

```

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 2021-10-18 08:15:13.628004: 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 2021-10-18 08:15:13.628601: 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 2021-10-18 08:15:25.631270: W tensorflow/
  stream_executor/platform/default/dso_loader.cc:64]
  Could not load dynamic library 'nvcuda.dll'; dlerror
  : nvcuda.dll not found
9 2021-10-18 08:15:25.631836: W tensorflow/
  stream_executor/cuda/cuda_driver.cc:269] failed call
  to cuInit: UNKNOWN ERROR (303)
10 2021-10-18 08:15:25.648947: I tensorflow/
  stream_executor/cuda/cuda_diagnostics.cc:169]
  retrieving CUDA diagnostic information for host:
  D26265VWTB0E
11 2021-10-18 08:15:25.649537: I tensorflow/
  stream_executor/cuda/cuda_diagnostics.cc:176]
  hostname: D26265VWTB0E
12 2021-10-18 08:15:25.650111: 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, 128
   )          14745728
42 -----
43 dense_1 (Dense)          (None, 128
   )          16512
44 -----
45 dense_2 (Dense)          (None, 6
   )          774
46 =====
   =====
47 Total params: 14,856,262
48 Trainable params: 14,856,262
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 2021-10-18 08:15:28.080439: I tensorflow/compiler/
   mlir/mlir_graph_optimization_pass.cc:185] None of the
   MLIR Optimization Passes are enabled (registered 2)
55 2/196 [.....] - ETA: 6:37

```

```
55 - loss: 2.2383 - accuracy: 0.2656 2021-10-18 08:15:
    33.930771: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
56 4/196 [.....] - ETA: 6:37
    - loss: 2.0056 - accuracy: 0.2734 2021-10-18 08:15:38
    .198877: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
57 5/196 [.....] - ETA: 6:44
    - loss: 1.9130 - accuracy: 0.3125 2021-10-18 08:15:40
    .492189: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
58 13/196 [>.....] - ETA: 6:22
    - loss: 1.6369 - accuracy: 0.3822 2021-10-18 08:15:57
    .107224: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
59 45/196 [=====>.....] - ETA: 5:15
    - loss: 1.4654 - accuracy: 0.3958 2021-10-18 08:17:03
    .858790: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
60 46/196 [=====>.....] - ETA: 5:13
    - loss: 1.4658 - accuracy: 0.3967 2021-10-18 08:17:05
    .893427: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
61 55/196 [=====>.....] - ETA: 4:54
    - loss: 1.4459 - accuracy: 0.4097 2021-10-18 08:17:24
    .754816: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
62 58/196 [=====>.....] - ETA: 4:48
    - loss: 1.4381 - accuracy: 0.4100 2021-10-18 08:17:31
    .112355: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
63 59/196 [=====>.....] - ETA: 4:46
    - loss: 1.4376 - accuracy: 0.4100 2021-10-18 08:17:33
    .178359: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
64 64/196 [=====>.....] - ETA: 4:34
    - loss: 1.4339 - accuracy: 0.4121 2021-10-18 08:17:43
    .118414: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
65 72/196 [=====>.....] - ETA: 4:17
    - loss: 1.4248 - accuracy: 0.4115 2021-10-18 08:17:59
```

```
65 .622718: W tensorflow/core/lib/png/png_io.cc:88] PNG
warning: iCCP: known incorrect sRGB profile
66 75/196 [=====>.....] - ETA: 4:11
- loss: 1.4205 - accuracy: 0.41372021-10-18 08:18:
06.058527: W tensorflow/core/lib/png/png_io.cc:88]
PNG warning: iCCP: known incorrect sRGB profile
67 81/196 [=====>.....] - ETA: 3:58
- loss: 1.4159 - accuracy: 0.41552021-10-18 08:18:
18.164140: W tensorflow/core/lib/png/png_io.cc:88]
PNG warning: iCCP: known incorrect sRGB profile
68 86/196 [=====>.....] - ETA: 3:48
- loss: 1.4093 - accuracy: 0.41572021-10-18 08:18:
28.697078: W tensorflow/core/lib/png/png_io.cc:88]
PNG warning: iCCP: known incorrect sRGB profile
69 91/196 [=====>.....] - ETA: 3:38
- loss: 1.4097 - accuracy: 0.41452021-10-18 08:18:
38.996846: W tensorflow/core/lib/png/png_io.cc:88]
PNG warning: iCCP: known incorrect sRGB profile
70 95/196 [=====>.....] - ETA: 3:29
- loss: 1.4073 - accuracy: 0.41742021-10-18 08:18:
47.625117: W tensorflow/core/lib/png/png_io.cc:88]
PNG warning: iCCP: known incorrect sRGB profile
71 108/196 [=====>.....] - ETA: 3:02
- loss: 1.3995 - accuracy: 0.42852021-10-18 08:19:
14.268244: W tensorflow/core/lib/png/png_io.cc:88]
PNG warning: iCCP: known incorrect sRGB profile
72 117/196 [=====>.....] - ETA: 2:44
- loss: 1.3962 - accuracy: 0.43002021-10-18 08:19:
32.798626: W tensorflow/core/lib/png/png_io.cc:88]
PNG warning: iCCP: known incorrect sRGB profile
73 119/196 [=====>.....] - ETA: 2:39
- loss: 1.3972 - accuracy: 0.42912021-10-18 08:19:
36.798398: W tensorflow/core/lib/png/png_io.cc:88]
PNG warning: iCCP: known incorrect sRGB profile
74 121/196 [=====>.....] - ETA: 2:35
- loss: 1.3948 - accuracy: 0.43082021-10-18 08:19:
41.076356: W tensorflow/core/lib/png/png_io.cc:88]
PNG warning: iCCP: known incorrect sRGB profile
75 2021-10-18 08:19:41.729299: W tensorflow/core/lib/
png/png_io.cc:88] PNG warning: iCCP: known incorrect
sRGB profile
```

```
76 126/196 [=====>.....] - ETA: 2:25
    - loss: 1.3896 - accuracy: 0.43352021-10-18 08:19:
    51.832989: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
77 129/196 [=====>.....] - ETA: 2:19
    - loss: 1.3903 - accuracy: 0.43482021-10-18 08:19:
    57.947251: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
78 130/196 [=====>.....] - ETA: 2:17
    - loss: 1.3935 - accuracy: 0.43392021-10-18 08:20:
    00.351061: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
79 133/196 [=====>.....] - ETA: 2:10
    - loss: 1.3906 - accuracy: 0.43562021-10-18 08:20:
    06.569657: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
80 135/196 [=====>.....] - ETA: 2:06
    - loss: 1.3897 - accuracy: 0.43612021-10-18 08:20:
    10.715547: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
81 2021-10-18 08:20:10.718396: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
    sRGB profile
82 154/196 [=====>.....] - ETA: 1:27
    - loss: 1.3825 - accuracy: 0.44092021-10-18 08:20:
    50.998743: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
83 165/196 [=====>.....] - ETA: 1:04
    - loss: 1.3826 - accuracy: 0.43882021-10-18 08:21:
    15.160505: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
84 171/196 [=====>....] - ETA: 52s
    - loss: 1.3787 - accuracy: 0.44192021-10-18 08:21:
    27.998784: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
85 173/196 [=====>....] - ETA: 48s
    - loss: 1.3781 - accuracy: 0.44202021-10-18 08:21:
    31.945732: W tensorflow/core/lib/png/png_io.cc:88]
    PNG warning: iCCP: known incorrect sRGB profile
86 196/196 [=====] - ETA: 0s
    - loss: 1.3738 - accuracy: 0.44182021-10-18 08:22:
```

```
86 19.387402: W tensorflow/core/lib/png/png_io.cc:88]
  PNG warning: iCCP: known incorrect sRGB profile
87 2021-10-18 08:22:19.694542: W tensorflow/core/lib/
  png/png_io.cc:88] PNG warning: iCCP: known incorrect
  sRGB profile
88 2021-10-18 08:22:21.075860: W tensorflow/core/lib/
  png/png_io.cc:88] PNG warning: iCCP: known incorrect
  sRGB profile
89 2021-10-18 08:22:35.378744: W tensorflow/core/lib/
  png/png_io.cc:88] PNG warning: iCCP: known incorrect
  sRGB profile
90 2021-10-18 08:22:35.885763: W tensorflow/core/lib/
  png/png_io.cc:88] PNG warning: iCCP: known incorrect
  sRGB profile
91 2021-10-18 08:22:44.123582: W tensorflow/core/lib/
  png/png_io.cc:88] PNG warning: iCCP: known incorrect
  sRGB profile
92 196/196 [=====] - 446s 2s/
  step - loss: 1.3738 - accuracy: 0.4418 - val_loss: 1
  .2951 - val_accuracy: 0.4795
93 Epoch 2/30
94 196/196 [=====] - 415s 2s/
  step - loss: 1.3226 - accuracy: 0.4585 - val_loss: 1
  .3055 - val_accuracy: 0.4846
95 Epoch 3/30
96 196/196 [=====] - 407s 2s/
  step - loss: 1.3142 - accuracy: 0.4673 - val_loss: 1
  .2654 - val_accuracy: 0.4904
97 Epoch 4/30
98 196/196 [=====] - 425s 2s/
  step - loss: 1.2936 - accuracy: 0.4735 - val_loss: 1
  .2646 - val_accuracy: 0.4987
99 Epoch 5/30
100 196/196 [=====] - 406s 2s/
  step - loss: 1.2766 - accuracy: 0.4782 - val_loss: 1
  .2709 - val_accuracy: 0.5051
101 Epoch 6/30
102 196/196 [=====] - 400s 2s/
  step - loss: 1.2720 - accuracy: 0.4820 - val_loss: 1
  .2596 - val_accuracy: 0.5038
103 Epoch 7/30
```

```

104 196/196 [=====] - 428s 2s/
    step - loss: 1.2634 - accuracy: 0.4858 - val_loss: 1
        .2353 - val_accuracy: 0.5058
105 Epoch 8/30
106 196/196 [=====] - 445s 2s/
    step - loss: 1.2593 - accuracy: 0.4855 - val_loss: 1
        .2350 - val_accuracy: 0.5077
107 Epoch 9/30
108 196/196 [=====] - 412s 2s/
    step - loss: 1.2623 - accuracy: 0.4831 - val_loss: 1
        .2305 - val_accuracy: 0.5045
109 Epoch 10/30
110 196/196 [=====] - 396s 2s/
    step - loss: 1.2503 - accuracy: 0.4924 - val_loss: 1
        .2265 - val_accuracy: 0.5096
111 Epoch 11/30
112 196/196 [=====] - 401s 2s/
    step - loss: 1.2426 - accuracy: 0.4921 - val_loss: 1
        .2183 - val_accuracy: 0.5141
113 Epoch 12/30
114 196/196 [=====] - 414s 2s/
    step - loss: 1.2366 - accuracy: 0.4982 - val_loss: 1
        .2571 - val_accuracy: 0.5102
115 Epoch 13/30
116 196/196 [=====] - 441s 2s/
    step - loss: 1.2309 - accuracy: 0.4999 - val_loss: 1
        .2177 - val_accuracy: 0.5224
117 Epoch 14/30
118 196/196 [=====] - 424s 2s/
    step - loss: 1.2253 - accuracy: 0.5002 - val_loss: 1
        .2219 - val_accuracy: 0.5262
119 Epoch 15/30
120 196/196 [=====] - 404s 2s/
    step - loss: 1.2242 - accuracy: 0.5039 - val_loss: 1
        .2061 - val_accuracy: 0.5314
121 Epoch 16/30
122 196/196 [=====] - 426s 2s/
    step - loss: 1.2199 - accuracy: 0.5076 - val_loss: 1
        .2241 - val_accuracy: 0.5314
123 Epoch 17/30
124 196/196 [=====] - 410s 2s/

```



```
124 step - loss: 1.2177 - accuracy: 0.5097 - val_loss: 1
    .2089 - val_accuracy: 0.5237
125 Epoch 18/30
126 196/196 [=====] - 409s 2s/
    step - loss: 1.1981 - accuracy: 0.5172 - val_loss: 1
    .2267 - val_accuracy: 0.5064
127 Epoch 19/30
128 196/196 [=====] - 440s 2s/
    step - loss: 1.1980 - accuracy: 0.5132 - val_loss: 1
    .2111 - val_accuracy: 0.5198
129 Epoch 20/30
130 196/196 [=====] - 414s 2s/
    step - loss: 1.1889 - accuracy: 0.5167 - val_loss: 1
    .2173 - val_accuracy: 0.5294
131 Epoch 21/30
132 196/196 [=====] - 426s 2s/
    step - loss: 1.1845 - accuracy: 0.5188 - val_loss: 1
    .2208 - val_accuracy: 0.5320
133 Epoch 22/30
134 196/196 [=====] - 410s 2s/
    step - loss: 1.1712 - accuracy: 0.5223 - val_loss: 1
    .2200 - val_accuracy: 0.5224
135 Epoch 23/30
136 196/196 [=====] - 404s 2s/
    step - loss: 1.1704 - accuracy: 0.5262 - val_loss: 1
    .2445 - val_accuracy: 0.5224
137 Epoch 24/30
138 196/196 [=====] - 399s 2s/
    step - loss: 1.1603 - accuracy: 0.5278 - val_loss: 1
    .2256 - val_accuracy: 0.5218
139 Epoch 25/30
140 196/196 [=====] - 415s 2s/
    step - loss: 1.1428 - accuracy: 0.5385 - val_loss: 1
    .2214 - val_accuracy: 0.5327
141 Epoch 26/30
142 196/196 [=====] - 409s 2s/
    step - loss: 1.1551 - accuracy: 0.5348 - val_loss: 1
    .2156 - val_accuracy: 0.5166
143 Epoch 27/30
144 196/196 [=====] - 405s 2s/
    step - loss: 1.1371 - accuracy: 0.5418 - val_loss: 1
```

```

144 .2170 - val_accuracy: 0.5096
145 Epoch 28/30
146 196/196 [=====] - 423s 2s/
    step - loss: 1.1271 - accuracy: 0.5439 - val_loss: 1
    .2200 - val_accuracy: 0.5173
147 Epoch 29/30
148 196/196 [=====] - 431s 2s/
    step - loss: 1.1282 - accuracy: 0.5452 - val_loss: 1
    .1914 - val_accuracy: 0.5224
149 Epoch 30/30
150 196/196 [=====] - 419s 2s/
    step - loss: 1.1188 - accuracy: 0.5481 - val_loss: 1
    .2031 - val_accuracy: 0.5160
151 2021-10-18 11:43:50.774050: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
    sRGB profile
152 2021-10-18 11:43:52.069083: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
    sRGB profile
153 7/27 [=====>.....] - ETA: 13s -
    loss: 1.1927 - accuracy: 0.54022021-10-18 11:43:56.
    683523: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
154 2021-10-18 11:43:56.765467: W tensorflow/core/lib/
    png/png_io.cc:88] PNG warning: iCCP: known incorrect
    sRGB profile
155 2021-10-18 11:43:56.875089: 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 2021-10-18 11:43:56.875564: 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 2021-10-18 11:43:56.875981: 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 2021-10-18 11:43:56.876361: 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 2021-10-18 11:43:56.876848: 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 2021-10-18 11:43:56.877235: 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 2021-10-18 11:43:56.877600: 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 2021-10-18 11:43:56.877967: 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 2021-10-18 11:43:56.878339: 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 2021-10-18 11:43:56.878703: 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 2021-10-18 11:43:56.879071: 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 2021-10-18 11:43:56.879444: 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 2021-10-18 11:43:56.879860: 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 2021-10-18 11:43:56.880341: 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 2021-10-18 11:43:56.880823: 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 2021-10-18 11:43:56.881306: 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: 8s -
    loss: 1.2441 - accuracy: 0.54372021-10-18 11:44:01.
    434983: W tensorflow/core/lib/png/png_io.cc:88] PNG
    warning: iCCP: known incorrect sRGB profile
172 27/27 [=====] - 18s 619ms/
    step - loss: 1.2359 - accuracy: 0.5556
173 Accuracy: 0.555555820465088
174 Loss: 1.2359036207199097
175 end
176
177 Process finished with exit code 0
178
```