```
1 F:\Tasarım\Deneme1\venv\Scripts\python.exe F
  :/Tasarım/Deneme1/train.py
2 2021-11-13 12:06:31.667742: 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 2021-11-13 12:06:31.668702: 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 2021-11-13 12:07:10.555003: W tensorflow/
  stream_executor/platform/default/dso_loader.
  cc:64] Could not load dynamic library '
  cudart64_110.dll'; dlerror: cudart64_110.dll
  not found
5 2021-11-13 12:07:10.556125: W tensorflow/
  stream_executor/platform/default/dso_loader.
  cc:64] Could not load dynamic library '
  cublas64_11.dll'; dlerror: cublas64_11.dll
  not found
6 2021-11-13 12:07:10.557200: W tensorflow/
  stream_executor/platform/default/dso_loader.
  cc:64] Could not load dynamic library '
  cublasLt64_11.dll'; dlerror: cublasLt64_11.
  dll not found
7 2021-11-13 12:07:10.558259: W tensorflow/
  stream_executor/platform/default/dso_loader.
  cc:64] Could not load dynamic library '
  cufft64_10.dll'; dlerror: cufft64_10.dll not
  found
8 2021-11-13 12:07:10.559300: W tensorflow/
  stream_executor/platform/default/dso_loader.
  cc:64] Could not load dynamic library '
  curand64_10.dll'; dlerror: curand64_10.dll
```

```
 8 not found
 9 2021-11-13 12:07:10.560399: W tensorflow/
   stream_executor/platform/default/dso_loader.
   cc:64] Could not load dynamic library '
   cusolver64_11.dll'; dlerror: cusolver64_11.
   dll not found
10 2021-11-13 12:07:10.561490: W tensorflow/
   stream_executor/platform/default/dso_loader.
   cc:64] Could not load dynamic library '
   cusparse64_11.dll'; dlerror: cusparse64_11.
   dll not found
11 2021-11-13 12:07:10.562639: W tensorflow/
   stream_executor/platform/default/dso_loader.
   cc:64] Could not load dynamic library '
   cudnn64_8.dll'; dlerror: cudnn64_8.dll not
   found
12 2021-11-13 12:07:10.562819: W tensorflow/core
   /common_runtime/gpu/gpu_device.cc:1835]
   Cannot dlopen some GPU libraries. Please make
    sure the missing libraries mentioned above
   are installed properly if you would like to
   use GPU. Follow the guide at https://www.
   tensorflow.org/install/gpu for how to
   download and setup the required libraries for
    your platform.
13 Skipping registering GPU devices...
14 2021-11-13 12:07:10.775190: 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
15 To enable them in other operations, rebuild
   TensorFlow with the appropriate compiler
   flags.
```

```
Model: "sequential"
_________________________________________________________________
Layer (type)                 Output Shape              Param #
=================================================================
conv2d (Conv2D)              (None, 42, 11, 64)        640
_________________________________________________________________
batch_normalization (BatchNo (None, 42, 11, 64)        256
_________________________________________________________________
max_pooling2d (MaxPooling2D) (None, 21, 6, 64)         0
_________________________________________________________________
conv2d_1 (Conv2D)            (None, 19, 4, 32)         18464
_________________________________________________________________
batch_normalization_1 (Batch (None, 19, 4, 32)         128
_________________________________________________________________
max_pooling2d_1 (MaxPooling2 (None, 10, 2, 32)         0
_________________________________________________________________
conv2d_2 (Conv2D)            (None, 9, 1, 32)          4128
_________________________________________________________________
```

```
34 batch_normalization_2 (Batch (None, 9, 1, 32
   )          128
35 _________________________________________________
   ____________________
36 max_pooling2d_2 (MaxPooling2 (None, 5, 1, 32
   )          0
37 _________________________________________________
   ____________________
38 flatten (Flatten)            (None, 160
   )               0
39 _________________________________________________
   ____________________
40 dense (Dense)                (None, 64
   )               10304
41 _________________________________________________
   ____________________
42 dropout (Dropout)            (None, 64
   )               0
43 _________________________________________________
   ____________________
44 dense_1 (Dense)              (None, 10
   )               650
45 =================================================
   ====================
46 Total params: 34,698
47 Trainable params: 34,442
48 Non-trainable params: 256
49 _________________________________________________
   ____________________
50 2021-11-13 12:07:11.818576: I tensorflow/
   compiler/mlir/mlir_graph_optimization_pass.cc
   :185] None of the MLIR Optimization Passes
   are enabled (registered 2)
51 Epoch 1/50
52 540/540 [==============================] -
```

```
52 12s 19ms/step - loss: 3.0356 - accuracy: 0.
   1174 - val_loss: 2.6828 - val_accuracy: 0.
   1335
53 Epoch 2/50
54 540/540 [==============================] -
   10s 18ms/step - loss: 2.6935 - accuracy: 0.
   1574 - val_loss: 2.4104 - val_accuracy: 0.
   1981
55 Epoch 3/50
56 540/540 [==============================] -
   10s 18ms/step - loss: 2.5019 - accuracy: 0.
   1908 - val_loss: 2.2559 - val_accuracy: 0.
   2377
57 Epoch 4/50
58 540/540 [==============================] -
   10s 18ms/step - loss: 2.4000 - accuracy: 0.
   2086 - val_loss: 2.1543 - val_accuracy: 0.
   2753
59 Epoch 5/50
60 540/540 [==============================] -
   10s 18ms/step - loss: 2.3131 - accuracy: 0.
   2341 - val_loss: 2.0798 - val_accuracy: 0.
   3060
61 Epoch 6/50
62 540/540 [==============================] -
   10s 18ms/step - loss: 2.2366 - accuracy: 0.
   2561 - val_loss: 2.0156 - val_accuracy: 0.
   3196
63 Epoch 7/50
64 540/540 [==============================] -
   10s 18ms/step - loss: 2.1763 - accuracy: 0.
   2691 - val_loss: 1.9643 - val_accuracy: 0.
   3488
65 Epoch 8/50
66 540/540 [==============================] -
```

```
66 10s 18ms/step - loss: 2.1056 - accuracy: 0.
   2907 - val_loss: 1.9024 - val_accuracy: 0.
   3697
67 Epoch 9/50
68 540/540 [==============================] -
   10s 18ms/step - loss: 2.0706 - accuracy: 0.
   3002 - val_loss: 1.8726 - val_accuracy: 0.
   3853
69 Epoch 10/50
70 540/540 [==============================] -
   10s 18ms/step - loss: 2.0291 - accuracy: 0.
   3193 - val_loss: 1.8314 - val_accuracy: 0.
   4025
71 Epoch 11/50
72 540/540 [==============================] -
   10s 18ms/step - loss: 1.9884 - accuracy: 0.
   3334 - val_loss: 1.7868 - val_accuracy: 0.
   4213
73 Epoch 12/50
74 540/540 [==============================] -
   10s 18ms/step - loss: 1.9478 - accuracy: 0.
   3532 - val_loss: 1.7477 - val_accuracy: 0.
   4359
75 Epoch 13/50
76 540/540 [==============================] -
   10s 18ms/step - loss: 1.9122 - accuracy: 0.
   3603 - val_loss: 1.7200 - val_accuracy: 0.
   4484
77 Epoch 14/50
78 540/540 [==============================] -
   10s 18ms/step - loss: 1.8843 - accuracy: 0.
   3750 - val_loss: 1.6903 - val_accuracy: 0.
   4614
79 Epoch 15/50
80 540/540 [==============================] -
```

```
80 10s 18ms/step - loss: 1.8394 - accuracy: 0.
   3893 - val_loss: 1.6553 - val_accuracy: 0.
   4760
81 Epoch 16/50
82 540/540 [==============================] -
   10s 18ms/step - loss: 1.8022 - accuracy: 0.
   4000 - val_loss: 1.6378 - val_accuracy: 0.
   4896
83 Epoch 17/50
84 540/540 [==============================] -
   10s 18ms/step - loss: 1.7794 - accuracy: 0.
   4085 - val_loss: 1.5929 - val_accuracy: 0.
   5083
85 Epoch 18/50
86 540/540 [==============================] -
   10s 18ms/step - loss: 1.7399 - accuracy: 0.
   4190 - val_loss: 1.5654 - val_accuracy: 0.
   5120
87 Epoch 19/50
88 540/540 [==============================] -
   10s 18ms/step - loss: 1.7155 - accuracy: 0.
   4371 - val_loss: 1.5387 - val_accuracy: 0.
   5323
89 Epoch 20/50
90 540/540 [==============================] -
   10s 18ms/step - loss: 1.6900 - accuracy: 0.
   4458 - val_loss: 1.5170 - val_accuracy: 0.
   5349
91 Epoch 21/50
92 540/540 [==============================] -
   10s 18ms/step - loss: 1.6595 - accuracy: 0.
   4530 - val_loss: 1.4865 - val_accuracy: 0.
   5469
93 Epoch 22/50
94 540/540 [==============================] -
```

```
 94 10s 19ms/step - loss: 1.6277 - accuracy: 0.
    4665 - val_loss: 1.4623 - val_accuracy: 0.
    5558
 95 Epoch 23/50
 96 540/540 [==============================] -
    11s 21ms/step - loss: 1.6209 - accuracy: 0.
    4651 - val_loss: 1.4335 - val_accuracy: 0.
    5626
 97 Epoch 24/50
 98 540/540 [==============================] -
    11s 20ms/step - loss: 1.5845 - accuracy: 0.
    4841 - val_loss: 1.4113 - val_accuracy: 0.
    5709
 99 Epoch 25/50
100 540/540 [==============================] -
    11s 20ms/step - loss: 1.5588 - accuracy: 0.
    4954 - val_loss: 1.3939 - val_accuracy: 0.
    5746
101 Epoch 26/50
102 540/540 [==============================] -
    10s 19ms/step - loss: 1.5391 - accuracy: 0.
    5020 - val_loss: 1.3586 - val_accuracy: 0.
    5949
103 Epoch 27/50
104 540/540 [==============================] -
    11s 20ms/step - loss: 1.5147 - accuracy: 0.
    5087 - val_loss: 1.3365 - val_accuracy: 0.
    6069
105 Epoch 28/50
106 540/540 [==============================] -
    11s 20ms/step - loss: 1.4926 - accuracy: 0.
    5215 - val_loss: 1.3339 - val_accuracy: 0.
    6100
107 Epoch 29/50
108 540/540 [==============================] -
```

```
108 12s 21ms/step - loss: 1.4646 - accuracy: 0.
    5287 - val_loss: 1.3048 - val_accuracy: 0.
    6225
109 Epoch 30/50
110 540/540 [==============================] -
    10s 19ms/step - loss: 1.4473 - accuracy: 0.
    5322 - val_loss: 1.2845 - val_accuracy: 0.
    6236
111 Epoch 31/50
112 540/540 [==============================] -
    11s 20ms/step - loss: 1.4324 - accuracy: 0.
    5419 - val_loss: 1.2629 - val_accuracy: 0.
    6376
113 Epoch 32/50
114 540/540 [==============================] -
    10s 19ms/step - loss: 1.4148 - accuracy: 0.
    5469 - val_loss: 1.2527 - val_accuracy: 0.
    6418
115 Epoch 33/50
116 540/540 [==============================] -
    10s 19ms/step - loss: 1.3924 - accuracy: 0.
    5552 - val_loss: 1.2331 - val_accuracy: 0.
    6554
117 Epoch 34/50
118 540/540 [==============================] -
    10s 19ms/step - loss: 1.3720 - accuracy: 0.
    5618 - val_loss: 1.2126 - val_accuracy: 0.
    6564
119 Epoch 35/50
120 540/540 [==============================] -
    12s 22ms/step - loss: 1.3554 - accuracy: 0.
    5702 - val_loss: 1.1948 - val_accuracy: 0.
    6621
121 Epoch 36/50
122 540/540 [==============================] -
```

```
122 10s 19ms/step - loss: 1.3421 - accuracy: 0.
    5770 - val_loss: 1.1855 - val_accuracy: 0.
    6642
123 Epoch 37/50
124 540/540 [==============================] -
    11s 21ms/step - loss: 1.3278 - accuracy: 0.
    5802 - val_loss: 1.1604 - val_accuracy: 0.
    6825
125 Epoch 38/50
126 540/540 [==============================] -
    11s 20ms/step - loss: 1.3028 - accuracy: 0.
    5894 - val_loss: 1.1519 - val_accuracy: 0.
    6752
127 Epoch 39/50
128 540/540 [==============================] -
    11s 20ms/step - loss: 1.2929 - accuracy: 0.
    5937 - val_loss: 1.1273 - val_accuracy: 0.
    6882
129 Epoch 40/50
130 540/540 [==============================] -
    12s 22ms/step - loss: 1.2796 - accuracy: 0.
    5960 - val_loss: 1.1164 - val_accuracy: 0.
    6950
131 Epoch 41/50
132 540/540 [==============================] -
    11s 21ms/step - loss: 1.2676 - accuracy: 0.
    6014 - val_loss: 1.1025 - val_accuracy: 0.
    7013
133 Epoch 42/50
134 540/540 [==============================] -
    11s 20ms/step - loss: 1.2505 - accuracy: 0.
    6073 - val_loss: 1.0937 - val_accuracy: 0.
    6877
135 Epoch 43/50
136 540/540 [==============================] -
```

```
136 11s 20ms/step - loss: 1.2282 - accuracy: 0.
    6149 - val_loss: 1.0824 - val_accuracy: 0.
    7059
137 Epoch 44/50
138 540/540 [==============================] -
    11s 20ms/step - loss: 1.2220 - accuracy: 0.
    6191 - val_loss: 1.0534 - val_accuracy: 0.
    7127
139 Epoch 45/50
140 540/540 [==============================] -
    11s 20ms/step - loss: 1.2180 - accuracy: 0.
    6250 - val_loss: 1.0708 - val_accuracy: 0.
    7049
141 Epoch 46/50
142 540/540 [==============================] -
    11s 19ms/step - loss: 1.1986 - accuracy: 0.
    6239 - val_loss: 1.0325 - val_accuracy: 0.
    7174
143 Epoch 47/50
144 540/540 [==============================] -
    11s 20ms/step - loss: 1.1801 - accuracy: 0.
    6333 - val_loss: 1.0241 - val_accuracy: 0.
    7216
145 Epoch 48/50
146 540/540 [==============================] -
    11s 20ms/step - loss: 1.1711 - accuracy: 0.
    6352 - val_loss: 1.0225 - val_accuracy: 0.
    7200
147 Epoch 49/50
148 540/540 [==============================] -
    11s 20ms/step - loss: 1.1604 - accuracy: 0.
    6418 - val_loss: 1.0120 - val_accuracy: 0.
    7362
149 Epoch 50/50
150 540/540 [==============================] -
```

```
150 12s 22ms/step - loss: 1.1496 - accuracy: 0.
    6418 - val_loss: 0.9940 - val_accuracy: 0.
    7362
151 67/67 [==============================] - 1s
    8ms/step - loss: 0.9964 - accuracy: 0.7345
152 Test error: 0.9963766932487488, test
    accuracy: 0.7345215678215027
153
154 Process finished with exit code 0
155
```