====] - 16s 134ms/step - loss: 62.3155 - reconstruction_error: 48.4981 - regularization_error: 13.8175 - val_loss: 65.2956 - val_reconstruction_error: 52.1321 - val_regularization_error: 13.1636
Epoch 14/1000
120/120 [=====] - 13s 109ms/step - loss: 62.4587 - reconstruction_error: 48.6010 - regularization_error: 13.8577 - val_loss: 64.8764 - val_reconstruction_error: 50.7264 - val_regularization_error: 14.1500
Epoch 15/1000
120/120 [=====] - 18s 145ms/step - loss: 61.9531 - reconstruction_error: 48.0105 - regularization_error: 13.9425 - val_loss: 64.8060 - val_reconstruction_error: 51.8312 - val_regularization_error: 12.9748
Epoch 16/1000
120/120 [=====] - 15s 124ms/step - loss: 61.2715 - reconstruction_error: 47.3079 - regularization_error: 13.9636 - val_loss: 64.2581 - val_reconstruction_error: 50.1652 - val_regularization_error: 14.0930
Epoch 17/1000
120/120 [=====] - 18s 151ms/step - loss: 61.4619 - reconstruction_error: 47.2409 - regularization_error: 14.2210 - val_loss: 63.3553 - val_reconstruction_error: 49.4747 - val_regularization_error: 13.8807
Epoch 18/1000
120/120 [=====] - 16s 135ms/step - loss: 60.6936 - reconstruction_error: 46.5113 - regularization_error: 14.1824 - val_loss: 63.8253 - val_reconstruction_error: 49.4855 - val_regularization_error: 14.3398
Epoch 19/1000
120/120 [=====] - 15s 122ms/step - loss: 60.5959 - reconstruction_error: 46.1470 - regularization_error: 14.4489 - val_loss: 63.8596 - val_reconstruction_error: 48.6189 - val_regularization_error: 15.2407
Epoch 20/1000
120/120 [=====] - 14s 117ms/step - loss: 61.0005 - reconstruction_error: 46.6730 - regularization_error: 14.3275 - val_loss: 64.3099 - val_reconstruction_error: 49.9965 - val_regularization_error: 14.3134
Epoch 21/1000
120/120 [=====] - ETA: 0s - loss: 60.0346 - reconstruction_error: 45.7506 - regularization_error: 14.2840
[2023-12-02 16:46:05.635905]: Reconstructing images for epoch 21 ...
```



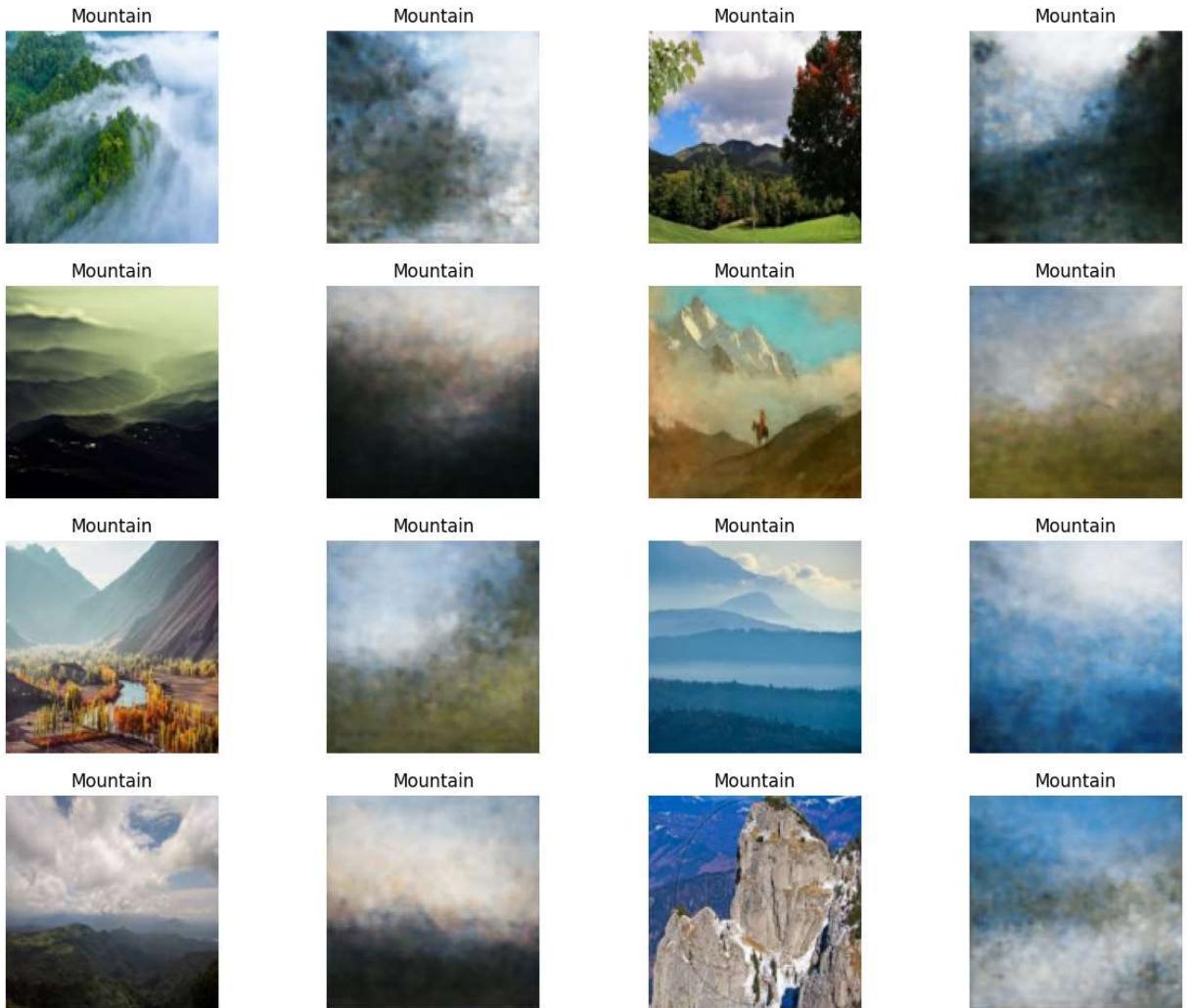
```
120/120 [=====] - 18s 147ms/step - loss: 60.0346 - reconstruction_error: 45.7506 - regularization_error: 14.2840 - val_loss: 65.0777 - val_reconstruction_error: 52.0093 - val_regularization_error: 13.0685
Epoch 22/1000
120/120 [=====] - 17s 141ms/step - loss: 59.6411 - reconstruction_error: 45.3077 - regularization_error: 14.3334 - val_loss: 63.6816 - val_reconstruction_error: 49.5838 - val_regularization_error: 14.0979
Epoch 23/1000
120/120 [=====] - 18s 147ms/step - loss: 59.9113 - reconstruction_error: 45.3463 - regularization_error: 14.5649 - val_loss: 63.8983 - val_reconstruction_error: 49.7423 - val_regularization_error: 14.1561
Epoch 24/1000
120/120 [=====] - 18s 149ms/step - loss: 59.5625 - reconstruction_error: 45.0433 - regularization_error: 14.5192 - val_loss: 63.1621 - val_reconstruction_error: 47.3642 - val_regularization_error: 15.7979
Epoch 25/1000
120/120 [=====] - 19s 157ms/step - loss: 59.5943 - reconstruction_error: 45.0114 - regularization_error: 14.5829 - val_loss: 64.2087 - val_reconstruction_error: 50.5139 - val_regularization_error: 13.6948
Epoch 26/1000
120/120 [=====] - 17s 141ms/step - loss: 59.5355 - reconstruction_error: 44.8407 - regularization_error: 14.6948 - val_loss: 64.2152 - val_reconstruction_error: 50.4291 - val_regularization_error: 13.7862
Epoch 27/1000
120/120 [=====] - 13s 107ms/step - loss: 59.1381 - reconstruction_error: 44.4661 - regularization_error: 14.6720 - val_loss: 63.2570 - val_reconstruction_error: 47.9289 - val_regularization_error: 15.3281
Epoch 28/1000
120/120 [=====] - 19s 157ms/step - loss: 59.0023 - reconstruction_error: 44.2715 - regularization_error: 14.7308 - val_loss: 62.9914 - val_reconstruction_error: 48.4781 - val_regularization_error: 14.5133
Epoch 29/1000
120/120 [=====] - 18s 149ms/step - loss: 58.9440 - reconstruction_error: 44.1413 - regularization_error: 14.8028 - val_loss: 63.3707 - val_reconstruction_error: 48.1317 - val_regularization_error: 15.2390
Epoch 30/1000
120/120 [=====] - 15s 126ms/step - loss: 58.6774 - reconstruction_error: 43.7723 - regularization_error: 14.9052 - val_loss: 62.7459 - val_reconstruction_error: 47.7774 - val_regularization_error: 14.9685
Epoch 31/1000
120/120 [=====] - ETA: 0s - loss: 58.5242 - reconstruction_error: 43.6126 - regularization_error: 14.9116
[2023-12-02 16:48:55.121157]: Reconstructing images for epoch 31 ...
```



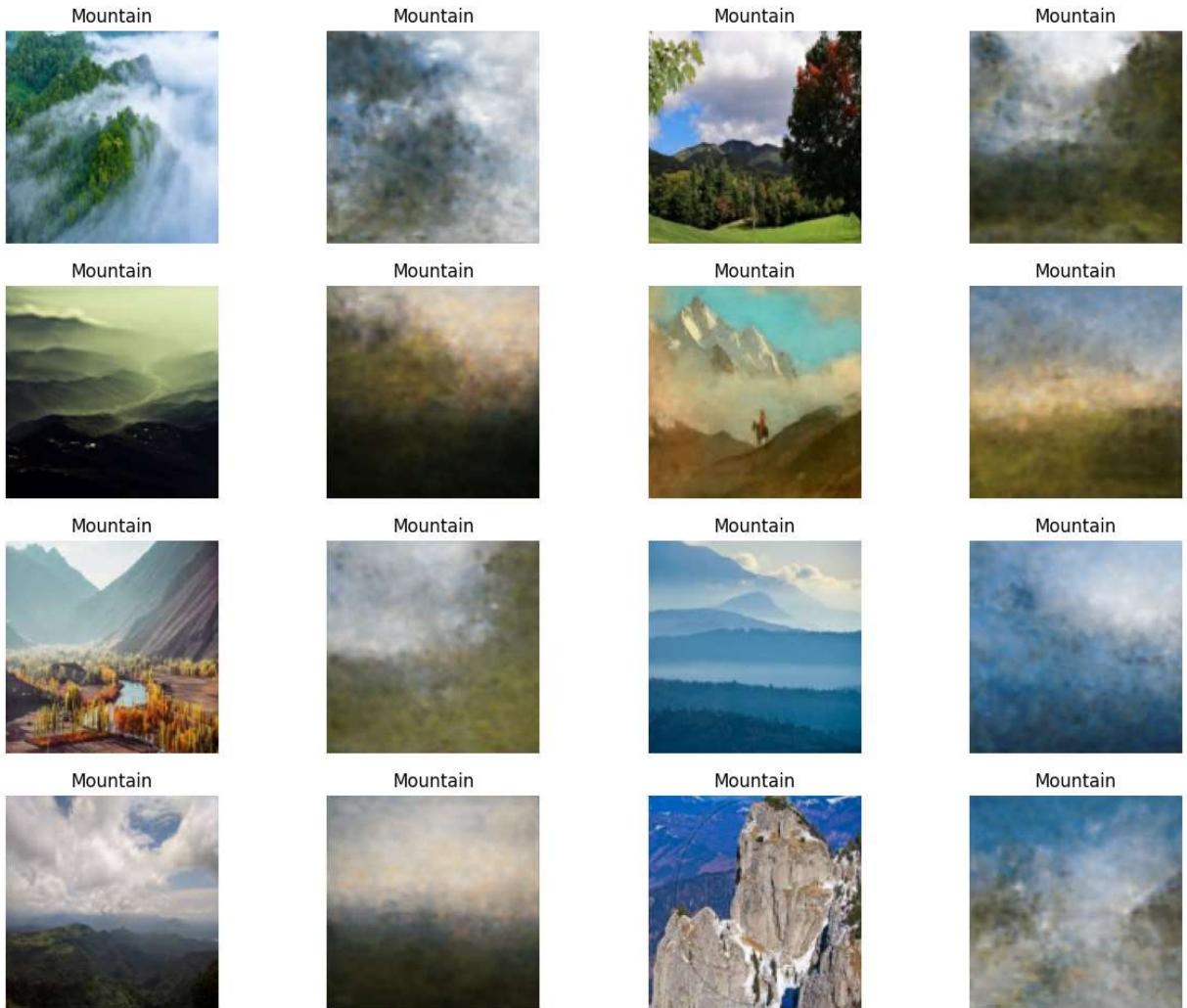
```
120/120 [=====] - 16s 132ms/step - loss: 58.5242 - reconstruction_error: 43.6126 - regularization_error: 14.9116 - val_loss: 64.5228 - val_reconstruction_error: 50.8726 - val_regularization_error: 13.6502
Epoch 32/1000
120/120 [=====] - 15s 124ms/step - loss: 58.8808 - reconstruction_error: 43.8342 - regularization_error: 15.0466 - val_loss: 63.5035 - val_reconstruction_error: 48.2819 - val_regularization_error: 15.2215
Epoch 33/1000
120/120 [=====] - 17s 136ms/step - loss: 58.4952 - reconstruction_error: 43.4340 - regularization_error: 15.0611 - val_loss: 62.4816 - val_reconstruction_error: 47.7016 - val_regularization_error: 14.7800
Epoch 34/1000
120/120 [=====] - 18s 148ms/step - loss: 58.4797 - reconstruction_error: 43.5597 - regularization_error: 14.9200 - val_loss: 64.1797 - val_reconstruction_error: 49.1572 - val_regularization_error: 15.0225
Epoch 35/1000
120/120 [=====] - 15s 126ms/step - loss: 58.3830 - reconstruction_error: 43.3324 - regularization_error: 15.0506 - val_loss: 62.8575 - val_reconstruction_error: 47.3135 - val_regularization_error: 15.5440
Epoch 36/1000
120/120 [=====] - 15s 122ms/step - loss: 58.0067 - reconstruction_error: 42.8961 - regularization_error: 15.1107 - val_loss: 64.1594 - val_reconstruction_error: 48.5392 - val_regularization_error: 15.6201
Epoch 37/1000
120/120 [=====] - 15s 125ms/step - loss: 58.1032 - reconstruction_error: 42.9142 - regularization_error: 15.1891 - val_loss: 63.2758 - val_reconstruction_error: 48.4624 - val_regularization_error: 14.8135
Epoch 38/1000
120/120 [=====] - 17s 139ms/step - loss: 58.0362 - reconstruction_error: 42.7771 - regularization_error: 15.2591 - val_loss: 63.2577 - val_reconstruction_error: 47.9845 - val_regularization_error: 15.2733
Epoch 39/1000
120/120 [=====] - 15s 125ms/step - loss: 57.5473 - reconstruction_error: 42.3165 - regularization_error: 15.2308 - val_loss: 63.4008 - val_reconstruction_error: 47.8432 - val_regularization_error: 15.5576
Epoch 40/1000
120/120 [=====] - 18s 149ms/step - loss: 57.5234 - reconstruction_error: 42.1201 - regularization_error: 15.4033 - val_loss: 63.0203 - val_reconstruction_error: 47.4988 - val_regularization_error: 15.5215
Epoch 41/1000
120/120 [=====] - ETA: 0s - loss: 57.7175 - reconstruction_error: 42.2262 - regularization_error: 15.4914
[2023-12-02 16:51:41.528103]: Reconstructing images for epoch 41 ...
```



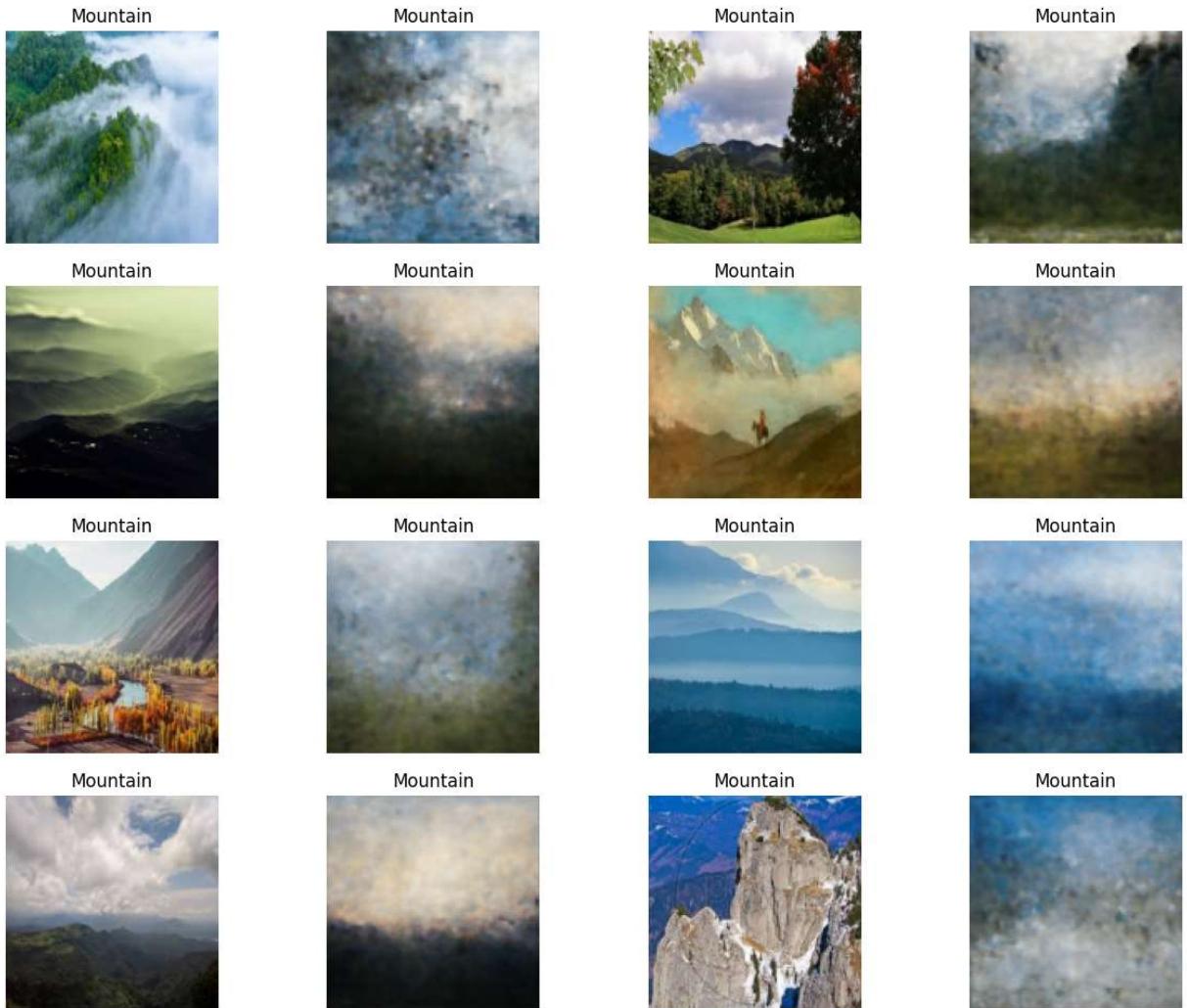
```
120/120 [=====] - 18s 147ms/step - loss: 57.7175 - reconstruction_error: 42.2262 - regularization_error: 15.4914 - val_loss: 64.4978 - val_reconstruction_error: 49.3218 - val_regularization_error: 15.1761
Epoch 42/1000
120/120 [=====] - 18s 153ms/step - loss: 57.2922 - reconstruction_error: 41.8720 - regularization_error: 15.4201 - val_loss: 64.2165 - val_reconstruction_error: 48.7520 - val_regularization_error: 15.4645
Epoch 43/1000
120/120 [=====] - 16s 132ms/step - loss: 57.6907 - reconstruction_error: 42.1333 - regularization_error: 15.5573 - val_loss: 63.2743 - val_reconstruction_error: 48.6172 - val_regularization_error: 14.6571
Epoch 44/1000
120/120 [=====] - 14s 118ms/step - loss: 56.9699 - reconstruction_error: 41.4054 - regularization_error: 15.5645 - val_loss: 62.3949 - val_reconstruction_error: 47.5238 - val_regularization_error: 14.8711
Epoch 45/1000
120/120 [=====] - 15s 123ms/step - loss: 56.9360 - reconstruction_error: 41.4188 - regularization_error: 15.5172 - val_loss: 63.2356 - val_reconstruction_error: 47.2422 - val_regularization_error: 15.9934
Epoch 46/1000
120/120 [=====] - 17s 137ms/step - loss: 56.5803 - reconstruction_error: 40.9002 - regularization_error: 15.6801 - val_loss: 63.5977 - val_reconstruction_error: 47.9359 - val_regularization_error: 15.6618
Epoch 47/1000
120/120 [=====] - 13s 110ms/step - loss: 56.6719 - reconstruction_error: 41.0030 - regularization_error: 15.6689 - val_loss: 64.3482 - val_reconstruction_error: 49.8657 - val_regularization_error: 14.4824
Epoch 48/1000
120/120 [=====] - 16s 129ms/step - loss: 56.4457 - reconstruction_error: 40.6779 - regularization_error: 15.7678 - val_loss: 64.2961 - val_reconstruction_error: 48.2350 - val_regularization_error: 16.0611
Epoch 49/1000
120/120 [=====] - 15s 121ms/step - loss: 56.6454 - reconstruction_error: 40.6702 - regularization_error: 15.9752 - val_loss: 62.8138 - val_reconstruction_error: 46.6350 - val_regularization_error: 16.1788
Epoch 50/1000
120/120 [=====] - 14s 115ms/step - loss: 56.4282 - reconstruction_error: 40.4207 - regularization_error: 16.0075 - val_loss: 63.6558 - val_reconstruction_error: 48.4126 - val_regularization_error: 15.2431
Epoch 51/1000
120/120 [=====] - ETA: 0s - loss: 56.2819 - reconstruction_error: 40.2108 - regularization_error: 16.0712
[2023-12-02 16:54:20.262963]: Reconstructing images for epoch 51 ...
```



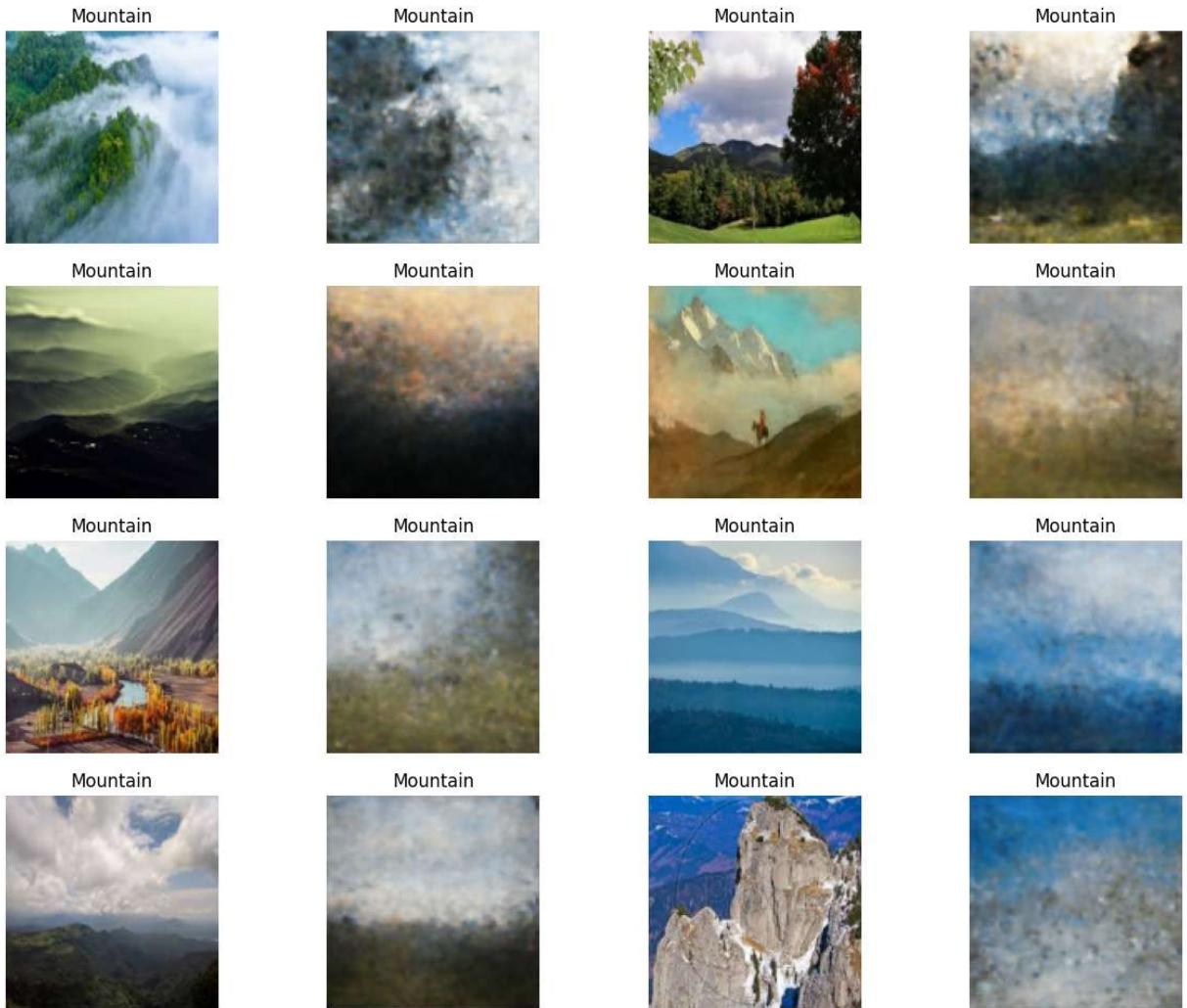
```
120/120 [=====] - 21s 175ms/step - loss: 56.2819 - reconstruction_error: 40.2108 - regularization_error: 16.0712 - val_loss: 64.6266 - val_reconstruction_error: 49.0214 - val_regularization_error: 15.6052
Epoch 52/1000
120/120 [=====] - 18s 148ms/step - loss: 56.0909 - reconstruction_error: 40.1626 - regularization_error: 15.9282 - val_loss: 62.8083 - val_reconstruction_error: 47.8214 - val_regularization_error: 14.9869
Epoch 53/1000
120/120 [=====] - 14s 115ms/step - loss: 55.9710 - reconstruction_error: 39.8773 - regularization_error: 16.0937 - val_loss: 63.6838 - val_reconstruction_error: 48.7804 - val_regularization_error: 14.9035
Epoch 54/1000
120/120 [=====] - 15s 126ms/step - loss: 55.5944 - reconstruction_error: 39.5772 - regularization_error: 16.0172 - val_loss: 64.2026 - val_reconstruction_error: 49.2835 - val_regularization_error: 14.9191
Epoch 55/1000
120/120 [=====] - 14s 115ms/step - loss: 55.7305 - reconstruction_error: 39.5080 - regularization_error: 16.2224 - val_loss: 64.6072 - val_reconstruction_error: 49.0080 - val_regularization_error: 15.5991
Epoch 56/1000
120/120 [=====] - 17s 140ms/step - loss: 55.8178 - reconstruction_error: 39.5796 - regularization_error: 16.2381 - val_loss: 63.4921 - val_reconstruction_error: 48.0237 - val_regularization_error: 15.4684
Epoch 57/1000
120/120 [=====] - 15s 121ms/step - loss: 55.3010 - reconstruction_error: 38.9398 - regularization_error: 16.3612 - val_loss: 64.0132 - val_reconstruction_error: 48.4794 - val_regularization_error: 15.5337
Epoch 58/1000
120/120 [=====] - 16s 129ms/step - loss: 55.5086 - reconstruction_error: 39.2491 - regularization_error: 16.2595 - val_loss: 64.2213 - val_reconstruction_error: 49.8298 - val_regularization_error: 14.3914
Epoch 59/1000
120/120 [=====] - 18s 147ms/step - loss: 55.2532 - reconstruction_error: 38.6596 - regularization_error: 16.5936 - val_loss: 63.1114 - val_reconstruction_error: 46.9458 - val_regularization_error: 16.1655
Epoch 60/1000
120/120 [=====] - 15s 126ms/step - loss: 55.2555 - reconstruction_error: 38.8098 - regularization_error: 16.4457 - val_loss: 63.4956 - val_reconstruction_error: 47.9613 - val_regularization_error: 15.5343
Epoch 61/1000
120/120 [=====] - ETA: 0s - loss: 54.8504 - reconstruction_error: 38.1926 - regularization_error: 16.6578
[2023-12-02 16:57:01.138969]: Reconstructing images for epoch 61 ...
```



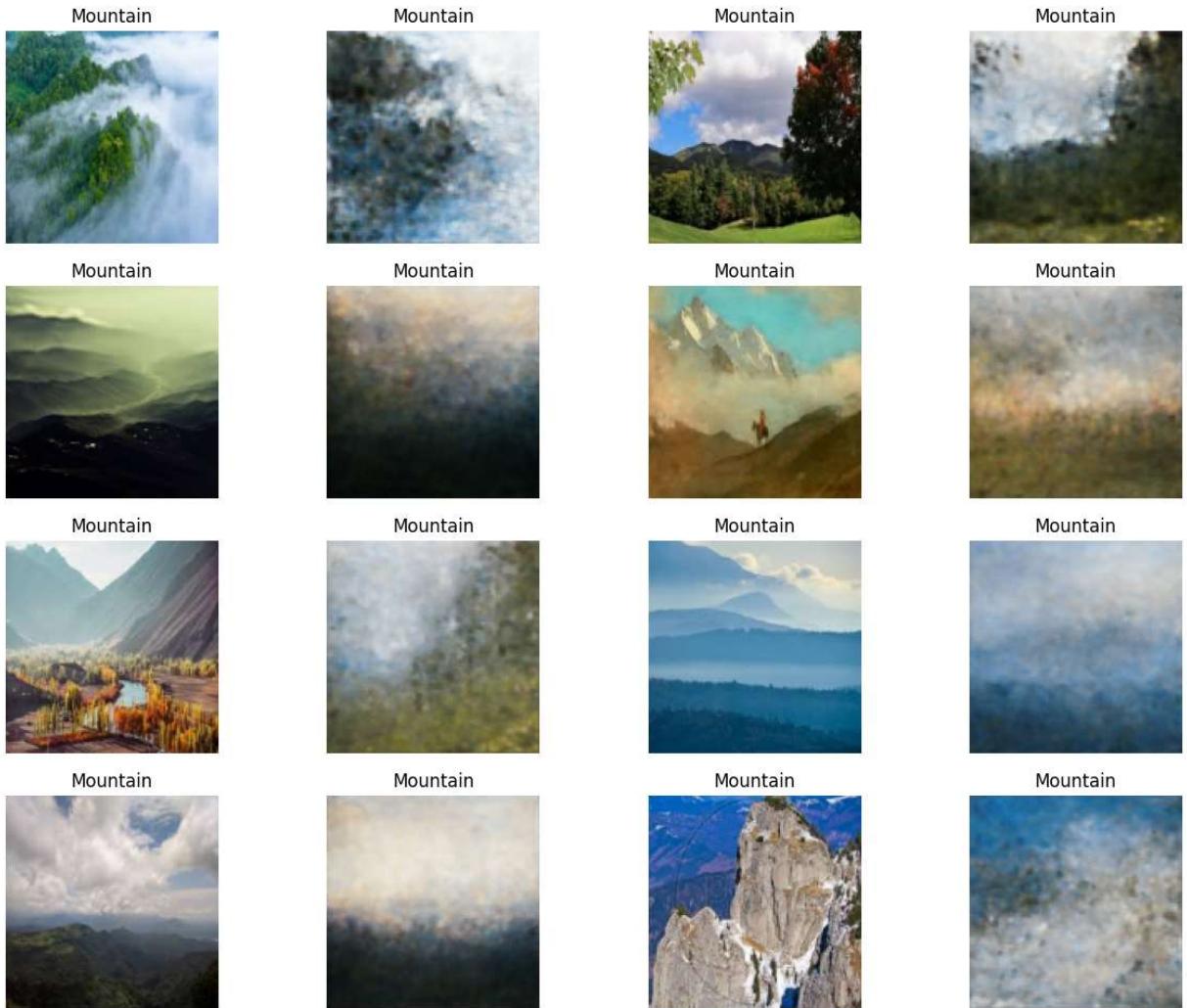
```
120/120 [=====] - 16s 134ms/step - loss: 54.8504 - reconstruction_error: 38.1926 - regularization_error: 16.6578 - val_loss: 64.3707 - val_reconstruction_error: 48.3190 - val_regularization_error: 16.0517
Epoch 62/1000
120/120 [=====] - 16s 132ms/step - loss: 54.8713 - reconstruction_error: 38.3945 - regularization_error: 16.4768 - val_loss: 64.1193 - val_reconstruction_error: 47.9669 - val_regularization_error: 16.1524
Epoch 63/1000
120/120 [=====] - 14s 114ms/step - loss: 54.7410 - reconstruction_error: 38.2050 - regularization_error: 16.5361 - val_loss: 64.0410 - val_reconstruction_error: 47.6892 - val_regularization_error: 16.3518
Epoch 64/1000
120/120 [=====] - 16s 129ms/step - loss: 54.5733 - reconstruction_error: 37.9590 - regularization_error: 16.6143 - val_loss: 64.1045 - val_reconstruction_error: 47.9279 - val_regularization_error: 16.1766
Epoch 65/1000
120/120 [=====] - 17s 138ms/step - loss: 54.5305 - reconstruction_error: 37.7126 - regularization_error: 16.8179 - val_loss: 63.6900 - val_reconstruction_error: 46.9266 - val_regularization_error: 16.7634
Epoch 66/1000
120/120 [=====] - 14s 113ms/step - loss: 54.4303 - reconstruction_error: 37.7913 - regularization_error: 16.6391 - val_loss: 64.8849 - val_reconstruction_error: 49.3866 - val_regularization_error: 15.4984
Epoch 67/1000
120/120 [=====] - 17s 137ms/step - loss: 54.3492 - reconstruction_error: 37.6618 - regularization_error: 16.6875 - val_loss: 64.2572 - val_reconstruction_error: 48.8953 - val_regularization_error: 15.3619
Epoch 68/1000
120/120 [=====] - 16s 127ms/step - loss: 54.0705 - reconstruction_error: 37.2585 - regularization_error: 16.8120 - val_loss: 64.0850 - val_reconstruction_error: 47.7054 - val_regularization_error: 16.3795
Epoch 69/1000
120/120 [=====] - 18s 150ms/step - loss: 53.6952 - reconstruction_error: 36.8960 - regularization_error: 16.7992 - val_loss: 63.7203 - val_reconstruction_error: 47.3206 - val_regularization_error: 16.3998
Epoch 70/1000
120/120 [=====] - 14s 112ms/step - loss: 53.8983 - reconstruction_error: 37.0818 - regularization_error: 16.8165 - val_loss: 65.0417 - val_reconstruction_error: 47.4913 - val_regularization_error: 17.5505
Epoch 71/1000
120/120 [=====] - ETA: 0s - loss: 53.5083 - reconstruction_error: 36.7051 - regularization_error: 16.8032
[2023-12-02 16:59:39.793550]: Reconstructing images for epoch 71 ...
```



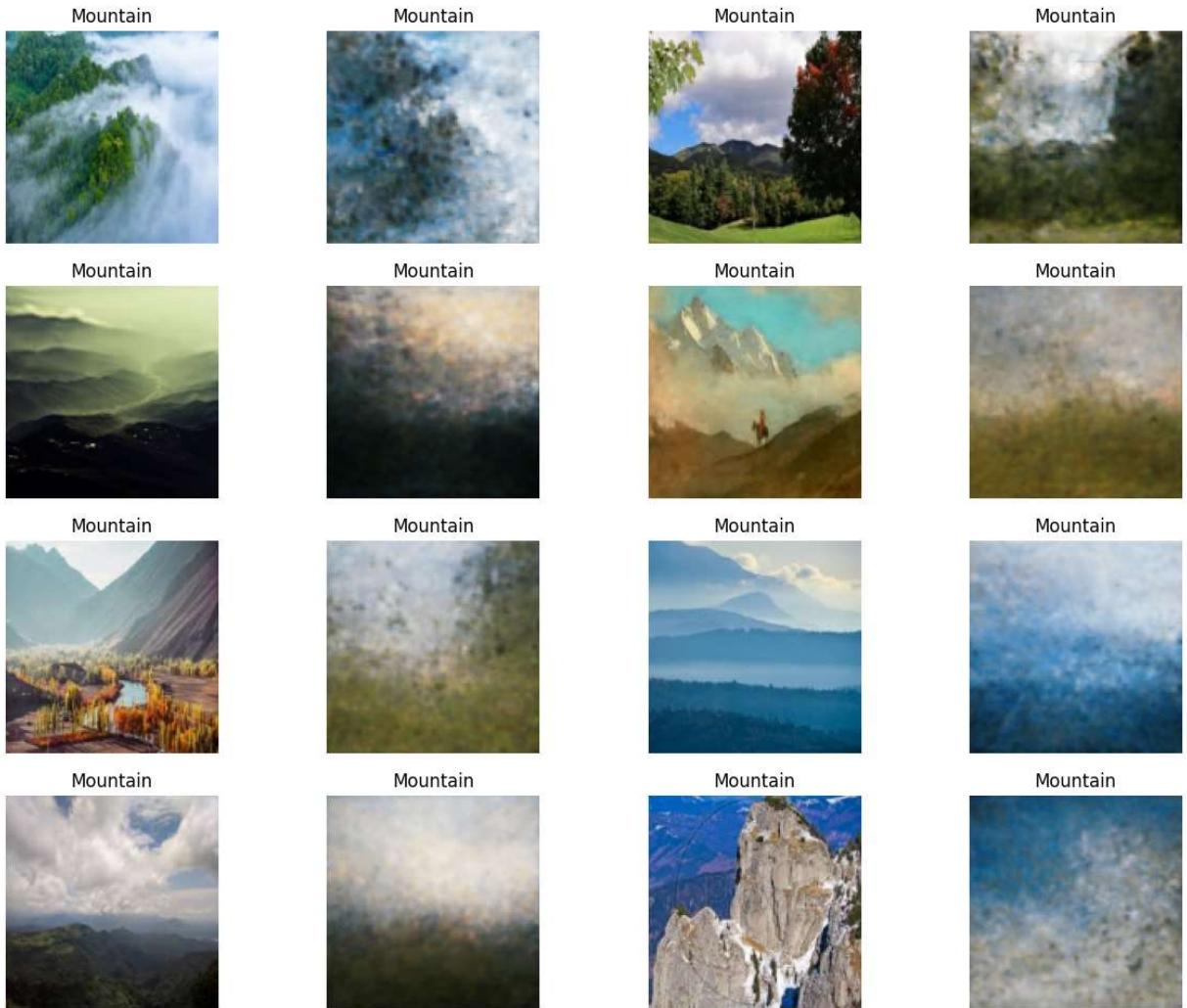
```
120/120 [=====] - 19s 155ms/step - loss: 53.5083 - reconstruction_error: 36.7051 - regularization_error: 16.8032 - val_loss: 64.1983 - val_reconstruction_error: 48.9004 - val_regularization_error: 15.2979
Epoch 72/1000
120/120 [=====] - 15s 121ms/step - loss: 53.5338 - reconstruction_error: 36.5366 - regularization_error: 16.9973 - val_loss: 64.4082 - val_reconstruction_error: 48.8910 - val_regularization_error: 15.5172
Epoch 73/1000
120/120 [=====] - 18s 146ms/step - loss: 53.2422 - reconstruction_error: 36.3980 - regularization_error: 16.8441 - val_loss: 64.2132 - val_reconstruction_error: 48.3287 - val_regularization_error: 15.8845
Epoch 74/1000
120/120 [=====] - 17s 143ms/step - loss: 53.2247 - reconstruction_error: 36.2590 - regularization_error: 16.9657 - val_loss: 64.6147 - val_reconstruction_error: 48.5804 - val_regularization_error: 16.0343
Epoch 75/1000
120/120 [=====] - 16s 127ms/step - loss: 53.0898 - reconstruction_error: 36.0597 - regularization_error: 17.0301 - val_loss: 64.2745 - val_reconstruction_error: 47.5710 - val_regularization_error: 16.7035
Epoch 76/1000
120/120 [=====] - 17s 143ms/step - loss: 52.8679 - reconstruction_error: 35.8238 - regularization_error: 17.0441 - val_loss: 63.7338 - val_reconstruction_error: 47.9631 - val_regularization_error: 15.7707
Epoch 77/1000
120/120 [=====] - 15s 126ms/step - loss: 52.9753 - reconstruction_error: 35.8857 - regularization_error: 17.0896 - val_loss: 65.1787 - val_reconstruction_error: 48.7032 - val_regularization_error: 16.4755
Epoch 78/1000
120/120 [=====] - 14s 118ms/step - loss: 52.7207 - reconstruction_error: 35.6621 - regularization_error: 17.0586 - val_loss: 64.9576 - val_reconstruction_error: 48.6688 - val_regularization_error: 16.2887
Epoch 79/1000
120/120 [=====] - 16s 131ms/step - loss: 52.5928 - reconstruction_error: 35.3971 - regularization_error: 17.1957 - val_loss: 63.7035 - val_reconstruction_error: 48.6197 - val_regularization_error: 15.0838
Epoch 80/1000
120/120 [=====] - 18s 145ms/step - loss: 52.5191 - reconstruction_error: 35.3130 - regularization_error: 17.2061 - val_loss: 65.2988 - val_reconstruction_error: 49.0362 - val_regularization_error: 16.2627
Epoch 81/1000
120/120 [=====] - ETA: 0s - loss: 52.9452 - reconstruction_error: 35.6203 - regularization_error: 17.3250
[2023-12-02 17:02:28.107975]: Reconstructing images for epoch 81 ...
```



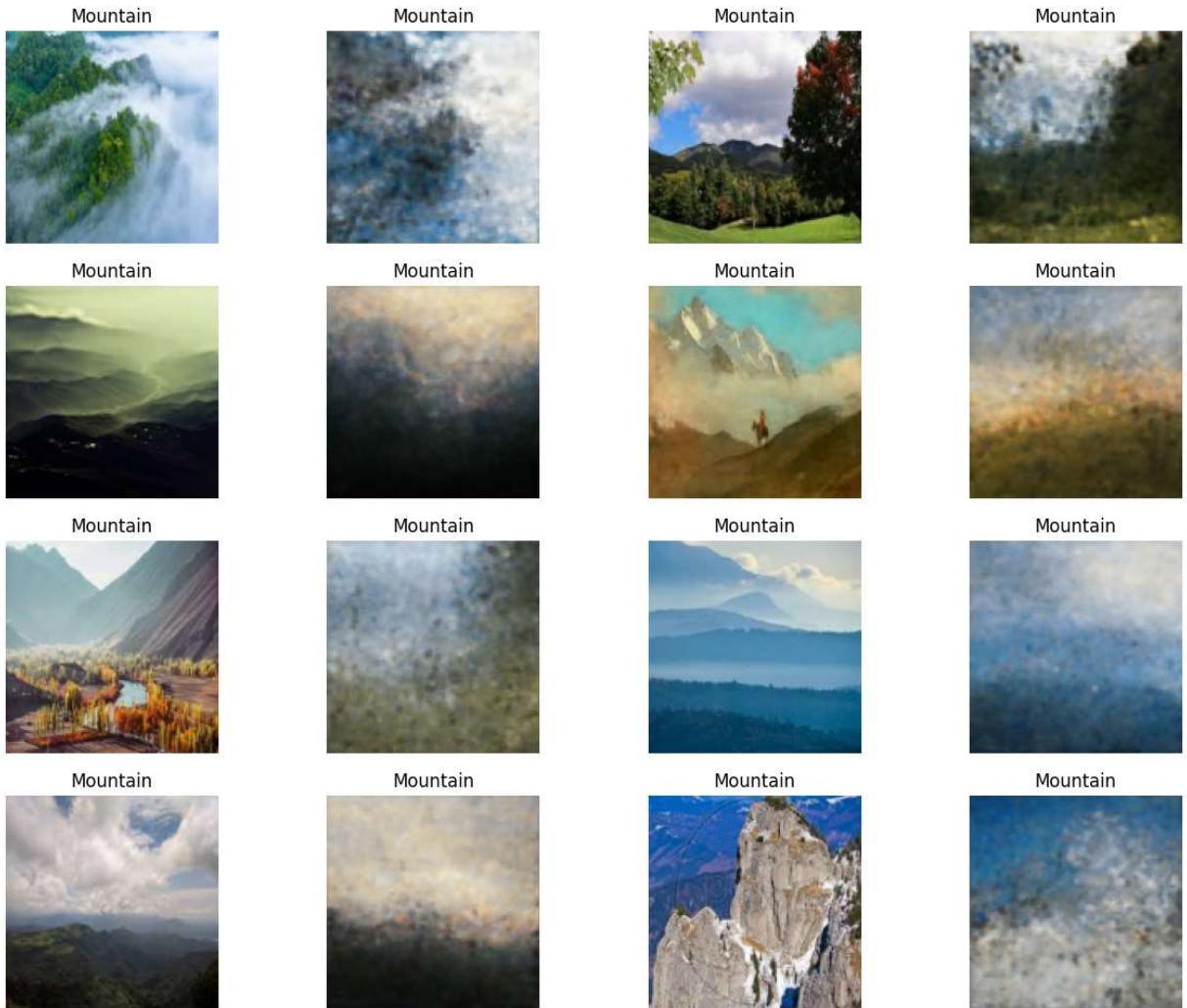
```
120/120 [=====] - 19s 160ms/step - loss: 52.9452 - reconstruction_error: 35.6203 - regularization_error: 17.3250 - val_loss: 64.3957 - val_reconstruction_error: 48.8061 - val_regularization_error: 15.5896
Epoch 82/1000
120/120 [=====] - 18s 147ms/step - loss: 52.3108 - reconstruction_error: 35.0793 - regularization_error: 17.2315 - val_loss: 64.9873 - val_reconstruction_error: 48.3615 - val_regularization_error: 16.6258
Epoch 83/1000
120/120 [=====] - 17s 145ms/step - loss: 52.4591 - reconstruction_error: 35.0334 - regularization_error: 17.4257 - val_loss: 65.0065 - val_reconstruction_error: 48.6591 - val_regularization_error: 16.3474
Epoch 84/1000
120/120 [=====] - 13s 106ms/step - loss: 52.1248 - reconstruction_error: 34.8490 - regularization_error: 17.2758 - val_loss: 64.4411 - val_reconstruction_error: 48.2809 - val_regularization_error: 16.1602
Epoch 85/1000
120/120 [=====] - 16s 132ms/step - loss: 52.0562 - reconstruction_error: 34.5592 - regularization_error: 17.4971 - val_loss: 65.0790 - val_reconstruction_error: 47.6187 - val_regularization_error: 17.4603
Epoch 86/1000
120/120 [=====] - 15s 124ms/step - loss: 52.0292 - reconstruction_error: 34.5829 - regularization_error: 17.4463 - val_loss: 65.8676 - val_reconstruction_error: 48.7466 - val_regularization_error: 17.1210
Epoch 87/1000
120/120 [=====] - 15s 126ms/step - loss: 51.8510 - reconstruction_error: 34.2795 - regularization_error: 17.5714 - val_loss: 64.2939 - val_reconstruction_error: 48.4090 - val_regularization_error: 15.8848
Epoch 88/1000
120/120 [=====] - 16s 136ms/step - loss: 51.5796 - reconstruction_error: 34.1361 - regularization_error: 17.4435 - val_loss: 65.1932 - val_reconstruction_error: 48.4281 - val_regularization_error: 16.7651
Epoch 89/1000
120/120 [=====] - 18s 148ms/step - loss: 51.5976 - reconstruction_error: 34.0616 - regularization_error: 17.5361 - val_loss: 64.6092 - val_reconstruction_error: 49.0745 - val_regularization_error: 15.5347
Epoch 90/1000
120/120 [=====] - 17s 142ms/step - loss: 51.6859 - reconstruction_error: 34.0178 - regularization_error: 17.6681 - val_loss: 64.6059 - val_reconstruction_error: 48.2125 - val_regularization_error: 16.3934
Epoch 91/1000
119/120 [=====.>.] - ETA: 0s - loss: 51.5410 - reconstruction_error: 33.9898 - regularization_error: 17.5512
[2023-12-02 17:05:15.709759]: Reconstructing images for epoch 91 ...
```



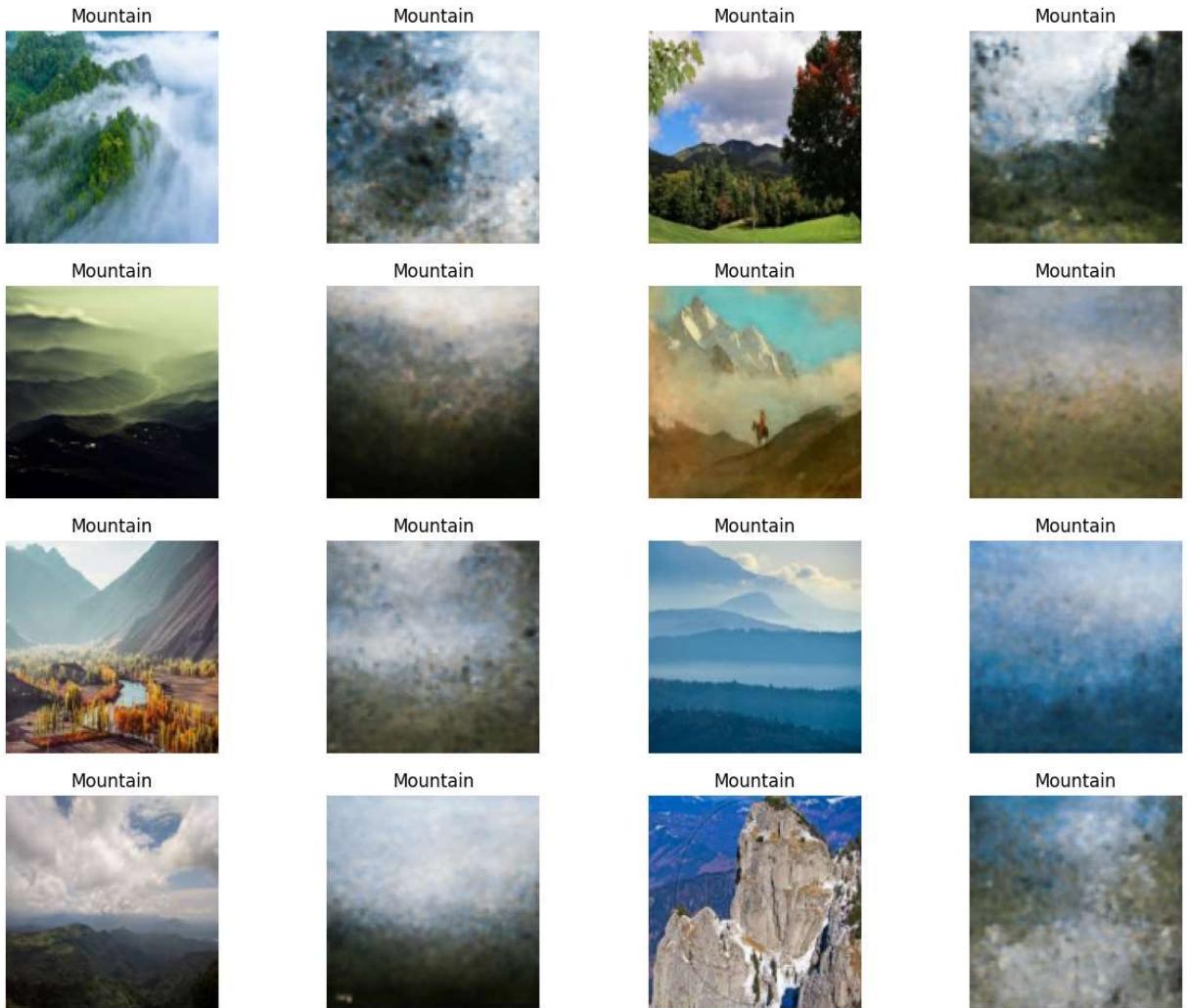
```
120/120 [=====] - 19s 156ms/step - loss: 51.5586 - reconstruction_error: 34.0084 - regularization_error: 17.5502 - val_loss: 66.1876 - val_reconstruction_error: 47.9649 - val_regularization_error: 18.2227
Epoch 92/1000
120/120 [=====] - 18s 149ms/step - loss: 51.3418 - reconstruction_error: 33.6948 - regularization_error: 17.6470 - val_loss: 65.2169 - val_reconstruction_error: 47.9700 - val_regularization_error: 17.2469
Epoch 93/1000
120/120 [=====] - 18s 149ms/step - loss: 51.2209 - reconstruction_error: 33.6426 - regularization_error: 17.5783 - val_loss: 66.6097 - val_reconstruction_error: 50.1770 - val_regularization_error: 16.4326
Epoch 94/1000
120/120 [=====] - 18s 151ms/step - loss: 51.1889 - reconstruction_error: 33.5121 - regularization_error: 17.6768 - val_loss: 66.0223 - val_reconstruction_error: 48.8385 - val_regularization_error: 17.1838
Epoch 95/1000
120/120 [=====] - 17s 139ms/step - loss: 51.4598 - reconstruction_error: 33.8685 - regularization_error: 17.5913 - val_loss: 65.4416 - val_reconstruction_error: 47.8665 - val_regularization_error: 17.5751
Epoch 96/1000
120/120 [=====] - 15s 128ms/step - loss: 51.2133 - reconstruction_error: 33.4663 - regularization_error: 17.7469 - val_loss: 65.2412 - val_reconstruction_error: 48.5107 - val_regularization_error: 16.7306
Epoch 97/1000
120/120 [=====] - 16s 134ms/step - loss: 51.1128 - reconstruction_error: 33.2731 - regularization_error: 17.8397 - val_loss: 65.3552 - val_reconstruction_error: 48.3202 - val_regularization_error: 17.0350
Epoch 98/1000
120/120 [=====] - 15s 126ms/step - loss: 51.0419 - reconstruction_error: 33.1921 - regularization_error: 17.8497 - val_loss: 65.6008 - val_reconstruction_error: 48.4722 - val_regularization_error: 17.1286
Epoch 99/1000
120/120 [=====] - 19s 154ms/step - loss: 51.0024 - reconstruction_error: 33.1421 - regularization_error: 17.8603 - val_loss: 64.9245 - val_reconstruction_error: 48.2601 - val_regularization_error: 16.6644
Epoch 100/1000
120/120 [=====] - 17s 140ms/step - loss: 50.3737 - reconstruction_error: 32.6325 - regularization_error: 17.7411 - val_loss: 64.5116 - val_reconstruction_error: 48.2573 - val_regularization_error: 16.2544
Epoch 101/1000
120/120 [=====] - ETA: 0s - loss: 50.7061 - reconstruction_error: 32.8688 - regularization_error: 17.8374
[2023-12-02 17:08:06.790065]: Reconstructing images for epoch 101 ...
```



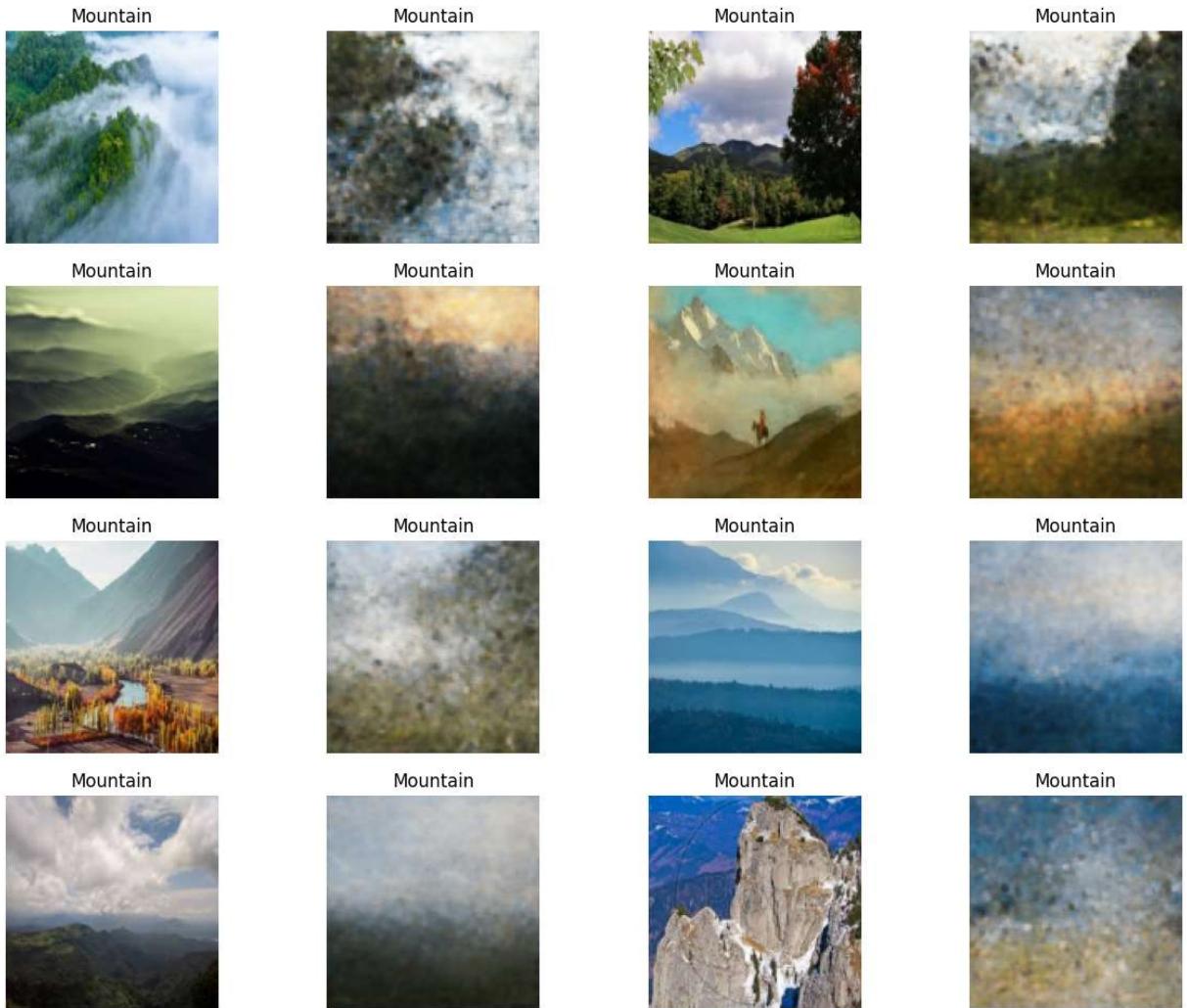
```
120/120 [=====] - 17s 144ms/step - loss: 50.7061 - reconstruction_error: 32.8688 - regularization_error: 17.8374 - val_loss: 66.2549 - val_reconstruction_error: 48.1274 - val_regularization_error: 18.1275
Epoch 102/1000
120/120 [=====] - 18s 154ms/step - loss: 50.5624 - reconstruction_error: 32.6631 - regularization_error: 17.8993 - val_loss: 65.4406 - val_reconstruction_error: 47.5518 - val_regularization_error: 17.8888
Epoch 103/1000
120/120 [=====] - 17s 137ms/step - loss: 50.4861 - reconstruction_error: 32.6330 - regularization_error: 17.8530 - val_loss: 65.2132 - val_reconstruction_error: 48.3406 - val_regularization_error: 16.8726
Epoch 104/1000
120/120 [=====] - 19s 158ms/step - loss: 50.2979 - reconstruction_error: 32.3900 - regularization_error: 17.9079 - val_loss: 65.2560 - val_reconstruction_error: 49.8115 - val_regularization_error: 15.4444
Epoch 105/1000
120/120 [=====] - 17s 140ms/step - loss: 50.2136 - reconstruction_error: 32.3269 - regularization_error: 17.8866 - val_loss: 65.5369 - val_reconstruction_error: 49.3801 - val_regularization_error: 16.1569
Epoch 106/1000
120/120 [=====] - 16s 130ms/step - loss: 50.1168 - reconstruction_error: 32.1447 - regularization_error: 17.9721 - val_loss: 65.5445 - val_reconstruction_error: 49.1306 - val_regularization_error: 16.4139
Epoch 107/1000
120/120 [=====] - 17s 138ms/step - loss: 50.2421 - reconstruction_error: 32.2646 - regularization_error: 17.9776 - val_loss: 65.2220 - val_reconstruction_error: 47.8141 - val_regularization_error: 17.4079
Epoch 108/1000
120/120 [=====] - 18s 144ms/step - loss: 49.7663 - reconstruction_error: 31.9243 - regularization_error: 17.8420 - val_loss: 64.9790 - val_reconstruction_error: 47.8477 - val_regularization_error: 17.1314
Epoch 109/1000
120/120 [=====] - 15s 125ms/step - loss: 49.8713 - reconstruction_error: 31.9834 - regularization_error: 17.8879 - val_loss: 65.0006 - val_reconstruction_error: 49.1251 - val_regularization_error: 15.8755
Epoch 110/1000
120/120 [=====] - 13s 107ms/step - loss: 49.8983 - reconstruction_error: 31.8535 - regularization_error: 18.0448 - val_loss: 65.6385 - val_reconstruction_error: 48.7605 - val_regularization_error: 16.8779
Epoch 111/1000
119/120 [=====.>.] - ETA: 0s - loss: 49.9852 - reconstruction_error: 31.8906 - regularization_error: 18.0945
[2023-12-02 17:10:56.312838]: Reconstructing images for epoch 111 ...
```



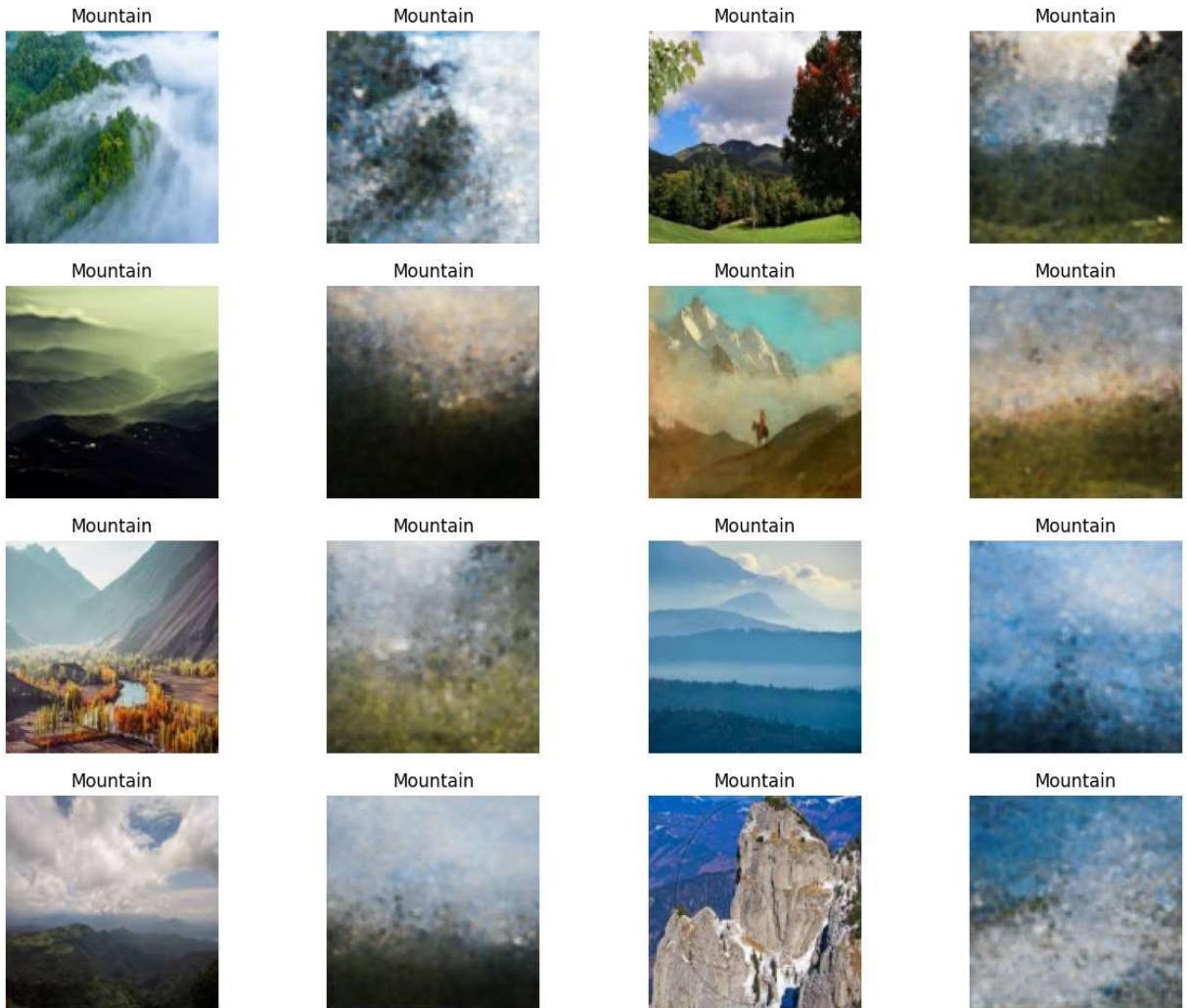
```
120/120 [=====] - 18s 147ms/step - loss: 50.0122 - reconstruction_error: 31.9179 - regularization_error: 18.0943 - val_loss: 65.2615 - val_reconstruction_error: 48.2001 - val_regularization_error: 17.0614
Epoch 112/1000
120/120 [=====] - 19s 156ms/step - loss: 49.9907 - reconstruction_error: 31.9674 - regularization_error: 18.0233 - val_loss: 65.6638 - val_reconstruction_error: 47.8875 - val_regularization_error: 17.7764
Epoch 113/1000
120/120 [=====] - 14s 114ms/step - loss: 49.8475 - reconstruction_error: 31.7053 - regularization_error: 18.1422 - val_loss: 65.3976 - val_reconstruction_error: 48.0255 - val_regularization_error: 17.3721
Epoch 114/1000
120/120 [=====] - 17s 144ms/step - loss: 49.6907 - reconstruction_error: 31.5333 - regularization_error: 18.1574 - val_loss: 65.2218 - val_reconstruction_error: 48.9579 - val_regularization_error: 16.2639
Epoch 115/1000
120/120 [=====] - 16s 131ms/step - loss: 49.4809 - reconstruction_error: 31.4663 - regularization_error: 18.0146 - val_loss: 65.3304 - val_reconstruction_error: 47.6148 - val_regularization_error: 17.7156
Epoch 116/1000
120/120 [=====] - 14s 118ms/step - loss: 49.4621 - reconstruction_error: 31.2719 - regularization_error: 18.1902 - val_loss: 65.3712 - val_reconstruction_error: 48.0411 - val_regularization_error: 17.3301
Epoch 117/1000
120/120 [=====] - 13s 109ms/step - loss: 49.3824 - reconstruction_error: 31.2352 - regularization_error: 18.1473 - val_loss: 65.3614 - val_reconstruction_error: 48.0617 - val_regularization_error: 17.2996
Epoch 118/1000
120/120 [=====] - 16s 135ms/step - loss: 49.3468 - reconstruction_error: 31.1617 - regularization_error: 18.1851 - val_loss: 65.7906 - val_reconstruction_error: 48.7454 - val_regularization_error: 17.0452
Epoch 119/1000
120/120 [=====] - 16s 132ms/step - loss: 49.4891 - reconstruction_error: 31.2258 - regularization_error: 18.2633 - val_loss: 64.7391 - val_reconstruction_error: 48.3113 - val_regularization_error: 16.4278
Epoch 120/1000
120/120 [=====] - 15s 127ms/step - loss: 49.2437 - reconstruction_error: 31.0405 - regularization_error: 18.2032 - val_loss: 65.1964 - val_reconstruction_error: 48.9957 - val_regularization_error: 16.2007
Epoch 121/1000
120/120 [=====] - ETA: 0s - loss: 49.2124 - reconstruction_error: 31.0326 - regularization_error: 18.1799
[2023-12-02 17:13:40.173661]: Reconstructing images for epoch 121 ...
```



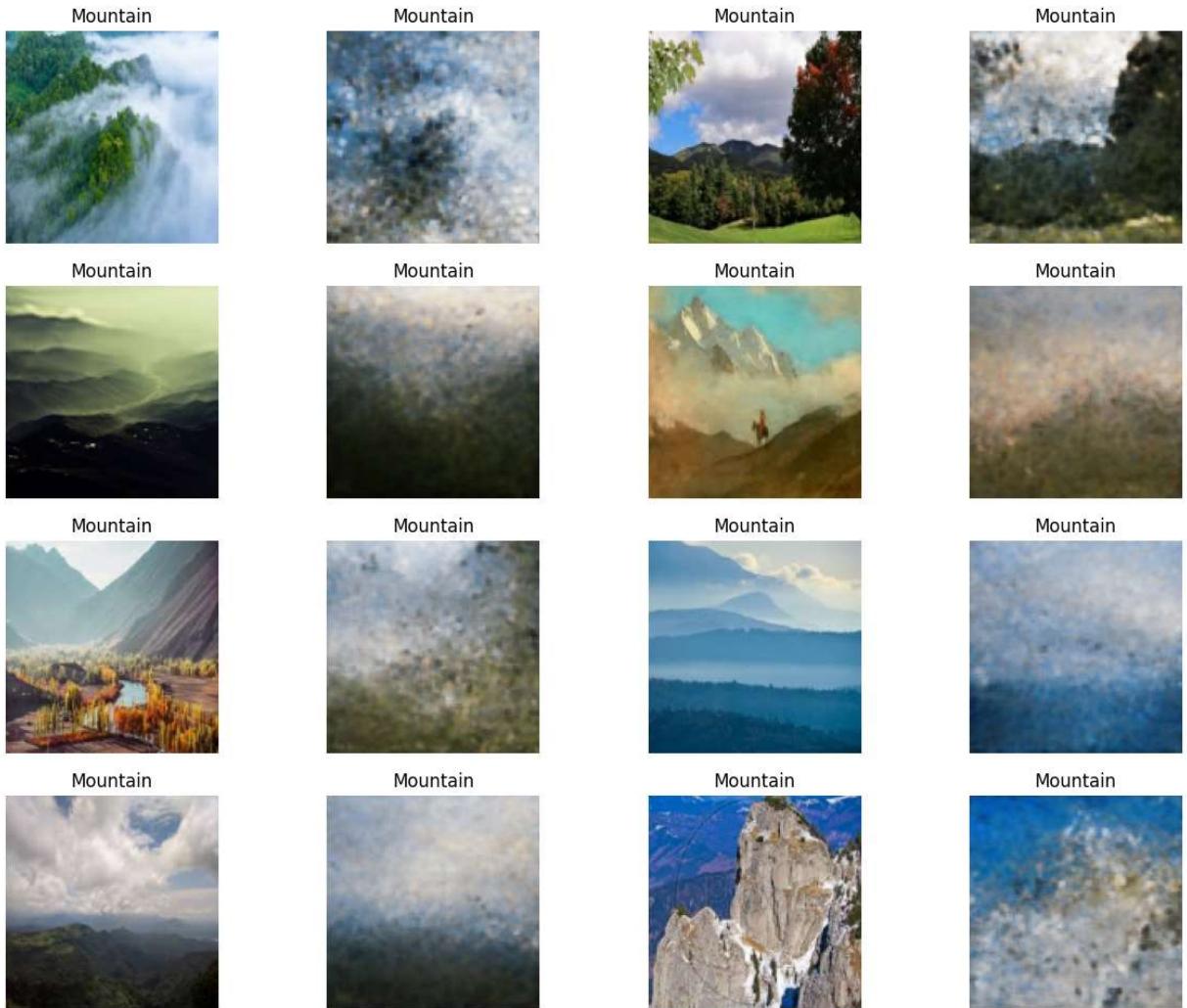
```
120/120 [=====] - 21s 170ms/step - loss: 49.2124 - reconstruction_error: 31.0326 - regularization_error: 18.1799 - val_loss: 65.7902 - val_reconstruction_error: 50.1822 - val_regularization_error: 15.6081
Epoch 122/1000
120/120 [=====] - 16s 132ms/step - loss: 49.0386 - reconstruction_error: 30.8153 - regularization_error: 18.2233 - val_loss: 65.9291 - val_reconstruction_error: 48.6863 - val_regularization_error: 17.2428
Epoch 123/1000
120/120 [=====] - 15s 127ms/step - loss: 48.9395 - reconstruction_error: 30.5322 - regularization_error: 18.4073 - val_loss: 67.2479 - val_reconstruction_error: 49.5824 - val_regularization_error: 17.6655
Epoch 124/1000
120/120 [=====] - 18s 149ms/step - loss: 48.8398 - reconstruction_error: 30.6367 - regularization_error: 18.2032 - val_loss: 65.1508 - val_reconstruction_error: 48.6750 - val_regularization_error: 16.4757
Epoch 125/1000
120/120 [=====] - 18s 146ms/step - loss: 49.0307 - reconstruction_error: 30.8647 - regularization_error: 18.1660 - val_loss: 67.2889 - val_reconstruction_error: 50.5422 - val_regularization_error: 16.7467
Epoch 126/1000
120/120 [=====] - 15s 123ms/step - loss: 48.9873 - reconstruction_error: 30.7293 - regularization_error: 18.2580 - val_loss: 66.3384 - val_reconstruction_error: 49.6445 - val_regularization_error: 16.6940
Epoch 127/1000
120/120 [=====] - 16s 132ms/step - loss: 48.6060 - reconstruction_error: 30.2462 - regularization_error: 18.3598 - val_loss: 65.6848 - val_reconstruction_error: 49.3689 - val_regularization_error: 16.3159
Epoch 128/1000
120/120 [=====] - 17s 140ms/step - loss: 48.7796 - reconstruction_error: 30.3691 - regularization_error: 18.4104 - val_loss: 66.0300 - val_reconstruction_error: 48.2789 - val_regularization_error: 17.7512
Epoch 129/1000
120/120 [=====] - 14s 114ms/step - loss: 48.7951 - reconstruction_error: 30.4132 - regularization_error: 18.3820 - val_loss: 65.8928 - val_reconstruction_error: 48.6630 - val_regularization_error: 17.2298
Epoch 130/1000
120/120 [=====] - 16s 135ms/step - loss: 48.5610 - reconstruction_error: 30.2050 - regularization_error: 18.3560 - val_loss: 66.3492 - val_reconstruction_error: 49.5578 - val_regularization_error: 16.7914
Epoch 131/1000
120/120 [=====] - ETA: 0s - loss: 48.7215 - reconstruction_error: 30.2472 - regularization_error: 18.4744
[2023-12-02 17:16:25.977151]: Reconstructing images for epoch 131 ...
```



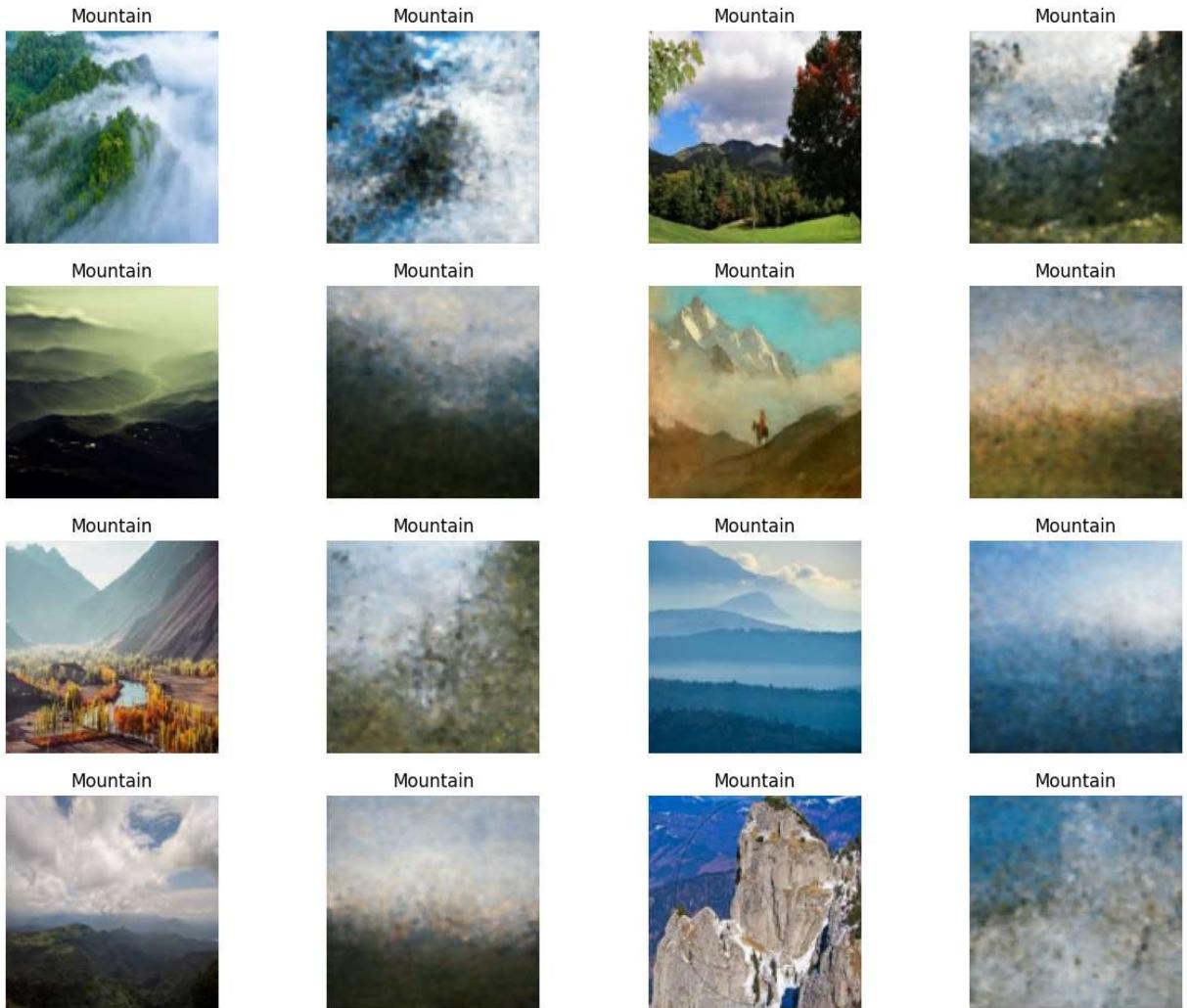
```
120/120 [=====] - 19s 155ms/step - loss: 48.7215 - reconstruction_error: 30.2472 - regularization_error: 18.4744 - val_loss: 66.8181 - val_reconstruction_error: 49.1255 - val_regularization_error: 17.6926
Epoch 132/1000
120/120 [=====] - 14s 119ms/step - loss: 48.1387 - reconstruction_error: 29.8325 - regularization_error: 18.3062 - val_loss: 66.0475 - val_reconstruction_error: 48.4826 - val_regularization_error: 17.5649
Epoch 133/1000
120/120 [=====] - 17s 143ms/step - loss: 48.3393 - reconstruction_error: 29.9023 - regularization_error: 18.4370 - val_loss: 66.0109 - val_reconstruction_error: 48.1006 - val_regularization_error: 17.9103
Epoch 134/1000
120/120 [=====] - 15s 124ms/step - loss: 48.4647 - reconstruction_error: 30.0891 - regularization_error: 18.3756 - val_loss: 65.8881 - val_reconstruction_error: 48.6250 - val_regularization_error: 17.2631
Epoch 135/1000
120/120 [=====] - 15s 124ms/step - loss: 47.8648 - reconstruction_error: 29.5621 - regularization_error: 18.3027 - val_loss: 65.1203 - val_reconstruction_error: 48.6985 - val_regularization_error: 16.4218
Epoch 136/1000
120/120 [=====] - 16s 131ms/step - loss: 48.1943 - reconstruction_error: 29.7848 - regularization_error: 18.4095 - val_loss: 65.9971 - val_reconstruction_error: 49.7262 - val_regularization_error: 16.2709
Epoch 137/1000
120/120 [=====] - 17s 139ms/step - loss: 47.9595 - reconstruction_error: 29.4742 - regularization_error: 18.4854 - val_loss: 67.3645 - val_reconstruction_error: 49.2601 - val_regularization_error: 18.1044
Epoch 138/1000
120/120 [=====] - 17s 143ms/step - loss: 47.9074 - reconstruction_error: 29.4321 - regularization_error: 18.4754 - val_loss: 66.1111 - val_reconstruction_error: 49.1050 - val_regularization_error: 17.0062
Epoch 139/1000
120/120 [=====] - 13s 107ms/step - loss: 48.3435 - reconstruction_error: 29.7967 - regularization_error: 18.5469 - val_loss: 66.5072 - val_reconstruction_error: 48.5481 - val_regularization_error: 17.9590
Epoch 140/1000
120/120 [=====] - 15s 121ms/step - loss: 48.0184 - reconstruction_error: 29.4752 - regularization_error: 18.5432 - val_loss: 65.9306 - val_reconstruction_error: 49.0783 - val_regularization_error: 16.8524
Epoch 141/1000
120/120 [=====] - ETA: 0s - loss: 47.9482 - reconstruction_error: 29.5088 - regularization_error: 18.4394
[2023-12-02 17:19:08.070520]: Reconstructing images for epoch 141 ...
```



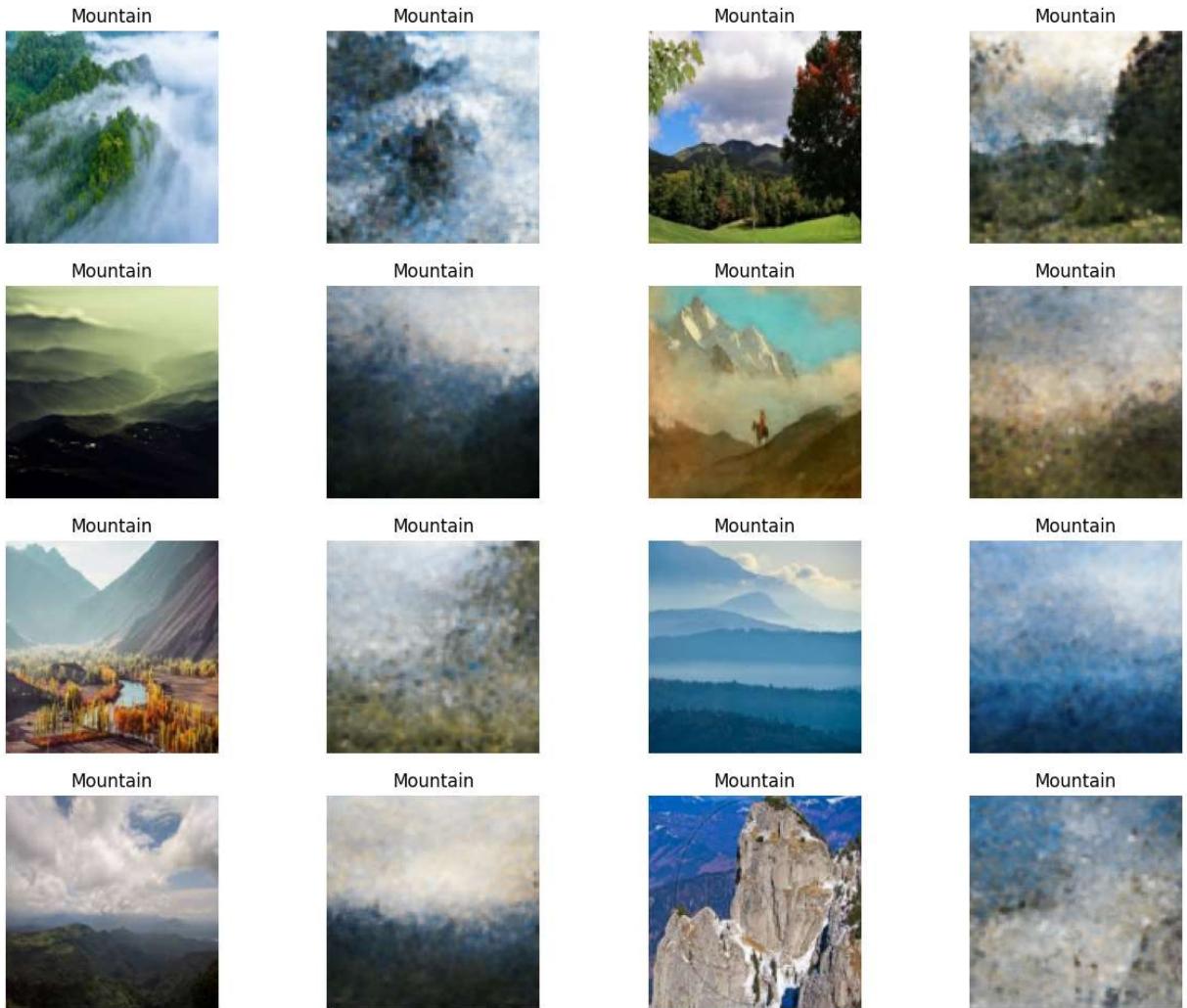
```
120/120 [=====] - 20s 167ms/step - loss: 47.9482 - reconstruction_error: 29.5088 - regularization_error: 18.4394 - val_loss: 66.3298 - val_reconstruction_error: 48.7732 - val_regularization_error: 17.5566
Epoch 142/1000
120/120 [=====] - 14s 115ms/step - loss: 48.0310 - reconstruction_error: 29.5840 - regularization_error: 18.4470 - val_loss: 68.7568 - val_reconstruction_error: 50.4719 - val_regularization_error: 18.2849
Epoch 143/1000
120/120 [=====] - 14s 117ms/step - loss: 48.2152 - reconstruction_error: 29.5902 - regularization_error: 18.6250 - val_loss: 66.9425 - val_reconstruction_error: 50.1377 - val_regularization_error: 16.8048
Epoch 144/1000
120/120 [=====] - 16s 131ms/step - loss: 48.1102 - reconstruction_error: 29.4765 - regularization_error: 18.6338 - val_loss: 67.2633 - val_reconstruction_error: 50.5003 - val_regularization_error: 16.7630
Epoch 145/1000
120/120 [=====] - 14s 112ms/step - loss: 47.7118 - reconstruction_error: 29.0303 - regularization_error: 18.6815 - val_loss: 66.5447 - val_reconstruction_error: 48.9889 - val_regularization_error: 17.5558
Epoch 146/1000
120/120 [=====] - 17s 139ms/step - loss: 47.5724 - reconstruction_error: 29.0422 - regularization_error: 18.5302 - val_loss: 66.3558 - val_reconstruction_error: 49.1657 - val_regularization_error: 17.1901
Epoch 147/1000
120/120 [=====] - 17s 141ms/step - loss: 47.5933 - reconstruction_error: 29.0546 - regularization_error: 18.5387 - val_loss: 66.0655 - val_reconstruction_error: 50.0310 - val_regularization_error: 16.0345
Epoch 148/1000
120/120 [=====] - 17s 138ms/step - loss: 47.3241 - reconstruction_error: 28.7131 - regularization_error: 18.6110 - val_loss: 66.3829 - val_reconstruction_error: 50.6926 - val_regularization_error: 15.6903
Epoch 149/1000
120/120 [=====] - 15s 128ms/step - loss: 47.8154 - reconstruction_error: 29.1230 - regularization_error: 18.6924 - val_loss: 66.2326 - val_reconstruction_error: 49.7532 - val_regularization_error: 16.4794
Epoch 150/1000
120/120 [=====] - 16s 133ms/step - loss: 47.2485 - reconstruction_error: 28.7767 - regularization_error: 18.4718 - val_loss: 67.3639 - val_reconstruction_error: 49.3685 - val_regularization_error: 17.9954
Epoch 151/1000
119/120 [=====.>.] - ETA: 0s - loss: 47.5193 - reconstruction_error: 28.8991 - regularization_error: 18.6202
[2023-12-02 17:21:47.041873]: Reconstructing images for epoch 151 ...
```



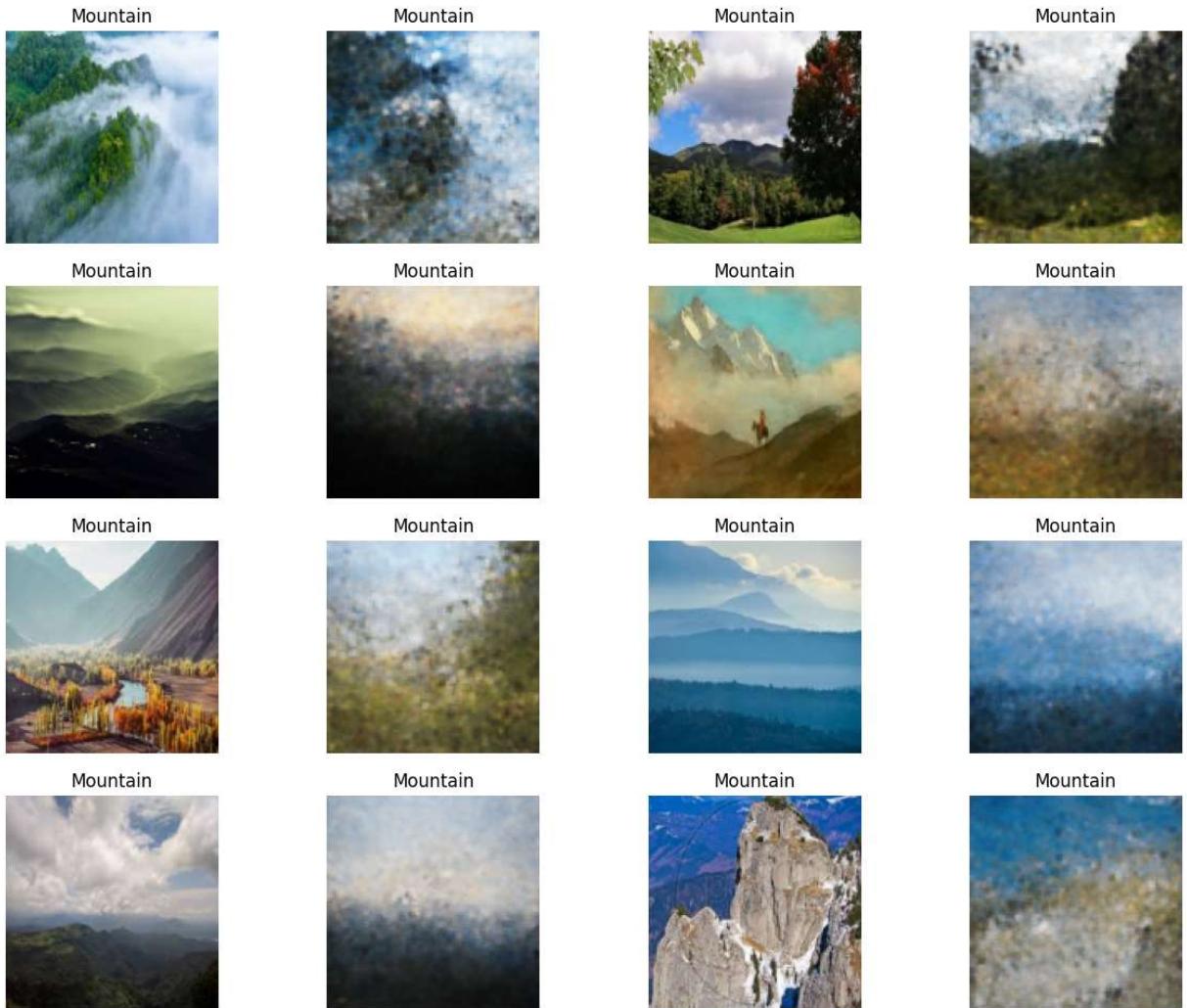
```
120/120 [=====] - 18s 149ms/step - loss: 47.5455 - reconstruction_error: 28.9071 - regularization_error: 18.6384 - val_loss: 66.7259 - val_reconstruction_error: 49.4400 - val_regularization_error: 17.2859
Epoch 152/1000
120/120 [=====] - 16s 131ms/step - loss: 47.3039 - reconstruction_error: 28.7520 - regularization_error: 18.5519 - val_loss: 66.7106 - val_reconstruction_error: 49.9857 - val_regularization_error: 16.7250
Epoch 153/1000
120/120 [=====] - 15s 123ms/step - loss: 47.3748 - reconstruction_error: 28.7290 - regularization_error: 18.6459 - val_loss: 66.7525 - val_reconstruction_error: 48.7687 - val_regularization_error: 17.9838
Epoch 154/1000
120/120 [=====] - 16s 132ms/step - loss: 48.0707 - reconstruction_error: 29.2491 - regularization_error: 18.8216 - val_loss: 66.5645 - val_reconstruction_error: 49.5161 - val_regularization_error: 17.0484
Epoch 155/1000
120/120 [=====] - 18s 146ms/step - loss: 47.0897 - reconstruction_error: 28.4333 - regularization_error: 18.6564 - val_loss: 66.6468 - val_reconstruction_error: 49.4829 - val_regularization_error: 17.1638
Epoch 156/1000
120/120 [=====] - 16s 131ms/step - loss: 46.9339 - reconstruction_error: 28.3596 - regularization_error: 18.5744 - val_loss: 67.1646 - val_reconstruction_error: 49.7887 - val_regularization_error: 17.3759
Epoch 157/1000
120/120 [=====] - 14s 115ms/step - loss: 46.9955 - reconstruction_error: 28.4855 - regularization_error: 18.5101 - val_loss: 67.6432 - val_reconstruction_error: 49.2101 - val_regularization_error: 18.4331
Epoch 158/1000
120/120 [=====] - 14s 118ms/step - loss: 46.9974 - reconstruction_error: 28.2237 - regularization_error: 18.7737 - val_loss: 67.0352 - val_reconstruction_error: 49.5899 - val_regularization_error: 17.4453
Epoch 159/1000
120/120 [=====] - 15s 120ms/step - loss: 46.8812 - reconstruction_error: 28.2556 - regularization_error: 18.6256 - val_loss: 67.5175 - val_reconstruction_error: 49.5421 - val_regularization_error: 17.9754
Epoch 160/1000
120/120 [=====] - 16s 130ms/step - loss: 47.1373 - reconstruction_error: 28.3614 - regularization_error: 18.7758 - val_loss: 66.5560 - val_reconstruction_error: 49.1113 - val_regularization_error: 17.4447
Epoch 161/1000
120/120 [=====] - ETA: 0s - loss: 47.1637 - reconstruction_error: 28.4240 - regularization_error: 18.7397
[2023-12-02 17:24:29.694898]: Reconstructing images for epoch 161 ...
```



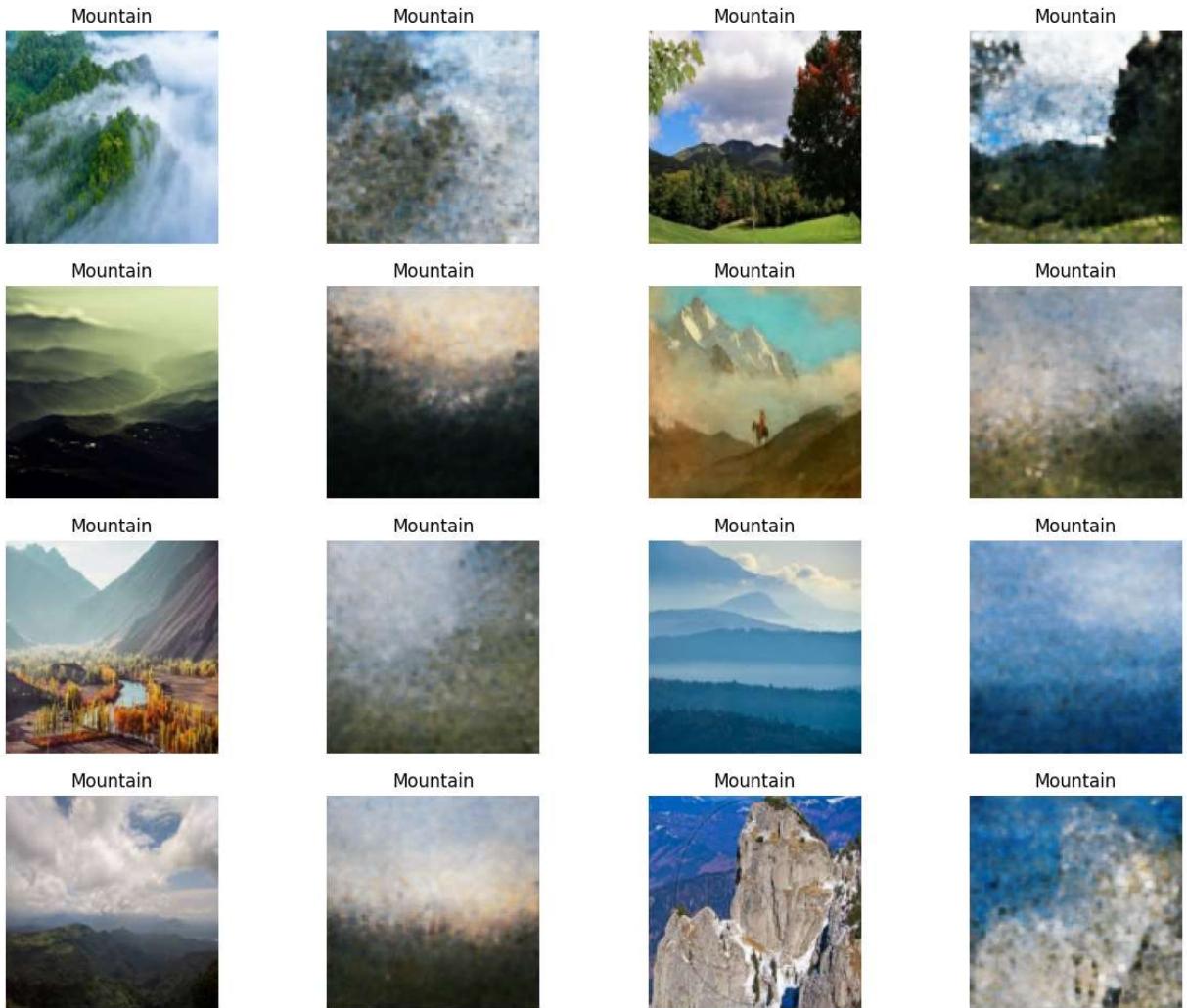
```
120/120 [=====] - 20s 169ms/step - loss: 47.1637 - reconstruction_error: 28.4240 - regularization_error: 18.7397 - val_loss: 67.9050 - val_reconstruction_error: 51.5167 - val_regularization_error: 16.3883
Epoch 162/1000
120/120 [=====] - 15s 125ms/step - loss: 46.8981 - reconstruction_error: 28.1543 - regularization_error: 18.7438 - val_loss: 68.1176 - val_reconstruction_error: 48.6405 - val_regularization_error: 19.4771
Epoch 163/1000
120/120 [=====] - 15s 123ms/step - loss: 46.9469 - reconstruction_error: 28.1004 - regularization_error: 18.8465 - val_loss: 67.0312 - val_reconstruction_error: 50.1414 - val_regularization_error: 16.8898
Epoch 164/1000
120/120 [=====] - 17s 142ms/step - loss: 46.3458 - reconstruction_error: 27.7931 - regularization_error: 18.5527 - val_loss: 66.2151 - val_reconstruction_error: 49.1313 - val_regularization_error: 17.0838
Epoch 165/1000
120/120 [=====] - 16s 129ms/step - loss: 46.8054 - reconstruction_error: 27.9821 - regularization_error: 18.8233 - val_loss: 68.0401 - val_reconstruction_error: 49.5592 - val_regularization_error: 18.4809
Epoch 166/1000
120/120 [=====] - 17s 140ms/step - loss: 46.5344 - reconstruction_error: 27.7526 - regularization_error: 18.7818 - val_loss: 66.4605 - val_reconstruction_error: 49.2063 - val_regularization_error: 17.2542
Epoch 167/1000
120/120 [=====] - 14s 117ms/step - loss: 46.5299 - reconstruction_error: 27.7424 - regularization_error: 18.7875 - val_loss: 66.6079 - val_reconstruction_error: 49.1346 - val_regularization_error: 17.4733
Epoch 168/1000
120/120 [=====] - 15s 115ms/step - loss: 46.5420 - reconstruction_error: 27.6871 - regularization_error: 18.8549 - val_loss: 67.0327 - val_reconstruction_error: 50.0924 - val_regularization_error: 16.9403
Epoch 169/1000
120/120 [=====] - 15s 128ms/step - loss: 46.4439 - reconstruction_error: 27.7511 - regularization_error: 18.6929 - val_loss: 66.4406 - val_reconstruction_error: 49.2891 - val_regularization_error: 17.1514
Epoch 170/1000
120/120 [=====] - 17s 141ms/step - loss: 46.6068 - reconstruction_error: 27.7225 - regularization_error: 18.8842 - val_loss: 66.9124 - val_reconstruction_error: 48.4884 - val_regularization_error: 18.4240
Epoch 171/1000
120/120 [=====] - ETA: 0s - loss: 46.4292 - reconstruction_error: 27.6554 - regularization_error: 18.7739
[2023-12-02 17:27:18.560260]: Reconstructing images for epoch 171 ...
```



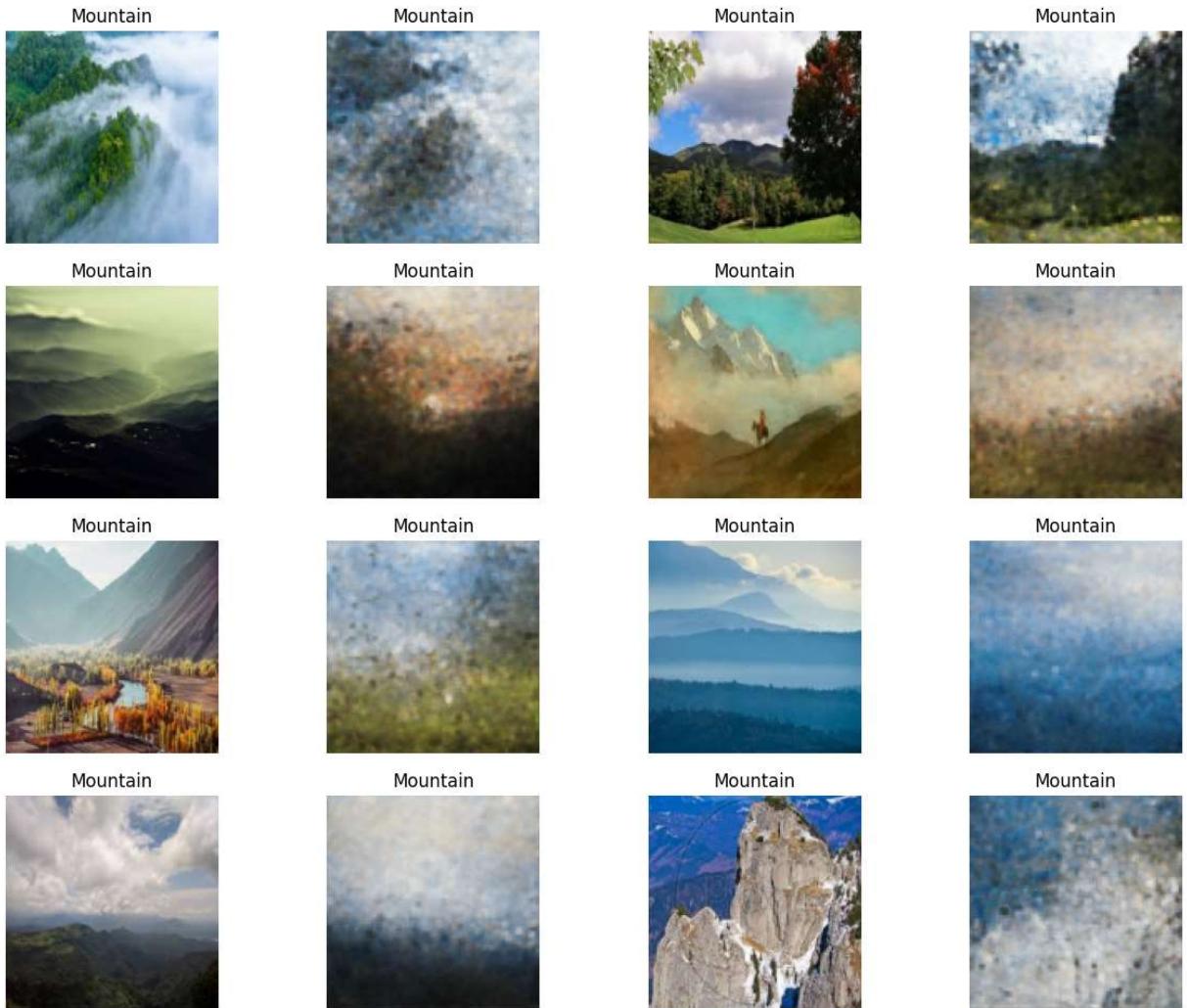
```
120/120 [=====] - 20s 163ms/step - loss: 46.4292 - reconstruction_error: 27.6554 - regularization_error: 18.7739 - val_loss: 67.6433 - val_reconstruction_error: 49.7063 - val_regularization_error: 17.9370
Epoch 172/1000
120/120 [=====] - 15s 125ms/step - loss: 46.4140 - reconstruction_error: 27.4929 - regularization_error: 18.9210 - val_loss: 67.8788 - val_reconstruction_error: 50.0625 - val_regularization_error: 17.8162
Epoch 173/1000
120/120 [=====] - 16s 137ms/step - loss: 46.3814 - reconstruction_error: 27.4722 - regularization_error: 18.9092 - val_loss: 67.7499 - val_reconstruction_error: 49.6959 - val_regularization_error: 18.0539
Epoch 174/1000
120/120 [=====] - 13s 110ms/step - loss: 46.3756 - reconstruction_error: 27.5118 - regularization_error: 18.8639 - val_loss: 66.1093 - val_reconstruction_error: 49.0978 - val_regularization_error: 17.0115
Epoch 175/1000
120/120 [=====] - 18s 145ms/step - loss: 46.2608 - reconstruction_error: 27.4459 - regularization_error: 18.8149 - val_loss: 66.6327 - val_reconstruction_error: 50.9012 - val_regularization_error: 15.7316
Epoch 176/1000
120/120 [=====] - 14s 118ms/step - loss: 46.1287 - reconstruction_error: 27.3597 - regularization_error: 18.7690 - val_loss: 67.1227 - val_reconstruction_error: 49.3716 - val_regularization_error: 17.7511
Epoch 177/1000
120/120 [=====] - 15s 126ms/step - loss: 46.3857 - reconstruction_error: 27.5064 - regularization_error: 18.8793 - val_loss: 66.6467 - val_reconstruction_error: 49.4361 - val_regularization_error: 17.2105
Epoch 178/1000
120/120 [=====] - 16s 134ms/step - loss: 46.0870 - reconstruction_error: 27.2844 - regularization_error: 18.8027 - val_loss: 67.6433 - val_reconstruction_error: 50.0730 - val_regularization_error: 17.5703
Epoch 179/1000
120/120 [=====] - 17s 145ms/step - loss: 45.9667 - reconstruction_error: 27.1108 - regularization_error: 18.8559 - val_loss: 67.2013 - val_reconstruction_error: 48.6803 - val_regularization_error: 18.5211
Epoch 180/1000
120/120 [=====] - 16s 136ms/step - loss: 45.8518 - reconstruction_error: 27.0350 - regularization_error: 18.8168 - val_loss: 66.8019 - val_reconstruction_error: 51.1754 - val_regularization_error: 15.6265
Epoch 181/1000
120/120 [=====] - ETA: 0s - loss: 46.4334 - reconstruction_error: 27.3480 - regularization_error: 19.0854
[2023-12-02 17:30:00.227713]: Reconstructing images for epoch 181 ...
```



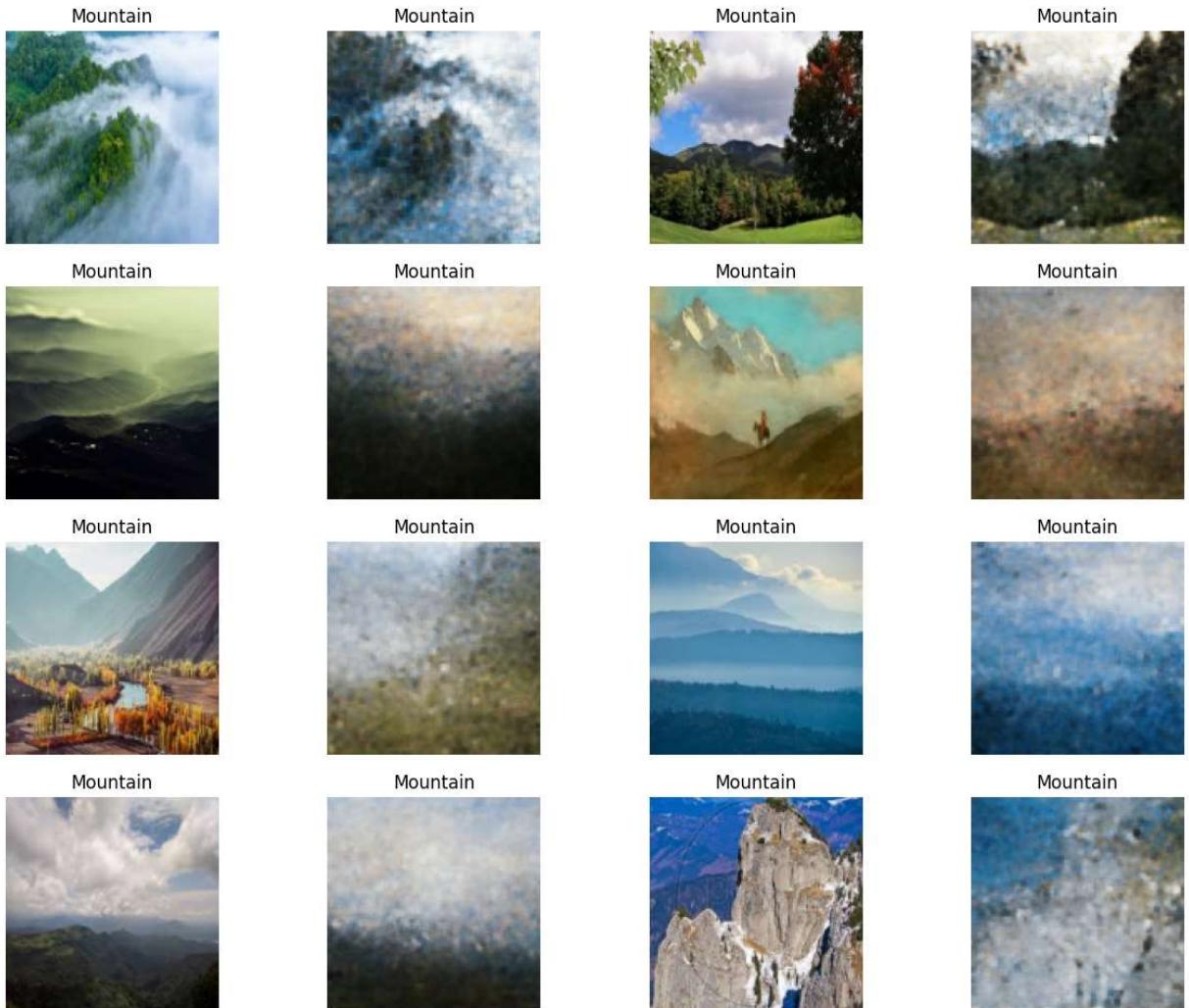
```
120/120 [=====] - 18s 148ms/step - loss: 46.4334 - reconstruction_error: 27.3480 - regularization_error: 19.0854 - val_loss: 66.5108 - val_reconstruction_error: 50.3503 - val_regularization_error: 16.1605
Epoch 182/1000
120/120 [=====] - 13s 104ms/step - loss: 45.9014 - reconstruction_error: 27.0056 - regularization_error: 18.8959 - val_loss: 67.9782 - val_reconstruction_error: 51.1238 - val_regularization_error: 16.8544
Epoch 183/1000
120/120 [=====] - 15s 125ms/step - loss: 46.1616 - reconstruction_error: 27.1908 - regularization_error: 18.9709 - val_loss: 66.4709 - val_reconstruction_error: 50.4551 - val_regularization_error: 16.0158
Epoch 184/1000
120/120 [=====] - 18s 154ms/step - loss: 45.7819 - reconstruction_error: 26.9626 - regularization_error: 18.8192 - val_loss: 66.9519 - val_reconstruction_error: 49.6304 - val_regularization_error: 17.3214
Epoch 185/1000
120/120 [=====] - 18s 149ms/step - loss: 45.5918 - reconstruction_error: 26.7742 - regularization_error: 18.8176 - val_loss: 67.0611 - val_reconstruction_error: 50.1405 - val_regularization_error: 16.9207
Epoch 186/1000
120/120 [=====] - 17s 141ms/step - loss: 45.5507 - reconstruction_error: 26.7288 - regularization_error: 18.8218 - val_loss: 67.3564 - val_reconstruction_error: 50.4141 - val_regularization_error: 16.9423
Epoch 187/1000
120/120 [=====] - 14s 114ms/step - loss: 45.6770 - reconstruction_error: 26.8227 - regularization_error: 18.8543 - val_loss: 66.7047 - val_reconstruction_error: 48.8624 - val_regularization_error: 17.8423
Epoch 188/1000
120/120 [=====] - 16s 130ms/step - loss: 45.7369 - reconstruction_error: 26.8885 - regularization_error: 18.8484 - val_loss: 69.0309 - val_reconstruction_error: 52.1412 - val_regularization_error: 16.8897
Epoch 189/1000
120/120 [=====] - 17s 144ms/step - loss: 45.7930 - reconstruction_error: 26.8324 - regularization_error: 18.9606 - val_loss: 67.6524 - val_reconstruction_error: 49.7504 - val_regularization_error: 17.9020
Epoch 190/1000
120/120 [=====] - 17s 136ms/step - loss: 45.9544 - reconstruction_error: 26.9531 - regularization_error: 19.0014 - val_loss: 66.7784 - val_reconstruction_error: 50.3302 - val_regularization_error: 16.4482
Epoch 191/1000
120/120 [=====] - ETA: 0s - loss: 45.6182 - reconstruction_error: 26.5306 - regularization_error: 19.0876
[2023-12-02 17:32:44.279584]: Reconstructing images for epoch 191 ...
```



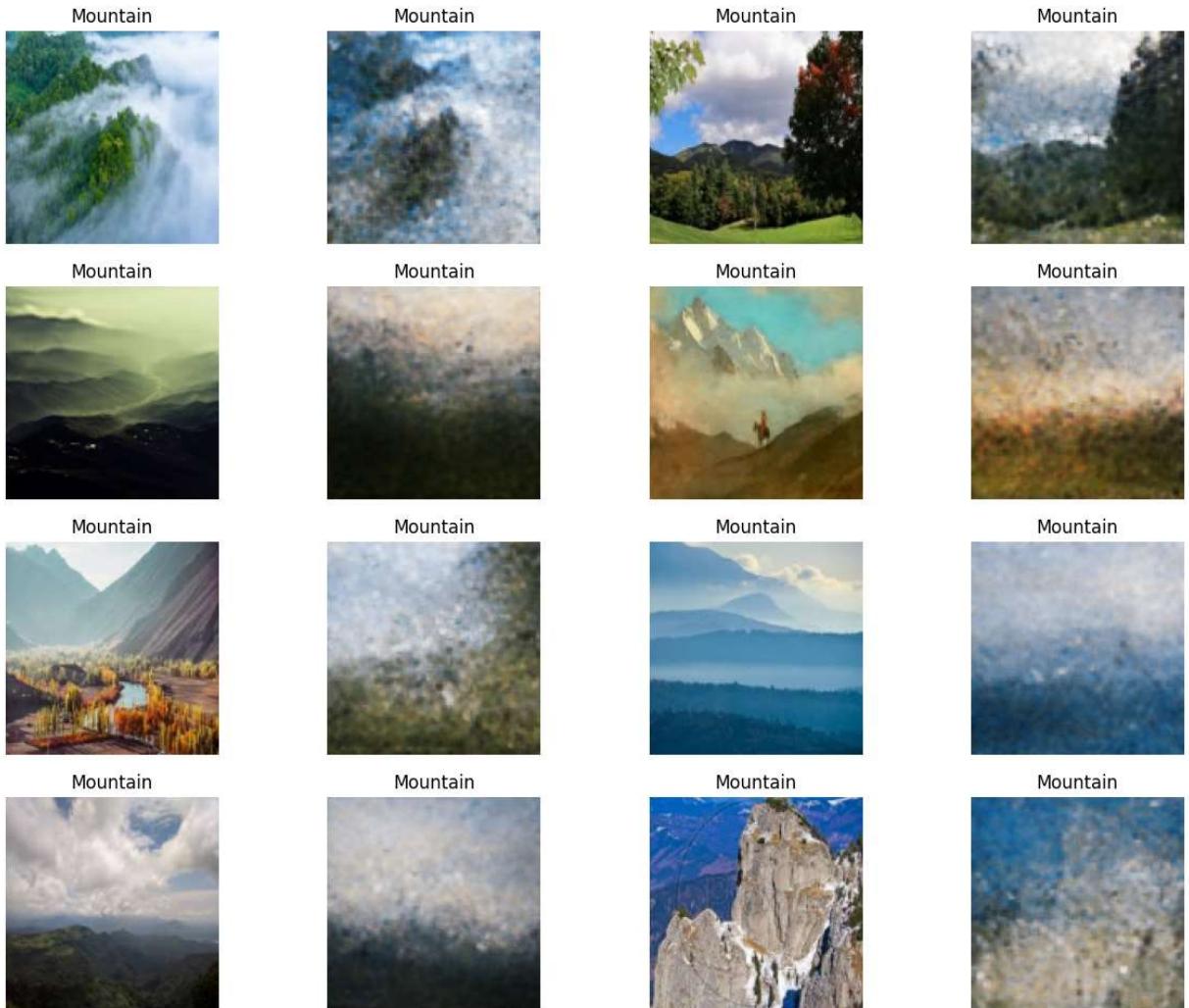
```
120/120 [=====] - 19s 155ms/step - loss: 45.6182 - reconstruction_error: 26.5306 - regularization_error: 19.0876 - val_loss: 66.6742 - val_reconstruction_error: 49.0730 - val_regularization_error: 17.6012
Epoch 192/1000
120/120 [=====] - 15s 119ms/step - loss: 45.4237 - reconstruction_error: 26.4784 - regularization_error: 18.9453 - val_loss: 67.4953 - val_reconstruction_error: 49.8464 - val_regularization_error: 17.6490
Epoch 193/1000
120/120 [=====] - 17s 138ms/step - loss: 45.3785 - reconstruction_error: 26.4506 - regularization_error: 18.9278 - val_loss: 67.3068 - val_reconstruction_error: 50.8996 - val_regularization_error: 16.4072
Epoch 194/1000
120/120 [=====] - 17s 142ms/step - loss: 45.7743 - reconstruction_error: 26.7841 - regularization_error: 18.9902 - val_loss: 67.3397 - val_reconstruction_error: 50.3223 - val_regularization_error: 17.0174
Epoch 195/1000
120/120 [=====] - 17s 141ms/step - loss: 45.4850 - reconstruction_error: 26.5996 - regularization_error: 18.8854 - val_loss: 68.7230 - val_reconstruction_error: 50.0916 - val_regularization_error: 18.6315
Epoch 196/1000
120/120 [=====] - 19s 159ms/step - loss: 45.3032 - reconstruction_error: 26.2664 - regularization_error: 19.0368 - val_loss: 68.3805 - val_reconstruction_error: 50.7533 - val_regularization_error: 17.6272
Epoch 197/1000
120/120 [=====] - 15s 124ms/step - loss: 45.5465 - reconstruction_error: 26.5617 - regularization_error: 18.9848 - val_loss: 67.1989 - val_reconstruction_error: 49.2671 - val_regularization_error: 17.9318
Epoch 198/1000
120/120 [=====] - 17s 143ms/step - loss: 45.5877 - reconstruction_error: 26.5276 - regularization_error: 19.0600 - val_loss: 67.5121 - val_reconstruction_error: 50.2205 - val_regularization_error: 17.2916
Epoch 199/1000
120/120 [=====] - 20s 165ms/step - loss: 45.2313 - reconstruction_error: 26.2551 - regularization_error: 18.9762 - val_loss: 67.5290 - val_reconstruction_error: 51.0731 - val_regularization_error: 16.4559
Epoch 200/1000
120/120 [=====] - 18s 147ms/step - loss: 45.3410 - reconstruction_error: 26.2003 - regularization_error: 19.1407 - val_loss: 68.2952 - val_reconstruction_error: 49.8958 - val_regularization_error: 18.3994
Epoch 201/1000
120/120 [=====] - ETA: 0s - loss: 44.8984 - reconstruction_error: 25.9788 - regularization_error: 18.9197
[2023-12-02 17:35:42.892575]: Reconstructing images for epoch 201 ...
```



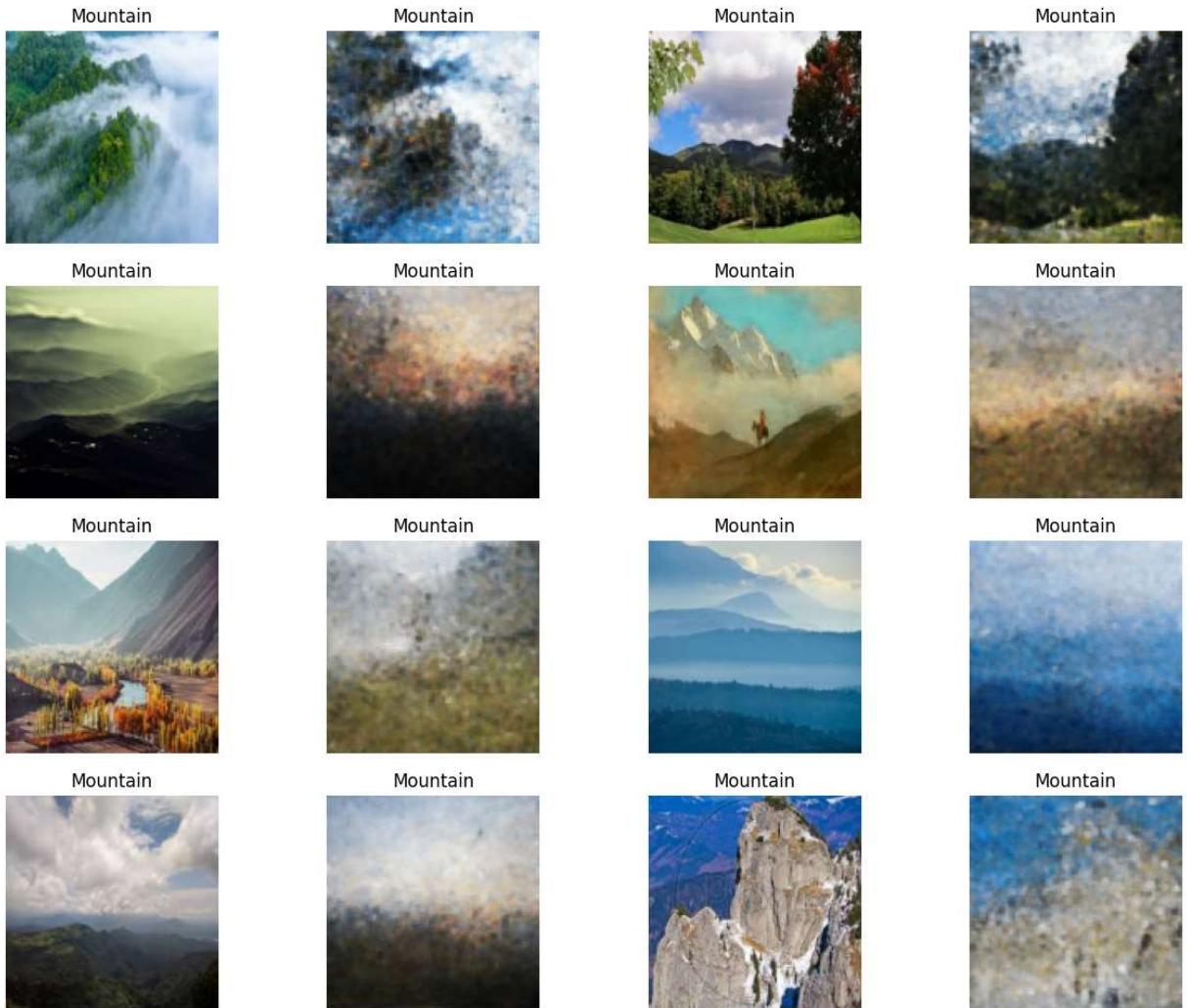
```
120/120 [=====] - 22s 183ms/step - loss: 44.8984 - reconstruction_error: 25.9788 - regularization_error: 18.9197 - val_loss: 66.4801 - val_reconstruction_error: 49.5122 - val_regularization_error: 16.9679
Epoch 202/1000
120/120 [=====] - 17s 145ms/step - loss: 45.6566 - reconstruction_error: 26.6448 - regularization_error: 19.0118 - val_loss: 69.0810 - val_reconstruction_error: 52.4070 - val_regularization_error: 16.6740
Epoch 203/1000
120/120 [=====] - 16s 128ms/step - loss: 45.2043 - reconstruction_error: 26.1970 - regularization_error: 19.0072 - val_loss: 67.9912 - val_reconstruction_error: 50.3006 - val_regularization_error: 17.6907
Epoch 204/1000
120/120 [=====] - 16s 130ms/step - loss: 45.0300 - reconstruction_error: 25.9721 - regularization_error: 19.0578 - val_loss: 68.3379 - val_reconstruction_error: 51.9794 - val_regularization_error: 16.3585
Epoch 205/1000
120/120 [=====] - 19s 153ms/step - loss: 45.3894 - reconstruction_error: 26.2085 - regularization_error: 19.1809 - val_loss: 67.4763 - val_reconstruction_error: 50.8091 - val_regularization_error: 16.6673
Epoch 206/1000
120/120 [=====] - 19s 158ms/step - loss: 45.2957 - reconstruction_error: 26.1036 - regularization_error: 19.1921 - val_loss: 66.7367 - val_reconstruction_error: 50.2932 - val_regularization_error: 16.4435
Epoch 207/1000
120/120 [=====] - 17s 137ms/step - loss: 44.8692 - reconstruction_error: 25.9024 - regularization_error: 18.9668 - val_loss: 68.8728 - val_reconstruction_error: 50.5501 - val_regularization_error: 18.3226
Epoch 208/1000
120/120 [=====] - 17s 139ms/step - loss: 44.8845 - reconstruction_error: 25.9005 - regularization_error: 18.9840 - val_loss: 68.0529 - val_reconstruction_error: 49.5470 - val_regularization_error: 18.5059
Epoch 209/1000
120/120 [=====] - 17s 144ms/step - loss: 44.9475 - reconstruction_error: 25.9188 - regularization_error: 19.0287 - val_loss: 66.4368 - val_reconstruction_error: 49.5705 - val_regularization_error: 16.8663
Epoch 210/1000
120/120 [=====] - 14s 119ms/step - loss: 44.5011 - reconstruction_error: 25.6081 - regularization_error: 18.8930 - val_loss: 67.4507 - val_reconstruction_error: 49.7855 - val_regularization_error: 17.6651
Epoch 211/1000
120/120 [=====] - ETA: 0s - loss: 44.8001 - reconstruction_error: 25.7560 - regularization_error: 19.0441
[2023-12-02 17:38:37.837967]: Reconstructing images for epoch 211 ...
```



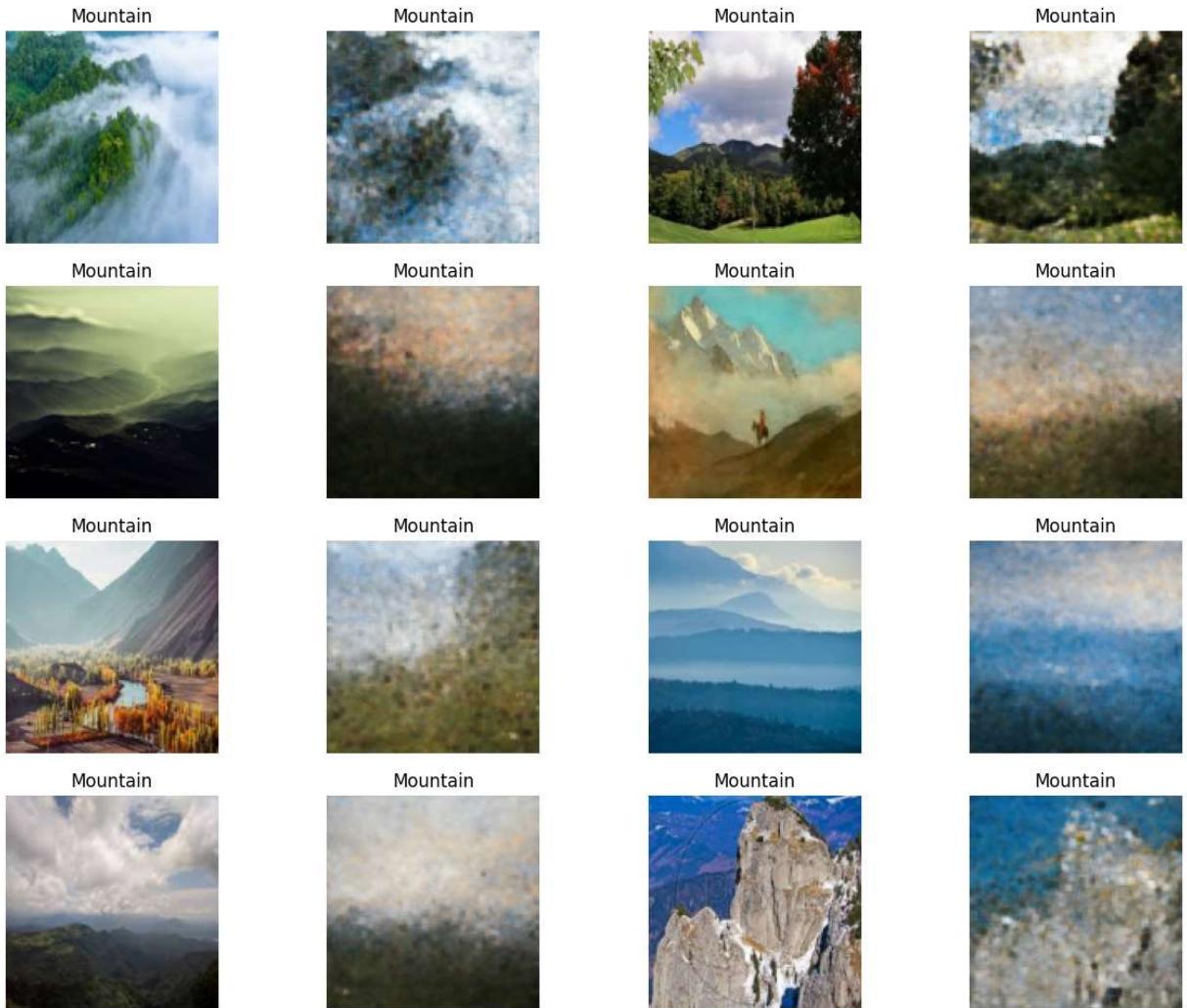
```
120/120 [=====] - 21s 174ms/step - loss: 44.8001 - reconstruction_error: 25.7560 - regularization_error: 19.0441 - val_loss: 67.1759 - val_reconstruction_error: 49.4275 - val_regularization_error: 17.7484
Epoch 212/1000
120/120 [=====] - 15s 128ms/step - loss: 45.0975 - reconstruction_error: 25.9841 - regularization_error: 19.1133 - val_loss: 67.2600 - val_reconstruction_error: 50.0614 - val_regularization_error: 17.1986
Epoch 213/1000
120/120 [=====] - 17s 143ms/step - loss: 44.5580 - reconstruction_error: 25.6326 - regularization_error: 18.9254 - val_loss: 67.3644 - val_reconstruction_error: 49.8121 - val_regularization_error: 17.5522
Epoch 214/1000
120/120 [=====] - 21s 171ms/step - loss: 44.6021 - reconstruction_error: 25.5417 - regularization_error: 19.0604 - val_loss: 66.8272 - val_reconstruction_error: 49.9835 - val_regularization_error: 16.8436
Epoch 215/1000
120/120 [=====] - 17s 141ms/step - loss: 45.0216 - reconstruction_error: 25.8741 - regularization_error: 19.1475 - val_loss: 69.2797 - val_reconstruction_error: 50.7720 - val_regularization_error: 18.5076
Epoch 216/1000
120/120 [=====] - 16s 132ms/step - loss: 44.6029 - reconstruction_error: 25.6636 - regularization_error: 18.9394 - val_loss: 69.6342 - val_reconstruction_error: 53.1959 - val_regularization_error: 16.4382
Epoch 217/1000
120/120 [=====] - 19s 159ms/step - loss: 44.7911 - reconstruction_error: 25.7550 - regularization_error: 19.0361 - val_loss: 68.2262 - val_reconstruction_error: 50.6112 - val_regularization_error: 17.6150
Epoch 218/1000
120/120 [=====] - 16s 130ms/step - loss: 44.4719 - reconstruction_error: 25.4770 - regularization_error: 18.9949 - val_loss: 67.7613 - val_reconstruction_error: 50.3580 - val_regularization_error: 17.4034
Epoch 219/1000
120/120 [=====] - 18s 145ms/step - loss: 44.8003 - reconstruction_error: 25.6248 - regularization_error: 19.1755 - val_loss: 66.4997 - val_reconstruction_error: 49.9511 - val_regularization_error: 16.5486
Epoch 220/1000
120/120 [=====] - 20s 164ms/step - loss: 44.7131 - reconstruction_error: 25.5297 - regularization_error: 19.1834 - val_loss: 67.1745 - val_reconstruction_error: 50.0323 - val_regularization_error: 17.1422
Epoch 221/1000
120/120 [=====] - ETA: 0s - loss: 44.3552 - reconstruction_error: 25.3254 - regularization_error: 19.0299
[2023-12-02 17:41:40.679186]: Reconstructing images for epoch 221 ...
```



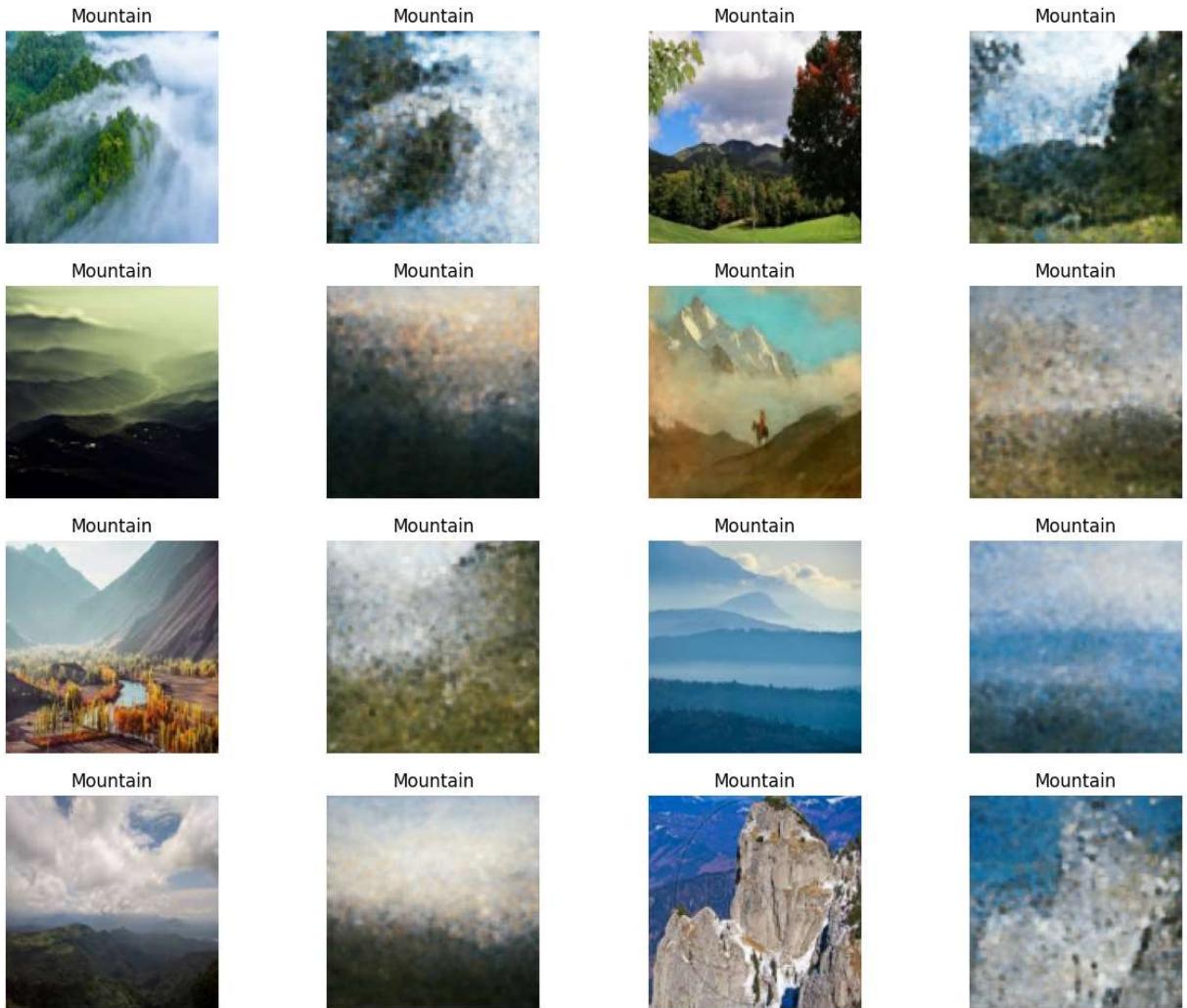
```
120/120 [=====] - 21s 176ms/step - loss: 44.3552 - reconstruction_error: 25.3254 - regularization_error: 19.0299 - val_loss: 66.2553 - val_reconstruction_error: 50.2501 - val_regularization_error: 16.0052
Epoch 222/1000
120/120 [=====] - 18s 151ms/step - loss: 44.6539 - reconstruction_error: 25.4545 - regularization_error: 19.1994 - val_loss: 67.4517 - val_reconstruction_error: 50.0503 - val_regularization_error: 17.4014
Epoch 223/1000
120/120 [=====] - 19s 154ms/step - loss: 44.5758 - reconstruction_error: 25.4184 - regularization_error: 19.1573 - val_loss: 67.1157 - val_reconstruction_error: 49.8310 - val_regularization_error: 17.2846
Epoch 224/1000
120/120 [=====] - 17s 144ms/step - loss: 44.4503 - reconstruction_error: 25.3978 - regularization_error: 19.0525 - val_loss: 70.2302 - val_reconstruction_error: 52.3573 - val_regularization_error: 17.8728
Epoch 225/1000
120/120 [=====] - 17s 142ms/step - loss: 44.3683 - reconstruction_error: 25.4867 - regularization_error: 18.8816 - val_loss: 68.2743 - val_reconstruction_error: 50.2197 - val_regularization_error: 18.0546
Epoch 226/1000
120/120 [=====] - 19s 154ms/step - loss: 44.2662 - reconstruction_error: 25.1671 - regularization_error: 19.0990 - val_loss: 66.9975 - val_reconstruction_error: 49.9609 - val_regularization_error: 17.0366
Epoch 227/1000
120/120 [=====] - 19s 160ms/step - loss: 44.4179 - reconstruction_error: 25.2651 - regularization_error: 19.1528 - val_loss: 66.8751 - val_reconstruction_error: 49.8001 - val_regularization_error: 17.0750
Epoch 228/1000
120/120 [=====] - 15s 126ms/step - loss: 44.4109 - reconstruction_error: 25.3286 - regularization_error: 19.0824 - val_loss: 68.0424 - val_reconstruction_error: 50.4677 - val_regularization_error: 17.5747
Epoch 229/1000
120/120 [=====] - 15s 123ms/step - loss: 44.5483 - reconstruction_error: 25.3454 - regularization_error: 19.2029 - val_loss: 68.1850 - val_reconstruction_error: 49.8049 - val_regularization_error: 18.3801
Epoch 230/1000
120/120 [=====] - 18s 149ms/step - loss: 44.1212 - reconstruction_error: 25.0099 - regularization_error: 19.1113 - val_loss: 67.5120 - val_reconstruction_error: 50.0383 - val_regularization_error: 17.4737
Epoch 231/1000
120/120 [=====] - ETA: 0s - loss: 44.4055 - reconstruction_error: 25.1902 - regularization_error: 19.2153
[2023-12-02 17:44:39.939836]: Reconstructing images for epoch 231 ...
```



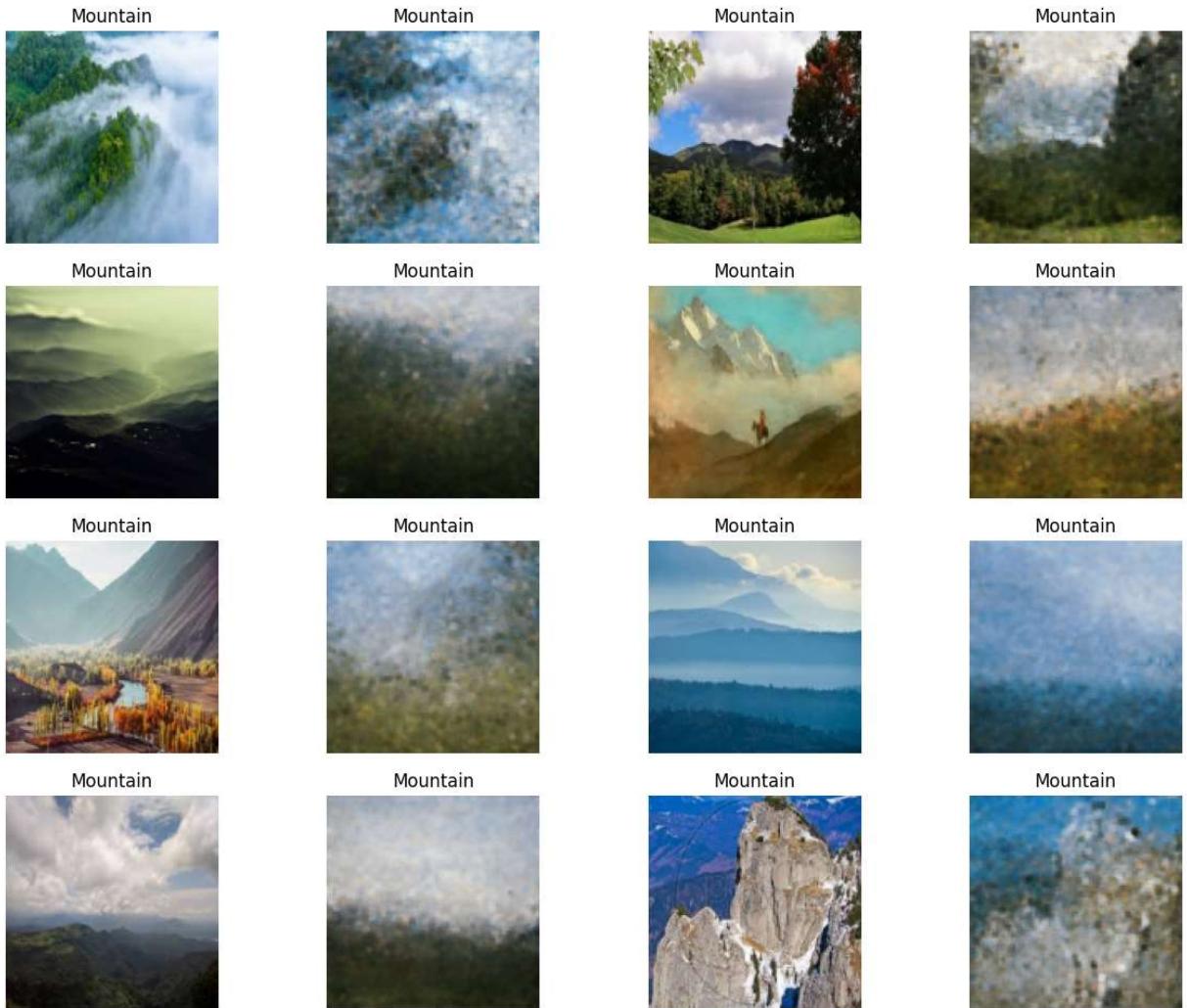
```
120/120 [=====] - 21s 177ms/step - loss: 44.4055 - reconstruction_error: 25.1902 - regularization_error: 19.2153 - val_loss: 67.9509 - val_reconstruction_error: 50.2328 - val_regularization_error: 17.7180
Epoch 232/1000
120/120 [=====] - 17s 135ms/step - loss: 43.9753 - reconstruction_error: 24.9172 - regularization_error: 19.0581 - val_loss: 69.1855 - val_reconstruction_error: 51.6314 - val_regularization_error: 17.5541
Epoch 233/1000
120/120 [=====] - 15s 126ms/step - loss: 43.9755 - reconstruction_error: 24.8077 - regularization_error: 19.1678 - val_loss: 66.7902 - val_reconstruction_error: 49.7506 - val_regularization_error: 17.0396
Epoch 234/1000
120/120 [=====] - 19s 153ms/step - loss: 44.0088 - reconstruction_error: 24.8671 - regularization_error: 19.1416 - val_loss: 67.6140 - val_reconstruction_error: 50.1513 - val_regularization_error: 17.4627
Epoch 235/1000
120/120 [=====] - 17s 137ms/step - loss: 44.0209 - reconstruction_error: 24.8657 - regularization_error: 19.1552 - val_loss: 68.4602 - val_reconstruction_error: 51.2284 - val_regularization_error: 17.2318
Epoch 236/1000
120/120 [=====] - 17s 138ms/step - loss: 44.0033 - reconstruction_error: 24.8876 - regularization_error: 19.1157 - val_loss: 67.4887 - val_reconstruction_error: 50.1358 - val_regularization_error: 17.3529
Epoch 237/1000
120/120 [=====] - 17s 142ms/step - loss: 43.9105 - reconstruction_error: 24.6388 - regularization_error: 19.2717 - val_loss: 68.2725 - val_reconstruction_error: 49.7000 - val_regularization_error: 18.5725
Epoch 238/1000
120/120 [=====] - 18s 147ms/step - loss: 43.9112 - reconstruction_error: 24.6611 - regularization_error: 19.2501 - val_loss: 67.5085 - val_reconstruction_error: 50.0745 - val_regularization_error: 17.4339
Epoch 239/1000
120/120 [=====] - 18s 146ms/step - loss: 44.5603 - reconstruction_error: 25.2841 - regularization_error: 19.2762 - val_loss: 67.6021 - val_reconstruction_error: 49.5248 - val_regularization_error: 18.0774
Epoch 240/1000
120/120 [=====] - 18s 150ms/step - loss: 44.0878 - reconstruction_error: 24.7576 - regularization_error: 19.3303 - val_loss: 67.6142 - val_reconstruction_error: 49.6410 - val_regularization_error: 17.9732
Epoch 241/1000
120/120 [=====] - ETA: 0s - loss: 43.6464 - reconstruction_error: 24.5390 - regularization_error: 19.1074
[2023-12-02 17:47:37.836698]: Reconstructing images for epoch 241 ...
```



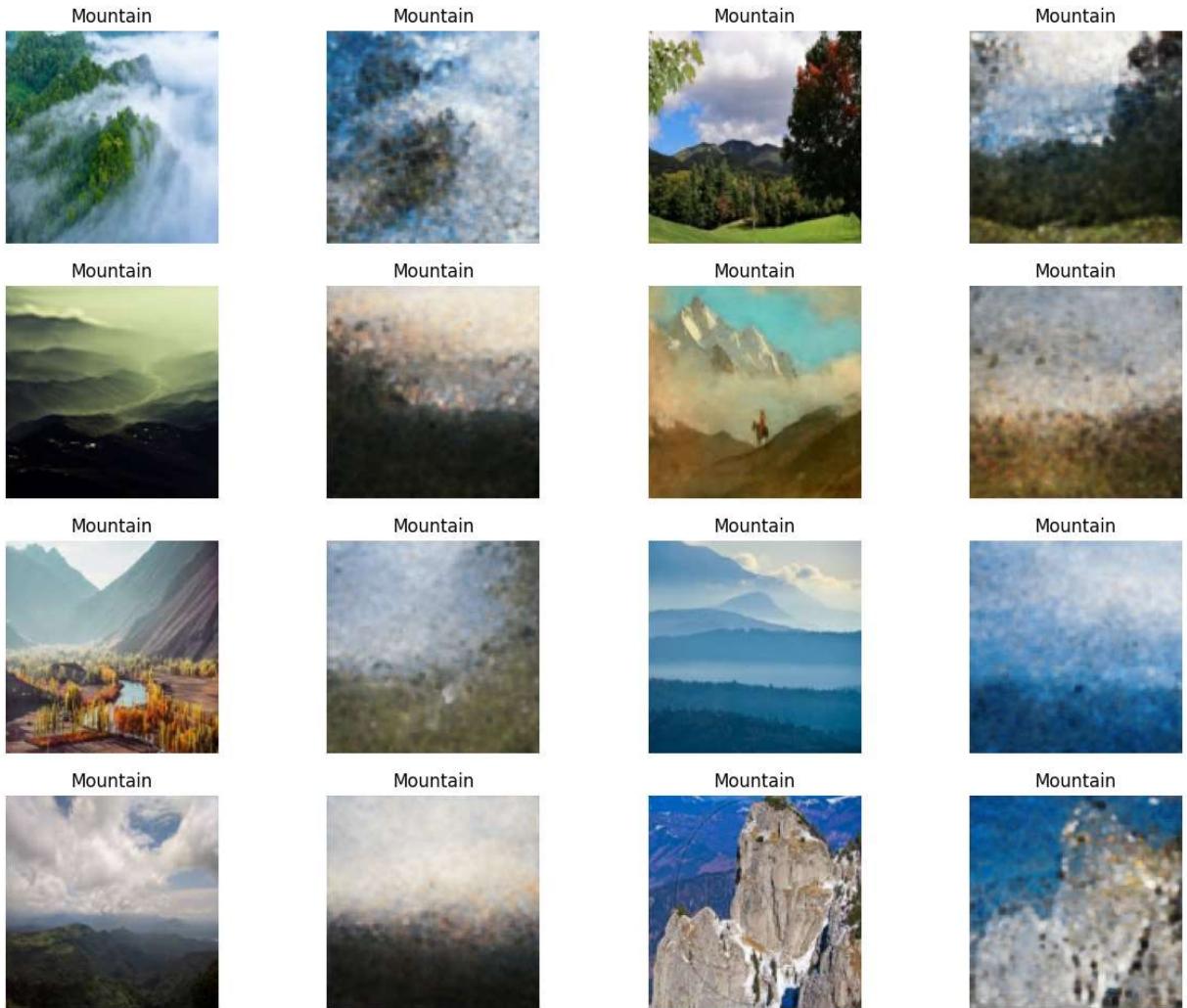
```
120/120 [=====] - 21s 173ms/step - loss: 43.6464 - reconstruction_error: 24.5390 - regularization_error: 19.1074 - val_loss: 68.8473 - val_reconstruction_error: 50.6059 - val_regularization_error: 18.2413
Epoch 242/1000
120/120 [=====] - 16s 137ms/step - loss: 44.0435 - reconstruction_error: 24.8801 - regularization_error: 19.1634 - val_loss: 68.4000 - val_reconstruction_error: 50.7256 - val_regularization_error: 17.6744
Epoch 243/1000
120/120 [=====] - 19s 154ms/step - loss: 43.9281 - reconstruction_error: 24.6626 - regularization_error: 19.2655 - val_loss: 67.6937 - val_reconstruction_error: 49.8512 - val_regularization_error: 17.8425
Epoch 244/1000
120/120 [=====] - 18s 148ms/step - loss: 43.5486 - reconstruction_error: 24.4474 - regularization_error: 19.1011 - val_loss: 68.2934 - val_reconstruction_error: 50.6904 - val_regularization_error: 17.6030
Epoch 245/1000
120/120 [=====] - 17s 142ms/step - loss: 43.7776 - reconstruction_error: 24.5955 - regularization_error: 19.1821 - val_loss: 66.8246 - val_reconstruction_error: 51.1880 - val_regularization_error: 15.6366
Epoch 246/1000
120/120 [=====] - 19s 156ms/step - loss: 43.9896 - reconstruction_error: 24.8529 - regularization_error: 19.1367 - val_loss: 68.5980 - val_reconstruction_error: 51.0363 - val_regularization_error: 17.5617
Epoch 247/1000
120/120 [=====] - 16s 133ms/step - loss: 43.9739 - reconstruction_error: 24.7644 - regularization_error: 19.2096 - val_loss: 67.0985 - val_reconstruction_error: 50.7245 - val_regularization_error: 16.3740
Epoch 248/1000
120/120 [=====] - 16s 135ms/step - loss: 43.5405 - reconstruction_error: 24.4172 - regularization_error: 19.1233 - val_loss: 68.4616 - val_reconstruction_error: 50.2181 - val_regularization_error: 18.2435
Epoch 249/1000
120/120 [=====] - 15s 120ms/step - loss: 43.5090 - reconstruction_error: 24.3056 - regularization_error: 19.2034 - val_loss: 67.4736 - val_reconstruction_error: 49.9544 - val_regularization_error: 17.5192
Epoch 250/1000
120/120 [=====] - 18s 148ms/step - loss: 43.5174 - reconstruction_error: 24.2553 - regularization_error: 19.2621 - val_loss: 67.3837 - val_reconstruction_error: 50.7787 - val_regularization_error: 16.6050
Epoch 251/1000
120/120 [=====] - ETA: 0s - loss: 43.5103 - reconstruction_error: 24.3175 - regularization_error: 19.1928
[2023-12-02 17:50:31.805258]: Reconstructing images for epoch 251 ...
```



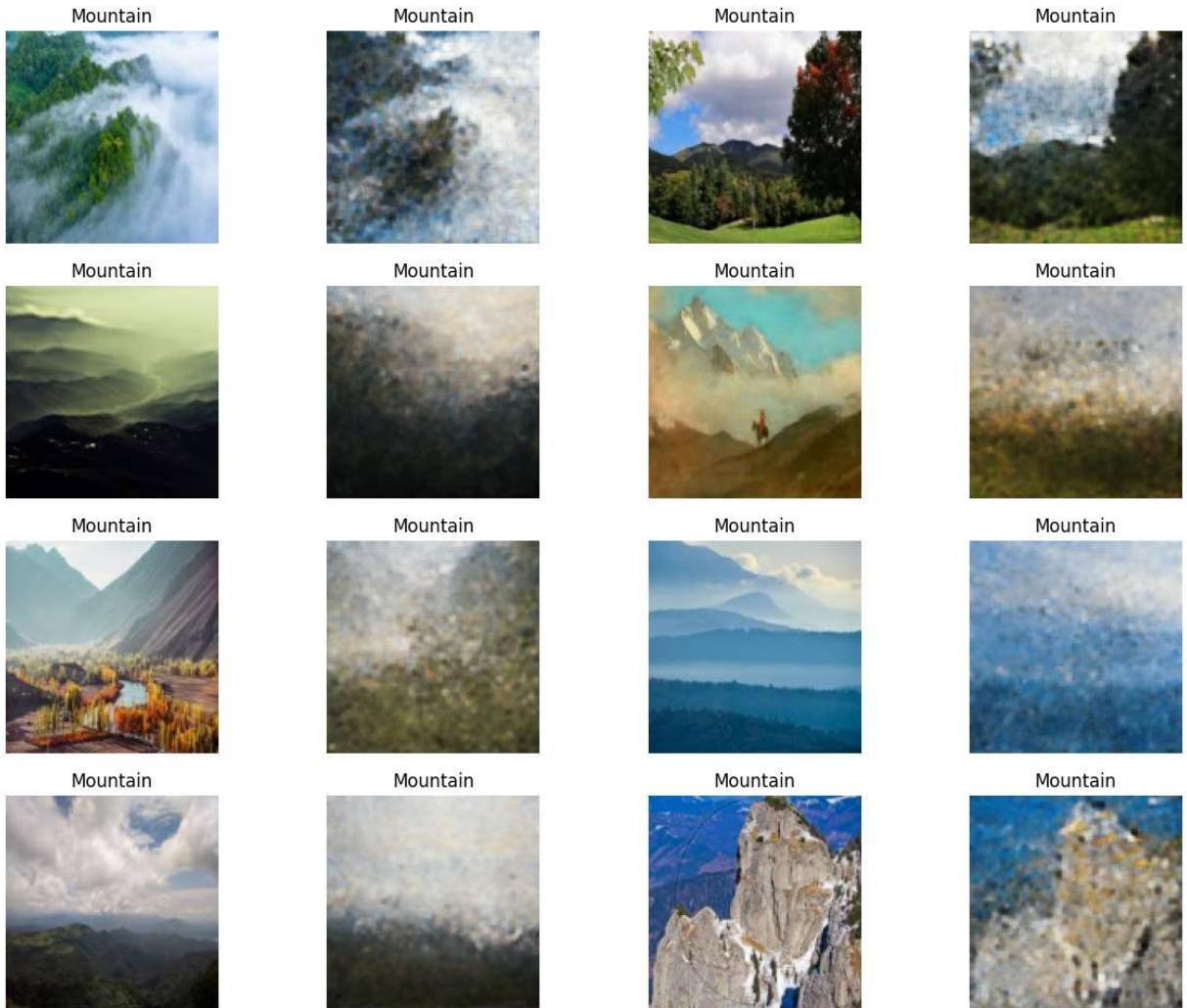
```
120/120 [=====] - 17s 139ms/step - loss: 43.5103 - reconstruction_error: 24.3175 - regularization_error: 19.1928 - val_loss: 68.7236 - val_reconstruction_error: 50.7646 - val_regularization_error: 17.9590
Epoch 252/1000
120/120 [=====] - 18s 154ms/step - loss: 43.8431 - reconstruction_error: 24.4918 - regularization_error: 19.3513 - val_loss: 68.0487 - val_reconstruction_error: 50.1140 - val_regularization_error: 17.9347
Epoch 253/1000
120/120 [=====] - 15s 128ms/step - loss: 43.5356 - reconstruction_error: 24.1706 - regularization_error: 19.3650 - val_loss: 66.5366 - val_reconstruction_error: 49.9097 - val_regularization_error: 16.6270
Epoch 254/1000
120/120 [=====] - 17s 137ms/step - loss: 43.6567 - reconstruction_error: 24.5065 - regularization_error: 19.1502 - val_loss: 68.5877 - val_reconstruction_error: 51.7203 - val_regularization_error: 16.8674
Epoch 255/1000
120/120 [=====] - 14s 118ms/step - loss: 43.3709 - reconstruction_error: 24.2944 - regularization_error: 19.0765 - val_loss: 68.4946 - val_reconstruction_error: 51.4342 - val_regularization_error: 17.0604
Epoch 256/1000
120/120 [=====] - 17s 144ms/step - loss: 43.8077 - reconstruction_error: 24.5123 - regularization_error: 19.2955 - val_loss: 66.9400 - val_reconstruction_error: 50.5364 - val_regularization_error: 16.4036
Epoch 257/1000
120/120 [=====] - 17s 141ms/step - loss: 43.1904 - reconstruction_error: 24.0777 - regularization_error: 19.1128 - val_loss: 69.2399 - val_reconstruction_error: 50.8899 - val_regularization_error: 18.3500
Epoch 258/1000
120/120 [=====] - 15s 122ms/step - loss: 43.3459 - reconstruction_error: 24.1225 - regularization_error: 19.2234 - val_loss: 68.5459 - val_reconstruction_error: 50.9015 - val_regularization_error: 17.6443
Epoch 259/1000
120/120 [=====] - 15s 125ms/step - loss: 43.1919 - reconstruction_error: 24.0617 - regularization_error: 19.1302 - val_loss: 67.5486 - val_reconstruction_error: 50.8354 - val_regularization_error: 16.7132
Epoch 260/1000
120/120 [=====] - 15s 128ms/step - loss: 43.5725 - reconstruction_error: 24.2312 - regularization_error: 19.3413 - val_loss: 68.9117 - val_reconstruction_error: 51.0311 - val_regularization_error: 17.8805
Epoch 261/1000
120/120 [=====] - ETA: 0s - loss: 43.4282 - reconstruction_error: 24.2271 - regularization_error: 19.2010
[2023-12-02 17:53:16.251214]: Reconstructing images for epoch 261 ...
```



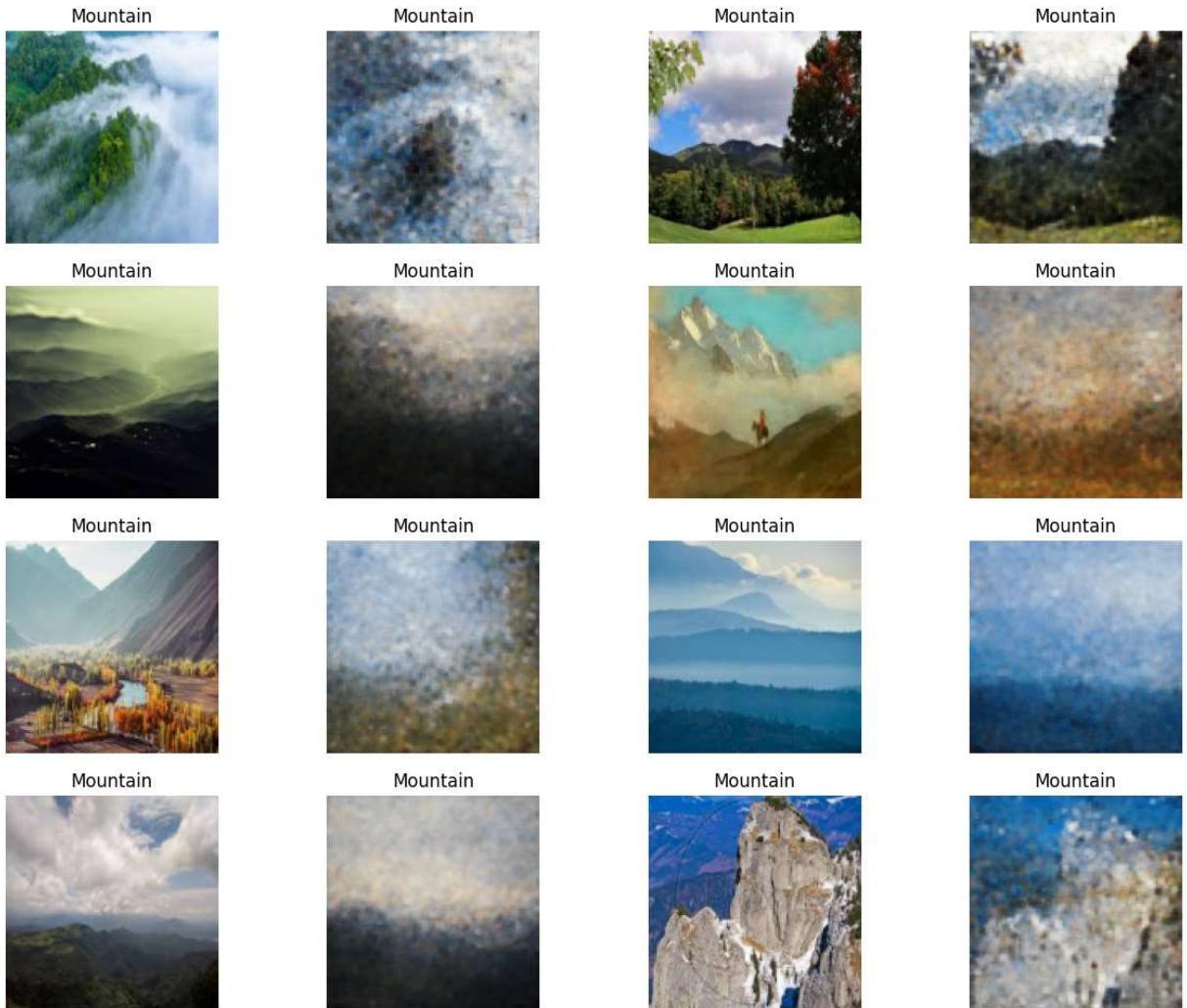
```
120/120 [=====] - 19s 159ms/step - loss: 43.4282 - reconstruction_error: 24.2271 - regularization_error: 19.2010 - val_loss: 67.8007 - val_reconstruction_error: 50.8902 - val_regularization_error: 16.9105
Epoch 262/1000
120/120 [=====] - 19s 162ms/step - loss: 43.5118 - reconstruction_error: 24.2088 - regularization_error: 19.3029 - val_loss: 67.9028 - val_reconstruction_error: 50.2299 - val_regularization_error: 17.6729
Epoch 263/1000
120/120 [=====] - 16s 136ms/step - loss: 43.1210 - reconstruction_error: 24.0370 - regularization_error: 19.0839 - val_loss: 68.6986 - val_reconstruction_error: 50.9708 - val_regularization_error: 17.7278
Epoch 264/1000
120/120 [=====] - 17s 143ms/step - loss: 43.1666 - reconstruction_error: 23.9827 - regularization_error: 19.1839 - val_loss: 69.9568 - val_reconstruction_error: 51.7499 - val_regularization_error: 18.2069
Epoch 265/1000
120/120 [=====] - 14s 118ms/step - loss: 43.3436 - reconstruction_error: 24.1663 - regularization_error: 19.1773 - val_loss: 69.4658 - val_reconstruction_error: 52.3962 - val_regularization_error: 17.0695
Epoch 266/1000
120/120 [=====] - 17s 138ms/step - loss: 43.1850 - reconstruction_error: 24.0300 - regularization_error: 19.1550 - val_loss: 66.6991 - val_reconstruction_error: 49.8389 - val_regularization_error: 16.8602
Epoch 267/1000
120/120 [=====] - 17s 140ms/step - loss: 42.9409 - reconstruction_error: 23.7365 - regularization_error: 19.2045 - val_loss: 67.6202 - val_reconstruction_error: 50.6540 - val_regularization_error: 16.9662
Epoch 268/1000
120/120 [=====] - 18s 148ms/step - loss: 42.8978 - reconstruction_error: 23.5981 - regularization_error: 19.2997 - val_loss: 67.0781 - val_reconstruction_error: 49.8121 - val_regularization_error: 17.2660
Epoch 269/1000
120/120 [=====] - 16s 130ms/step - loss: 43.3866 - reconstruction_error: 23.9718 - regularization_error: 19.4148 - val_loss: 67.5642 - val_reconstruction_error: 49.9836 - val_regularization_error: 17.5806
Epoch 270/1000
120/120 [=====] - 12s 100ms/step - loss: 42.8611 - reconstruction_error: 23.6429 - regularization_error: 19.2182 - val_loss: 69.4391 - val_reconstruction_error: 52.3925 - val_regularization_error: 17.0466
Epoch 271/1000
120/120 [=====] - ETA: 0s - loss: 42.9123 - reconstruction_error: 23.6910 - regularization_error: 19.2213
[2023-12-02 17:56:01.710705]: Reconstructing images for epoch 271 ...
```



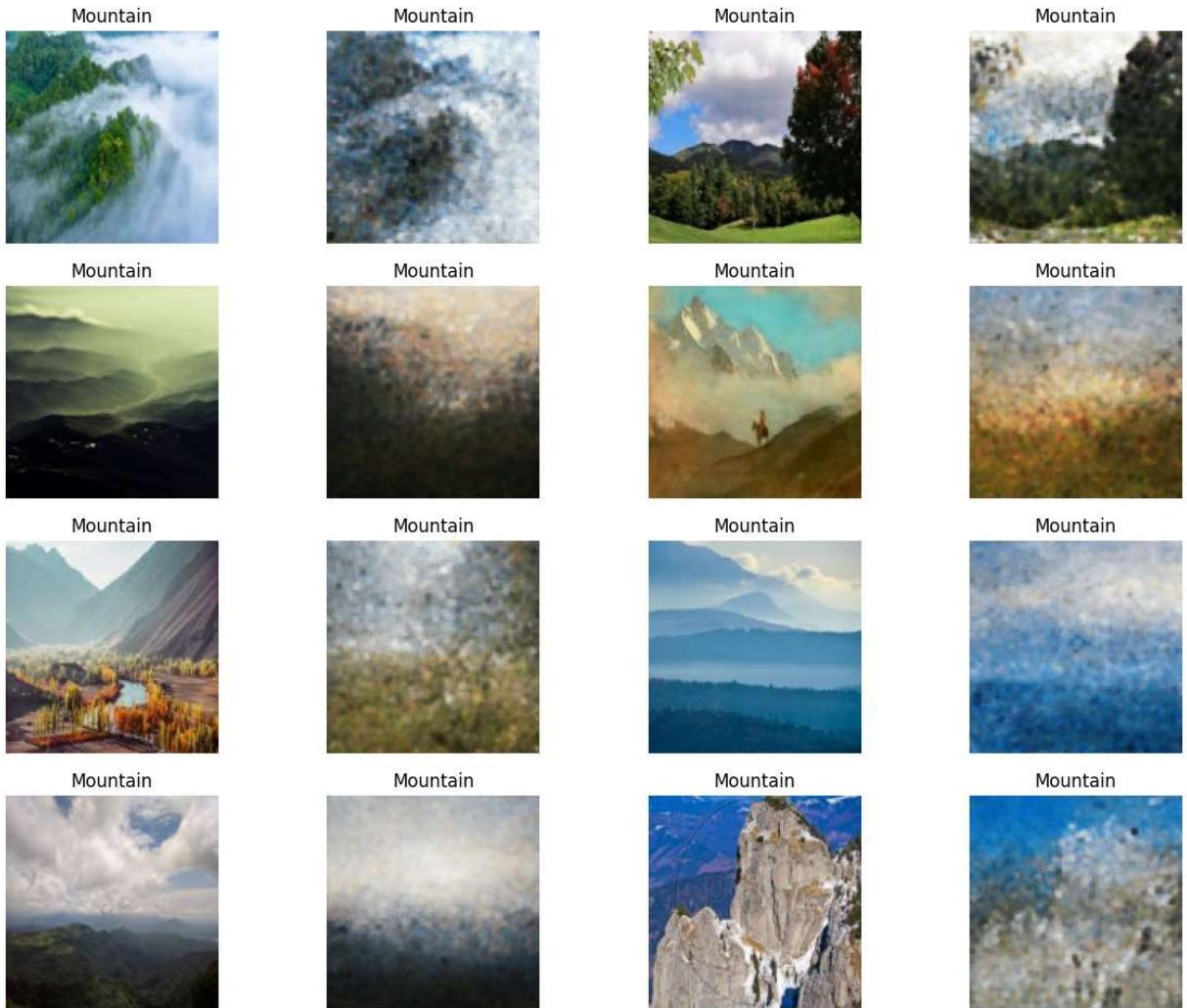
```
120/120 [=====] - 18s 149ms/step - loss: 42.9123 - reconstruction_error: 23.6910 - regularization_error: 19.2213 - val_loss: 68.9840 - val_reconstruction_error: 51.0229 - val_regularization_error: 17.9611
Epoch 272/1000
120/120 [=====] - 17s 140ms/step - loss: 43.0395 - reconstruction_error: 23.7663 - regularization_error: 19.2732 - val_loss: 68.6888 - val_reconstruction_error: 50.3247 - val_regularization_error: 18.3641
Epoch 273/1000
120/120 [=====] - 15s 128ms/step - loss: 42.7029 - reconstruction_error: 23.6346 - regularization_error: 19.0683 - val_loss: 67.7114 - val_reconstruction_error: 50.6110 - val_regularization_error: 17.1004
Epoch 274/1000
120/120 [=====] - 17s 139ms/step - loss: 42.9766 - reconstruction_error: 23.6235 - regularization_error: 19.3531 - val_loss: 68.4702 - val_reconstruction_error: 51.1646 - val_regularization_error: 17.3056
Epoch 275/1000
120/120 [=====] - 18s 146ms/step - loss: 42.7249 - reconstruction_error: 23.5051 - regularization_error: 19.2198 - val_loss: 68.2409 - val_reconstruction_error: 50.6457 - val_regularization_error: 17.5952
Epoch 276/1000
120/120 [=====] - 15s 123ms/step - loss: 42.7964 - reconstruction_error: 23.5600 - regularization_error: 19.2364 - val_loss: 69.0592 - val_reconstruction_error: 51.2062 - val_regularization_error: 17.8530
Epoch 277/1000
120/120 [=====] - 15s 124ms/step - loss: 43.0166 - reconstruction_error: 23.6958 - regularization_error: 19.3209 - val_loss: 69.3228 - val_reconstruction_error: 51.3069 - val_regularization_error: 18.0159
Epoch 278/1000
120/120 [=====] - 17s 144ms/step - loss: 42.9702 - reconstruction_error: 23.5991 - regularization_error: 19.3711 - val_loss: 68.1264 - val_reconstruction_error: 50.5062 - val_regularization_error: 17.6202
Epoch 279/1000
120/120 [=====] - 17s 142ms/step - loss: 42.6689 - reconstruction_error: 23.4696 - regularization_error: 19.1992 - val_loss: 68.3719 - val_reconstruction_error: 52.3102 - val_regularization_error: 16.0617
Epoch 280/1000
120/120 [=====] - 20s 162ms/step - loss: 42.8833 - reconstruction_error: 23.5676 - regularization_error: 19.3157 - val_loss: 68.4525 - val_reconstruction_error: 50.0667 - val_regularization_error: 18.3859
Epoch 281/1000
120/120 [=====] - ETA: 0s - loss: 42.7053 - reconstruction_error: 23.4136 - regularization_error: 19.2917
[2023-12-02 17:58:55.208272]: Reconstructing images for epoch 281 ...
```



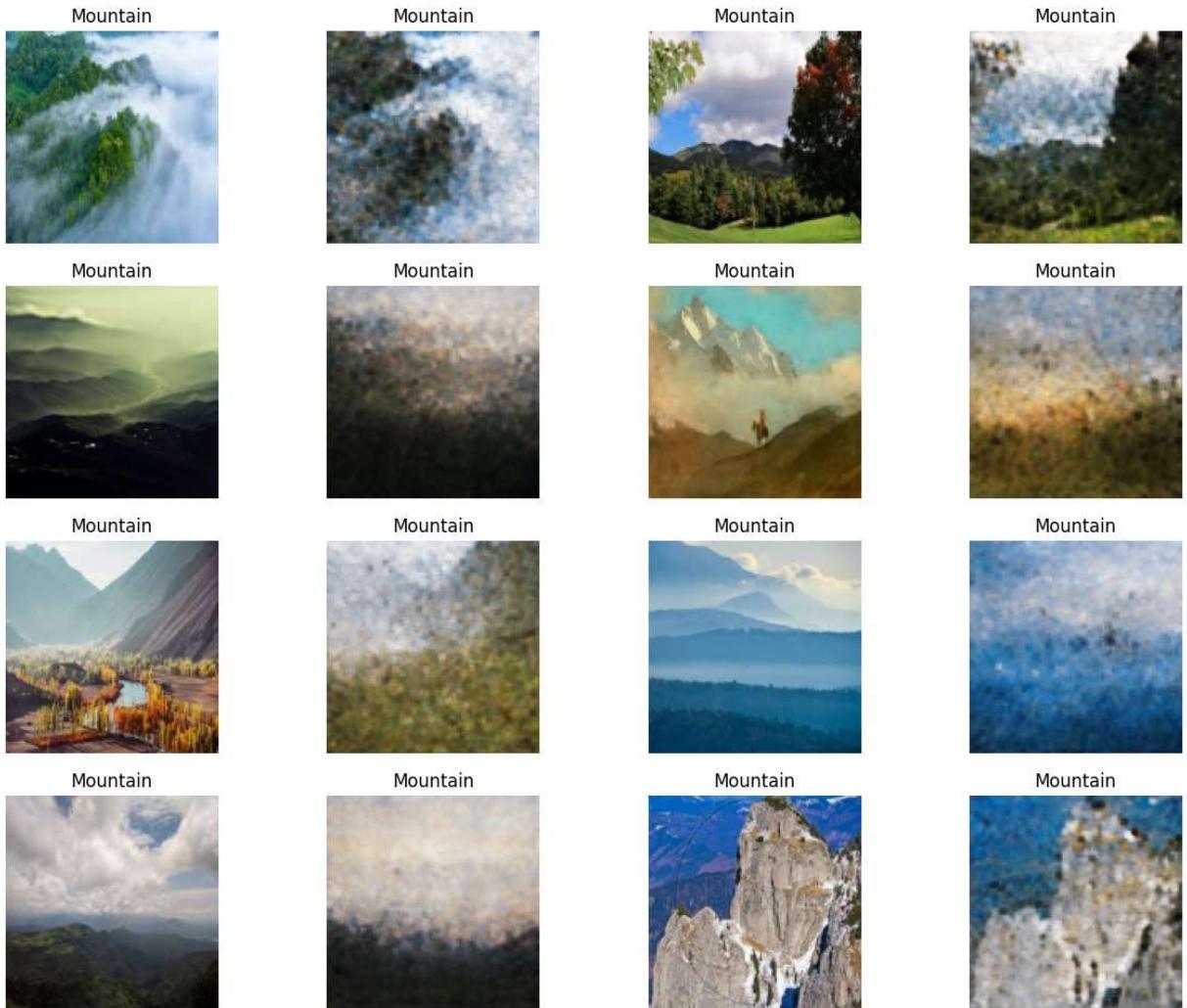
```
120/120 [=====] - 20s 165ms/step - loss: 42.7053 - reconstruction_error: 23.4136 - regularization_error: 19.2917 - val_loss: 67.3993 - val_reconstruction_error: 50.4282 - val_regularization_error: 16.9711
Epoch 282/1000
120/120 [=====] - 18s 151ms/step - loss: 42.7780 - reconstruction_error: 23.5349 - regularization_error: 19.2430 - val_loss: 69.5045 - val_reconstruction_error: 50.4050 - val_regularization_error: 19.0994
Epoch 283/1000
120/120 [=====] - 13s 108ms/step - loss: 43.0961 - reconstruction_error: 23.7669 - regularization_error: 19.3291 - val_loss: 68.3991 - val_reconstruction_error: 51.6400 - val_regularization_error: 16.7591
Epoch 284/1000
120/120 [=====] - 17s 139ms/step - loss: 42.7992 - reconstruction_error: 23.4501 - regularization_error: 19.3491 - val_loss: 69.0815 - val_reconstruction_error: 51.3926 - val_regularization_error: 17.6888
Epoch 285/1000
120/120 [=====] - 17s 140ms/step - loss: 42.3906 - reconstruction_error: 23.2002 - regularization_error: 19.1904 - val_loss: 66.9008 - val_reconstruction_error: 50.2201 - val_regularization_error: 16.6807
Epoch 286/1000
120/120 [=====] - 15s 127ms/step - loss: 42.4207 - reconstruction_error: 23.3051 - regularization_error: 19.1156 - val_loss: 68.7923 - val_reconstruction_error: 51.2417 - val_regularization_error: 17.5506
Epoch 287/1000
120/120 [=====] - 13s 110ms/step - loss: 42.5471 - reconstruction_error: 23.3144 - regularization_error: 19.2327 - val_loss: 68.1760 - val_reconstruction_error: 50.3068 - val_regularization_error: 17.8692
Epoch 288/1000
120/120 [=====] - 17s 139ms/step - loss: 42.6356 - reconstruction_error: 23.1907 - regularization_error: 19.4449 - val_loss: 68.2049 - val_reconstruction_error: 51.2021 - val_regularization_error: 17.0028
Epoch 289/1000
120/120 [=====] - 14s 114ms/step - loss: 42.2511 - reconstruction_error: 23.1335 - regularization_error: 19.1177 - val_loss: 68.3823 - val_reconstruction_error: 51.0485 - val_regularization_error: 17.3338
Epoch 290/1000
120/120 [=====] - 16s 134ms/step - loss: 42.4202 - reconstruction_error: 23.2113 - regularization_error: 19.2089 - val_loss: 68.5742 - val_reconstruction_error: 51.3876 - val_regularization_error: 17.1866
Epoch 291/1000
120/120 [=====] - ETA: 0s - loss: 42.6966 - reconstruction_error: 23.4541 - regularization_error: 19.2425
[2023-12-02 18:01:34.875745]: Reconstructing images for epoch 291 ...
```



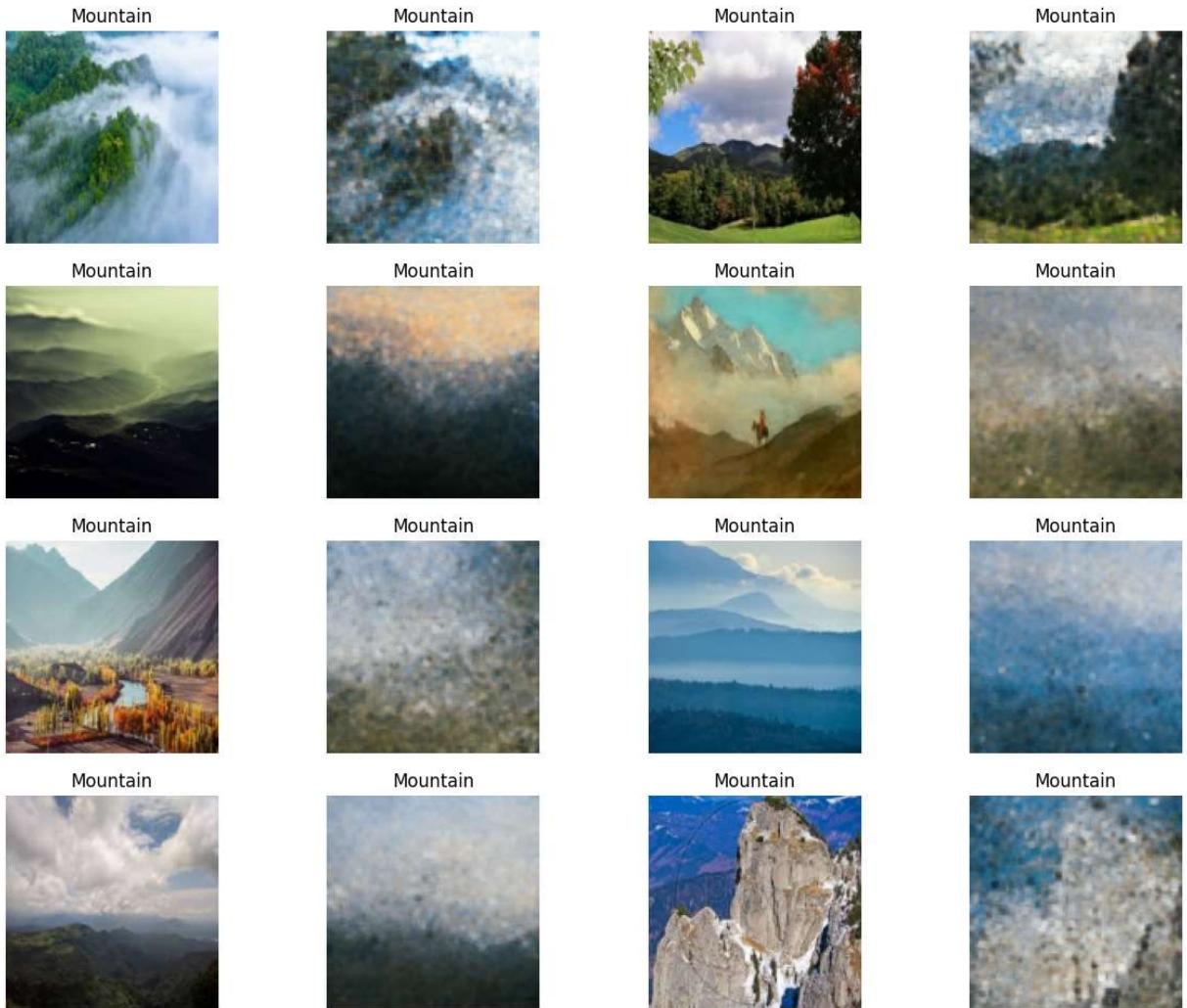
```
120/120 [=====] - 19s 155ms/step - loss: 42.6966 - reconstruction_error: 23.4541 - regularization_error: 19.2425 - val_loss: 67.6553 - val_reconstruction_error: 50.9141 - val_regularization_error: 16.7412
Epoch 292/1000
120/120 [=====] - 16s 136ms/step - loss: 42.4496 - reconstruction_error: 23.1585 - regularization_error: 19.2911 - val_loss: 68.8786 - val_reconstruction_error: 50.9117 - val_regularization_error: 17.9668
Epoch 293/1000
120/120 [=====] - 16s 135ms/step - loss: 42.2839 - reconstruction_error: 23.1016 - regularization_error: 19.1823 - val_loss: 68.5375 - val_reconstruction_error: 50.7283 - val_regularization_error: 17.8092
Epoch 294/1000
120/120 [=====] - 14s 114ms/step - loss: 42.4823 - reconstruction_error: 23.1176 - regularization_error: 19.3647 - val_loss: 68.5358 - val_reconstruction_error: 52.3816 - val_regularization_error: 16.1542
Epoch 295/1000
120/120 [=====] - 16s 130ms/step - loss: 42.4377 - reconstruction_error: 23.1604 - regularization_error: 19.2774 - val_loss: 68.9235 - val_reconstruction_error: 50.5272 - val_regularization_error: 18.3964
Epoch 296/1000
120/120 [=====] - 15s 126ms/step - loss: 42.1926 - reconstruction_error: 22.8967 - regularization_error: 19.2959 - val_loss: 68.4086 - val_reconstruction_error: 51.5277 - val_regularization_error: 16.8809
Epoch 297/1000
120/120 [=====] - 19s 154ms/step - loss: 42.2043 - reconstruction_error: 23.0564 - regularization_error: 19.1479 - val_loss: 67.8039 - val_reconstruction_error: 51.3420 - val_regularization_error: 16.4619
Epoch 298/1000
120/120 [=====] - 15s 121ms/step - loss: 42.3783 - reconstruction_error: 23.1293 - regularization_error: 19.2490 - val_loss: 68.2506 - val_reconstruction_error: 51.2342 - val_regularization_error: 17.0164
Epoch 299/1000
120/120 [=====] - 17s 142ms/step - loss: 42.1456 - reconstruction_error: 22.9065 - regularization_error: 19.2390 - val_loss: 68.3844 - val_reconstruction_error: 51.2100 - val_regularization_error: 17.1744
Epoch 300/1000
120/120 [=====] - 18s 147ms/step - loss: 42.3743 - reconstruction_error: 22.9659 - regularization_error: 19.4084 - val_loss: 67.8649 - val_reconstruction_error: 50.7030 - val_regularization_error: 17.1619
Epoch 301/1000
120/120 [=====] - ETA: 0s - loss: 41.9891 - reconstruction_error: 22.9334 - regularization_error: 19.0557
[2023-12-02 18:04:23.318704]: Reconstructing images for epoch 301 ...
```



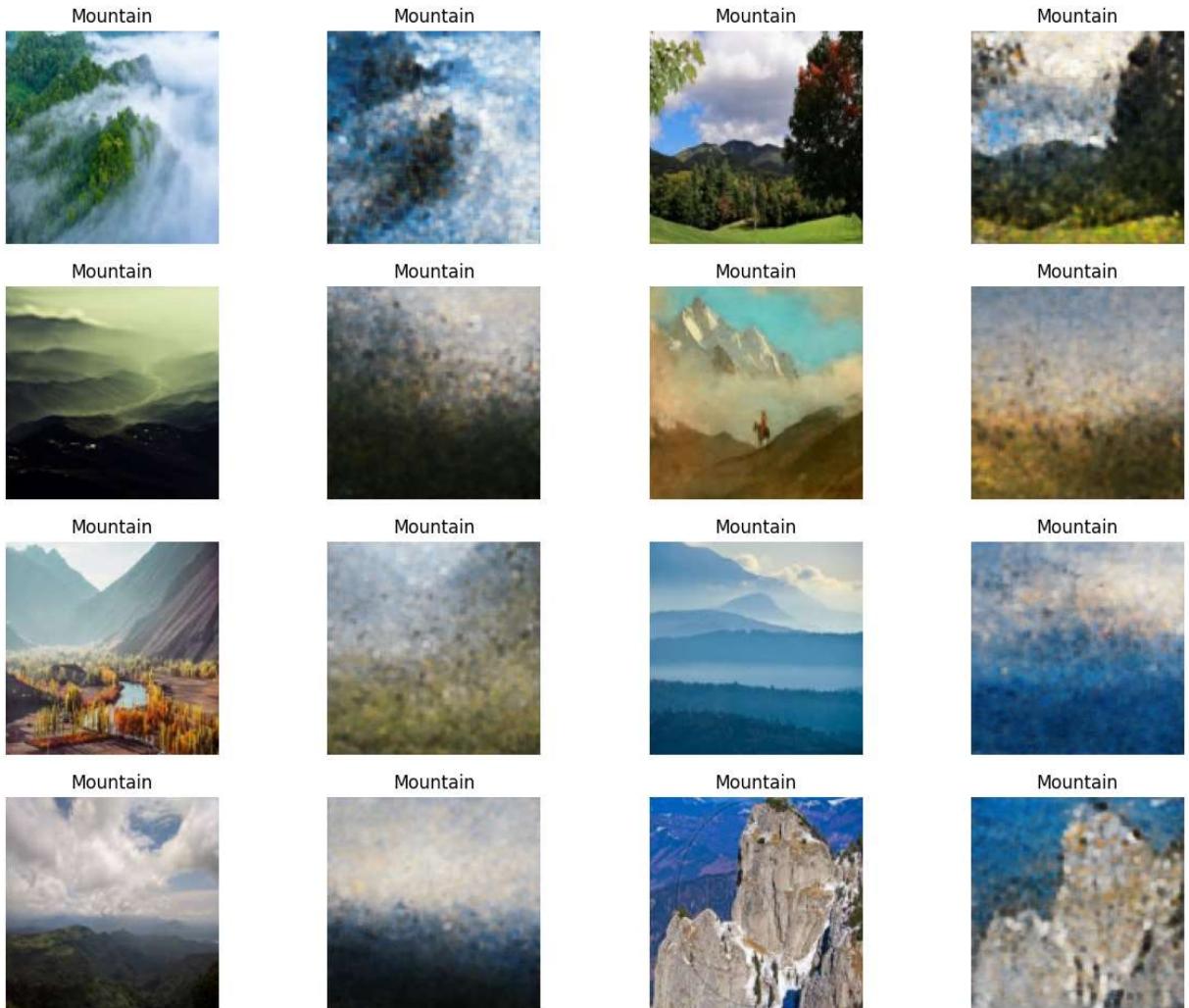
```
120/120 [=====] - 19s 157ms/step - loss: 41.9891 - reconstruction_error: 22.9334 - regularization_error: 19.0557 - val_loss: 68.5718 - val_reconstruction_error: 51.6327 - val_regularization_error: 16.9391
Epoch 302/1000
120/120 [=====] - 16s 133ms/step - loss: 42.3882 - reconstruction_error: 23.0207 - regularization_error: 19.3675 - val_loss: 68.9666 - val_reconstruction_error: 51.6040 - val_regularization_error: 17.3625
Epoch 303/1000
120/120 [=====] - 19s 154ms/step - loss: 42.3260 - reconstruction_error: 22.9653 - regularization_error: 19.3606 - val_loss: 68.3693 - val_reconstruction_error: 50.6775 - val_regularization_error: 17.6918
Epoch 304/1000
120/120 [=====] - 18s 149ms/step - loss: 41.8646 - reconstruction_error: 22.7575 - regularization_error: 19.1071 - val_loss: 69.5279 - val_reconstruction_error: 51.3528 - val_regularization_error: 18.1752
Epoch 305/1000
120/120 [=====] - 14s 114ms/step - loss: 42.2176 - reconstruction_error: 22.9446 - regularization_error: 19.2730 - val_loss: 68.3423 - val_reconstruction_error: 50.2487 - val_regularization_error: 18.0935
Epoch 306/1000
120/120 [=====] - 16s 132ms/step - loss: 42.2086 - reconstruction_error: 22.8830 - regularization_error: 19.3256 - val_loss: 68.2530 - val_reconstruction_error: 51.8277 - val_regularization_error: 16.4253
Epoch 307/1000
120/120 [=====] - 17s 144ms/step - loss: 42.2808 - reconstruction_error: 22.8311 - regularization_error: 19.4497 - val_loss: 69.1141 - val_reconstruction_error: 51.3159 - val_regularization_error: 17.7982
Epoch 308/1000
120/120 [=====] - 18s 147ms/step - loss: 41.9432 - reconstruction_error: 22.6336 - regularization_error: 19.3096 - val_loss: 69.6082 - val_reconstruction_error: 51.2141 - val_regularization_error: 18.3940
Epoch 309/1000
120/120 [=====] - 14s 117ms/step - loss: 42.0658 - reconstruction_error: 22.9186 - regularization_error: 19.1472 - val_loss: 68.6759 - val_reconstruction_error: 51.3303 - val_regularization_error: 17.3456
Epoch 310/1000
120/120 [=====] - 17s 144ms/step - loss: 42.0409 - reconstruction_error: 22.6685 - regularization_error: 19.3724 - val_loss: 67.8975 - val_reconstruction_error: 50.4495 - val_regularization_error: 17.4480
Epoch 311/1000
120/120 [=====] - ETA: 0s - loss: 41.8868 - reconstruction_error: 22.6638 - regularization_error: 19.2230
[2023-12-02 18:07:13.746353]: Reconstructing images for epoch 311 ...
```



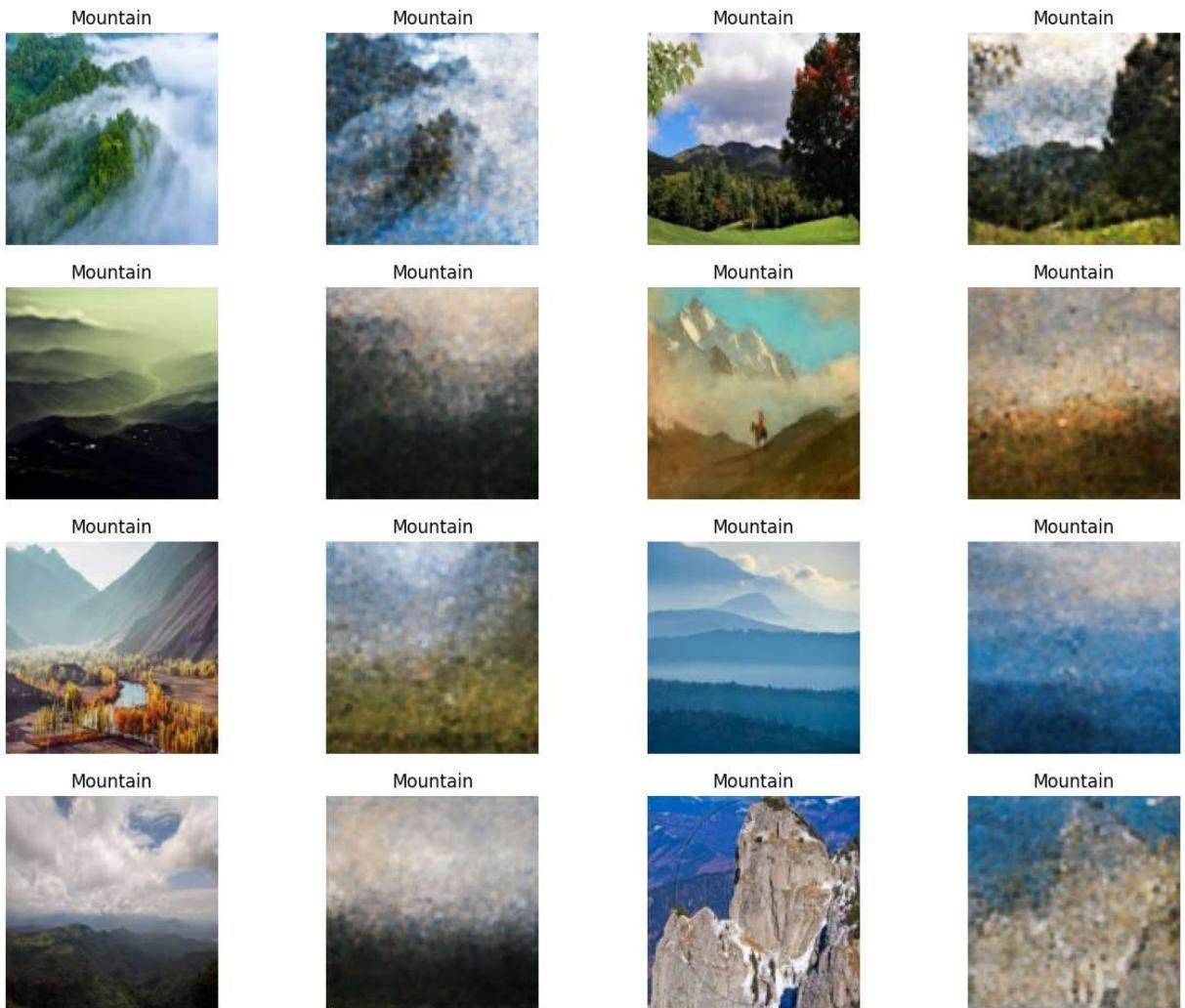
```
120/120 [=====] - 20s 170ms/step - loss: 41.8868 - reconstruction_error: 22.6638 - regularization_error: 19.2230 - val_loss: 69.7345 - val_reconstruction_error: 52.1919 - val_regularization_error: 17.5426
Epoch 312/1000
120/120 [=====] - 17s 138ms/step - loss: 42.0236 - reconstruction_error: 22.7135 - regularization_error: 19.3101 - val_loss: 68.9961 - val_reconstruction_error: 50.8267 - val_regularization_error: 18.1694
Epoch 313/1000
120/120 [=====] - 18s 151ms/step - loss: 41.9198 - reconstruction_error: 22.4978 - regularization_error: 19.4220 - val_loss: 67.9752 - val_reconstruction_error: 50.5974 - val_regularization_error: 17.3778
Epoch 314/1000
120/120 [=====] - 17s 139ms/step - loss: 41.8562 - reconstruction_error: 22.5897 - regularization_error: 19.2665 - val_loss: 68.5112 - val_reconstruction_error: 50.5110 - val_regularization_error: 18.0002
Epoch 315/1000
120/120 [=====] - 17s 142ms/step - loss: 41.7762 - reconstruction_error: 22.4635 - regularization_error: 19.3127 - val_loss: 67.1133 - val_reconstruction_error: 50.1696 - val_regularization_error: 16.9438
Epoch 316/1000
120/120 [=====] - 19s 157ms/step - loss: 41.6043 - reconstruction_error: 22.4590 - regularization_error: 19.1453 - val_loss: 67.6390 - val_reconstruction_error: 50.9934 - val_regularization_error: 16.6456
Epoch 317/1000
120/120 [=====] - 17s 139ms/step - loss: 41.8493 - reconstruction_error: 22.4666 - regularization_error: 19.3827 - val_loss: 68.7495 - val_reconstruction_error: 50.3202 - val_regularization_error: 18.4294
Epoch 318/1000
120/120 [=====] - 17s 140ms/step - loss: 41.8826 - reconstruction_error: 22.6233 - regularization_error: 19.2593 - val_loss: 68.6788 - val_reconstruction_error: 51.6896 - val_regularization_error: 16.9892
Epoch 319/1000
120/120 [=====] - 13s 111ms/step - loss: 41.6821 - reconstruction_error: 22.4457 - regularization_error: 19.2364 - val_loss: 68.0749 - val_reconstruction_error: 51.1031 - val_regularization_error: 16.9717
Epoch 320/1000
120/120 [=====] - 16s 134ms/step - loss: 41.9331 - reconstruction_error: 22.5271 - regularization_error: 19.4060 - val_loss: 68.8480 - val_reconstruction_error: 50.8684 - val_regularization_error: 17.9796
Epoch 321/1000
120/120 [=====] - ETA: 0s - loss: 41.8043 - reconstruction_error: 22.4121 - regularization_error: 19.3922
[2023-12-02 18:10:04.206386]: Reconstructing images for epoch 321 ...
```



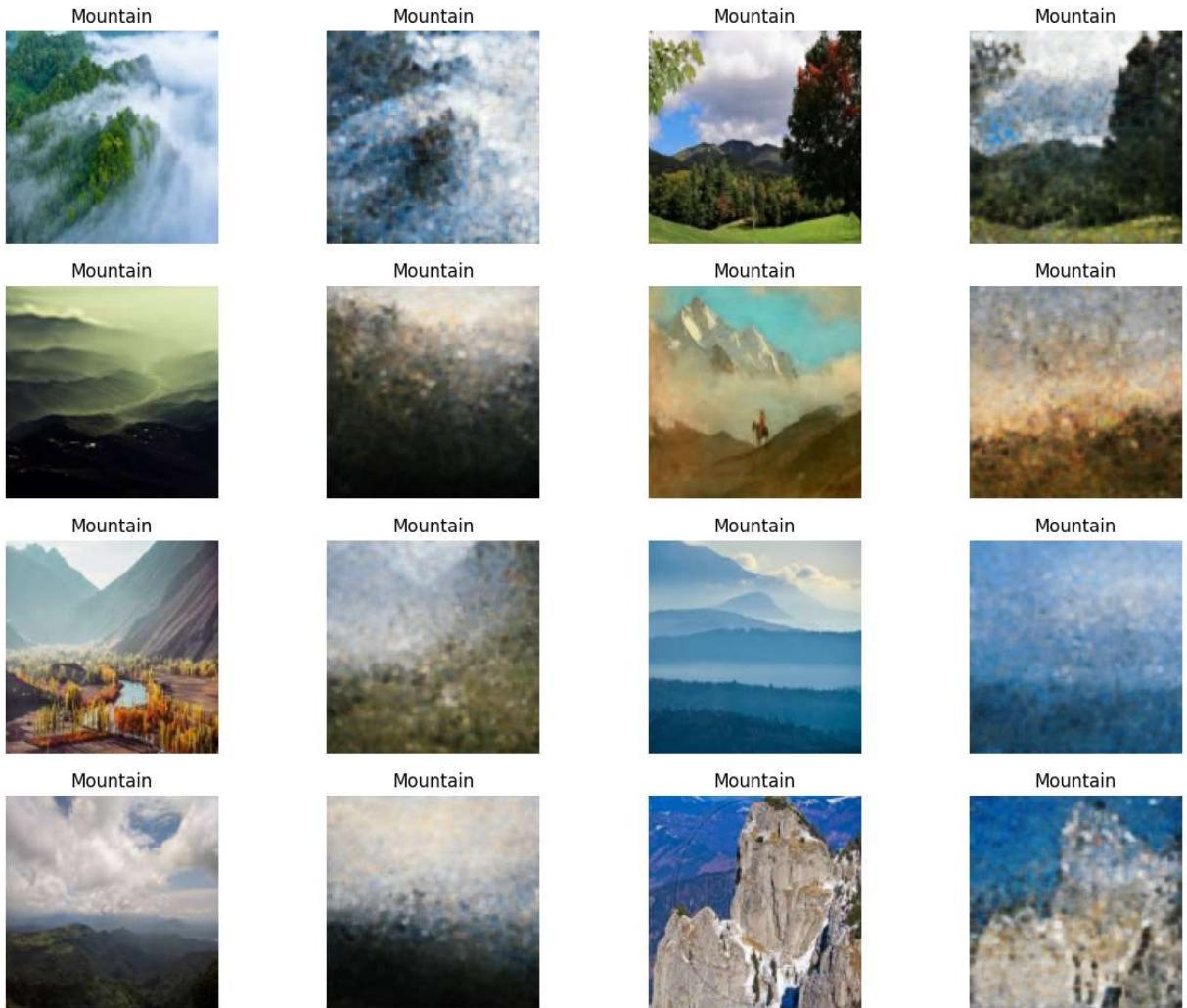
```
120/120 [=====] - 19s 153ms/step - loss: 41.8043 - reconstruction_error: 22.4121 - regularization_error: 19.3922 - val_loss: 68.0173 - val_reconstruction_error: 51.3314 - val_regularization_error: 16.6860
Epoch 322/1000
120/120 [=====] - 18s 152ms/step - loss: 41.9633 - reconstruction_error: 22.5263 - regularization_error: 19.4370 - val_loss: 68.3604 - val_reconstruction_error: 51.4080 - val_regularization_error: 16.9524
Epoch 323/1000
120/120 [=====] - 19s 159ms/step - loss: 41.5710 - reconstruction_error: 22.4054 - regularization_error: 19.1656 - val_loss: 68.3083 - val_reconstruction_error: 50.7927 - val_regularization_error: 17.5156
Epoch 324/1000
120/120 [=====] - 17s 137ms/step - loss: 41.3514 - reconstruction_error: 22.1505 - regularization_error: 19.2008 - val_loss: 69.0350 - val_reconstruction_error: 51.7294 - val_regularization_error: 17.3057
Epoch 325/1000
120/120 [=====] - 17s 144ms/step - loss: 41.5192 - reconstruction_error: 22.3372 - regularization_error: 19.1820 - val_loss: 68.2579 - val_reconstruction_error: 51.8207 - val_regularization_error: 16.4373
Epoch 326/1000
120/120 [=====] - 17s 138ms/step - loss: 41.5077 - reconstruction_error: 22.1611 - regularization_error: 19.3467 - val_loss: 68.6217 - val_reconstruction_error: 51.2059 - val_regularization_error: 17.4158
Epoch 327/1000
120/120 [=====] - 15s 128ms/step - loss: 41.3834 - reconstruction_error: 22.2048 - regularization_error: 19.1786 - val_loss: 67.8737 - val_reconstruction_error: 51.1077 - val_regularization_error: 16.7660
Epoch 328/1000
120/120 [=====] - 18s 144ms/step - loss: 41.7669 - reconstruction_error: 22.5067 - regularization_error: 19.2602 - val_loss: 69.1680 - val_reconstruction_error: 53.3666 - val_regularization_error: 15.8014
Epoch 329/1000
120/120 [=====] - 18s 148ms/step - loss: 41.7268 - reconstruction_error: 22.4314 - regularization_error: 19.2954 - val_loss: 69.1930 - val_reconstruction_error: 52.1048 - val_regularization_error: 17.0882
Epoch 330/1000
120/120 [=====] - 17s 136ms/step - loss: 41.4039 - reconstruction_error: 22.2123 - regularization_error: 19.1917 - val_loss: 68.2523 - val_reconstruction_error: 51.0253 - val_regularization_error: 17.2269
Epoch 331/1000
120/120 [=====] - ETA: 0s - loss: 41.4670 - reconstruction_error: 22.1849 - regularization_error: 19.2821
[2023-12-02 18:13:00.262917]: Reconstructing images for epoch 331 ...
```



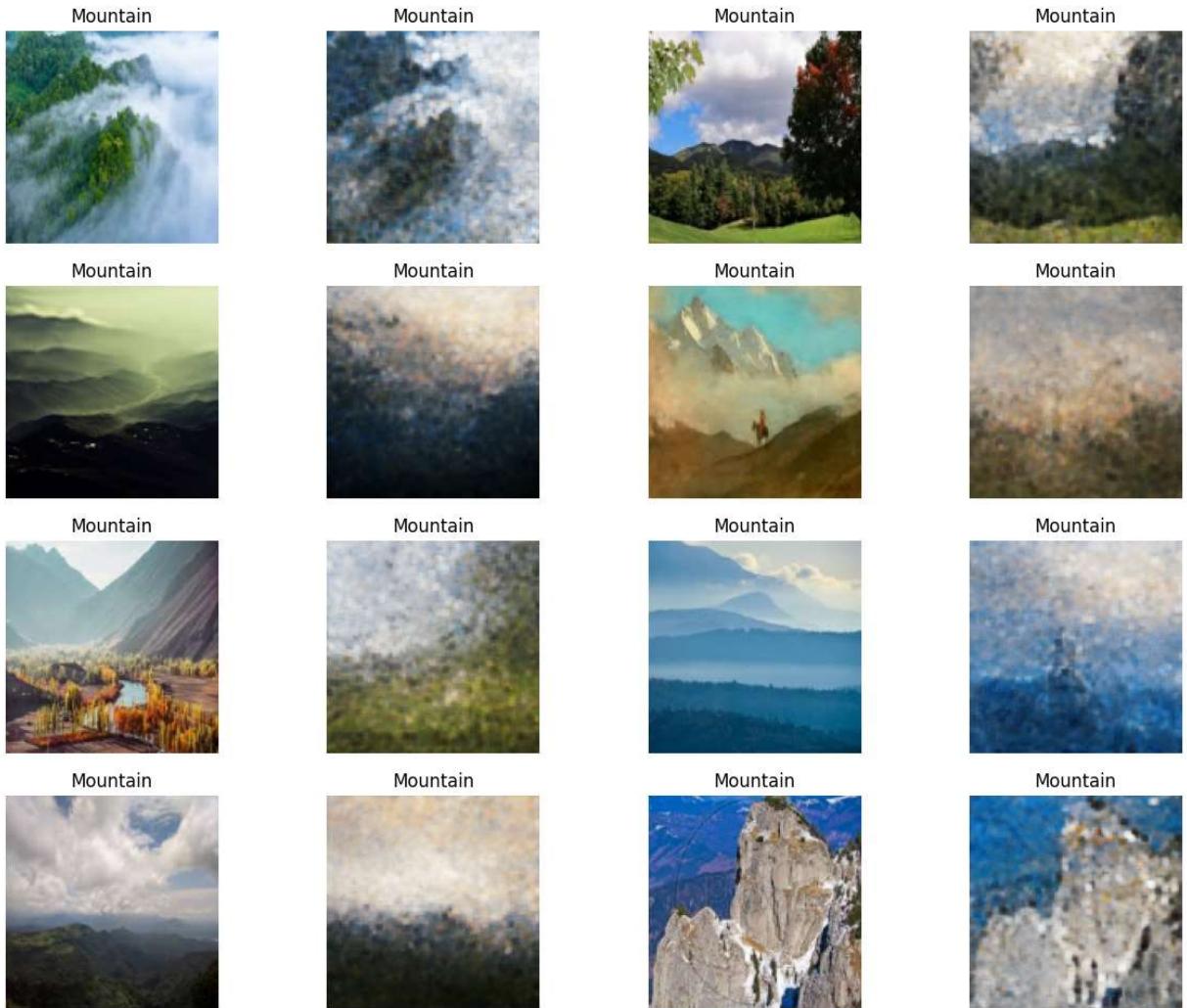
```
120/120 [=====] - 18s 147ms/step - loss: 41.4670 - reconstruction_error: 22.1849 - regularization_error: 19.2821 - val_loss: 69.4243 - val_reconstruction_error: 51.0063 - val_regularization_error: 18.4180
Epoch 332/1000
120/120 [=====] - 14s 119ms/step - loss: 41.5959 - reconstruction_error: 22.3385 - regularization_error: 19.2574 - val_loss: 69.2246 - val_reconstruction_error: 52.7785 - val_regularization_error: 16.4461
Epoch 333/1000
120/120 [=====] - 19s 158ms/step - loss: 41.3805 - reconstruction_error: 22.2095 - regularization_error: 19.1710 - val_loss: 67.9703 - val_reconstruction_error: 50.1993 - val_regularization_error: 17.7710
Epoch 334/1000
120/120 [=====] - 18s 152ms/step - loss: 41.4650 - reconstruction_error: 22.2070 - regularization_error: 19.2581 - val_loss: 68.8646 - val_reconstruction_error: 51.1695 - val_regularization_error: 17.6951
Epoch 335/1000
120/120 [=====] - 14s 110ms/step - loss: 41.6023 - reconstruction_error: 22.2119 - regularization_error: 19.3903 - val_loss: 69.7598 - val_reconstruction_error: 52.2401 - val_regularization_error: 17.5196
Epoch 336/1000
120/120 [=====] - 17s 138ms/step - loss: 41.4270 - reconstruction_error: 22.1035 - regularization_error: 19.3235 - val_loss: 68.2815 - val_reconstruction_error: 51.6959 - val_regularization_error: 16.5855
Epoch 337/1000
120/120 [=====] - 16s 134ms/step - loss: 41.4706 - reconstruction_error: 22.1916 - regularization_error: 19.2790 - val_loss: 69.0028 - val_reconstruction_error: 51.7323 - val_regularization_error: 17.2704
Epoch 338/1000
120/120 [=====] - 15s 125ms/step - loss: 41.2185 - reconstruction_error: 22.0269 - regularization_error: 19.1916 - val_loss: 69.0566 - val_reconstruction_error: 51.7621 - val_regularization_error: 17.2945
Epoch 339/1000
120/120 [=====] - 15s 123ms/step - loss: 41.4147 - reconstruction_error: 22.2180 - regularization_error: 19.1967 - val_loss: 69.6307 - val_reconstruction_error: 52.3273 - val_regularization_error: 17.3034
Epoch 340/1000
120/120 [=====] - 17s 145ms/step - loss: 41.3083 - reconstruction_error: 22.0575 - regularization_error: 19.2509 - val_loss: 67.8879 - val_reconstruction_error: 50.8023 - val_regularization_error: 17.0856
Epoch 341/1000
120/120 [=====] - ETA: 0s - loss: 41.3116 - reconstruction_error: 22.0398 - regularization_error: 19.2717
[2023-12-02 18:15:47.348904]: Reconstructing images for epoch 341 ...
```



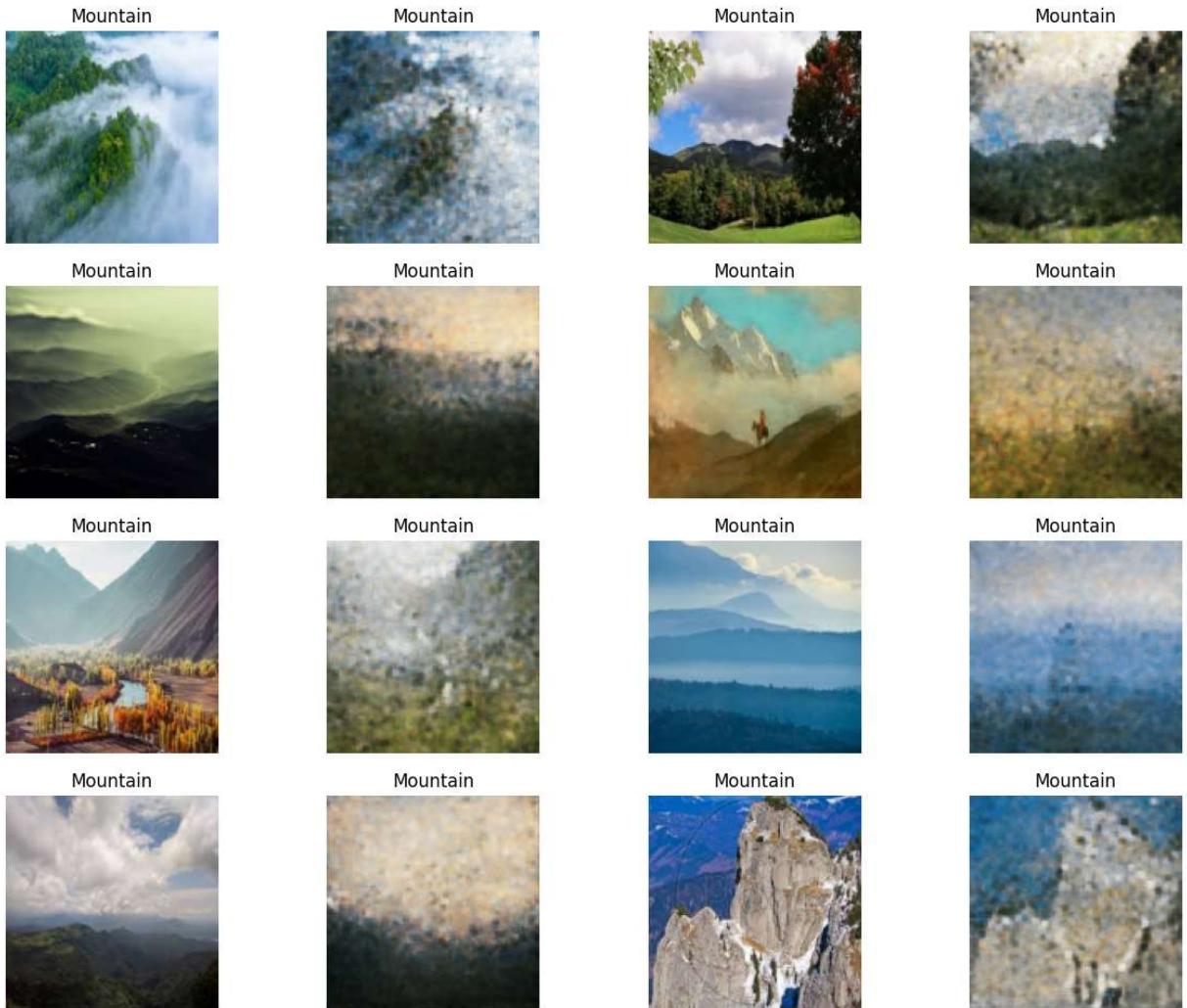
```
120/120 [=====] - 21s 174ms/step - loss: 41.3116 - reconstruction_error: 22.0398 - regularization_error: 19.2717 - val_loss: 69.8374 - val_reconstruction_error: 52.0090 - val_regularization_error: 17.8284
Epoch 342/1000
120/120 [=====] - 15s 118ms/step - loss: 41.2627 - reconstruction_error: 21.9929 - regularization_error: 19.2698 - val_loss: 68.5155 - val_reconstruction_error: 51.0198 - val_regularization_error: 17.4958
Epoch 343/1000
120/120 [=====] - 14s 118ms/step - loss: 40.9778 - reconstruction_error: 21.7937 - regularization_error: 19.1841 - val_loss: 68.6046 - val_reconstruction_error: 51.6797 - val_regularization_error: 16.9249
Epoch 344/1000
120/120 [=====] - 16s 130ms/step - loss: 41.2602 - reconstruction_error: 22.0255 - regularization_error: 19.2347 - val_loss: 69.0575 - val_reconstruction_error: 51.8885 - val_regularization_error: 17.1691
Epoch 345/1000
120/120 [=====] - 18s 148ms/step - loss: 41.3235 - reconstruction_error: 21.9813 - regularization_error: 19.3422 - val_loss: 69.6843 - val_reconstruction_error: 51.1169 - val_regularization_error: 18.5674
Epoch 346/1000
120/120 [=====] - 17s 136ms/step - loss: 40.9778 - reconstruction_error: 21.7434 - regularization_error: 19.2345 - val_loss: 68.6267 - val_reconstruction_error: 50.8706 - val_regularization_error: 17.7561
Epoch 347/1000
120/120 [=====] - 16s 133ms/step - loss: 41.0941 - reconstruction_error: 21.8788 - regularization_error: 19.2153 - val_loss: 67.7294 - val_reconstruction_error: 51.3712 - val_regularization_error: 16.3582
Epoch 348/1000
120/120 [=====] - 16s 130ms/step - loss: 41.2078 - reconstruction_error: 21.8786 - regularization_error: 19.3292 - val_loss: 68.5867 - val_reconstruction_error: 51.0742 - val_regularization_error: 17.5125
Epoch 349/1000
120/120 [=====] - 16s 132ms/step - loss: 41.0801 - reconstruction_error: 21.7997 - regularization_error: 19.2804 - val_loss: 69.6863 - val_reconstruction_error: 51.6476 - val_regularization_error: 18.0387
Epoch 350/1000
120/120 [=====] - 19s 155ms/step - loss: 41.1812 - reconstruction_error: 21.8698 - regularization_error: 19.3114 - val_loss: 69.7859 - val_reconstruction_error: 52.3651 - val_regularization_error: 17.4208
Epoch 351/1000
120/120 [=====] - ETA: 0s - loss: 41.0996 - reconstruction_error: 21.8910 - regularization_error: 19.2086
[2023-12-02 18:18:34.025754]: Reconstructing images for epoch 351 ...
```



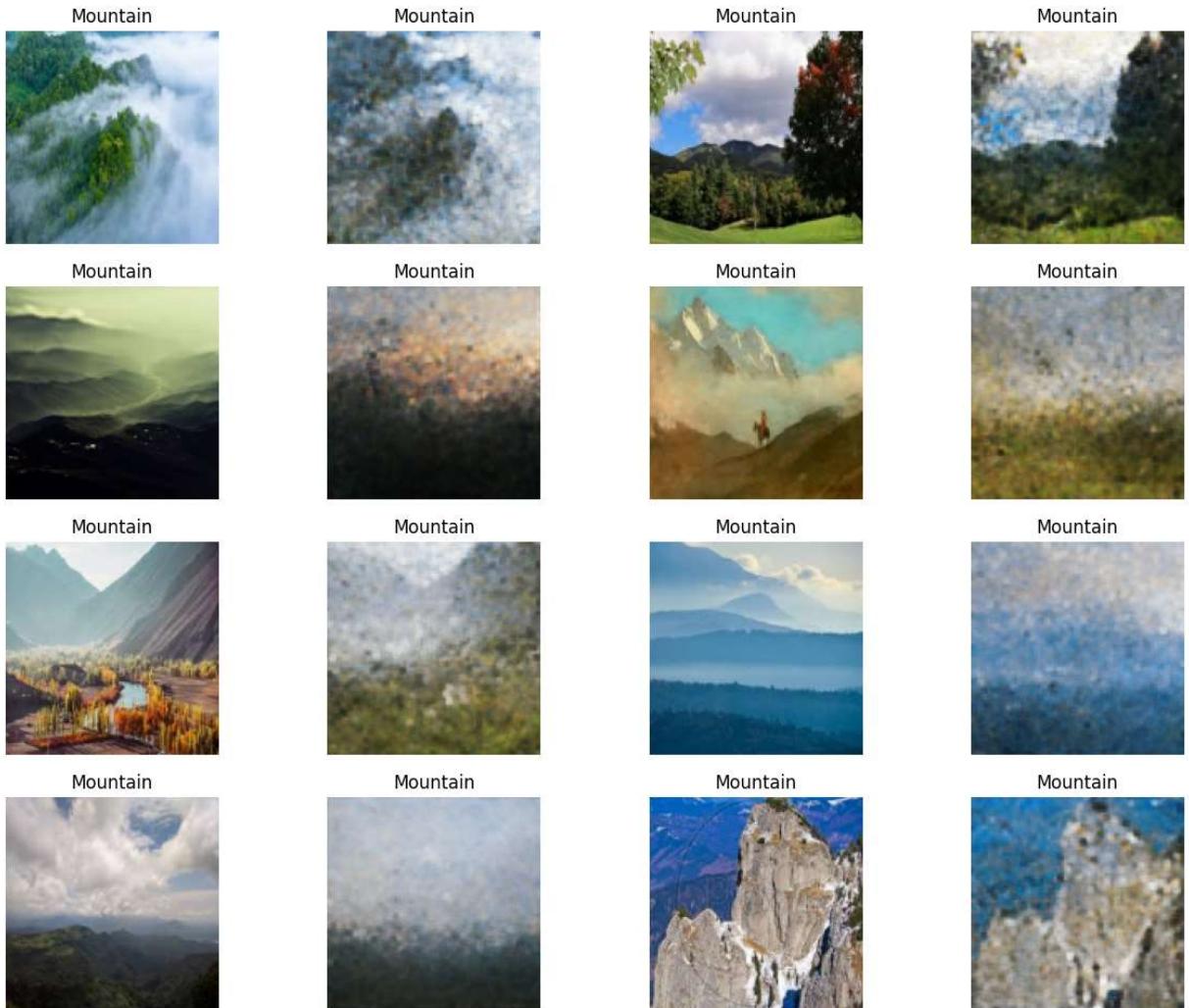
```
120/120 [=====] - 21s 171ms/step - loss: 41.0996 - reconstruction_error: 21.8910 - regularization_error: 19.2086 - val_loss: 69.0536 - val_reconstruction_error: 51.5334 - val_regularization_error: 17.5202
Epoch 352/1000
120/120 [=====] - 16s 133ms/step - loss: 41.1934 - reconstruction_error: 21.8783 - regularization_error: 19.3151 - val_loss: 67.9717 - val_reconstruction_error: 50.8206 - val_regularization_error: 17.1511
Epoch 353/1000
120/120 [=====] - 18s 148ms/step - loss: 40.8667 - reconstruction_error: 21.6488 - regularization_error: 19.2179 - val_loss: 69.9820 - val_reconstruction_error: 51.7733 - val_regularization_error: 18.2086
Epoch 354/1000
120/120 [=====] - 17s 138ms/step - loss: 41.1533 - reconstruction_error: 21.7867 - regularization_error: 19.3666 - val_loss: 70.0395 - val_reconstruction_error: 51.8430 - val_regularization_error: 18.1965
Epoch 355/1000
120/120 [=====] - 16s 134ms/step - loss: 41.1515 - reconstruction_error: 21.8037 - regularization_error: 19.3477 - val_loss: 69.2011 - val_reconstruction_error: 51.5071 - val_regularization_error: 17.6940
Epoch 356/1000
120/120 [=====] - 13s 112ms/step - loss: 41.0248 - reconstruction_error: 21.7248 - regularization_error: 19.3000 - val_loss: 69.0329 - val_reconstruction_error: 51.3985 - val_regularization_error: 17.6344
Epoch 357/1000
120/120 [=====] - 19s 156ms/step - loss: 40.9271 - reconstruction_error: 21.6681 - regularization_error: 19.2590 - val_loss: 69.0127 - val_reconstruction_error: 52.1420 - val_regularization_error: 16.8707
Epoch 358/1000
120/120 [=====] - 14s 114ms/step - loss: 41.0591 - reconstruction_error: 21.6752 - regularization_error: 19.3839 - val_loss: 68.5811 - val_reconstruction_error: 52.5954 - val_regularization_error: 15.9856
Epoch 359/1000
120/120 [=====] - 17s 142ms/step - loss: 40.9841 - reconstruction_error: 21.6754 - regularization_error: 19.3087 - val_loss: 69.2794 - val_reconstruction_error: 51.1236 - val_regularization_error: 18.1557
Epoch 360/1000
120/120 [=====] - 16s 129ms/step - loss: 40.9626 - reconstruction_error: 21.7009 - regularization_error: 19.2617 - val_loss: 69.8250 - val_reconstruction_error: 51.8912 - val_regularization_error: 17.9339
Epoch 361/1000
120/120 [=====] - ETA: 0s - loss: 40.7698 - reconstruction_error: 21.4962 - regularization_error: 19.2737
[2023-12-02 18:21:17.032786]: Reconstructing images for epoch 361 ...
```



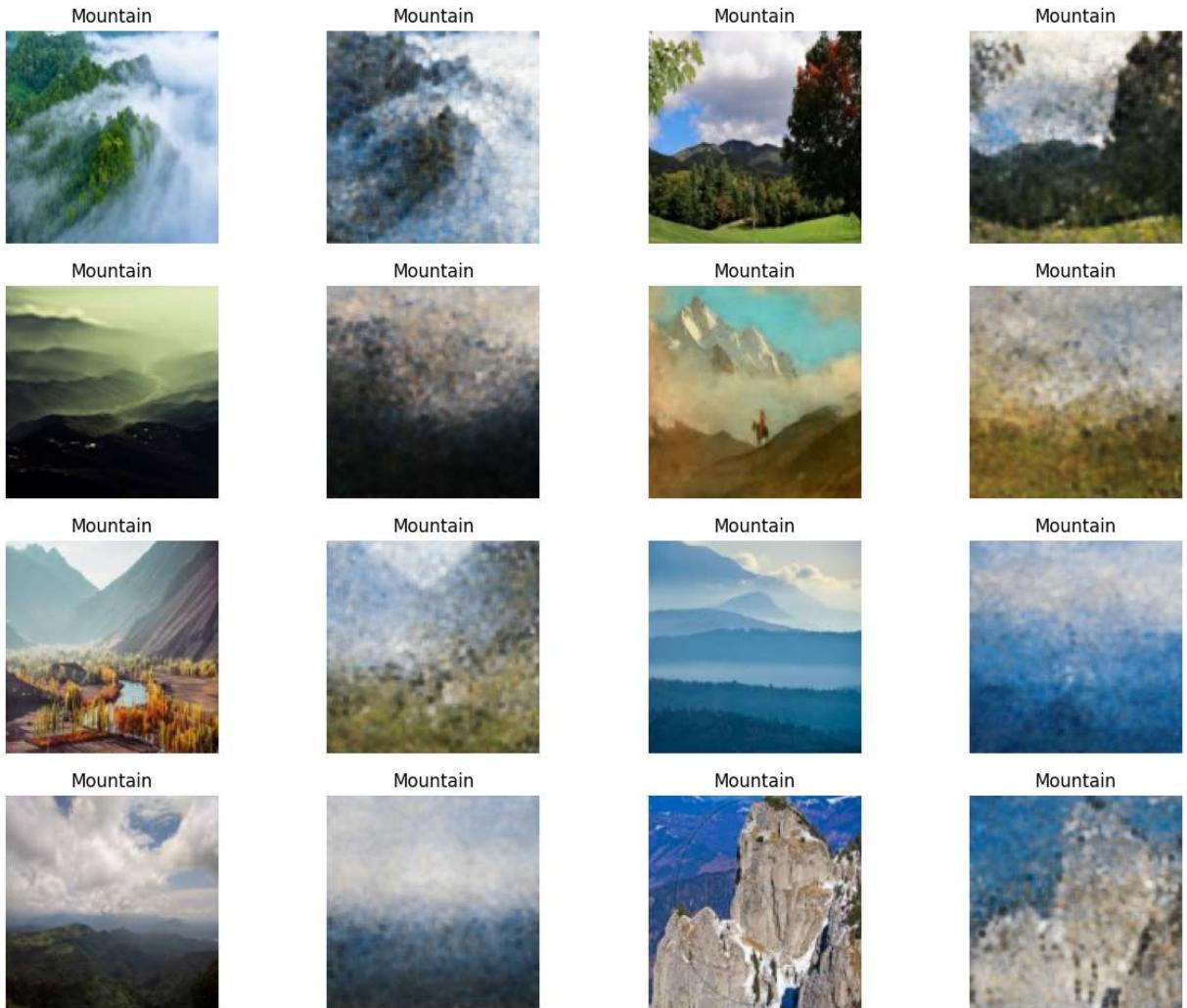
```
120/120 [=====] - 17s 137ms/step - loss: 40.7698 - reconstruction_error: 21.4962 - regularization_error: 19.2737 - val_loss: 69.5197 - val_reconstruction_error: 52.3344 - val_regularization_error: 17.1853
Epoch 362/1000
120/120 [=====] - 17s 139ms/step - loss: 40.8956 - reconstruction_error: 21.5891 - regularization_error: 19.3065 - val_loss: 68.4591 - val_reconstruction_error: 50.9539 - val_regularization_error: 17.5052
Epoch 363/1000
120/120 [=====] - 14s 110ms/step - loss: 40.7120 - reconstruction_error: 21.5650 - regularization_error: 19.1469 - val_loss: 69.5686 - val_reconstruction_error: 52.3982 - val_regularization_error: 17.1704
Epoch 364/1000
120/120 [=====] - 15s 123ms/step - loss: 40.7955 - reconstruction_error: 21.4619 - regularization_error: 19.3336 - val_loss: 69.6868 - val_reconstruction_error: 50.8008 - val_regularization_error: 18.8860
Epoch 365/1000
120/120 [=====] - 15s 127ms/step - loss: 40.7766 - reconstruction_error: 21.4007 - regularization_error: 19.3759 - val_loss: 68.9057 - val_reconstruction_error: 51.0494 - val_regularization_error: 17.8564
Epoch 366/1000
120/120 [=====] - 13s 112ms/step - loss: 41.0304 - reconstruction_error: 21.5507 - regularization_error: 19.4796 - val_loss: 68.6751 - val_reconstruction_error: 51.2550 - val_regularization_error: 17.4201
Epoch 367/1000
120/120 [=====] - 16s 135ms/step - loss: 40.8709 - reconstruction_error: 21.4897 - regularization_error: 19.3812 - val_loss: 68.1102 - val_reconstruction_error: 50.8221 - val_regularization_error: 17.2881
Epoch 368/1000
120/120 [=====] - 16s 134ms/step - loss: 40.6823 - reconstruction_error: 21.4018 - regularization_error: 19.2805 - val_loss: 69.4041 - val_reconstruction_error: 51.6165 - val_regularization_error: 17.7875
Epoch 369/1000
120/120 [=====] - 17s 138ms/step - loss: 40.7206 - reconstruction_error: 21.4924 - regularization_error: 19.2282 - val_loss: 68.7558 - val_reconstruction_error: 52.3672 - val_regularization_error: 16.3886
Epoch 370/1000
120/120 [=====] - 17s 138ms/step - loss: 40.7892 - reconstruction_error: 21.3989 - regularization_error: 19.3903 - val_loss: 69.9012 - val_reconstruction_error: 51.3944 - val_regularization_error: 18.5068
Epoch 371/1000
120/120 [=====] - ETA: 0s - loss: 40.6223 - reconstruction_error: 21.3034 - regularization_error: 19.3190
[2023-12-02 18:23:59.891219]: Reconstructing images for epoch 371 ...
```



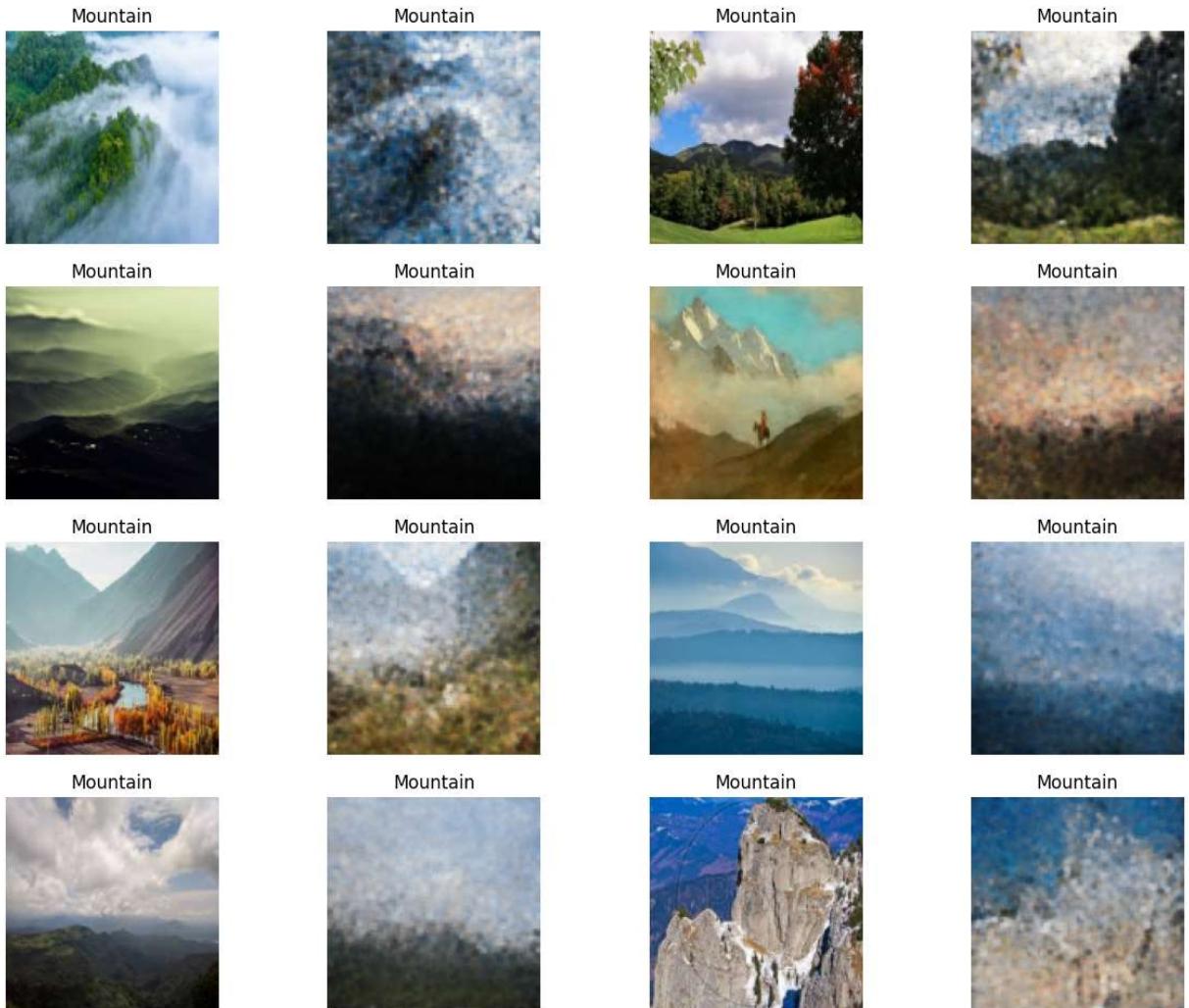
```
120/120 [=====] - 19s 159ms/step - loss: 40.6223 - reconstruction_error: 21.3034 - regularization_error: 19.3190 - val_loss: 69.3417 - val_reconstruction_error: 52.4487 - val_regularization_error: 16.8930
Epoch 372/1000
120/120 [=====] - 14s 116ms/step - loss: 40.6461 - reconstruction_error: 21.3503 - regularization_error: 19.2958 - val_loss: 68.4556 - val_reconstruction_error: 51.1701 - val_regularization_error: 17.2855
Epoch 373/1000
120/120 [=====] - 15s 126ms/step - loss: 40.8293 - reconstruction_error: 21.5224 - regularization_error: 19.3069 - val_loss: 70.0230 - val_reconstruction_error: 51.8234 - val_regularization_error: 18.1995
Epoch 374/1000
120/120 [=====] - 15s 120ms/step - loss: 40.5637 - reconstruction_error: 21.2230 - regularization_error: 19.3407 - val_loss: 70.1790 - val_reconstruction_error: 52.8818 - val_regularization_error: 17.2971
Epoch 375/1000
120/120 [=====] - 18s 150ms/step - loss: 40.6859 - reconstruction_error: 21.4681 - regularization_error: 19.2178 - val_loss: 69.2454 - val_reconstruction_error: 52.2576 - val_regularization_error: 16.9878
Epoch 376/1000
120/120 [=====] - 16s 132ms/step - loss: 40.6398 - reconstruction_error: 21.3663 - regularization_error: 19.2735 - val_loss: 67.9670 - val_reconstruction_error: 51.1258 - val_regularization_error: 16.8412
Epoch 377/1000
120/120 [=====] - 13s 109ms/step - loss: 40.7949 - reconstruction_error: 21.4922 - regularization_error: 19.3028 - val_loss: 68.6921 - val_reconstruction_error: 51.1163 - val_regularization_error: 17.5758
Epoch 378/1000
120/120 [=====] - 14s 117ms/step - loss: 40.8196 - reconstruction_error: 21.3172 - regularization_error: 19.5025 - val_loss: 68.9537 - val_reconstruction_error: 51.5119 - val_regularization_error: 17.4418
Epoch 379/1000
120/120 [=====] - 14s 119ms/step - loss: 40.7335 - reconstruction_error: 21.3950 - regularization_error: 19.3385 - val_loss: 68.9443 - val_reconstruction_error: 51.0605 - val_regularization_error: 17.8838
Epoch 380/1000
120/120 [=====] - 18s 145ms/step - loss: 40.6430 - reconstruction_error: 21.3682 - regularization_error: 19.2748 - val_loss: 68.7724 - val_reconstruction_error: 51.5308 - val_regularization_error: 17.2415
Epoch 381/1000
120/120 [=====] - ETA: 0s - loss: 40.7083 - reconstruction_error: 21.4041 - regularization_error: 19.3042
[2023-12-02 18:26:38.847559]: Reconstructing images for epoch 381 ...
```



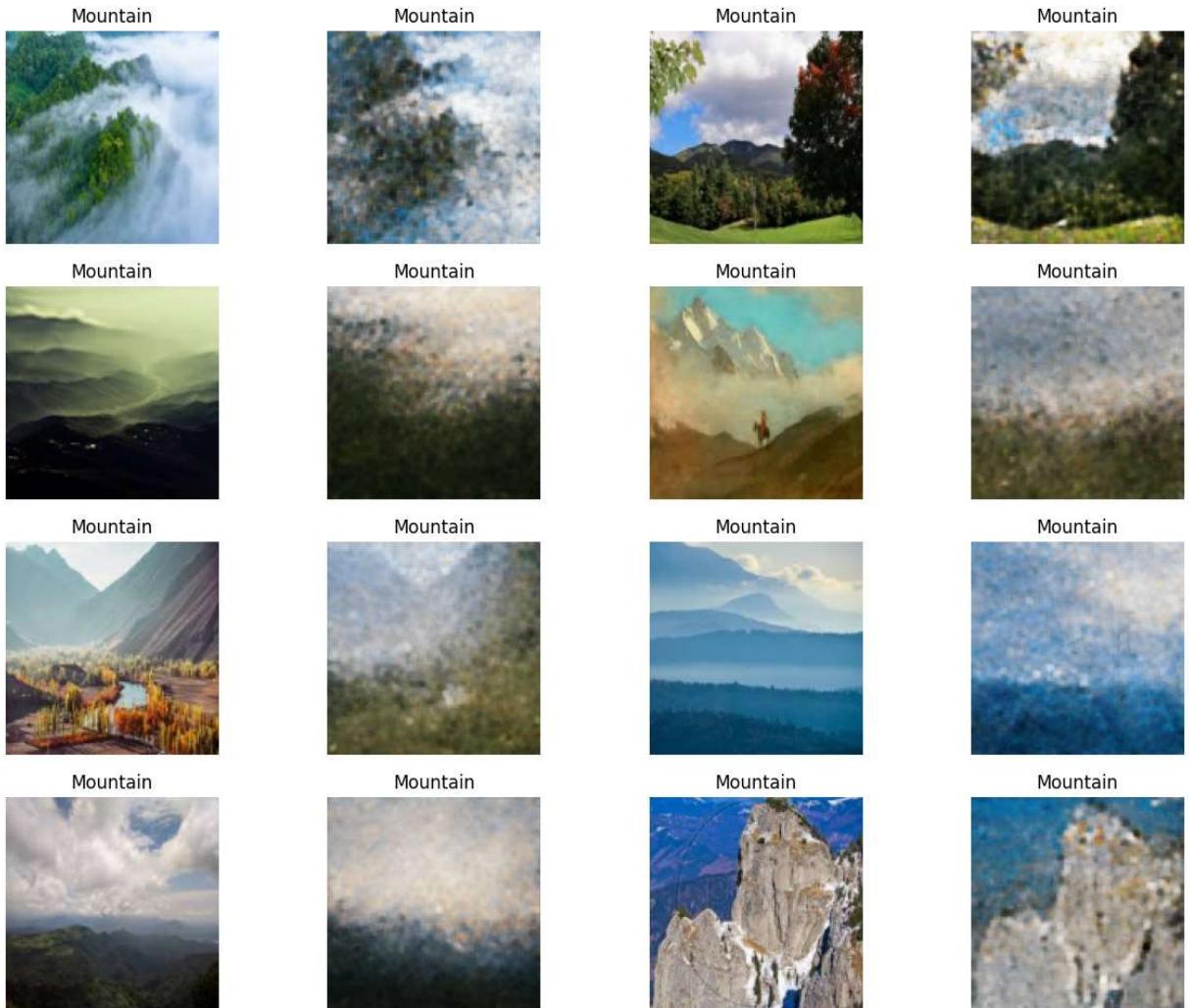
```
120/120 [=====] - 19s 156ms/step - loss: 40.7083 - reconstruction_error: 21.4041 - regularization_error: 19.3042 - val_loss: 68.8707 - val_reconstruction_error: 51.6570 - val_regularization_error: 17.2137
Epoch 382/1000
120/120 [=====] - 16s 135ms/step - loss: 40.3849 - reconstruction_error: 21.0380 - regularization_error: 19.3469 - val_loss: 69.4250 - val_reconstruction_error: 51.5945 - val_regularization_error: 17.8306
Epoch 383/1000
120/120 [=====] - 17s 140ms/step - loss: 40.5615 - reconstruction_error: 21.1246 - regularization_error: 19.4370 - val_loss: 69.4552 - val_reconstruction_error: 51.7548 - val_regularization_error: 17.7004
Epoch 384/1000
120/120 [=====] - 14s 116ms/step - loss: 40.6351 - reconstruction_error: 21.3073 - regularization_error: 19.3279 - val_loss: 70.4986 - val_reconstruction_error: 51.7273 - val_regularization_error: 18.7713
Epoch 385/1000
120/120 [=====] - 16s 135ms/step - loss: 40.4252 - reconstruction_error: 21.1600 - regularization_error: 19.2652 - val_loss: 69.0971 - val_reconstruction_error: 51.3134 - val_regularization_error: 17.7837
Epoch 386/1000
120/120 [=====] - 17s 138ms/step - loss: 40.3724 - reconstruction_error: 21.0321 - regularization_error: 19.3403 - val_loss: 70.5832 - val_reconstruction_error: 52.4605 - val_regularization_error: 18.1227
Epoch 387/1000
120/120 [=====] - 18s 147ms/step - loss: 40.3544 - reconstruction_error: 21.0545 - regularization_error: 19.2999 - val_loss: 69.4995 - val_reconstruction_error: 51.2257 - val_regularization_error: 18.2738
Epoch 388/1000
120/120 [=====] - 17s 140ms/step - loss: 40.4950 - reconstruction_error: 21.1757 - regularization_error: 19.3194 - val_loss: 69.8838 - val_reconstruction_error: 51.1416 - val_regularization_error: 18.7421
Epoch 389/1000
120/120 [=====] - 18s 148ms/step - loss: 40.4671 - reconstruction_error: 21.1009 - regularization_error: 19.3663 - val_loss: 69.7631 - val_reconstruction_error: 52.6277 - val_regularization_error: 17.1353
Epoch 390/1000
120/120 [=====] - 16s 130ms/step - loss: 40.6152 - reconstruction_error: 21.1487 - regularization_error: 19.4665 - val_loss: 69.1343 - val_reconstruction_error: 51.8384 - val_regularization_error: 17.2959
Epoch 391/1000
120/120 [=====] - ETA: 0s - loss: 40.3920 - reconstruction_error: 21.0387 - regularization_error: 19.3533
[2023-12-02 18:29:29.111796]: Reconstructing images for epoch 391 ...
```



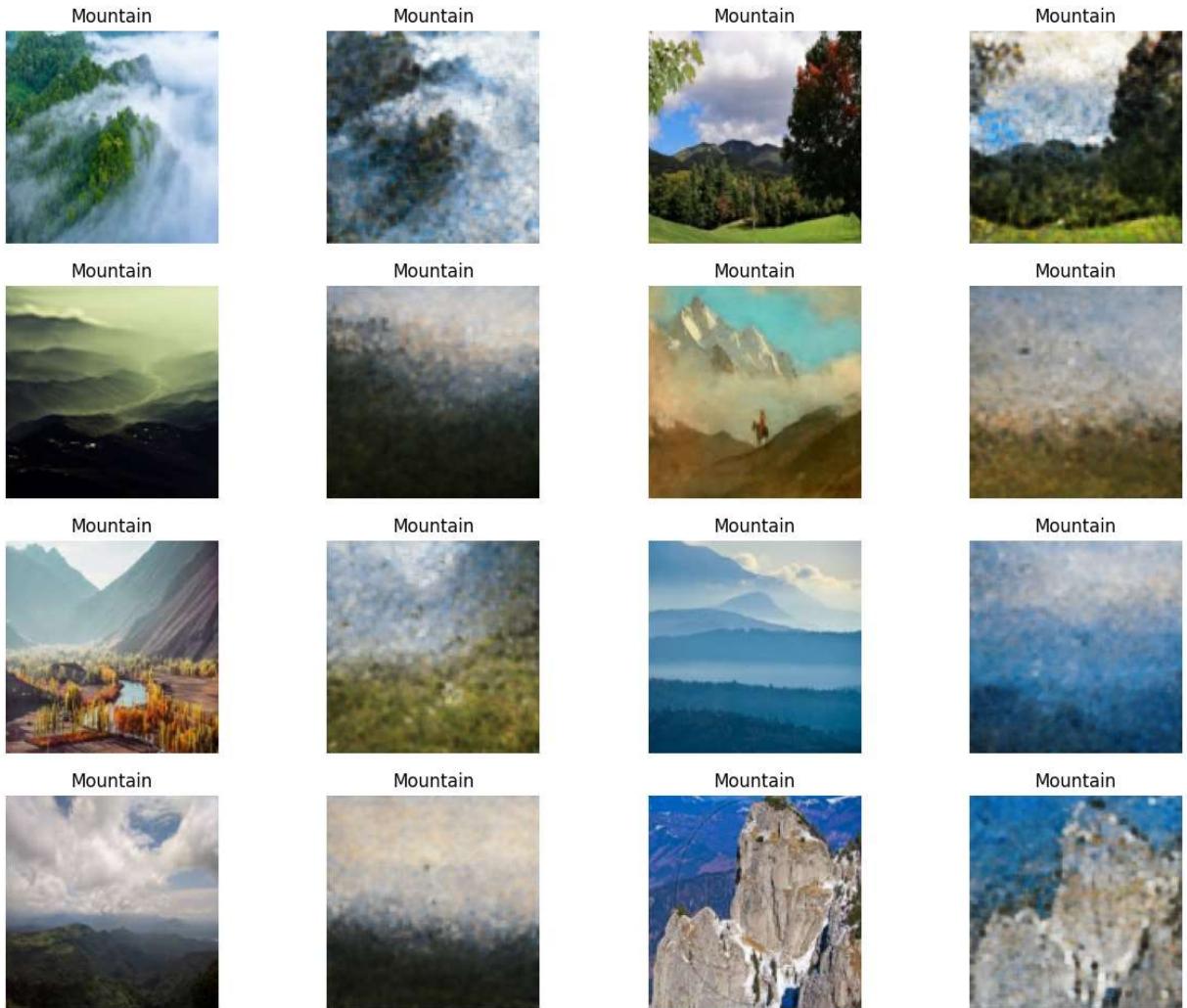
```
120/120 [=====] - 21s 171ms/step - loss: 40.3920 - reconstruction_error: 21.0387 - regularization_error: 19.3533 - val_loss: 67.8600 - val_reconstruction_error: 50.6782 - val_regularization_error: 17.1818
Epoch 392/1000
120/120 [=====] - 17s 142ms/step - loss: 40.6072 - reconstruction_error: 21.2492 - regularization_error: 19.3580 - val_loss: 69.1047 - val_reconstruction_error: 51.4941 - val_regularization_error: 17.6107
Epoch 393/1000
120/120 [=====] - 16s 131ms/step - loss: 40.5168 - reconstruction_error: 21.0955 - regularization_error: 19.4213 - val_loss: 68.3357 - val_reconstruction_error: 51.2149 - val_regularization_error: 17.1208
Epoch 394/1000
120/120 [=====] - 17s 141ms/step - loss: 40.0896 - reconstruction_error: 20.9177 - regularization_error: 19.1719 - val_loss: 68.7088 - val_reconstruction_error: 51.9544 - val_regularization_error: 16.7544
Epoch 395/1000
120/120 [=====] - 18s 147ms/step - loss: 40.2931 - reconstruction_error: 21.0295 - regularization_error: 19.2636 - val_loss: 70.5088 - val_reconstruction_error: 53.7365 - val_regularization_error: 16.7723
Epoch 396/1000
120/120 [=====] - 15s 128ms/step - loss: 40.2955 - reconstruction_error: 21.0230 - regularization_error: 19.2725 - val_loss: 69.3800 - val_reconstruction_error: 51.5218 - val_regularization_error: 17.8581
Epoch 397/1000
120/120 [=====] - 17s 138ms/step - loss: 40.3304 - reconstruction_error: 21.0303 - regularization_error: 19.3001 - val_loss: 69.9029 - val_reconstruction_error: 51.1650 - val_regularization_error: 18.7379
Epoch 398/1000
120/120 [=====] - 16s 134ms/step - loss: 40.2365 - reconstruction_error: 20.9432 - regularization_error: 19.2932 - val_loss: 69.3583 - val_reconstruction_error: 51.7842 - val_regularization_error: 17.5740
Epoch 399/1000
120/120 [=====] - 14s 114ms/step - loss: 40.2631 - reconstruction_error: 20.9413 - regularization_error: 19.3218 - val_loss: 69.9837 - val_reconstruction_error: 52.9196 - val_regularization_error: 17.0642
Epoch 400/1000
120/120 [=====] - 17s 141ms/step - loss: 40.1460 - reconstruction_error: 20.8308 - regularization_error: 19.3152 - val_loss: 69.4199 - val_reconstruction_error: 51.9237 - val_regularization_error: 17.4963
Epoch 401/1000
120/120 [=====] - ETA: 0s - loss: 40.1153 - reconstruction_error: 20.8621 - regularization_error: 19.2531
[2023-12-02 18:32:34.866622]: Reconstructing images for epoch 401 ...
```



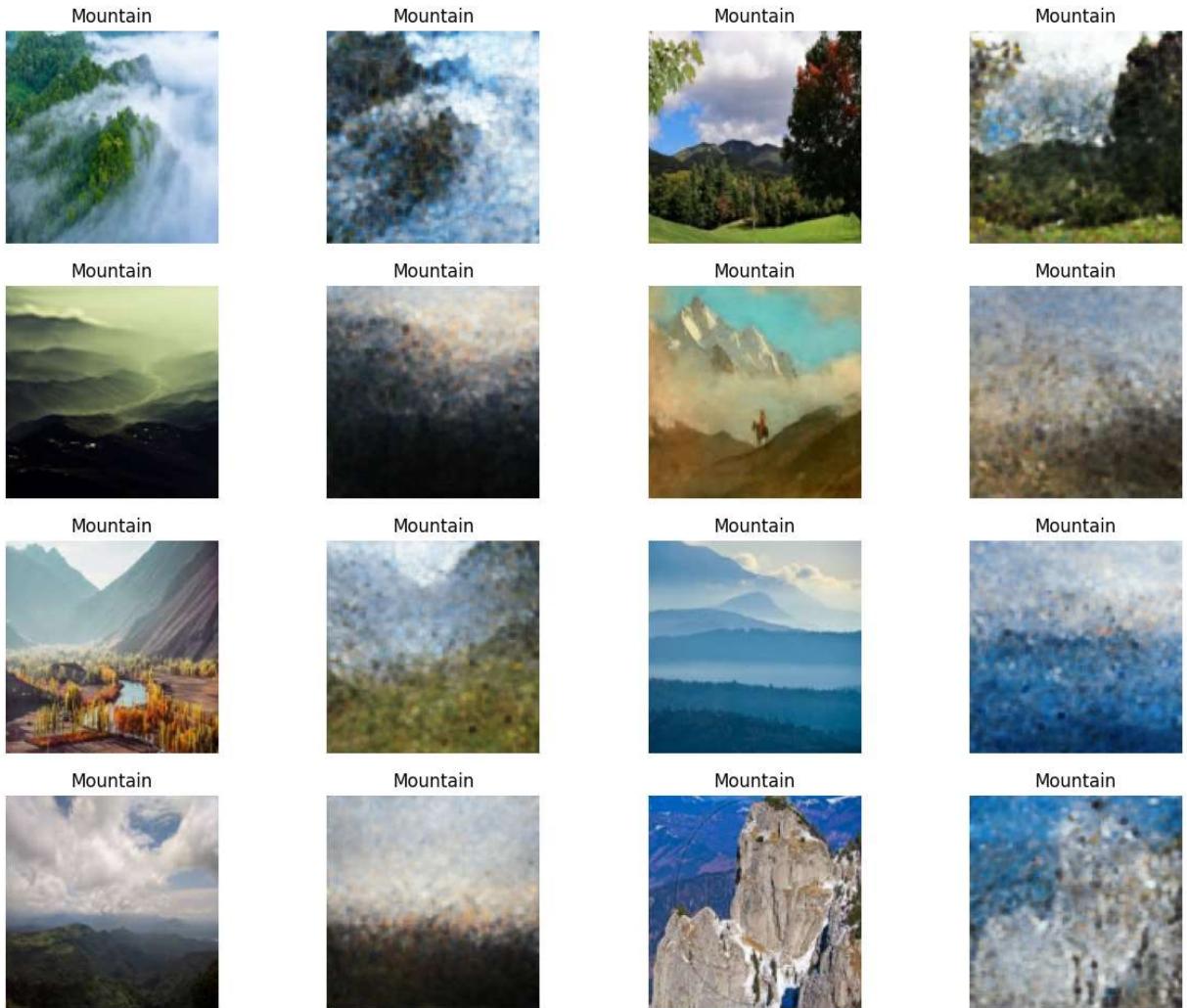
```
120/120 [=====] - 17s 142ms/step - loss: 40.1153 - reconstruction_error: 20.8621 - regularization_error: 19.2531 - val_loss: 69.1758 - val_reconstruction_error: 52.9871 - val_regularization_error: 16.1887
Epoch 402/1000
120/120 [=====] - 14s 120ms/step - loss: 40.1123 - reconstruction_error: 20.8122 - regularization_error: 19.3001 - val_loss: 69.1995 - val_reconstruction_error: 51.4317 - val_regularization_error: 17.7678
Epoch 403/1000
120/120 [=====] - 19s 159ms/step - loss: 40.0591 - reconstruction_error: 20.7807 - regularization_error: 19.2784 - val_loss: 68.9330 - val_reconstruction_error: 51.1089 - val_regularization_error: 17.8240
Epoch 404/1000
120/120 [=====] - 15s 124ms/step - loss: 40.2126 - reconstruction_error: 20.9299 - regularization_error: 19.2827 - val_loss: 69.0144 - val_reconstruction_error: 51.3930 - val_regularization_error: 17.6214
Epoch 405/1000
120/120 [=====] - 15s 126ms/step - loss: 40.2891 - reconstruction_error: 20.9134 - regularization_error: 19.3758 - val_loss: 70.4047 - val_reconstruction_error: 53.2957 - val_regularization_error: 17.1090
Epoch 406/1000
120/120 [=====] - 14s 115ms/step - loss: 40.2275 - reconstruction_error: 20.9402 - regularization_error: 19.2873 - val_loss: 69.6978 - val_reconstruction_error: 53.7691 - val_regularization_error: 15.9287
Epoch 407/1000
120/120 [=====] - 16s 129ms/step - loss: 40.2346 - reconstruction_error: 20.8598 - regularization_error: 19.3749 - val_loss: 69.4015 - val_reconstruction_error: 52.0057 - val_regularization_error: 17.3959
Epoch 408/1000
120/120 [=====] - 18s 144ms/step - loss: 39.9312 - reconstruction_error: 20.6677 - regularization_error: 19.2635 - val_loss: 69.1394 - val_reconstruction_error: 51.0102 - val_regularization_error: 18.1293
Epoch 409/1000
120/120 [=====] - 15s 119ms/step - loss: 39.9549 - reconstruction_error: 20.6401 - regularization_error: 19.3148 - val_loss: 69.7550 - val_reconstruction_error: 52.6120 - val_regularization_error: 17.1429
Epoch 410/1000
120/120 [=====] - 15s 128ms/step - loss: 40.3348 - reconstruction_error: 20.9115 - regularization_error: 19.4233 - val_loss: 72.0671 - val_reconstruction_error: 54.6993 - val_regularization_error: 17.3678
Epoch 411/1000
120/120 [=====] - ETA: 0s - loss: 40.1945 - reconstruction_error: 20.8282 - regularization_error: 19.3664
[2023-12-02 18:35:15.548173]: Reconstructing images for epoch 411 ...
```



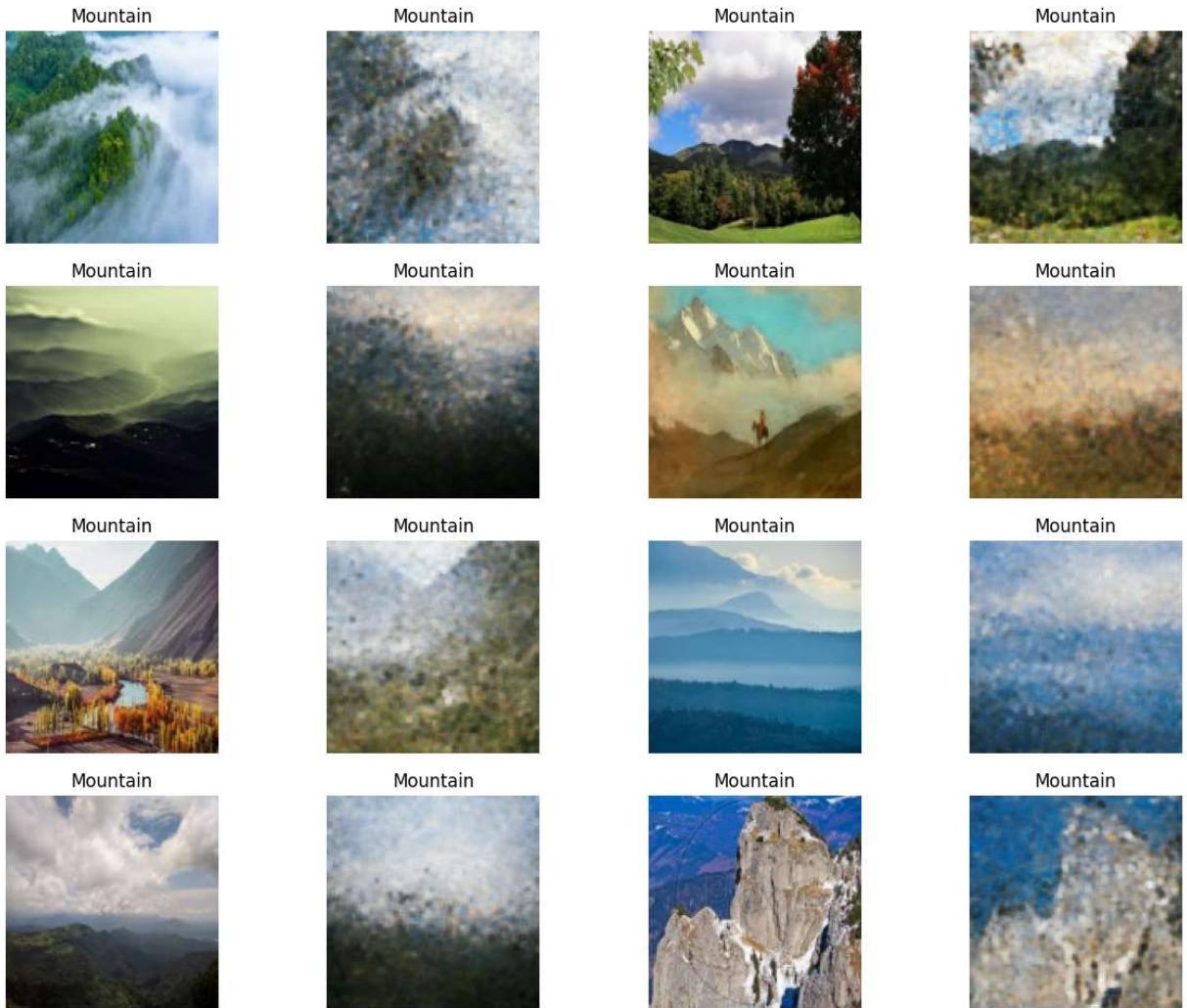
```
120/120 [=====] - 18s 148ms/step - loss: 40.1945 - reconstruction_error: 20.8282 - regularization_error: 19.3664 - val_loss: 68.9394 - val_reconstruction_error: 51.6660 - val_regularization_error: 17.2733
Epoch 412/1000
120/120 [=====] - 17s 139ms/step - loss: 40.3234 - reconstruction_error: 20.8938 - regularization_error: 19.4296 - val_loss: 69.7771 - val_reconstruction_error: 52.2690 - val_regularization_error: 17.5081
Epoch 413/1000
120/120 [=====] - 15s 126ms/step - loss: 40.0408 - reconstruction_error: 20.7979 - regularization_error: 19.2429 - val_loss: 69.5985 - val_reconstruction_error: 52.5175 - val_regularization_error: 17.0810
Epoch 414/1000
120/120 [=====] - 14s 112ms/step - loss: 40.1562 - reconstruction_error: 20.7484 - regularization_error: 19.4078 - val_loss: 69.7111 - val_reconstruction_error: 53.1175 - val_regularization_error: 16.5936
Epoch 415/1000
120/120 [=====] - 19s 157ms/step - loss: 40.0039 - reconstruction_error: 20.6561 - regularization_error: 19.3478 - val_loss: 68.6795 - val_reconstruction_error: 52.0727 - val_regularization_error: 16.6068
Epoch 416/1000
120/120 [=====] - 17s 138ms/step - loss: 39.7868 - reconstruction_error: 20.6212 - regularization_error: 19.1656 - val_loss: 70.0572 - val_reconstruction_error: 52.2589 - val_regularization_error: 17.7983
Epoch 417/1000
120/120 [=====] - 17s 141ms/step - loss: 39.9531 - reconstruction_error: 20.7133 - regularization_error: 19.2397 - val_loss: 70.1737 - val_reconstruction_error: 52.9000 - val_regularization_error: 17.2737
Epoch 418/1000
120/120 [=====] - 17s 140ms/step - loss: 39.9261 - reconstruction_error: 20.6161 - regularization_error: 19.3101 - val_loss: 68.3928 - val_reconstruction_error: 50.8495 - val_regularization_error: 17.5432
Epoch 419/1000
120/120 [=====] - 17s 141ms/step - loss: 39.9160 - reconstruction_error: 20.6352 - regularization_error: 19.2808 - val_loss: 68.9184 - val_reconstruction_error: 51.6450 - val_regularization_error: 17.2734
Epoch 420/1000
120/120 [=====] - 17s 143ms/step - loss: 40.0570 - reconstruction_error: 20.6466 - regularization_error: 19.4104 - val_loss: 69.8439 - val_reconstruction_error: 52.9474 - val_regularization_error: 16.8964
Epoch 421/1000
120/120 [=====] - ETA: 0s - loss: 40.0843 - reconstruction_error: 20.6794 - regularization_error: 19.4049
[2023-12-02 18:38:05.156605]: Reconstructing images for epoch 421 ...
```



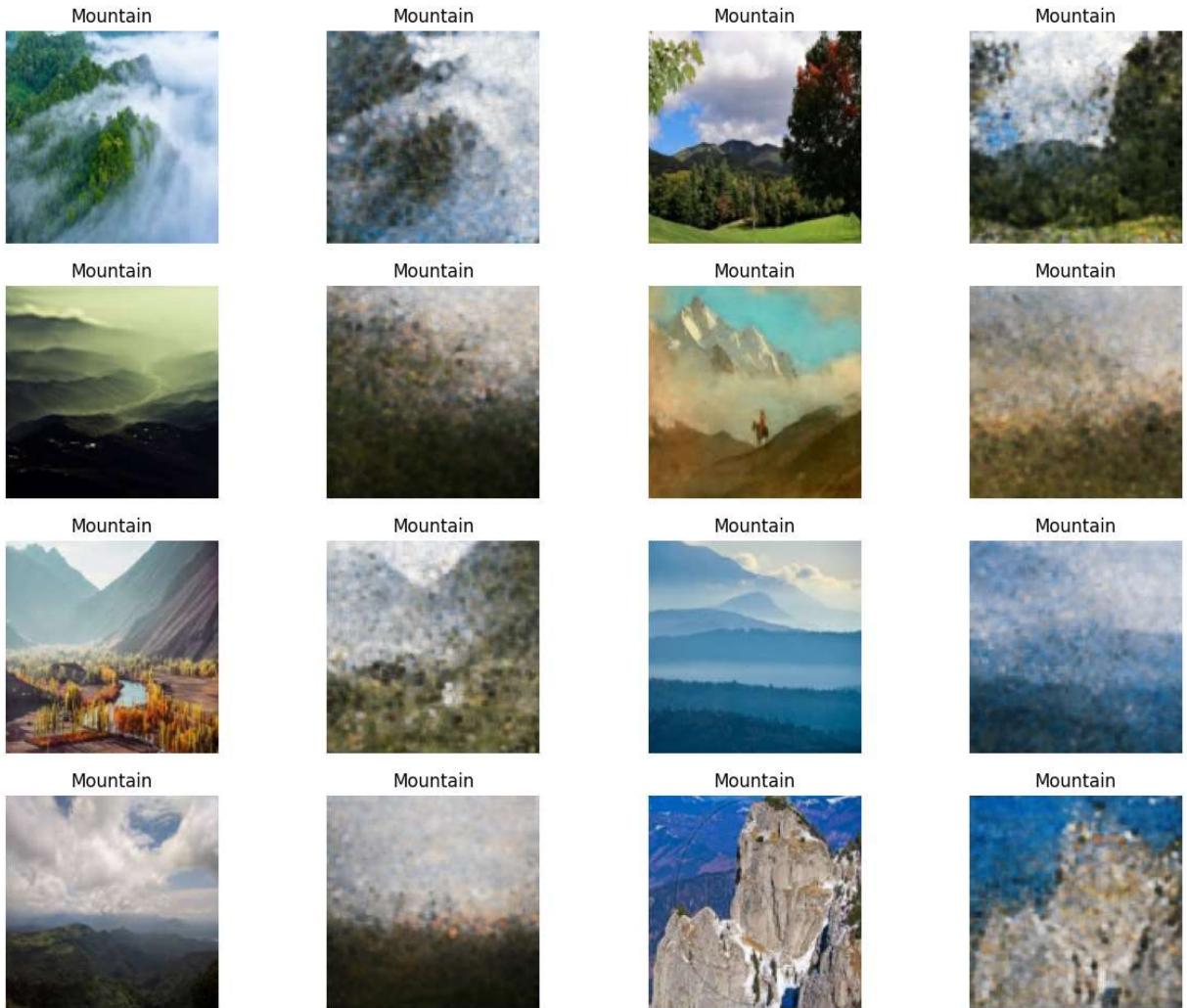
```
120/120 [=====] - 19s 161ms/step - loss: 40.0843 - reconstruction_error: 20.6794 - regularization_error: 19.4049 - val_loss: 70.1086 - val_reconstruction_error: 51.9986 - val_regularization_error: 18.1100
Epoch 422/1000
120/120 [=====] - 15s 124ms/step - loss: 40.1006 - reconstruction_error: 20.8586 - regularization_error: 19.2420 - val_loss: 69.3435 - val_reconstruction_error: 51.3142 - val_regularization_error: 18.0293
Epoch 423/1000
120/120 [=====] - 20s 164ms/step - loss: 39.9355 - reconstruction_error: 20.6299 - regularization_error: 19.3056 - val_loss: 68.5075 - val_reconstruction_error: 51.9935 - val_regularization_error: 16.5141
Epoch 424/1000
120/120 [=====] - 16s 134ms/step - loss: 40.1502 - reconstruction_error: 20.6085 - regularization_error: 19.5418 - val_loss: 69.7428 - val_reconstruction_error: 52.1655 - val_regularization_error: 17.5773
Epoch 425/1000
120/120 [=====] - 16s 137ms/step - loss: 39.8830 - reconstruction_error: 20.5450 - regularization_error: 19.3380 - val_loss: 69.5077 - val_reconstruction_error: 51.6376 - val_regularization_error: 17.8702
Epoch 426/1000
120/120 [=====] - 14s 111ms/step - loss: 39.5163 - reconstruction_error: 20.3947 - regularization_error: 19.1216 - val_loss: 68.5130 - val_reconstruction_error: 52.0259 - val_regularization_error: 16.4871
Epoch 427/1000
120/120 [=====] - 18s 146ms/step - loss: 39.7097 - reconstruction_error: 20.3934 - regularization_error: 19.3163 - val_loss: 70.2091 - val_reconstruction_error: 52.6671 - val_regularization_error: 17.5420
Epoch 428/1000
120/120 [=====] - 16s 132ms/step - loss: 39.7148 - reconstruction_error: 20.4522 - regularization_error: 19.2626 - val_loss: 69.4983 - val_reconstruction_error: 52.0522 - val_regularization_error: 17.4461
Epoch 429/1000
120/120 [=====] - 15s 120ms/step - loss: 39.8618 - reconstruction_error: 20.5550 - regularization_error: 19.3068 - val_loss: 69.5680 - val_reconstruction_error: 51.7785 - val_regularization_error: 17.7896
Epoch 430/1000
120/120 [=====] - 19s 152ms/step - loss: 39.8810 - reconstruction_error: 20.6138 - regularization_error: 19.2672 - val_loss: 69.7642 - val_reconstruction_error: 52.1811 - val_regularization_error: 17.5831
Epoch 431/1000
120/120 [=====] - ETA: 0s - loss: 39.6859 - reconstruction_error: 20.4490 - regularization_error: 19.2370
[2023-12-02 18:40:54.518960]: Reconstructing images for epoch 431 ...
```



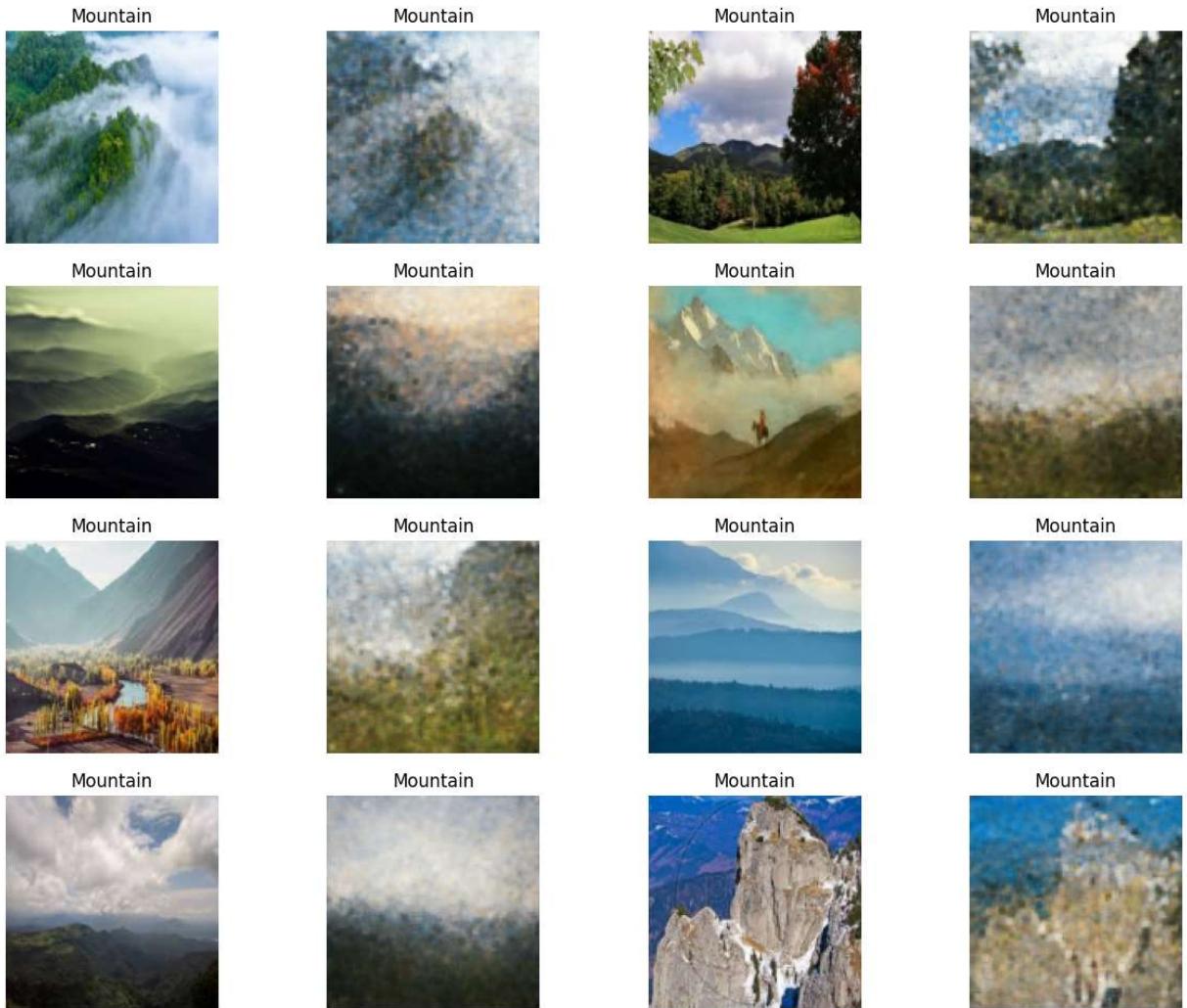
```
120/120 [=====] - 20s 167ms/step - loss: 39.6859 - reconstruction_error: 20.4490 - regularization_error: 19.2370 - val_loss: 69.6395 - val_reconstruction_error: 52.9273 - val_regularization_error: 16.7123
Epoch 432/1000
120/120 [=====] - 19s 160ms/step - loss: 39.7723 - reconstruction_error: 20.4359 - regularization_error: 19.3364 - val_loss: 69.7817 - val_reconstruction_error: 51.8912 - val_regularization_error: 17.8905
Epoch 433/1000
120/120 [=====] - 17s 136ms/step - loss: 39.7800 - reconstruction_error: 20.5120 - regularization_error: 19.2680 - val_loss: 69.8573 - val_reconstruction_error: 51.9808 - val_regularization_error: 17.8765
Epoch 434/1000
120/120 [=====] - 16s 132ms/step - loss: 39.5581 - reconstruction_error: 20.3010 - regularization_error: 19.2571 - val_loss: 68.5083 - val_reconstruction_error: 51.4688 - val_regularization_error: 17.0395
Epoch 435/1000
120/120 [=====] - 17s 141ms/step - loss: 39.8682 - reconstruction_error: 20.3699 - regularization_error: 19.4984 - val_loss: 69.9332 - val_reconstruction_error: 51.5789 - val_regularization_error: 18.3543
Epoch 436/1000
120/120 [=====] - 16s 128ms/step - loss: 39.6260 - reconstruction_error: 20.4068 - regularization_error: 19.2192 - val_loss: 68.8797 - val_reconstruction_error: 52.0954 - val_regularization_error: 16.7842
Epoch 437/1000
120/120 [=====] - 20s 164ms/step - loss: 39.7253 - reconstruction_error: 20.3728 - regularization_error: 19.3525 - val_loss: 69.8022 - val_reconstruction_error: 52.8296 - val_regularization_error: 16.9725
Epoch 438/1000
120/120 [=====] - 17s 138ms/step - loss: 39.4524 - reconstruction_error: 20.3572 - regularization_error: 19.0952 - val_loss: 71.8864 - val_reconstruction_error: 53.2643 - val_regularization_error: 18.6221
Epoch 439/1000
120/120 [=====] - 17s 140ms/step - loss: 39.6005 - reconstruction_error: 20.3661 - regularization_error: 19.2344 - val_loss: 70.5452 - val_reconstruction_error: 52.1702 - val_regularization_error: 18.3750
Epoch 440/1000
120/120 [=====] - 13s 105ms/step - loss: 39.6428 - reconstruction_error: 20.3559 - regularization_error: 19.2869 - val_loss: 69.3026 - val_reconstruction_error: 52.6074 - val_regularization_error: 16.6952
Epoch 441/1000
120/120 [=====] - ETA: 0s - loss: 39.5890 - reconstruction_error: 20.2670 - regularization_error: 19.3221
[2023-12-02 18:43:48.332617]: Reconstructing images for epoch 441 ...
```



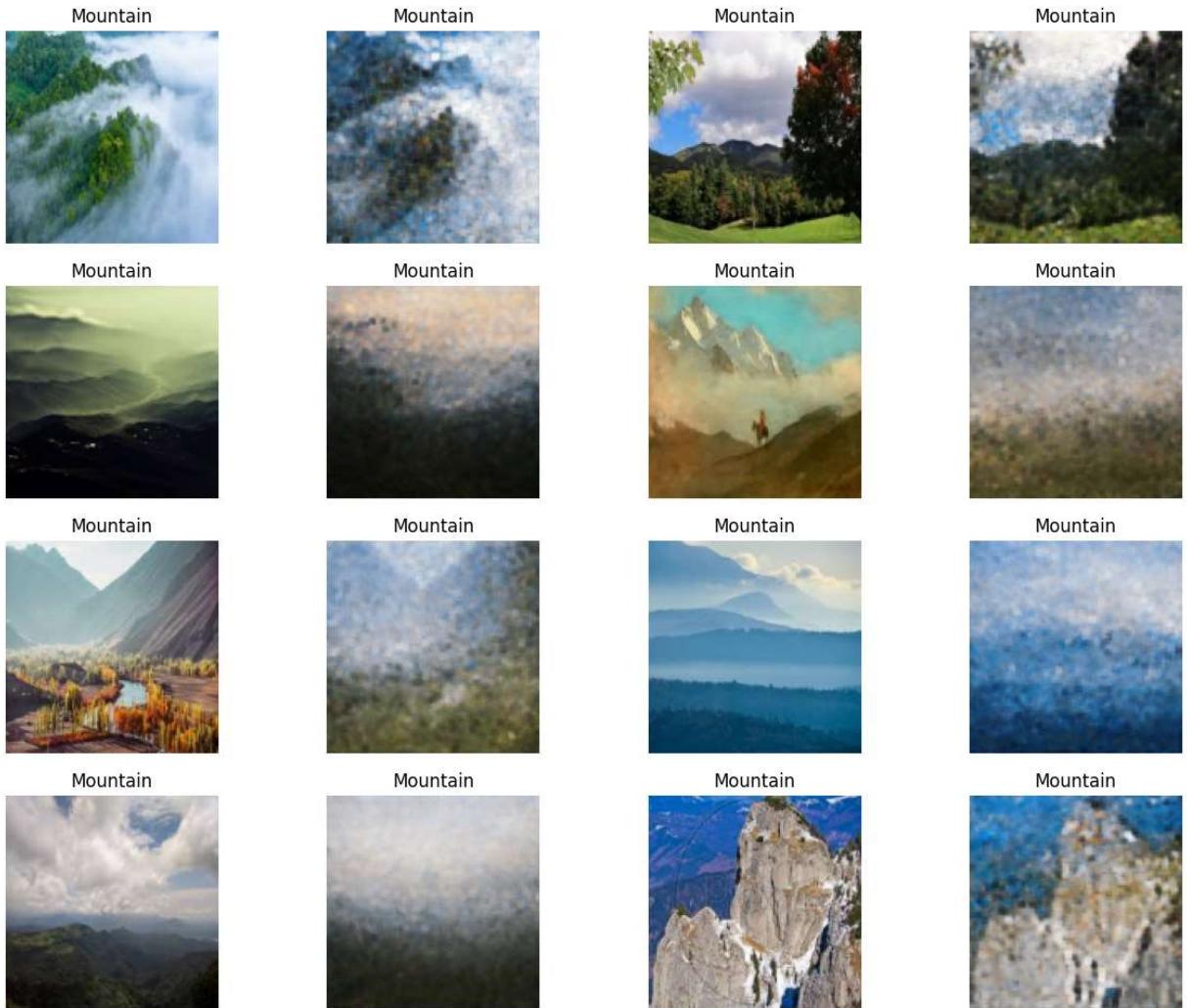
```
120/120 [=====] - 22s 186ms/step - loss: 39.5890 - reconstruction_error: 20.2670 - regularization_error: 19.3221 - val_loss: 70.1521 - val_reconstruction_error: 52.3082 - val_regularization_error: 17.8438
Epoch 442/1000
120/120 [=====] - 15s 120ms/step - loss: 39.4801 - reconstruction_error: 20.1667 - regularization_error: 19.3134 - val_loss: 69.4842 - val_reconstruction_error: 52.2251 - val_regularization_error: 17.2591
Epoch 443/1000
120/120 [=====] - 15s 124ms/step - loss: 39.4782 - reconstruction_error: 20.3093 - regularization_error: 19.1690 - val_loss: 69.2699 - val_reconstruction_error: 51.4004 - val_regularization_error: 17.8696
Epoch 444/1000
120/120 [=====] - 16s 130ms/step - loss: 39.4643 - reconstruction_error: 20.2417 - regularization_error: 19.2226 - val_loss: 68.3899 - val_reconstruction_error: 51.6551 - val_regularization_error: 16.7347
Epoch 445/1000
120/120 [=====] - 17s 138ms/step - loss: 39.6322 - reconstruction_error: 20.2536 - regularization_error: 19.3786 - val_loss: 69.2972 - val_reconstruction_error: 53.2178 - val_regularization_error: 16.0794
Epoch 446/1000
120/120 [=====] - 17s 137ms/step - loss: 39.3279 - reconstruction_error: 20.1990 - regularization_error: 19.1289 - val_loss: 70.5380 - val_reconstruction_error: 52.9253 - val_regularization_error: 17.6127
Epoch 447/1000
120/120 [=====] - 16s 134ms/step - loss: 39.6544 - reconstruction_error: 20.4457 - regularization_error: 19.2088 - val_loss: 69.7463 - val_reconstruction_error: 52.3937 - val_regularization_error: 17.3525
Epoch 448/1000
120/120 [=====] - 16s 127ms/step - loss: 39.5812 - reconstruction_error: 20.3025 - regularization_error: 19.2787 - val_loss: 69.3601 - val_reconstruction_error: 51.5019 - val_regularization_error: 17.8582
Epoch 449/1000
120/120 [=====] - 18s 148ms/step - loss: 39.4893 - reconstruction_error: 20.1461 - regularization_error: 19.3432 - val_loss: 69.5990 - val_reconstruction_error: 52.4748 - val_regularization_error: 17.1242
Epoch 450/1000
120/120 [=====] - 18s 149ms/step - loss: 39.3141 - reconstruction_error: 20.0883 - regularization_error: 19.2258 - val_loss: 70.2597 - val_reconstruction_error: 53.0305 - val_regularization_error: 17.2292
Epoch 451/1000
120/120 [=====] - ETA: 0s - loss: 39.4747 - reconstruction_error: 20.2058 - regularization_error: 19.2689
[2023-12-02 18:46:38.351217]: Reconstructing images for epoch 451 ...
```



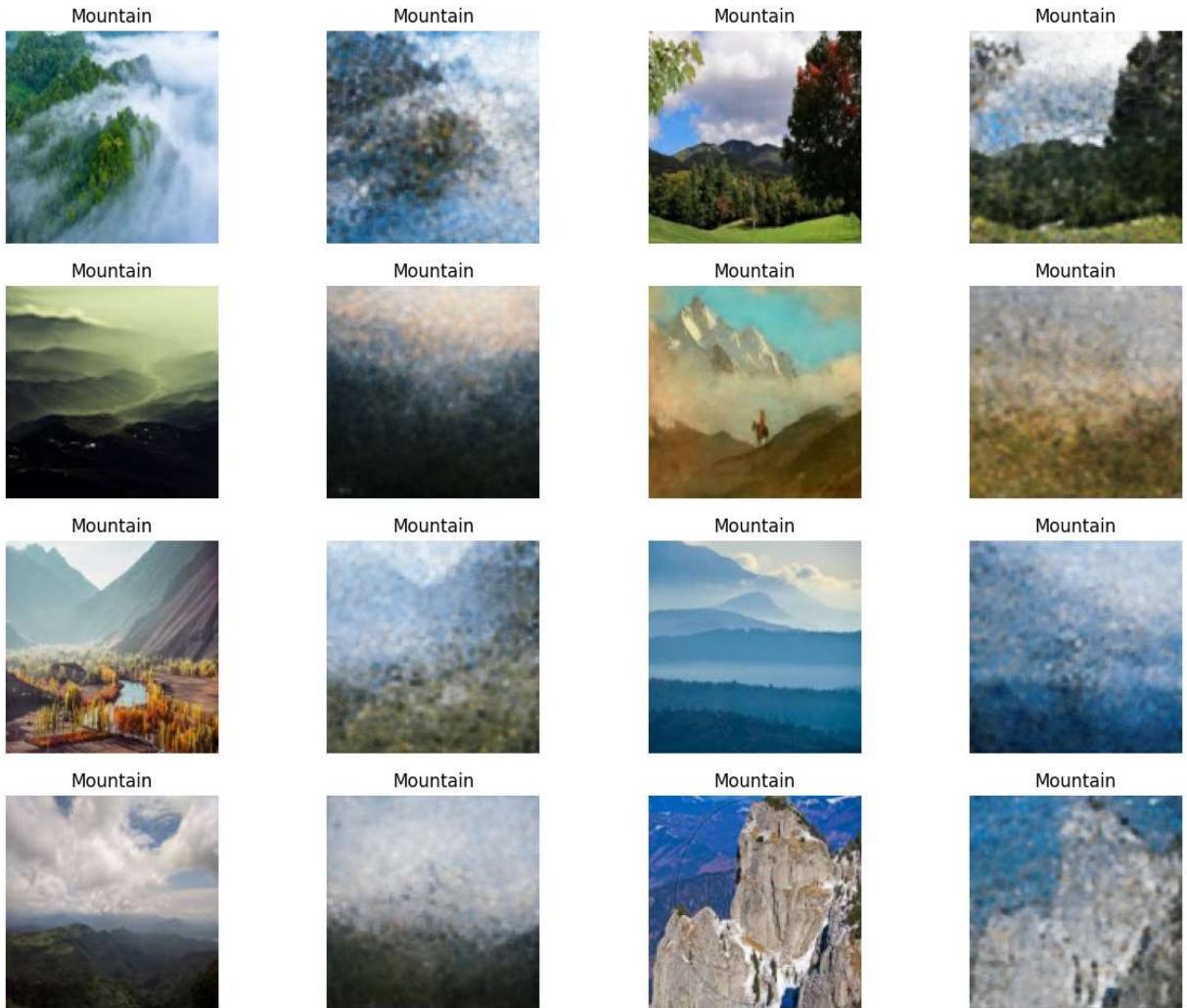
```
120/120 [=====] - 19s 155ms/step - loss: 39.4747 - reconstruction_error: 20.2058 - regularization_error: 19.2689 - val_loss: 70.4321 - val_reconstruction_error: 53.0808 - val_regularization_error: 17.3512
Epoch 452/1000
120/120 [=====] - 16s 133ms/step - loss: 39.6263 - reconstruction_error: 20.1374 - regularization_error: 19.4889 - val_loss: 68.8825 - val_reconstruction_error: 51.6590 - val_regularization_error: 17.2235
Epoch 453/1000
120/120 [=====] - 16s 128ms/step - loss: 39.3307 - reconstruction_error: 20.0697 - regularization_error: 19.2609 - val_loss: 69.3724 - val_reconstruction_error: 52.4123 - val_regularization_error: 16.9601
Epoch 454/1000
120/120 [=====] - 15s 127ms/step - loss: 39.6163 - reconstruction_error: 20.2609 - regularization_error: 19.3554 - val_loss: 72.3419 - val_reconstruction_error: 53.5634 - val_regularization_error: 18.7785
Epoch 455/1000
120/120 [=====] - 16s 135ms/step - loss: 39.4052 - reconstruction_error: 20.0557 - regularization_error: 19.3495 - val_loss: 69.1082 - val_reconstruction_error: 51.9373 - val_regularization_error: 17.1708
Epoch 456/1000
120/120 [=====] - 19s 157ms/step - loss: 39.3118 - reconstruction_error: 20.0774 - regularization_error: 19.2344 - val_loss: 68.7575 - val_reconstruction_error: 51.3386 - val_regularization_error: 17.4189
Epoch 457/1000
120/120 [=====] - 16s 128ms/step - loss: 39.3313 - reconstruction_error: 20.0506 - regularization_error: 19.2807 - val_loss: 69.4300 - val_reconstruction_error: 52.3954 - val_regularization_error: 17.0345
Epoch 458/1000
120/120 [=====] - 16s 133ms/step - loss: 39.4101 - reconstruction_error: 20.1953 - regularization_error: 19.2148 - val_loss: 68.7018 - val_reconstruction_error: 51.6355 - val_regularization_error: 17.0662
Epoch 459/1000
120/120 [=====] - 15s 120ms/step - loss: 39.4153 - reconstruction_error: 20.0235 - regularization_error: 19.3918 - val_loss: 69.9506 - val_reconstruction_error: 53.4220 - val_regularization_error: 16.5287
Epoch 460/1000
120/120 [=====] - 17s 132ms/step - loss: 39.2671 - reconstruction_error: 20.0800 - regularization_error: 19.1871 - val_loss: 68.6077 - val_reconstruction_error: 52.2331 - val_regularization_error: 16.3747
Epoch 461/1000
120/120 [=====] - ETA: 0s - loss: 39.4257 - reconstruction_error: 20.0699 - regularization_error: 19.3558
[2023-12-02 18:49:30.298783]: Reconstructing images for epoch 461 ...
```



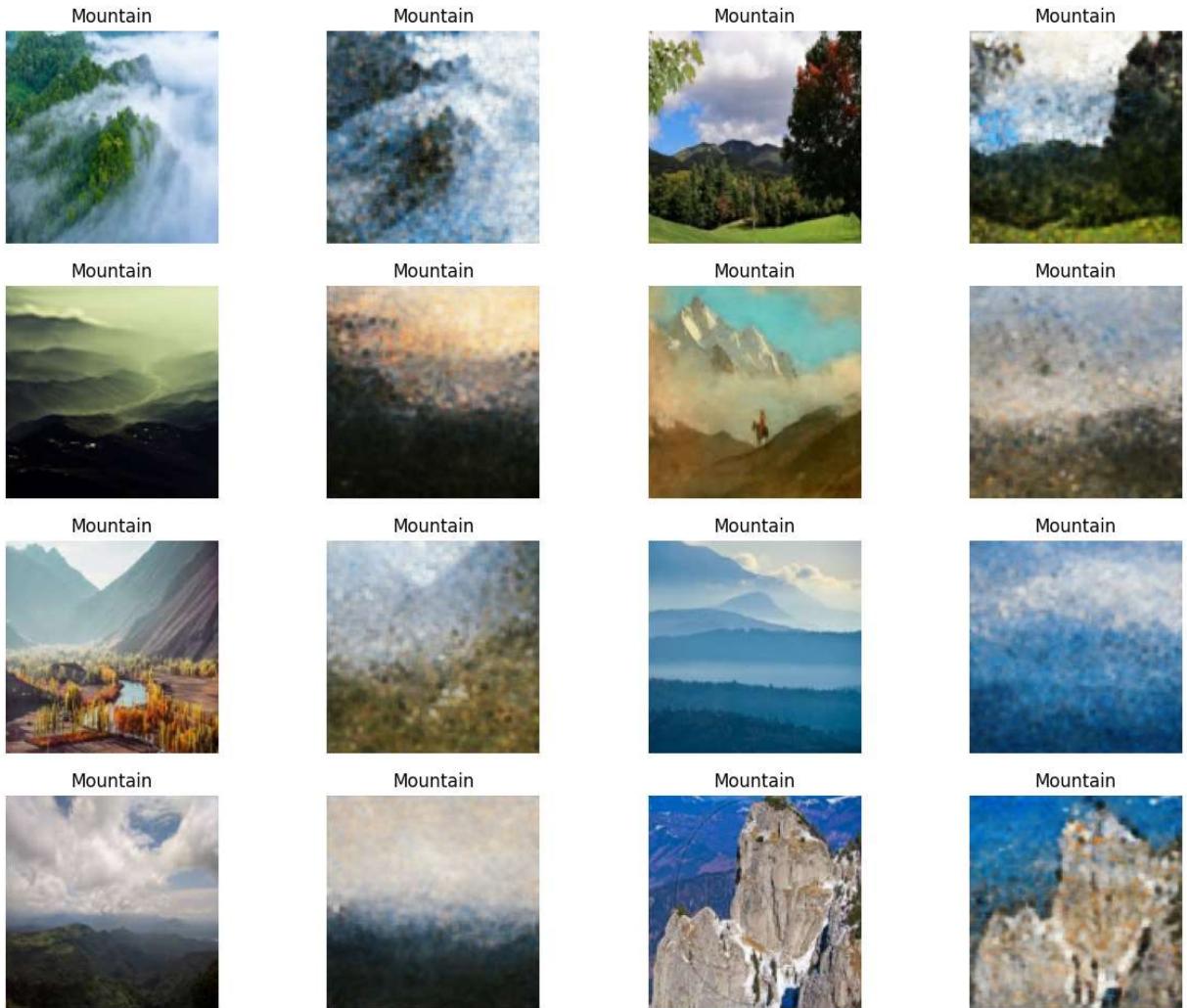
```
120/120 [=====] - 17s 140ms/step - loss: 39.4257 - reconstruction_error: 20.0699 - regularization_error: 19.3558 - val_loss: 67.5637 - val_reconstruction_error: 50.8600 - val_regularization_error: 16.7037
Epoch 462/1000
120/120 [=====] - 15s 129ms/step - loss: 39.2596 - reconstruction_error: 19.9909 - regularization_error: 19.2687 - val_loss: 69.8015 - val_reconstruction_error: 52.6963 - val_regularization_error: 17.1052
Epoch 463/1000
120/120 [=====] - 17s 138ms/step - loss: 39.3010 - reconstruction_error: 20.0021 - regularization_error: 19.2989 - val_loss: 69.9410 - val_reconstruction_error: 53.0163 - val_regularization_error: 16.9248
Epoch 464/1000
120/120 [=====] - 17s 144ms/step - loss: 39.3627 - reconstruction_error: 19.9999 - regularization_error: 19.3628 - val_loss: 70.4395 - val_reconstruction_error: 52.8363 - val_regularization_error: 17.6032
Epoch 465/1000
120/120 [=====] - 18s 154ms/step - loss: 39.2934 - reconstruction_error: 19.9393 - regularization_error: 19.3542 - val_loss: 69.4623 - val_reconstruction_error: 51.4454 - val_regularization_error: 18.0170
Epoch 466/1000
120/120 [=====] - 16s 133ms/step - loss: 39.4721 - reconstruction_error: 20.1678 - regularization_error: 19.3043 - val_loss: 69.3657 - val_reconstruction_error: 52.6658 - val_regularization_error: 16.6999
Epoch 467/1000
120/120 [=====] - 15s 125ms/step - loss: 39.3349 - reconstruction_error: 20.0564 - regularization_error: 19.2785 - val_loss: 70.3978 - val_reconstruction_error: 52.4075 - val_regularization_error: 17.9904
Epoch 468/1000
120/120 [=====] - 15s 125ms/step - loss: 39.1516 - reconstruction_error: 19.8913 - regularization_error: 19.2602 - val_loss: 68.3495 - val_reconstruction_error: 51.6461 - val_regularization_error: 16.7034
Epoch 469/1000
120/120 [=====] - 17s 137ms/step - loss: 39.1256 - reconstruction_error: 19.9806 - regularization_error: 19.1450 - val_loss: 70.3922 - val_reconstruction_error: 52.8015 - val_regularization_error: 17.5907
Epoch 470/1000
120/120 [=====] - 16s 133ms/step - loss: 39.4326 - reconstruction_error: 20.1172 - regularization_error: 19.3153 - val_loss: 69.4483 - val_reconstruction_error: 51.5787 - val_regularization_error: 17.8695
Epoch 471/1000
119/120 [=====.>.] - ETA: 0s - loss: 39.0899 - reconstruction_error: 19.8836 - regularization_error: 19.2063
[2023-12-02 18:52:15.926849]: Reconstructing images for epoch 471 ...
```



```
120/120 [=====] - 18s 150ms/step - loss: 39.0865 - reconstruction_error: 19.8810 - regularization_error: 19.2056 - val_loss: 69.5772 - val_reconstruction_error: 51.8938 - val_regularization_error: 17.6834
Epoch 472/1000
120/120 [=====] - 18s 153ms/step - loss: 39.5486 - reconstruction_error: 20.2172 - regularization_error: 19.3313 - val_loss: 69.4294 - val_reconstruction_error: 51.6525 - val_regularization_error: 17.7769
Epoch 473/1000
120/120 [=====] - 13s 106ms/step - loss: 39.4395 - reconstruction_error: 20.0639 - regularization_error: 19.3756 - val_loss: 69.3370 - val_reconstruction_error: 51.6639 - val_regularization_error: 17.6731
Epoch 474/1000
120/120 [=====] - 16s 131ms/step - loss: 39.0779 - reconstruction_error: 19.7385 - regularization_error: 19.3394 - val_loss: 69.7616 - val_reconstruction_error: 52.6821 - val_regularization_error: 17.0795
Epoch 475/1000
120/120 [=====] - 14s 116ms/step - loss: 39.0347 - reconstruction_error: 19.7759 - regularization_error: 19.2588 - val_loss: 70.8928 - val_reconstruction_error: 53.9242 - val_regularization_error: 16.9686
Epoch 476/1000
120/120 [=====] - 17s 138ms/step - loss: 39.0950 - reconstruction_error: 19.8590 - regularization_error: 19.2359 - val_loss: 70.3899 - val_reconstruction_error: 52.2338 - val_regularization_error: 18.1561
Epoch 477/1000
120/120 [=====] - 15s 123ms/step - loss: 39.4426 - reconstruction_error: 20.0057 - regularization_error: 19.4370 - val_loss: 69.4363 - val_reconstruction_error: 52.6782 - val_regularization_error: 16.7580
Epoch 478/1000
120/120 [=====] - 17s 137ms/step - loss: 39.2000 - reconstruction_error: 20.0022 - regularization_error: 19.1978 - val_loss: 69.6354 - val_reconstruction_error: 52.2814 - val_regularization_error: 17.3540
Epoch 479/1000
120/120 [=====] - 17s 138ms/step - loss: 39.2023 - reconstruction_error: 19.8774 - regularization_error: 19.3249 - val_loss: 69.5568 - val_reconstruction_error: 51.9165 - val_regularization_error: 17.6403
Epoch 480/1000
120/120 [=====] - 16s 130ms/step - loss: 39.0871 - reconstruction_error: 19.7183 - regularization_error: 19.3688 - val_loss: 69.4475 - val_reconstruction_error: 52.0086 - val_regularization_error: 17.4389
Epoch 481/1000
120/120 [=====] - ETA: 0s - loss: 39.0667 - reconstruction_error: 19.7356 - regularization_error: 19.3311
[2023-12-02 18:54:58.775982]: Reconstructing images for epoch 481 ...
```



```
120/120 [=====] - 18s 152ms/step - loss: 39.0667 - reconstruction_error: 19.7356 - regularization_error: 19.3311 - val_loss: 69.0393 - val_reconstruction_error: 52.8934 - val_regularization_error: 16.1459
Epoch 482/1000
120/120 [=====] - 16s 137ms/step - loss: 39.2075 - reconstruction_error: 19.8725 - regularization_error: 19.3350 - val_loss: 70.3709 - val_reconstruction_error: 52.8288 - val_regularization_error: 17.5420
Epoch 483/1000
120/120 [=====] - 17s 138ms/step - loss: 39.1458 - reconstruction_error: 19.7899 - regularization_error: 19.3559 - val_loss: 70.1970 - val_reconstruction_error: 52.7368 - val_regularization_error: 17.4602
Epoch 484/1000
120/120 [=====] - 17s 141ms/step - loss: 38.9222 - reconstruction_error: 19.5519 - regularization_error: 19.3704 - val_loss: 69.7440 - val_reconstruction_error: 51.7843 - val_regularization_error: 17.9597
Epoch 485/1000
120/120 [=====] - 14s 116ms/step - loss: 39.1110 - reconstruction_error: 19.7465 - regularization_error: 19.3645 - val_loss: 70.6223 - val_reconstruction_error: 52.9263 - val_regularization_error: 17.6960
Epoch 486/1000
120/120 [=====] - 17s 135ms/step - loss: 38.7279 - reconstruction_error: 19.5472 - regularization_error: 19.1806 - val_loss: 68.7575 - val_reconstruction_error: 51.5634 - val_regularization_error: 17.1942
Epoch 487/1000
120/120 [=====] - 16s 137ms/step - loss: 39.0311 - reconstruction_error: 19.7826 - regularization_error: 19.2485 - val_loss: 69.9955 - val_reconstruction_error: 52.1852 - val_regularization_error: 17.8103
Epoch 488/1000
120/120 [=====] - 18s 149ms/step - loss: 38.8619 - reconstruction_error: 19.6771 - regularization_error: 19.1848 - val_loss: 68.7877 - val_reconstruction_error: 52.2009 - val_regularization_error: 16.5867
Epoch 489/1000
120/120 [=====] - 14s 112ms/step - loss: 39.0736 - reconstruction_error: 19.7768 - regularization_error: 19.2968 - val_loss: 69.3473 - val_reconstruction_error: 52.7781 - val_regularization_error: 16.5692
Epoch 490/1000
120/120 [=====] - 20s 162ms/step - loss: 38.9522 - reconstruction_error: 19.6641 - regularization_error: 19.2881 - val_loss: 68.6267 - val_reconstruction_error: 52.4661 - val_regularization_error: 16.1606
Epoch 491/1000
120/120 [=====] - ETA: 0s - loss: 38.9975 - reconstruction_error: 19.8374 - regularization_error: 19.1601
[2023-12-02 18:57:44.445434]: Reconstructing images for epoch 491 ...
```



```
120/120 [=====] - 17s 142ms/step - loss: 38.9975 - reconstruction_error: 19.8374 - regularization_error: 19.1601 - val_loss: 69.7258 - val_reconstruction_error: 51.8306 - val_regularization_error: 17.8952
Epoch 492/1000
120/120 [=====] - 17s 142ms/step - loss: 38.8653 - reconstruction_error: 19.6120 - regularization_error: 19.2533 - val_loss: 69.7184 - val_reconstruction_error: 52.7712 - val_regularization_error: 16.9471
Epoch 493/1000
120/120 [=====] - 17s 140ms/step - loss: 38.9009 - reconstruction_error: 19.6437 - regularization_error: 19.2573 - val_loss: 68.7061 - val_reconstruction_error: 51.5921 - val_regularization_error: 17.1140
Epoch 494/1000
120/120 [=====] - 16s 131ms/step - loss: 38.9886 - reconstruction_error: 19.7324 - regularization_error: 19.2563 - val_loss: 68.8432 - val_reconstruction_error: 51.9361 - val_regularization_error: 16.9071
Epoch 495/1000
120/120 [=====] - 15s 122ms/step - loss: 39.0392 - reconstruction_error: 19.7379 - regularization_error: 19.3013 - val_loss: 69.6837 - val_reconstruction_error: 51.4848 - val_regularization_error: 18.1989
Epoch 496/1000
120/120 [=====] - 17s 138ms/step - loss: 38.6895 - reconstruction_error: 19.5182 - regularization_error: 19.1713 - val_loss: 70.6814 - val_reconstruction_error: 53.3740 - val_regularization_error: 17.3074
Epoch 497/1000
120/120 [=====] - 16s 135ms/step - loss: 38.9059 - reconstruction_error: 19.7092 - regularization_error: 19.1967 - val_loss: 70.3612 - val_reconstruction_error: 52.5728 - val_regularization_error: 17.7884
Epoch 498/1000
120/120 [=====] - 15s 121ms/step - loss: 38.8207 - reconstruction_error: 19.5913 - regularization_error: 19.2295 - val_loss: 69.6640 - val_reconstruction_error: 52.6029 - val_regularization_error: 17.0611
Epoch 499/1000
120/120 [=====] - 18s 147ms/step - loss: 38.9703 - reconstruction_error: 19.6940 - regularization_error: 19.2763 - val_loss: 70.9141 - val_reconstruction_error: 53.8316 - val_regularization_error: 17.0825
Epoch 500/1000
120/120 [=====] - 16s 128ms/step - loss: 39.1371 - reconstruction_error: 19.6874 - regularization_error: 19.4497 - val_loss: 69.9181 - val_reconstruction_error: 52.3908 - val_regularization_error: 17.5274
Epoch 501/1000
120/120 [=====] - ETA: 0s - loss: 38.9469 - reconstruction_error: 19.6003 - regularization_error: 19.3466
[2023-12-02 19:00:31.857574]: Reconstructing images for epoch 501 ...
```

