```
 1 "C:\Program Files\Python37\python.exe" "C:/Users/
   JDEAGAN/OneDrive - Environmental Protection Agency (
   EPA)/Profile/Desktop/Projects/AI/ArtificialIntel/
   BuildingIdentifier/ImageAnnotation/KerasTunerDeagan.
   py"
 2 2021-10-19 13:20:37.533541: W tensorflow/
   stream_executor/platform/default/dso_loader.cc:64]
   Could not load dynamic library 'cudart64_110.dll';
   dlerror: cudart64_110.dll not found
 3 2021-10-19 13:20:37.534017: I tensorflow/
   stream_executor/cuda/cudart_stub.cc:29] Ignore above
   cudart dlerror if you do not have a GPU set up on
   your machine.
 4 THIS IS THE PROPER KERAS TUNER
   ///////////////////////////////////////////////////
   ///////////////////////////////////////////////////
   ///////////////////////////////////////////////////
   /////
 5 2.6.0
 6 Found 7811 files belonging to 6 classes.
 7 Using 6249 files for training.
 8 2021-10-19 13:20:54.130032: W tensorflow/
   stream_executor/platform/default/dso_loader.cc:64]
   Could not load dynamic library 'nvcuda.dll'; dlerror
   : nvcuda.dll not found
 9 2021-10-19 13:20:54.131278: W tensorflow/
   stream_executor/cuda/cuda_driver.cc:269] failed call
   to cuInit: UNKNOWN ERROR (303)
10 2021-10-19 13:20:54.151076: I tensorflow/
   stream_executor/cuda/cuda_diagnostics.cc:169]
   retrieving CUDA diagnostic information for host:
   D26265VWTBOE
11 2021-10-19 13:20:54.151683: I tensorflow/
   stream_executor/cuda/cuda_diagnostics.cc:176]
   hostname: D26265VWTBOE
12 2021-10-19 13:20:54.152291: I tensorflow/core/
   platform/cpu_feature_guard.cc:142] This TensorFlow
   binary is optimized with oneAPI Deep Neural Network
   Library (oneDNN) to use the following CPU
   instructions in performance-critical operations:  AVX
    AVX2
```

```
13 To enable them in other operations, rebuild
   TensorFlow with the appropriate compiler flags.
14 Found 7811 files belonging to 6 classes.
15 Using 1562 files for validation.
16 Found 864 files belonging to 6 classes.
17 Model: "sequential"
18 _____
   _____
19 Layer (type)                  Output Shape
                    Param #
20 ===============================================
   ============
21 rescaling (Rescaling)         (None, 256, 256, 3
   )        0
22 _____
   _____
23 random_flip (RandomFlip)      (None, 256, 256, 3
   )        0
24 _____
   _____
25 random_rotation (RandomRotat  (None, 256, 256, 3
   )        0
26 _____
   _____
27 conv2d (Conv2D)               (None, 254, 254, 32
   )      896
28 _____
   _____
29 max_pooling2d (MaxPooling2D)  (None, 127, 127, 32
   )        0
30 _____
   _____
31 conv2d_1 (Conv2D)             (None, 125, 125, 64
   )      18496
32 _____
   _____
33 max_pooling2d_1 (MaxPooling2  (None, 62, 62, 64
   )        0
34 _____
   _____
35 conv2d_2 (Conv2D)             (None, 60, 60, 128
```

```
35 )                 73856
36 _____
   _____
37 max_pooling2d_2 (MaxPooling2 (None, 30, 30, 128
   )         0
38 _____
   _____
39 flatten (Flatten)            (None, 115200
   )              0
40 _____
   _____
41 dense (Dense)                (None, 256
   )              29491456
42 _____
   _____
43 dense_1 (Dense)              (None, 256
   )              65792
44 _____
   _____
45 dense_2 (Dense)              (None, 6
   )              1542
46 ===============================================
   ===========
47 Total params: 29,652,038
48 Trainable params: 29,652,038
49 Non-trainable params: 0
50 _____
   _____
51 Epoch 1/30
52 C:\Users\JDEAGAN\AppData\Roaming\Python\Python37\site
   -packages\keras\backend.py:4907: UserWarning: "`
   sparse_categorical_crossentropy` received `
   from_logits=True`, but the `output` argument was
   produced by a sigmoid or softmax activation and thus
   does not represent logits. Was this intended?"
53   '"`sparse_categorical_crossentropy` received `
   from_logits=True`, but '
54 2021-10-19 13:20:56.724502: I tensorflow/compiler/
   mlir/mlir_graph_optimization_pass.cc:185] None of the
    MLIR Optimization Passes are enabled (registered 2)
55   2/196 [..............................] - ETA: 8:11
```

```
55   - loss: 5.2303 - accuracy: 0.2500      2021-10-19 13:
     21:03.087262: W tensorflow/core/lib/png/png_io.cc:88
     ] PNG warning: iCCP: known incorrect sRGB profile
56    4/196 [..............................] - ETA: 8:30
     - loss: 3.5625 - accuracy: 0.17972021-10-19 13:21:08
     .642571: W tensorflow/core/lib/png/png_io.cc:88] PNG
     warning: iCCP: known incorrect sRGB profile
57    5/196 [..............................] - ETA: 8:28
     - loss: 3.1717 - accuracy: 0.23752021-10-19 13:21:11
     .469499: W tensorflow/core/lib/png/png_io.cc:88] PNG
     warning: iCCP: known incorrect sRGB profile
58   13/196 [>.............................] - ETA: 7:46
     - loss: 2.1244 - accuracy: 0.31492021-10-19 13:21:31
     .303364: W tensorflow/core/lib/png/png_io.cc:88] PNG
     warning: iCCP: known incorrect sRGB profile
59   46/196 [======>.......................] - ETA: 5:52
     - loss: 1.6033 - accuracy: 0.38452021-10-19 13:22:46
     .314009: W tensorflow/core/lib/png/png_io.cc:88] PNG
     warning: iCCP: known incorrect sRGB profile
60   47/196 [======>.......................] - ETA: 5:49
     - loss: 1.6027 - accuracy: 0.38502021-10-19 13:22:48
     .559197: W tensorflow/core/lib/png/png_io.cc:88] PNG
     warning: iCCP: known incorrect sRGB profile
61   56/196 [=======>......................] - ETA: 5:33
     - loss: 1.5562 - accuracy: 0.40012021-10-19 13:23:11
     .714937: W tensorflow/core/lib/png/png_io.cc:88] PNG
     warning: iCCP: known incorrect sRGB profile
62   59/196 [========>.....................] - ETA: 5:25
     - loss: 1.5467 - accuracy: 0.40042021-10-19 13:23:18
     .396133: W tensorflow/core/lib/png/png_io.cc:88] PNG
     warning: iCCP: known incorrect sRGB profile
63   60/196 [========>.....................] - ETA: 5:22
     - loss: 1.5445 - accuracy: 0.40212021-10-19 13:23:20
     .615540: W tensorflow/core/lib/png/png_io.cc:88] PNG
     warning: iCCP: known incorrect sRGB profile
64   65/196 [========>.....................] - ETA: 5:09
     - loss: 1.5290 - accuracy: 0.40342021-10-19 13:23:31
     .834577: W tensorflow/core/lib/png/png_io.cc:88] PNG
     warning: iCCP: known incorrect sRGB profile
65   73/196 [==========>...................] - ETA: 4:48
     - loss: 1.5121 - accuracy: 0.40502021-10-19 13:23:49
```

```
65 .723257: W tensorflow/core/lib/png/png_io.cc:88] PNG
   warning: iCCP: known incorrect sRGB profile
66 76/196 [=========>...................] - ETA: 4:40
   - loss: 1.5041 - accuracy: 0.40712021-10-19 13:23:
   56.194388: W tensorflow/core/lib/png/png_io.cc:88]
   PNG warning: iCCP: known incorrect sRGB profile
67 82/196 [==========>..................] - ETA: 4:25
   - loss: 1.4928 - accuracy: 0.40852021-10-19 13:24:
   09.220134: W tensorflow/core/lib/png/png_io.cc:88]
   PNG warning: iCCP: known incorrect sRGB profile
68 87/196 [===========>.................] - ETA: 4:12
   - loss: 1.4849 - accuracy: 0.40732021-10-19 13:24:
   20.146393: W tensorflow/core/lib/png/png_io.cc:88]
   PNG warning: iCCP: known incorrect sRGB profile
69 92/196 [============>................] - ETA: 4:00
   - loss: 1.4773 - accuracy: 0.40792021-10-19 13:24:
   31.160992: W tensorflow/core/lib/png/png_io.cc:88]
   PNG warning: iCCP: known incorrect sRGB profile
70 96/196 [============>................] - ETA: 3:51
   - loss: 1.4723 - accuracy: 0.41152021-10-19 13:24:
   40.627203: W tensorflow/core/lib/png/png_io.cc:88]
   PNG warning: iCCP: known incorrect sRGB profile
71 109/196 [================>............] - ETA: 3:20
   - loss: 1.4572 - accuracy: 0.42292021-10-19 13:25:
   10.013534: W tensorflow/core/lib/png/png_io.cc:88]
   PNG warning: iCCP: known incorrect sRGB profile
72 118/196 [=================>...........] - ETA: 2:59
   - loss: 1.4511 - accuracy: 0.42322021-10-19 13:25:
   29.827801: W tensorflow/core/lib/png/png_io.cc:88]
   PNG warning: iCCP: known incorrect sRGB profile
73 120/196 [==================>..........] - ETA: 2:54
   - loss: 1.4483 - accuracy: 0.42502021-10-19 13:25:
   34.170873: W tensorflow/core/lib/png/png_io.cc:88]
   PNG warning: iCCP: known incorrect sRGB profile
74 122/196 [==================>..........] - ETA: 2:50
   - loss: 1.4469 - accuracy: 0.42572021-10-19 13:25:
   39.125338: W tensorflow/core/lib/png/png_io.cc:88]
   PNG warning: iCCP: known incorrect sRGB profile
75 2021-10-19 13:25:39.848104: W tensorflow/core/lib/
   png/png_io.cc:88] PNG warning: iCCP: known incorrect
   sRGB profile
```

```
76 127/196 [===================>..........] - ETA: 2:39
    - loss: 1.4397 - accuracy: 0.42862021-10-19 13:25:
   52.075224: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
77 130/196 [===================>..........] - ETA: 2:33
    - loss: 1.4422 - accuracy: 0.42862021-10-19 13:25:
   59.827316: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
78 131/196 [====================>..........] - ETA: 2:30
    - loss: 1.4395 - accuracy: 0.43012021-10-19 13:26:
   02.622698: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
79 134/196 [====================>..........] - ETA: 2:23
    - loss: 1.4376 - accuracy: 0.43072021-10-19 13:26:
   09.574961: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
80 136/196 [====================>..........] - ETA: 2:19
    - loss: 1.4352 - accuracy: 0.43112021-10-19 13:26:
   13.941916: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
81 2021-10-19 13:26:13.995849: W tensorflow/core/lib/
   png/png_io.cc:88] PNG warning: iCCP: known incorrect
    sRGB profile
82 155/196 [=======================>.......] - ETA: 1:35
    - loss: 1.4220 - accuracy: 0.43552021-10-19 13:26:
   57.932527: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
83 166/196 [=========================>.....] - ETA: 1:09
    - loss: 1.4176 - accuracy: 0.43472021-10-19 13:27:
   23.053734: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
84 172/196 [==========================>....] - ETA: 55s
    - loss: 1.4127 - accuracy: 0.43752021-10-19 13:27:
   37.284275: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
85 174/196 [==========================>....] - ETA: 51s
    - loss: 1.4108 - accuracy: 0.43802021-10-19 13:27:
   41.674417: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
86 196/196 [==============================] - ETA: 0s
    - loss: 1.4030 - accuracy: 0.43862021-10-19 13:28:
```

```
 86 30.571557: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
 87 2021-10-19 13:28:30.879749: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
     sRGB profile
 88 2021-10-19 13:28:32.345521: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
     sRGB profile
 89 2021-10-19 13:28:47.806107: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
     sRGB profile
 90 2021-10-19 13:28:48.365051: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
     sRGB profile
 91 2021-10-19 13:28:55.797350: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
     sRGB profile
 92 196/196 [==============================] - 489s 2s/
    step - loss: 1.4030 - accuracy: 0.4386 - val_loss: 1
    .2978 - val_accuracy: 0.4808
 93 Epoch 2/30
 94 196/196 [==============================] - 468s 2s/
    step - loss: 1.3356 - accuracy: 0.4495 - val_loss: 1
    .3041 - val_accuracy: 0.4795
 95 Epoch 3/30
 96 196/196 [==============================] - 459s 2s/
    step - loss: 1.3074 - accuracy: 0.4617 - val_loss: 1
    .2799 - val_accuracy: 0.4866
 97 Epoch 4/30
 98 196/196 [==============================] - 446s 2s/
    step - loss: 1.2951 - accuracy: 0.4713 - val_loss: 1
    .2626 - val_accuracy: 0.5032
 99 Epoch 5/30
100 196/196 [==============================] - 457s 2s/
    step - loss: 1.2848 - accuracy: 0.4775 - val_loss: 1
    .3194 - val_accuracy: 0.4449
101 Epoch 6/30
102 196/196 [==============================] - 473s 2s/
    step - loss: 1.2818 - accuracy: 0.4786 - val_loss: 1
    .2939 - val_accuracy: 0.4718
103 Epoch 7/30
```

```
104 196/196 [==============================] - 469s 2s/
    step - loss: 1.2705 - accuracy: 0.4826 - val_loss: 1
    .2519 - val_accuracy: 0.5051
105 Epoch 8/30
106 196/196 [==============================] - 443s 2s/
    step - loss: 1.2620 - accuracy: 0.4822 - val_loss: 1
    .2380 - val_accuracy: 0.5141
107 Epoch 9/30
108 196/196 [==============================] - 440s 2s/
    step - loss: 1.2555 - accuracy: 0.4820 - val_loss: 1
    .2313 - val_accuracy: 0.5083
109 Epoch 10/30
110 196/196 [==============================] - 435s 2s/
    step - loss: 1.2553 - accuracy: 0.4831 - val_loss: 1
    .2337 - val_accuracy: 0.5058
111 Epoch 11/30
112 196/196 [==============================] - 469s 2s/
    step - loss: 1.2574 - accuracy: 0.4836 - val_loss: 1
    .2313 - val_accuracy: 0.5122
113 Epoch 12/30
114 196/196 [==============================] - 446s 2s/
    step - loss: 1.2428 - accuracy: 0.4951 - val_loss: 1
    .2192 - val_accuracy: 0.5083
115 Epoch 13/30
116 196/196 [==============================] - 443s 2s/
    step - loss: 1.2438 - accuracy: 0.4942 - val_loss: 1
    .2106 - val_accuracy: 0.5154
117 Epoch 14/30
118 196/196 [==============================] - 469s 2s/
    step - loss: 1.2400 - accuracy: 0.4943 - val_loss: 1
    .2127 - val_accuracy: 0.5147
119 Epoch 15/30
120 196/196 [==============================] - 462s 2s/
    step - loss: 1.2248 - accuracy: 0.4985 - val_loss: 1
    .2041 - val_accuracy: 0.5205
121 Epoch 16/30
122 196/196 [==============================] - 466s 2s/
    step - loss: 1.2240 - accuracy: 0.4983 - val_loss: 1
    .2231 - val_accuracy: 0.5147
123 Epoch 17/30
124 196/196 [==============================] - 466s 2s/
```

```
124 step - loss: 1.2259 - accuracy: 0.4993 - val_loss: 1
    .2174 - val_accuracy: 0.5013
125 Epoch 18/30
126 196/196 [==============================] - 470s 2s/
    step - loss: 1.2122 - accuracy: 0.5060 - val_loss: 1
    .2078 - val_accuracy: 0.5070
127 Epoch 19/30
128 196/196 [==============================] - 475s 2s/
    step - loss: 1.2073 - accuracy: 0.5090 - val_loss: 1
    .2023 - val_accuracy: 0.5064
129 Epoch 20/30
130 196/196 [==============================] - 466s 2s/
    step - loss: 1.2040 - accuracy: 0.5118 - val_loss: 1
    .1902 - val_accuracy: 0.5230
131 Epoch 21/30
132 196/196 [==============================] - 484s 2s/
    step - loss: 1.1895 - accuracy: 0.5145 - val_loss: 1
    .1966 - val_accuracy: 0.5128
133 Epoch 22/30
134 196/196 [==============================] - 485s 2s/
    step - loss: 1.1896 - accuracy: 0.5146 - val_loss: 1
    .1945 - val_accuracy: 0.5237
135 Epoch 23/30
136 196/196 [==============================] - 445s 2s/
    step - loss: 1.1756 - accuracy: 0.5204 - val_loss: 1
    .2029 - val_accuracy: 0.5269
137 Epoch 24/30
138 196/196 [==============================] - 441s 2s/
    step - loss: 1.1605 - accuracy: 0.5302 - val_loss: 1
    .2002 - val_accuracy: 0.5198
139 Epoch 25/30
140 196/196 [==============================] - 458s 2s/
    step - loss: 1.1562 - accuracy: 0.5316 - val_loss: 1
    .2212 - val_accuracy: 0.5083
141 Epoch 26/30
142 196/196 [==============================] - 442s 2s/
    step - loss: 1.1490 - accuracy: 0.5327 - val_loss: 1
    .2049 - val_accuracy: 0.5243
143 Epoch 27/30
144 196/196 [==============================] - 464s 2s/
    step - loss: 1.1472 - accuracy: 0.5326 - val_loss: 1
```

```
144 .2132 - val_accuracy: 0.5230
145 Epoch 28/30
146 196/196 [==============================] - 470s 2s/
    step - loss: 1.1332 - accuracy: 0.5390 - val_loss: 1
    .2323 - val_accuracy: 0.5192
147 Epoch 29/30
148 196/196 [==============================] - 452s 2s/
    step - loss: 1.1313 - accuracy: 0.5399 - val_loss: 1
    .2318 - val_accuracy: 0.4910
149 Epoch 30/30
150 196/196 [==============================] - 453s 2s/
    step - loss: 1.1244 - accuracy: 0.5441 - val_loss: 1
    .2230 - val_accuracy: 0.5006
151 2021-10-19 17:11:02.170382: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
     sRGB profile
152 2021-10-19 17:11:03.554608: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
     sRGB profile
153 10/27 [==========>...................] - ETA: 13s -
    loss: 1.2375 - accuracy: 0.54062021-10-19 17:11:08.
    769818: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
154 2021-10-19 17:11:08.846191: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
     sRGB profile
155 2021-10-19 17:11:08.903472: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'desc': ICC profile tag start not a
    multiple of 4
156 2021-10-19 17:11:08.903957: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'wtpt': ICC profile tag start not a
    multiple of 4
157 2021-10-19 17:11:08.904396: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'bkpt': ICC profile tag start not a
    multiple of 4
158 2021-10-19 17:11:08.904832: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'rXYZ': ICC profile tag start not a
```

```
158 multiple of 4
159 2021-10-19 17:11:08.905317: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'gXYZ': ICC profile tag start not a
    multiple of 4
160 2021-10-19 17:11:08.905752: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'bXYZ': ICC profile tag start not a
    multiple of 4
161 2021-10-19 17:11:08.906184: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'dmnd': ICC profile tag start not a
    multiple of 4
162 2021-10-19 17:11:08.906608: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'dmdd': ICC profile tag start not a
    multiple of 4
163 2021-10-19 17:11:08.907032: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'vued': ICC profile tag start not a
    multiple of 4
164 2021-10-19 17:11:08.907456: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'view': ICC profile tag start not a
    multiple of 4
165 2021-10-19 17:11:08.907882: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'lumi': ICC profile tag start not a
    multiple of 4
166 2021-10-19 17:11:08.908303: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'meas': ICC profile tag start not a
    multiple of 4
167 2021-10-19 17:11:08.908723: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'tech': ICC profile tag start not a
    multiple of 4
168 2021-10-19 17:11:08.909144: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'rTRC': ICC profile tag start not a
    multiple of 4
```

```
169 2021-10-19 17:11:08.909560: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'gTRC': ICC profile tag start not a
    multiple of 4
170 2021-10-19 17:11:08.909981: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: profile 'ICC
    Profile': 'bTRC': ICC profile tag start not a
    multiple of 4
171 15/27 [================>..............] - ETA: 9s -
    loss: 1.2615 - accuracy: 0.5437 2021-10-19 17:11:14.
    243085: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
172 27/27 [==============================] - 21s 720ms/
    step - loss: 1.2590 - accuracy: 0.5359
173 Accuracy: 0.5358796119689941
174 Loss: 1.2589768171310425
175 end
176
177 Process finished with exit code 0
178
```