dl-assignment-05-2

April 21, 2024

Name : Yatharth Thakare **PRN** : 12111403 **Roll No** : 51 **PS**: Write Python/R code to implement GAN.

Implementation of GAN on CIFAR 10 Dataset

[ ]:
```
import numpy as np
from numpy.random import randint
from keras.datasets.cifar10 import load_data
from matplotlib import pyplot
from keras.optimizers import Adam
from keras.models import Sequential
from keras.layers import Dense
from keras.layers import Conv2D
from keras.layers import Flatten
from keras.layers import Dropout
from keras.layers import LeakyReLU
from keras.layers import Reshape
from keras.layers import Conv2DTranspose
```

[ ]:
```
# Define the discriminator model
def define_discriminator(in_shape=(32, 32, 3)):
  model = Sequential()
  model.add(Conv2D(64, (3, 3), padding='same', input_shape=in_shape))
  model.add(LeakyReLU(alpha=0.2))
  model.add(Conv2D(256, (3, 3), strides=(2, 2), padding='same'))
  model.add(LeakyReLU(alpha=0.2))
  model.add(Conv2D(256, (3, 3), strides=(2, 2), padding='same'))
  model.add(LeakyReLU(alpha=0.2))
  model.add(Conv2D(256, (3, 3), strides=(2, 2), padding='same'))
  model.add(LeakyReLU(alpha=0.2))
  model.add(Flatten())
  model.add(Dropout(0.4))
  model.add(Dense(1, activation='sigmoid'))
  opt = Adam(lr=0.0002, beta_1=0.5)
  model.compile(loss='binary_crossentropy', optimizer=opt, metrics=['accuracy'])
  return model

# Define the generator model
```

```
def define_generator(latent_dim):
  model = Sequential()
  n_nodes = 256 * 4 * 4
  model.add(Dense(n_nodes, input_dim=latent_dim))
  model.add(LeakyReLU(alpha=0.2))
  model.add(Reshape((4, 4, 256)))
  model.add(Conv2DTranspose(256, (4, 4), strides=(2, 2), padding='same'))
  model.add(LeakyReLU(alpha=0.2))
  model.add(Conv2DTranspose(256, (4, 4), strides=(2, 2), padding='same'))
  model.add(LeakyReLU(alpha=0.2))
  model.add(Conv2DTranspose(256, (4, 4), strides=(2, 2), padding='same'))
  model.add(LeakyReLU(alpha=0.2))
  model.add(Conv2D(3, (3, 3), activation='tanh', padding='same'))
  return model

# Define the combined model for training the generator
def define_gan(g_model, d_model):
  d_model.trainable = False
  model = Sequential()
  model.add(g_model)
  model.add(d_model)
  opt = Adam(lr=0.0002, beta_1=0.5)
  model.compile(loss='binary_crossentropy', optimizer=opt)
  return model

# Load and prepare CIFAR-10 training images (assuming you have a function to␣
 ↪load_data())
def load_real_samples():
  (trainX, _), (_, _) = load_data()
  X = trainX.astype('float32')
  X = (X - 127.5) / 127.5
  return X

# Functions for generating real and fake samples with labels
def generate_real_samples(dataset, n_samples):
  ix = randint(0, dataset.shape[0], n_samples)
  X = dataset[ix]
  y = np.ones((n_samples, 1))
  return X, y

def generate_latent_points(latent_dim, n_samples):
  x_input = np.random.normal(size=(latent_dim * n_samples))
  x_input = x_input.reshape(n_samples, latent_dim)
  return x_input

def generate_fake_samples(g_model, latent_dim, n_samples):
        x_input = generate_latent_points(latent_dim, n_samples)
```

```
        X = g_model.predict(x_input)
        # create 'fake' class labels (0)
        y = np.zeros((n_samples, 1))
        return X, y

def save_plot(examples, epoch, n=7):
    examples = (examples + 1) / 2.0
    for i in range(n * n):
        pyplot.subplot(n, n, 1 + i)
        pyplot.axis('off')
        pyplot.imshow(examples[i])
    filename = 'generated_plot_e%03d.png' % (epoch+1)
    pyplot.savefig(filename)
    pyplot.close()

def summarize_performance(epoch, g_model, d_model, dataset, latent_dim,␣
 ↪n_samples=150):
    X_real, y_real = generate_real_samples(dataset, n_samples)
    _, acc_real = d_model.evaluate(X_real, y_real, verbose=0)
    x_fake, y_fake = generate_fake_samples(g_model, latent_dim, n_samples)
    _, acc_fake = d_model.evaluate(x_fake, y_fake, verbose=0)
    print('>Accuracy real: %.0f%%, fake: %.0f%%' % (acc_real*100, acc_fake*100))
    save_plot(x_fake, epoch)
    filename = 'generator_model_%03d.h5' % (epoch+1)
    g_model.save(filename)

def train(g_model, d_model, gan_model, dataset, latent_dim, n_epochs=10,␣
 ↪n_batch=256):
    bat_per_epo = int(dataset.shape[0] / n_batch)
    half_batch = int(n_batch / 2)
    for i in range(n_epochs):
        for j in range(bat_per_epo):
            X_real, y_real = generate_real_samples(dataset, half_batch)
            d_loss1, _ = d_model.train_on_batch(X_real, y_real)
            X_fake, y_fake = generate_fake_samples(g_model, latent_dim,␣
 ↪half_batch)
            d_loss2, _ = d_model.train_on_batch(X_fake, y_fake)
            X_gan = generate_latent_points(latent_dim, n_batch)
            y_gan = np.ones((n_batch, 1))
            g_loss = gan_model.train_on_batch(X_gan, y_gan)
            print('>%d, %d/%d, d1=%.3f, d2=%.3f g=%.3f' %
                  (i+1, j+1, bat_per_epo, d_loss1, d_loss2, g_loss))
        if (i+1) % 1 == 0:
            summarize_performance(i, g_model, d_model, dataset, latent_dim)
```

[ ]:
```
latent_dim = 100
d_model = define_discriminator()
g_model = define_generator(latent_dim)
gan_model = define_gan(g_model, d_model)
dataset = load_real_samples()
train(g_model, d_model, gan_model, dataset, latent_dim)
```

```
WARNING:absl:`lr` is deprecated in Keras optimizer, please use `learning_rate`
or use the legacy optimizer, e.g.,tf.keras.optimizers.legacy.Adam.
WARNING:absl:`lr` is deprecated in Keras optimizer, please use `learning_rate`
or use the legacy optimizer, e.g.,tf.keras.optimizers.legacy.Adam.

4/4 [==============================] - 1s 7ms/step
>1, 1/195, d1=0.688, d2=0.719 g=0.691
4/4 [==============================] - 0s 7ms/step
>1, 2/195, d1=0.338, d2=1.674 g=0.652
4/4 [==============================] - 0s 7ms/step
>1, 3/195, d1=0.141, d2=0.757 g=2.010
4/4 [==============================] - 0s 7ms/step
>1, 4/195, d1=0.213, d2=0.551 g=1.073
4/4 [==============================] - 0s 7ms/step
>1, 5/195, d1=0.126, d2=0.737 g=0.757
4/4 [==============================] - 0s 7ms/step
>1, 6/195, d1=0.194, d2=2.074 g=0.721
4/4 [==============================] - 0s 7ms/step
>1, 7/195, d1=0.174, d2=0.949 g=1.228
4/4 [==============================] - 0s 8ms/step
>1, 8/195, d1=1.087, d2=0.711 g=0.706
4/4 [==============================] - 0s 7ms/step
>1, 9/195, d1=0.170, d2=0.817 g=0.710
4/4 [==============================] - 0s 7ms/step
>1, 10/195, d1=0.083, d2=1.073 g=0.896
4/4 [==============================] - 0s 7ms/step
>1, 11/195, d1=0.297, d2=0.647 g=0.799
4/4 [==============================] - 0s 7ms/step
>1, 12/195, d1=0.103, d2=0.599 g=0.892
4/4 [==============================] - 0s 7ms/step
>1, 13/195, d1=0.036, d2=0.799 g=0.897
4/4 [==============================] - 0s 7ms/step
>1, 14/195, d1=0.030, d2=8.964 g=0.835
4/4 [==============================] - 0s 7ms/step
>1, 15/195, d1=0.571, d2=0.713 g=1.024
4/4 [==============================] - 0s 7ms/step
>1, 16/195, d1=0.475, d2=0.416 g=2.256
4/4 [==============================] - 0s 7ms/step
>1, 17/195, d1=0.160, d2=0.312 g=3.002
4/4 [==============================] - 0s 7ms/step
>1, 18/195, d1=0.034, d2=0.512 g=1.054
```

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4/4 [==============================] - 0s 7ms/step
>1, 19/195, d1=0.025, d2=0.749 g=1.230
4/4 [==============================] - 0s 7ms/step
>1, 20/195, d1=0.024, d2=1.585 g=4.121
4/4 [==============================] - 0s 7ms/step
>1, 21/195, d1=0.688, d2=0.347 g=1.373
4/4 [==============================] - 0s 7ms/step
>1, 22/195, d1=0.185, d2=0.578 g=1.472
4/4 [==============================] - 0s 8ms/step
>1, 23/195, d1=0.156, d2=0.771 g=1.874
4/4 [==============================] - 0s 7ms/step
>1, 24/195, d1=0.308, d2=0.280 g=4.118
4/4 [==============================] - 0s 7ms/step
>1, 25/195, d1=0.337, d2=0.130 g=4.730
4/4 [==============================] - 0s 7ms/step
>1, 26/195, d1=0.163, d2=0.525 g=6.348
4/4 [==============================] - 0s 7ms/step
>1, 27/195, d1=0.114, d2=0.192 g=13.044
4/4 [==============================] - 0s 7ms/step
>1, 28/195, d1=0.329, d2=0.415 g=3.304
4/4 [==============================] - 0s 7ms/step
>1, 29/195, d1=0.207, d2=1.088 g=5.055
4/4 [==============================] - 0s 7ms/step
>1, 30/195, d1=0.478, d2=0.332 g=3.932
4/4 [==============================] - 0s 7ms/step
>1, 31/195, d1=0.672, d2=0.631 g=1.811
4/4 [==============================] - 0s 7ms/step
>1, 32/195, d1=0.528, d2=0.946 g=1.448
4/4 [==============================] - 0s 7ms/step
>1, 33/195, d1=0.350, d2=0.653 g=1.910
4/4 [==============================] - 0s 7ms/step
>1, 34/195, d1=0.631, d2=0.579 g=2.219
4/4 [==============================] - 0s 7ms/step
>1, 35/195, d1=0.594, d2=0.641 g=2.471
4/4 [==============================] - 0s 7ms/step
>1, 36/195, d1=0.707, d2=0.770 g=1.981
4/4 [==============================] - 0s 7ms/step
>1, 37/195, d1=0.875, d2=0.557 g=1.330
4/4 [==============================] - 0s 7ms/step
>1, 38/195, d1=0.754, d2=0.579 g=1.209
4/4 [==============================] - 0s 7ms/step
>1, 39/195, d1=0.716, d2=0.489 g=1.553
4/4 [==============================] - 0s 7ms/step
>1, 40/195, d1=0.646, d2=0.358 g=2.230
4/4 [==============================] - 0s 7ms/step
>1, 41/195, d1=0.743, d2=0.413 g=1.894
4/4 [==============================] - 0s 7ms/step
>1, 42/195, d1=0.715, d2=0.602 g=1.295
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4/4 [==============================] - 0s 7ms/step
>1, 43/195, d1=0.693, d2=0.618 g=1.702
4/4 [==============================] - 0s 7ms/step
>1, 44/195, d1=0.610, d2=0.551 g=1.445
4/4 [==============================] - 0s 7ms/step
>1, 45/195, d1=0.572, d2=0.414 g=1.829
4/4 [==============================] - 0s 7ms/step
>1, 46/195, d1=0.525, d2=0.353 g=2.237
4/4 [==============================] - 0s 7ms/step
>1, 47/195, d1=0.468, d2=0.485 g=2.346
4/4 [==============================] - 0s 7ms/step
>1, 48/195, d1=0.463, d2=0.568 g=1.831
4/4 [==============================] - 0s 7ms/step
>1, 49/195, d1=0.532, d2=1.037 g=1.592
4/4 [==============================] - 0s 8ms/step
>1, 50/195, d1=0.611, d2=0.630 g=1.274
4/4 [==============================] - 0s 7ms/step
>1, 51/195, d1=0.599, d2=0.461 g=1.757
4/4 [==============================] - 0s 7ms/step
>1, 52/195, d1=0.499, d2=0.327 g=2.483
4/4 [==============================] - 0s 7ms/step
>1, 53/195, d1=0.597, d2=0.347 g=2.442
4/4 [==============================] - 0s 7ms/step
>1, 54/195, d1=0.400, d2=0.484 g=4.398
4/4 [==============================] - 0s 7ms/step
>1, 55/195, d1=0.680, d2=0.236 g=2.752
4/4 [==============================] - 0s 8ms/step
>1, 56/195, d1=0.424, d2=1.390 g=3.654
4/4 [==============================] - 0s 7ms/step
>1, 57/195, d1=0.597, d2=0.346 g=2.528
4/4 [==============================] - 0s 7ms/step
>1, 58/195, d1=0.561, d2=0.671 g=1.979
4/4 [==============================] - 0s 7ms/step
>1, 59/195, d1=0.478, d2=0.755 g=2.060
4/4 [==============================] - 0s 7ms/step
>1, 60/195, d1=0.551, d2=0.650 g=2.205
4/4 [==============================] - 0s 7ms/step
>1, 61/195, d1=0.470, d2=0.349 g=2.915
4/4 [==============================] - 0s 7ms/step
>1, 62/195, d1=0.468, d2=0.622 g=2.622
4/4 [==============================] - 0s 7ms/step
>1, 63/195, d1=0.638, d2=0.966 g=1.796
4/4 [==============================] - 0s 7ms/step
>1, 64/195, d1=0.618, d2=0.992 g=2.424
4/4 [==============================] - 0s 7ms/step
>1, 65/195, d1=0.942, d2=0.430 g=1.708
4/4 [==============================] - 0s 7ms/step
>1, 66/195, d1=0.608, d2=0.590 g=1.506
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4/4 [==============================] - 0s 7ms/step
>1, 67/195, d1=0.634, d2=0.839 g=1.210
4/4 [==============================] - 0s 7ms/step
>1, 68/195, d1=0.694, d2=0.638 g=1.374
4/4 [==============================] - 0s 7ms/step
>1, 69/195, d1=0.688, d2=0.712 g=1.349
4/4 [==============================] - 0s 7ms/step
>1, 70/195, d1=0.637, d2=0.561 g=1.415
4/4 [==============================] - 0s 7ms/step
>1, 71/195, d1=0.679, d2=0.469 g=1.520
4/4 [==============================] - 0s 7ms/step
>1, 72/195, d1=0.643, d2=0.506 g=1.361
4/4 [==============================] - 0s 7ms/step
>1, 73/195, d1=0.544, d2=0.604 g=1.499
4/4 [==============================] - 0s 7ms/step
>1, 74/195, d1=0.587, d2=0.511 g=1.575
4/4 [==============================] - 0s 7ms/step
>1, 75/195, d1=0.652, d2=0.487 g=1.464
4/4 [==============================] - 0s 8ms/step
>1, 76/195, d1=0.553, d2=0.555 g=1.619
4/4 [==============================] - 0s 7ms/step
>1, 77/195, d1=0.546, d2=0.437 g=1.808
4/4 [==============================] - 0s 7ms/step
>1, 78/195, d1=0.581, d2=0.473 g=2.124
4/4 [==============================] - 0s 7ms/step
>1, 79/195, d1=0.574, d2=0.486 g=2.193
4/4 [==============================] - 0s 7ms/step
>1, 80/195, d1=0.561, d2=0.746 g=1.806
4/4 [==============================] - 0s 8ms/step
>1, 81/195, d1=0.752, d2=1.094 g=1.341
4/4 [==============================] - 0s 7ms/step
>1, 82/195, d1=0.641, d2=0.566 g=1.487
4/4 [==============================] - 0s 7ms/step
>1, 83/195, d1=0.500, d2=0.432 g=2.045
4/4 [==============================] - 0s 7ms/step
>1, 84/195, d1=0.576, d2=0.767 g=2.809
4/4 [==============================] - 0s 7ms/step
>1, 85/195, d1=0.784, d2=1.590 g=2.165
4/4 [==============================] - 0s 7ms/step
>1, 86/195, d1=1.038, d2=0.441 g=1.452
4/4 [==============================] - 0s 7ms/step
>1, 87/195, d1=0.772, d2=0.568 g=1.544
4/4 [==============================] - 0s 7ms/step
>1, 88/195, d1=0.699, d2=0.508 g=1.716
4/4 [==============================] - 0s 8ms/step
>1, 89/195, d1=0.675, d2=0.589 g=1.455
4/4 [==============================] - 0s 7ms/step
>1, 90/195, d1=0.738, d2=0.736 g=1.447
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4/4 [==============================] - 0s 7ms/step
>1, 91/195, d1=0.738, d2=0.609 g=1.182
4/4 [==============================] - 0s 7ms/step
>1, 92/195, d1=0.706, d2=0.607 g=1.115
4/4 [==============================] - 0s 7ms/step
>1, 93/195, d1=0.629, d2=0.600 g=1.294
4/4 [==============================] - 0s 7ms/step
>1, 94/195, d1=0.594, d2=0.511 g=1.388
4/4 [==============================] - 0s 7ms/step
>1, 95/195, d1=0.732, d2=0.531 g=1.356
4/4 [==============================] - 0s 7ms/step
>1, 96/195, d1=0.621, d2=0.512 g=1.502
4/4 [==============================] - 0s 7ms/step
>1, 97/195, d1=0.578, d2=0.414 g=1.541
4/4 [==============================] - 0s 7ms/step
>1, 98/195, d1=0.631, d2=0.508 g=1.468
4/4 [==============================] - 0s 7ms/step
>1, 99/195, d1=0.604, d2=0.507 g=1.476
4/4 [==============================] - 0s 7ms/step
>1, 100/195, d1=0.596, d2=0.630 g=1.570
4/4 [==============================] - 0s 7ms/step
>1, 101/195, d1=0.789, d2=0.536 g=1.295
4/4 [==============================] - 0s 7ms/step
>1, 102/195, d1=0.579, d2=0.550 g=1.310
4/4 [==============================] - 0s 7ms/step
>1, 103/195, d1=0.477, d2=0.505 g=1.462
4/4 [==============================] - 0s 7ms/step
>1, 104/195, d1=0.518, d2=0.514 g=1.792
4/4 [==============================] - 0s 9ms/step
>1, 105/195, d1=0.444, d2=0.430 g=2.328
4/4 [==============================] - 0s 7ms/step
>1, 106/195, d1=0.623, d2=0.839 g=2.622
4/4 [==============================] - 0s 8ms/step
>1, 107/195, d1=0.522, d2=0.578 g=2.767
4/4 [==============================] - 0s 7ms/step
>1, 108/195, d1=0.648, d2=0.809 g=3.205
4/4 [==============================] - 0s 7ms/step
>1, 109/195, d1=1.082, d2=0.398 g=2.006
4/4 [==============================] - 0s 7ms/step
>1, 110/195, d1=0.637, d2=0.500 g=1.872
4/4 [==============================] - 0s 7ms/step
>1, 111/195, d1=0.663, d2=0.632 g=1.519
4/4 [==============================] - 0s 7ms/step
>1, 112/195, d1=0.696, d2=0.561 g=1.506
4/4 [==============================] - 0s 8ms/step
>1, 113/195, d1=0.546, d2=0.454 g=1.750
4/4 [==============================] - 0s 7ms/step
>1, 114/195, d1=0.620, d2=0.399 g=1.794
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4/4 [==============================] - 0s 7ms/step
>1, 115/195, d1=0.579, d2=0.478 g=1.914
4/4 [==============================] - 0s 7ms/step
>1, 116/195, d1=0.398, d2=0.575 g=1.818
4/4 [==============================] - 0s 7ms/step
>1, 117/195, d1=0.372, d2=0.472 g=2.242
4/4 [==============================] - 0s 7ms/step
>1, 118/195, d1=0.481, d2=0.720 g=2.440
4/4 [==============================] - 0s 7ms/step
>1, 119/195, d1=0.764, d2=0.744 g=2.011
4/4 [==============================] - 0s 7ms/step
>1, 120/195, d1=0.499, d2=0.882 g=2.068
4/4 [==============================] - 0s 7ms/step
>1, 121/195, d1=0.546, d2=0.413 g=2.702
4/4 [==============================] - 0s 7ms/step
>1, 122/195, d1=0.704, d2=0.294 g=3.635
4/4 [==============================] - 0s 7ms/step
>1, 123/195, d1=0.506, d2=0.247 g=4.092
4/4 [==============================] - 0s 7ms/step
>1, 124/195, d1=0.501, d2=0.541 g=4.421
4/4 [==============================] - 0s 7ms/step
>1, 125/195, d1=0.733, d2=0.850 g=2.238
4/4 [==============================] - 0s 7ms/step
>1, 126/195, d1=0.777, d2=0.593 g=1.301
4/4 [==============================] - 0s 7ms/step
>1, 127/195, d1=0.614, d2=0.630 g=1.295
4/4 [==============================] - 0s 7ms/step
>1, 128/195, d1=0.504, d2=0.574 g=1.593
4/4 [==============================] - 0s 7ms/step
>1, 129/195, d1=0.497, d2=0.526 g=2.168
4/4 [==============================] - 0s 7ms/step
>1, 130/195, d1=0.436, d2=0.832 g=2.220
4/4 [==============================] - 0s 8ms/step
>1, 131/195, d1=0.705, d2=0.356 g=2.225
4/4 [==============================] - 0s 8ms/step
>1, 132/195, d1=0.636, d2=0.492 g=2.150
4/4 [==============================] - 0s 7ms/step
>1, 133/195, d1=0.595, d2=0.504 g=2.120
4/4 [==============================] - 0s 7ms/step
>1, 134/195, d1=0.654, d2=0.711 g=2.257
4/4 [==============================] - 0s 7ms/step
>1, 135/195, d1=0.509, d2=1.125 g=2.336
4/4 [==============================] - 0s 7ms/step
>1, 136/195, d1=0.957, d2=0.535 g=1.663
4/4 [==============================] - 0s 7ms/step
>1, 137/195, d1=0.570, d2=0.519 g=1.860
4/4 [==============================] - 0s 7ms/step
>1, 138/195, d1=0.481, d2=0.880 g=2.428
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4/4 [==============================] - 0s 7ms/step
>1, 139/195, d1=0.885, d2=0.633 g=2.098
4/4 [==============================] - 0s 7ms/step
>1, 140/195, d1=0.680, d2=0.602 g=2.474
4/4 [==============================] - 0s 7ms/step
>1, 141/195, d1=0.769, d2=0.497 g=2.185
4/4 [==============================] - 0s 7ms/step
>1, 142/195, d1=0.707, d2=0.435 g=1.948
4/4 [==============================] - 0s 7ms/step
>1, 143/195, d1=0.624, d2=0.590 g=1.700
4/4 [==============================] - 0s 7ms/step
>1, 144/195, d1=0.591, d2=0.637 g=1.719
4/4 [==============================] - 0s 7ms/step
>1, 145/195, d1=0.689, d2=0.459 g=1.888
4/4 [==============================] - 0s 7ms/step
>1, 146/195, d1=0.620, d2=0.330 g=2.080
4/4 [==============================] - 0s 7ms/step
>1, 147/195, d1=0.532, d2=0.602 g=2.358
4/4 [==============================] - 0s 7ms/step
>1, 148/195, d1=0.660, d2=0.558 g=1.706
4/4 [==============================] - 0s 7ms/step
>1, 149/195, d1=0.527, d2=0.676 g=1.438
4/4 [==============================] - 0s 7ms/step
>1, 150/195, d1=0.553, d2=0.714 g=1.492
4/4 [==============================] - 0s 7ms/step
>1, 151/195, d1=0.730, d2=0.591 g=1.679
4/4 [==============================] - 0s 7ms/step
>1, 152/195, d1=0.618, d2=0.639 g=1.453
4/4 [==============================] - 0s 7ms/step
>1, 153/195, d1=0.594, d2=0.564 g=1.535
4/4 [==============================] - 0s 8ms/step
>1, 154/195, d1=0.648, d2=0.654 g=1.544
4/4 [==============================] - 0s 7ms/step
>1, 155/195, d1=0.539, d2=1.143 g=1.992
4/4 [==============================] - 0s 7ms/step
>1, 156/195, d1=0.809, d2=0.544 g=1.973
4/4 [==============================] - 0s 7ms/step
>1, 157/195, d1=0.754, d2=0.664 g=1.570
4/4 [==============================] - 0s 7ms/step
>1, 158/195, d1=0.671, d2=0.456 g=1.736
4/4 [==============================] - 0s 13ms/step
>1, 159/195, d1=0.772, d2=0.510 g=1.596
4/4 [==============================] - 0s 7ms/step
>1, 160/195, d1=0.652, d2=0.503 g=1.706
4/4 [==============================] - 0s 6ms/step
>1, 161/195, d1=0.749, d2=0.545 g=1.577
4/4 [==============================] - 0s 7ms/step
>1, 162/195, d1=0.793, d2=0.627 g=1.420
```

```
4/4 [==============================] - 0s 7ms/step
>1, 163/195, d1=0.678, d2=0.539 g=1.416
4/4 [==============================] - 0s 7ms/step
>1, 164/195, d1=0.591, d2=0.562 g=1.372
4/4 [==============================] - 0s 7ms/step
>1, 165/195, d1=0.670, d2=0.724 g=1.343
4/4 [==============================] - 0s 7ms/step
>1, 166/195, d1=0.573, d2=0.720 g=1.652
4/4 [==============================] - 0s 7ms/step
>1, 167/195, d1=0.619, d2=0.540 g=1.678
4/4 [==============================] - 0s 7ms/step
>1, 168/195, d1=0.619, d2=0.667 g=1.393
4/4 [==============================] - 0s 7ms/step
>1, 169/195, d1=0.644, d2=1.100 g=1.249
4/4 [==============================] - 0s 7ms/step
>1, 170/195, d1=0.806, d2=0.612 g=1.144
4/4 [==============================] - 0s 7ms/step
>1, 171/195, d1=0.706, d2=0.582 g=1.225
4/4 [==============================] - 0s 7ms/step
>1, 172/195, d1=0.552, d2=0.593 g=1.400
4/4 [==============================] - 0s 7ms/step
>1, 173/195, d1=0.564, d2=0.701 g=1.407
4/4 [==============================] - 0s 7ms/step
>1, 174/195, d1=0.547, d2=0.769 g=1.152
4/4 [==============================] - 0s 7ms/step
>1, 175/195, d1=0.542, d2=0.576 g=1.392
4/4 [==============================] - 0s 7ms/step
>1, 176/195, d1=0.487, d2=0.546 g=1.762
4/4 [==============================] - 0s 7ms/step
>1, 177/195, d1=0.511, d2=0.465 g=1.848
4/4 [==============================] - 0s 7ms/step
>1, 178/195, d1=0.551, d2=0.587 g=1.994
4/4 [==============================] - 0s 7ms/step
>1, 179/195, d1=0.506, d2=0.591 g=1.811
4/4 [==============================] - 0s 7ms/step
>1, 180/195, d1=0.589, d2=0.635 g=1.694
4/4 [==============================] - 0s 7ms/step
>1, 181/195, d1=0.618, d2=0.628 g=1.469
4/4 [==============================] - 0s 7ms/step
>1, 182/195, d1=0.600, d2=0.534 g=1.379
4/4 [==============================] - 0s 7ms/step
>1, 183/195, d1=0.580, d2=0.511 g=1.364
4/4 [==============================] - 0s 7ms/step
>1, 184/195, d1=0.485, d2=0.620 g=1.468
4/4 [==============================] - 0s 7ms/step
>1, 185/195, d1=0.470, d2=0.492 g=1.436
4/4 [==============================] - 0s 7ms/step
>1, 186/195, d1=0.554, d2=0.718 g=1.501
```

```
4/4 [==============================] - 0s 8ms/step
>1, 187/195, d1=0.531, d2=0.418 g=1.567
4/4 [==============================] - 0s 8ms/step
>1, 188/195, d1=0.502, d2=0.503 g=1.592
4/4 [==============================] - 0s 8ms/step
>1, 189/195, d1=0.399, d2=0.562 g=1.753
4/4 [==============================] - 0s 8ms/step
>1, 190/195, d1=0.468, d2=0.578 g=1.642
4/4 [==============================] - 0s 7ms/step
>1, 191/195, d1=0.525, d2=0.745 g=1.892
4/4 [==============================] - 0s 7ms/step
>1, 192/195, d1=0.638, d2=0.826 g=1.556
4/4 [==============================] - 0s 7ms/step
>1, 193/195, d1=0.646, d2=1.624 g=1.810
4/4 [==============================] - 0s 7ms/step
>1, 194/195, d1=0.808, d2=0.570 g=1.547
4/4 [==============================] - 0s 7ms/step
>1, 195/195, d1=0.822, d2=0.559 g=1.481
5/5 [==============================] - 1s 112ms/step
>Accuracy real: 49%, fake: 99%

/usr/local/lib/python3.10/dist-packages/keras/src/engine/training.py:3103:
UserWarning: You are saving your model as an HDF5 file via `model.save()`. This
file format is considered legacy. We recommend using instead the native Keras
format, e.g. `model.save('my_model.keras')`.
  saving_api.save_model(
WARNING:tensorflow:Compiled the loaded model, but the compiled metrics have yet
to be built. `model.compile_metrics` will be empty until you train or evaluate
the model.

4/4 [==============================] - 0s 7ms/step
>2, 1/195, d1=0.714, d2=0.453 g=1.510
4/4 [==============================] - 0s 7ms/step
>2, 2/195, d1=0.669, d2=0.547 g=1.381
4/4 [==============================] - 0s 7ms/step
>2, 3/195, d1=0.610, d2=0.479 g=1.379
4/4 [==============================] - 0s 7ms/step
>2, 4/195, d1=0.664, d2=0.576 g=1.391
4/4 [==============================] - 0s 7ms/step
>2, 5/195, d1=0.585, d2=0.502 g=1.368
4/4 [==============================] - 0s 7ms/step
>2, 6/195, d1=0.570, d2=0.547 g=1.301
4/4 [==============================] - 0s 7ms/step
>2, 7/195, d1=0.545, d2=0.659 g=1.394
4/4 [==============================] - 0s 7ms/step
>2, 8/195, d1=0.491, d2=0.481 g=1.594
4/4 [==============================] - 0s 7ms/step
>2, 9/195, d1=0.500, d2=0.514 g=1.710
4/4 [==============================] - 0s 7ms/step
```

```
>2, 10/195, d1=0.500, d2=1.393 g=1.992
4/4 [==============================] - 0s 7ms/step
>2, 11/195, d1=0.771, d2=0.591 g=1.491
4/4 [==============================] - 0s 7ms/step
>2, 12/195, d1=0.583, d2=0.692 g=1.638
4/4 [==============================] - 0s 7ms/step
>2, 13/195, d1=0.595, d2=0.562 g=1.869
4/4 [==============================] - 0s 7ms/step
>2, 14/195, d1=0.522, d2=0.402 g=2.246
4/4 [==============================] - 0s 7ms/step
>2, 15/195, d1=0.385, d2=0.445 g=3.014
4/4 [==============================] - 0s 7ms/step
>2, 16/195, d1=0.420, d2=0.386 g=2.725
4/4 [==============================] - 0s 7ms/step
>2, 17/195, d1=0.493, d2=0.987 g=2.050
4/4 [==============================] - 0s 7ms/step
>2, 18/195, d1=0.767, d2=0.448 g=1.436
4/4 [==============================] - 0s 7ms/step
>2, 19/195, d1=0.489, d2=0.459 g=1.442
4/4 [==============================] - 0s 7ms/step
>2, 20/195, d1=0.470, d2=0.424 g=1.797
4/4 [==============================] - 0s 7ms/step
>2, 21/195, d1=0.417, d2=1.199 g=2.518
4/4 [==============================] - 0s 7ms/step
>2, 22/195, d1=0.838, d2=0.254 g=2.047
4/4 [==============================] - 0s 7ms/step
>2, 23/195, d1=0.709, d2=0.507 g=1.401
4/4 [==============================] - 0s 7ms/step
>2, 24/195, d1=0.496, d2=0.532 g=1.342
4/4 [==============================] - 0s 7ms/step
>2, 25/195, d1=0.478, d2=0.536 g=1.333
4/4 [==============================] - 0s 7ms/step
>2, 26/195, d1=0.473, d2=0.550 g=1.476
4/4 [==============================] - 0s 7ms/step
>2, 27/195, d1=0.369, d2=0.511 g=1.790
4/4 [==============================] - 0s 7ms/step
>2, 28/195, d1=0.383, d2=0.745 g=2.022
4/4 [==============================] - 0s 7ms/step
>2, 29/195, d1=0.588, d2=1.375 g=2.270
4/4 [==============================] - 0s 7ms/step
>2, 30/195, d1=0.896, d2=0.541 g=2.094
4/4 [==============================] - 0s 7ms/step
>2, 31/195, d1=0.903, d2=0.573 g=1.436
4/4 [==============================] - 0s 7ms/step
>2, 32/195, d1=0.468, d2=0.559 g=1.631
4/4 [==============================] - 0s 7ms/step
>2, 33/195, d1=0.503, d2=0.523 g=2.269
4/4 [==============================] - 0s 7ms/step
```

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>2, 34/195, d1=0.410, d2=0.790 g=4.036
4/4 [==============================] - 0s 7ms/step
>2, 35/195, d1=1.281, d2=0.594 g=1.648
4/4 [==============================] - 0s 7ms/step
>2, 36/195, d1=0.682, d2=0.589 g=1.560
4/4 [==============================] - 0s 7ms/step
>2, 37/195, d1=0.588, d2=0.482 g=1.423
4/4 [==============================] - 0s 7ms/step
>2, 38/195, d1=0.544, d2=0.529 g=1.402
4/4 [==============================] - 0s 7ms/step
>2, 39/195, d1=0.540, d2=0.602 g=1.453
4/4 [==============================] - 0s 7ms/step
>2, 40/195, d1=0.489, d2=0.687 g=1.482
4/4 [==============================] - 0s 7ms/step
>2, 41/195, d1=0.593, d2=0.933 g=1.711
4/4 [==============================] - 0s 7ms/step
>2, 42/195, d1=0.837, d2=0.481 g=1.703
4/4 [==============================] - 0s 8ms/step
>2, 43/195, d1=0.707, d2=0.445 g=1.619
4/4 [==============================] - 0s 7ms/step
>2, 44/195, d1=0.730, d2=0.586 g=1.302
4/4 [==============================] - 0s 7ms/step
>2, 45/195, d1=0.606, d2=0.857 g=1.299
4/4 [==============================] - 0s 7ms/step
>2, 46/195, d1=0.698, d2=0.629 g=1.411
4/4 [==============================] - 0s 7ms/step
>2, 47/195, d1=0.666, d2=0.673 g=1.305
4/4 [==============================] - 0s 7ms/step
>2, 48/195, d1=0.649, d2=0.736 g=1.135
4/4 [==============================] - 0s 7ms/step
>2, 49/195, d1=0.634, d2=0.667 g=1.113
4/4 [==============================] - 0s 7ms/step
>2, 50/195, d1=0.673, d2=0.651 g=1.116
4/4 [==============================] - 0s 7ms/step
>2, 51/195, d1=0.628, d2=0.582 g=1.167
4/4 [==============================] - 0s 7ms/step
>2, 52/195, d1=0.578, d2=0.577 g=1.242
4/4 [==============================] - 0s 7ms/step
>2, 53/195, d1=0.418, d2=0.522 g=1.514
4/4 [==============================] - 0s 7ms/step
>2, 54/195, d1=0.467, d2=0.586 g=1.656
4/4 [==============================] - 0s 7ms/step
>2, 55/195, d1=0.567, d2=1.327 g=2.212
4/4 [==============================] - 0s 7ms/step
>2, 56/195, d1=0.912, d2=0.891 g=2.054
4/4 [==============================] - 0s 7ms/step
>2, 57/195, d1=1.005, d2=0.677 g=1.069
4/4 [==============================] - 0s 7ms/step
```

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>2, 58/195, d1=0.687, d2=0.580 g=1.050
4/4 [==============================] - 0s 7ms/step
>2, 59/195, d1=0.574, d2=0.536 g=1.185
4/4 [==============================] - 0s 7ms/step
>2, 60/195, d1=0.596, d2=0.494 g=1.315
4/4 [==============================] - 0s 7ms/step
>2, 61/195, d1=0.491, d2=0.458 g=1.480
4/4 [==============================] - 0s 7ms/step
>2, 62/195, d1=0.397, d2=0.580 g=1.492
4/4 [==============================] - 0s 7ms/step
>2, 63/195, d1=0.532, d2=0.637 g=1.271
4/4 [==============================] - 0s 8ms/step
>2, 64/195, d1=0.548, d2=0.662 g=1.209
4/4 [==============================] - 0s 7ms/step
>2, 65/195, d1=0.577, d2=0.596 g=1.397
4/4 [==============================] - 0s 7ms/step
>2, 66/195, d1=0.529, d2=0.560 g=1.513
4/4 [==============================] - 0s 7ms/step
>2, 67/195, d1=0.596, d2=0.737 g=1.459
4/4 [==============================] - 0s 7ms/step
>2, 68/195, d1=0.669, d2=0.862 g=1.407
4/4 [==============================] - 0s 7ms/step
>2, 69/195, d1=0.676, d2=0.506 g=1.474
4/4 [==============================] - 0s 7ms/step
>2, 70/195, d1=0.725, d2=0.455 g=1.633
4/4 [==============================] - 0s 7ms/step
>2, 71/195, d1=0.593, d2=0.365 g=1.854
4/4 [==============================] - 0s 8ms/step
>2, 72/195, d1=0.469, d2=0.526 g=1.634
4/4 [==============================] - 0s 7ms/step
>2, 73/195, d1=0.612, d2=0.619 g=1.300
4/4 [==============================] - 0s 7ms/step
>2, 74/195, d1=0.645, d2=0.553 g=1.282
4/4 [==============================] - 0s 7ms/step
>2, 75/195, d1=0.595, d2=0.491 g=1.365
4/4 [==============================] - 0s 7ms/step
>2, 76/195, d1=0.524, d2=0.558 g=1.376
4/4 [==============================] - 0s 7ms/step
>2, 77/195, d1=0.640, d2=0.489 g=1.428
4/4 [==============================] - 0s 7ms/step
>2, 78/195, d1=0.669, d2=0.694 g=1.208
4/4 [==============================] - 0s 7ms/step
>2, 79/195, d1=0.598, d2=0.863 g=1.231
4/4 [==============================] - 0s 7ms/step
>2, 80/195, d1=0.641, d2=0.630 g=1.379
4/4 [==============================] - 0s 7ms/step
>2, 81/195, d1=0.558, d2=0.514 g=1.431
4/4 [==============================] - 0s 7ms/step
```

```
>2, 82/195, d1=0.443, d2=0.550 g=1.432
4/4 [==============================] - 0s 7ms/step
>2, 83/195, d1=0.252, d2=0.796 g=1.539
4/4 [==============================] - 0s 7ms/step
>2, 84/195, d1=0.277, d2=0.680 g=1.858
4/4 [==============================] - 0s 7ms/step
>2, 85/195, d1=0.482, d2=0.580 g=1.921
4/4 [==============================] - 0s 7ms/step
>2, 86/195, d1=0.372, d2=2.594 g=3.925
4/4 [==============================] - 0s 7ms/step
>2, 87/195, d1=1.524, d2=0.496 g=1.483
4/4 [==============================] - 0s 7ms/step
>2, 88/195, d1=0.652, d2=0.634 g=1.686
4/4 [==============================] - 0s 7ms/step
>2, 89/195, d1=0.685, d2=0.497 g=1.487
4/4 [==============================] - 0s 7ms/step
>2, 90/195, d1=0.656, d2=0.542 g=1.357
4/4 [==============================] - 0s 7ms/step
>2, 91/195, d1=0.495, d2=0.766 g=1.257
4/4 [==============================] - 0s 7ms/step
>2, 92/195, d1=0.465, d2=0.566 g=1.365
4/4 [==============================] - 0s 7ms/step
>2, 93/195, d1=0.517, d2=0.697 g=1.518
4/4 [==============================] - 0s 7ms/step
>2, 94/195, d1=0.533, d2=0.943 g=1.501
4/4 [==============================] - 0s 7ms/step
>2, 95/195, d1=0.809, d2=0.683 g=1.368
4/4 [==============================] - 0s 7ms/step
>2, 96/195, d1=0.805, d2=0.559 g=1.410
4/4 [==============================] - 0s 7ms/step
>2, 97/195, d1=0.797, d2=0.514 g=1.387
4/4 [==============================] - 0s 7ms/step
>2, 98/195, d1=0.678, d2=0.548 g=1.344
4/4 [==============================] - 0s 8ms/step
>2, 99/195, d1=0.712, d2=0.621 g=1.213
4/4 [==============================] - 0s 7ms/step
>2, 100/195, d1=0.782, d2=0.577 g=1.099
4/4 [==============================] - 0s 7ms/step
>2, 101/195, d1=0.667, d2=0.642 g=1.037
4/4 [==============================] - 0s 7ms/step
>2, 102/195, d1=0.663, d2=0.652 g=1.088
4/4 [==============================] - 0s 7ms/step
>2, 103/195, d1=0.562, d2=0.653 g=1.164
4/4 [==============================] - 0s 7ms/step
>2, 104/195, d1=0.600, d2=0.563 g=1.206
4/4 [==============================] - 0s 7ms/step
>2, 105/195, d1=0.638, d2=0.688 g=1.177
4/4 [==============================] - 0s 7ms/step
```

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>2, 106/195, d1=0.622, d2=0.573 g=1.169
4/4 [==============================] - 0s 7ms/step
>2, 107/195, d1=0.702, d2=0.662 g=1.084
4/4 [==============================] - 0s 7ms/step
>2, 108/195, d1=0.561, d2=0.660 g=1.147
4/4 [==============================] - 0s 7ms/step
>2, 109/195, d1=0.633, d2=0.598 g=1.224
4/4 [==============================] - 0s 7ms/step
>2, 110/195, d1=0.567, d2=0.605 g=1.255
4/4 [==============================] - 0s 7ms/step
>2, 111/195, d1=0.568, d2=0.603 g=1.312
4/4 [==============================] - 0s 7ms/step
>2, 112/195, d1=0.516, d2=0.644 g=1.318
4/4 [==============================] - 0s 7ms/step
>2, 113/195, d1=0.574, d2=0.794 g=1.339
4/4 [==============================] - 0s 7ms/step
>2, 114/195, d1=0.722, d2=0.663 g=1.396
4/4 [==============================] - 0s 7ms/step
>2, 115/195, d1=0.718, d2=0.620 g=1.281
4/4 [==============================] - 0s 7ms/step
>2, 116/195, d1=0.727, d2=0.677 g=1.335
4/4 [==============================] - 0s 7ms/step
>2, 117/195, d1=0.582, d2=0.561 g=1.389
4/4 [==============================] - 0s 7ms/step
>2, 118/195, d1=0.626, d2=0.603 g=1.444
4/4 [==============================] - 0s 7ms/step
>2, 119/195, d1=0.677, d2=0.530 g=1.279
4/4 [==============================] - 0s 7ms/step
>2, 120/195, d1=0.648, d2=0.555 g=1.159
4/4 [==============================] - 0s 7ms/step
>2, 121/195, d1=0.506, d2=0.612 g=1.157
4/4 [==============================] - 0s 7ms/step
>2, 122/195, d1=0.479, d2=0.524 g=1.258
4/4 [==============================] - 0s 7ms/step
>2, 123/195, d1=0.443, d2=0.530 g=1.363
4/4 [==============================] - 0s 7ms/step
>2, 124/195, d1=0.393, d2=0.783 g=1.501
4/4 [==============================] - 0s 7ms/step
>2, 125/195, d1=0.477, d2=1.383 g=1.361
4/4 [==============================] - 0s 8ms/step
>2, 126/195, d1=0.645, d2=2.128 g=1.765
4/4 [==============================] - 0s 8ms/step
>2, 127/195, d1=1.010, d2=0.413 g=1.302
4/4 [==============================] - 0s 7ms/step
>2, 128/195, d1=0.758, d2=0.596 g=1.045
4/4 [==============================] - 0s 7ms/step
>2, 129/195, d1=0.698, d2=0.666 g=1.023
4/4 [==============================] - 0s 7ms/step
```

```
>2, 130/195, d1=0.645, d2=0.650 g=1.155
4/4 [==============================] - 0s 7ms/step
>2, 131/195, d1=0.645, d2=0.590 g=1.294
4/4 [==============================] - 0s 7ms/step
>2, 132/195, d1=0.625, d2=0.612 g=1.386
4/4 [==============================] - 0s 7ms/step
>2, 133/195, d1=0.646, d2=0.675 g=1.310
4/4 [==============================] - 0s 7ms/step
>2, 134/195, d1=0.667, d2=0.751 g=1.223
4/4 [==============================] - 0s 8ms/step
>2, 135/195, d1=0.751, d2=0.608 g=1.094
4/4 [==============================] - 0s 7ms/step
>2, 136/195, d1=0.750, d2=0.634 g=1.069
4/4 [==============================] - 0s 7ms/step
>2, 137/195, d1=0.705, d2=0.626 g=1.120
4/4 [==============================] - 0s 7ms/step
>2, 138/195, d1=0.667, d2=0.620 g=1.199
4/4 [==============================] - 0s 7ms/step
>2, 139/195, d1=0.668, d2=0.568 g=1.295
4/4 [==============================] - 0s 7ms/step
>2, 140/195, d1=0.662, d2=0.619 g=1.394
4/4 [==============================] - 0s 7ms/step
>2, 141/195, d1=0.596, d2=0.609 g=1.413
4/4 [==============================] - 0s 7ms/step
>2, 142/195, d1=0.610, d2=0.580 g=1.282
4/4 [==============================] - 0s 7ms/step
>2, 143/195, d1=0.575, d2=0.738 g=1.393
4/4 [==============================] - 0s 7ms/step
>2, 144/195, d1=0.679, d2=0.694 g=1.344
4/4 [==============================] - 0s 7ms/step
>2, 145/195, d1=0.668, d2=0.909 g=1.251
4/4 [==============================] - 0s 7ms/step
>2, 146/195, d1=0.636, d2=0.555 g=1.432
4/4 [==============================] - 0s 7ms/step
>2, 147/195, d1=0.653, d2=0.569 g=1.484
4/4 [==============================] - 0s 7ms/step
>2, 148/195, d1=0.585, d2=0.913 g=1.309
4/4 [==============================] - 0s 7ms/step
>2, 149/195, d1=0.671, d2=0.631 g=1.199
4/4 [==============================] - 0s 7ms/step
>2, 150/195, d1=0.705, d2=0.738 g=1.099
4/4 [==============================] - 0s 7ms/step
>2, 151/195, d1=0.673, d2=0.638 g=1.072
4/4 [==============================] - 0s 7ms/step
>2, 152/195, d1=0.555, d2=0.647 g=1.212
4/4 [==============================] - 0s 7ms/step
>2, 153/195, d1=0.459, d2=0.600 g=1.437
4/4 [==============================] - 0s 7ms/step
```

```
>2, 154/195, d1=0.510, d2=0.729 g=1.808
4/4 [==============================] - 0s 7ms/step
>2, 155/195, d1=0.692, d2=0.506 g=1.640
4/4 [==============================] - 0s 7ms/step
>2, 156/195, d1=0.723, d2=1.085 g=1.637
4/4 [==============================] - 0s 9ms/step
>2, 157/195, d1=0.971, d2=0.541 g=1.312
4/4 [==============================] - 0s 7ms/step
>2, 158/195, d1=0.825, d2=0.505 g=1.185
4/4 [==============================] - 0s 7ms/step
>2, 159/195, d1=0.726, d2=0.585 g=1.079
4/4 [==============================] - 0s 7ms/step
>2, 160/195, d1=0.684, d2=0.577 g=1.082
4/4 [==============================] - 0s 7ms/step
>2, 161/195, d1=0.691, d2=0.577 g=1.102
4/4 [==============================] - 0s 7ms/step
>2, 162/195, d1=0.681, d2=0.629 g=1.062
4/4 [==============================] - 0s 7ms/step
>2, 163/195, d1=0.641, d2=0.655 g=1.087
4/4 [==============================] - 0s 7ms/step
>2, 164/195, d1=0.654, d2=0.625 g=1.163
4/4 [==============================] - 0s 7ms/step
>2, 165/195, d1=0.692, d2=0.595 g=1.148
4/4 [==============================] - 0s 7ms/step
>2, 166/195, d1=0.692, d2=0.657 g=1.062
4/4 [==============================] - 0s 7ms/step
>2, 167/195, d1=0.631, d2=0.685 g=0.972
4/4 [==============================] - 0s 7ms/step
>2, 168/195, d1=0.580, d2=0.679 g=0.970
4/4 [==============================] - 0s 7ms/step
>2, 169/195, d1=0.576, d2=0.666 g=1.023
4/4 [==============================] - 0s 7ms/step
>2, 170/195, d1=0.537, d2=0.718 g=1.209
4/4 [==============================] - 0s 7ms/step
>2, 171/195, d1=0.511, d2=0.660 g=1.222
4/4 [==============================] - 0s 7ms/step
>2, 172/195, d1=0.554, d2=0.774 g=1.029
4/4 [==============================] - 0s 7ms/step
>2, 173/195, d1=0.560, d2=0.791 g=1.098
4/4 [==============================] - 0s 7ms/step
>2, 174/195, d1=0.625, d2=0.631 g=1.195
4/4 [==============================] - 0s 7ms/step
>2, 175/195, d1=0.613, d2=0.585 g=1.266
4/4 [==============================] - 0s 7ms/step
>2, 176/195, d1=0.613, d2=0.624 g=1.506
4/4 [==============================] - 0s 7ms/step
>2, 177/195, d1=0.543, d2=0.519 g=1.743
4/4 [==============================] - 0s 7ms/step
```

```
>2, 178/195, d1=0.584, d2=0.696 g=1.618
4/4 [==============================] - 0s 7ms/step
>2, 179/195, d1=0.606, d2=1.032 g=1.384
4/4 [==============================] - 0s 7ms/step
>2, 180/195, d1=0.754, d2=0.623 g=1.317
4/4 [==============================] - 0s 7ms/step
>2, 181/195, d1=0.690, d2=0.708 g=1.186
4/4 [==============================] - 0s 8ms/step
>2, 182/195, d1=0.723, d2=0.705 g=1.158
4/4 [==============================] - 0s 7ms/step
>2, 183/195, d1=0.653, d2=0.625 g=1.271
4/4 [==============================] - 0s 7ms/step
>2, 184/195, d1=0.698, d2=0.490 g=1.510
4/4 [==============================] - 0s 8ms/step
>2, 185/195, d1=0.705, d2=0.462 g=1.676
4/4 [==============================] - 0s 7ms/step
>2, 186/195, d1=0.644, d2=0.536 g=1.554
4/4 [==============================] - 0s 7ms/step
>2, 187/195, d1=0.671, d2=0.757 g=1.292
4/4 [==============================] - 0s 7ms/step
>2, 188/195, d1=0.623, d2=0.611 g=1.394
4/4 [==============================] - 0s 7ms/step
>2, 189/195, d1=0.622, d2=0.619 g=1.480
4/4 [==============================] - 0s 7ms/step
>2, 190/195, d1=0.686, d2=0.567 g=1.273
4/4 [==============================] - 0s 7ms/step
>2, 191/195, d1=0.652, d2=0.820 g=1.012
4/4 [==============================] - 0s 7ms/step
>2, 192/195, d1=0.644, d2=0.773 g=0.978
4/4 [==============================] - 0s 7ms/step
>2, 193/195, d1=0.646, d2=0.687 g=1.010
4/4 [==============================] - 0s 7ms/step
>2, 194/195, d1=0.576, d2=0.617 g=1.100
4/4 [==============================] - 0s 7ms/step
>2, 195/195, d1=0.526, d2=0.507 g=1.255
5/5 [==============================] - 0s 7ms/step
>Accuracy real: 85%, fake: 93%

WARNING:tensorflow:Compiled the loaded model, but the compiled metrics have yet
to be built. `model.compile_metrics` will be empty until you train or evaluate
the model.

4/4 [==============================] - 0s 7ms/step
>3, 1/195, d1=0.458, d2=0.509 g=1.437
4/4 [==============================] - 0s 7ms/step
>3, 2/195, d1=0.353, d2=0.609 g=1.703
4/4 [==============================] - 0s 7ms/step
>3, 3/195, d1=0.479, d2=0.479 g=1.985
4/4 [==============================] - 0s 7ms/step
```

```
>3, 4/195, d1=0.473, d2=0.905 g=1.984
4/4 [==============================] - 0s 8ms/step
>3, 5/195, d1=0.841, d2=1.107 g=1.841
4/4 [==============================] - 0s 7ms/step
>3, 6/195, d1=0.974, d2=1.250 g=1.656
4/4 [==============================] - 0s 7ms/step
>3, 7/195, d1=0.994, d2=0.365 g=1.384
4/4 [==============================] - 0s 7ms/step
>3, 8/195, d1=0.865, d2=0.490 g=1.190
4/4 [==============================] - 0s 7ms/step
>3, 9/195, d1=0.698, d2=0.552 g=1.190
4/4 [==============================] - 0s 7ms/step
>3, 10/195, d1=0.656, d2=0.563 g=1.326
4/4 [==============================] - 0s 7ms/step
>3, 11/195, d1=0.701, d2=0.694 g=1.236
4/4 [==============================] - 0s 7ms/step
>3, 12/195, d1=0.674, d2=0.811 g=1.229
4/4 [==============================] - 0s 7ms/step
>3, 13/195, d1=0.736, d2=0.780 g=1.220
4/4 [==============================] - 0s 7ms/step
>3, 14/195, d1=0.823, d2=0.593 g=1.224
4/4 [==============================] - 0s 7ms/step
>3, 15/195, d1=0.800, d2=0.527 g=1.437
4/4 [==============================] - 0s 7ms/step
>3, 16/195, d1=0.688, d2=0.588 g=1.232
4/4 [==============================] - 0s 7ms/step
>3, 17/195, d1=0.597, d2=0.852 g=0.943
4/4 [==============================] - 0s 7ms/step
>3, 18/195, d1=0.577, d2=0.809 g=0.871
4/4 [==============================] - 0s 7ms/step
>3, 19/195, d1=0.601, d2=0.712 g=0.934
4/4 [==============================] - 0s 7ms/step
>3, 20/195, d1=0.541, d2=0.668 g=1.070
4/4 [==============================] - 0s 7ms/step
>3, 21/195, d1=0.524, d2=0.580 g=1.223
4/4 [==============================] - 0s 7ms/step
>3, 22/195, d1=0.541, d2=0.630 g=1.315
4/4 [==============================] - 0s 7ms/step
>3, 23/195, d1=0.613, d2=0.653 g=1.262
4/4 [==============================] - 0s 7ms/step
>3, 24/195, d1=0.564, d2=0.667 g=1.246
4/4 [==============================] - 0s 7ms/step
>3, 25/195, d1=0.593, d2=0.697 g=1.328
4/4 [==============================] - 0s 7ms/step
>3, 26/195, d1=0.563, d2=0.648 g=1.393
4/4 [==============================] - 0s 7ms/step
>3, 27/195, d1=0.617, d2=0.734 g=1.439
4/4 [==============================] - 0s 7ms/step
```

```
>3, 28/195, d1=0.688, d2=0.493 g=1.420
4/4 [==============================] - 0s 7ms/step
>3, 29/195, d1=0.596, d2=0.549 g=1.441
4/4 [==============================] - 0s 7ms/step
>3, 30/195, d1=0.555, d2=0.602 g=1.652
4/4 [==============================] - 0s 8ms/step
>3, 31/195, d1=0.556, d2=0.614 g=1.582
4/4 [==============================] - 0s 7ms/step
>3, 32/195, d1=0.624, d2=0.599 g=1.455
4/4 [==============================] - 0s 7ms/step
>3, 33/195, d1=0.676, d2=0.715 g=1.390
4/4 [==============================] - 0s 7ms/step
>3, 34/195, d1=0.601, d2=0.666 g=1.361
4/4 [==============================] - 0s 7ms/step
>3, 35/195, d1=0.633, d2=0.678 g=1.347
4/4 [==============================] - 0s 7ms/step
>3, 36/195, d1=0.624, d2=0.754 g=1.389
4/4 [==============================] - 0s 7ms/step
>3, 37/195, d1=0.668, d2=0.612 g=1.381
4/4 [==============================] - 0s 7ms/step
>3, 38/195, d1=0.614, d2=0.643 g=1.394
4/4 [==============================] - 0s 7ms/step
>3, 39/195, d1=0.569, d2=0.630 g=1.428
4/4 [==============================] - 0s 8ms/step
>3, 40/195, d1=0.609, d2=0.748 g=1.667
4/4 [==============================] - 0s 7ms/step
>3, 41/195, d1=0.553, d2=0.600 g=1.853
4/4 [==============================] - 0s 7ms/step
>3, 42/195, d1=0.624, d2=0.854 g=1.731
4/4 [==============================] - 0s 7ms/step
>3, 43/195, d1=0.667, d2=0.611 g=1.673
4/4 [==============================] - 0s 7ms/step
>3, 44/195, d1=0.607, d2=0.661 g=1.558
4/4 [==============================] - 0s 7ms/step
>3, 45/195, d1=0.595, d2=0.740 g=1.504
4/4 [==============================] - 0s 7ms/step
>3, 46/195, d1=0.712, d2=0.587 g=1.764
4/4 [==============================] - 0s 7ms/step
>3, 47/195, d1=0.828, d2=0.510 g=1.459
4/4 [==============================] - 0s 7ms/step
>3, 48/195, d1=0.683, d2=0.588 g=1.249
4/4 [==============================] - 0s 7ms/step
>3, 49/195, d1=0.647, d2=0.628 g=1.040
4/4 [==============================] - 0s 7ms/step
>3, 50/195, d1=0.534, d2=0.611 g=1.111
4/4 [==============================] - 0s 7ms/step
>3, 51/195, d1=0.500, d2=0.571 g=1.288
4/4 [==============================] - 0s 7ms/step
```

```
>3, 52/195, d1=0.588, d2=0.560 g=1.360
4/4 [==============================] - 0s 7ms/step
>3, 53/195, d1=0.653, d2=0.624 g=1.159
4/4 [==============================] - 0s 7ms/step
>3, 54/195, d1=0.581, d2=0.760 g=1.203
4/4 [==============================] - 0s 7ms/step
>3, 55/195, d1=0.574, d2=0.598 g=1.401
4/4 [==============================] - 0s 7ms/step
>3, 56/195, d1=0.626, d2=0.528 g=1.385
4/4 [==============================] - 0s 7ms/step
>3, 57/195, d1=0.607, d2=0.731 g=1.201
4/4 [==============================] - 0s 7ms/step
>3, 58/195, d1=0.716, d2=0.670 g=1.192
4/4 [==============================] - 0s 7ms/step
>3, 59/195, d1=0.735, d2=0.551 g=1.268
4/4 [==============================] - 0s 7ms/step
>3, 60/195, d1=0.597, d2=0.588 g=1.362
4/4 [==============================] - 0s 7ms/step
>3, 61/195, d1=0.573, d2=0.581 g=1.630
4/4 [==============================] - 0s 7ms/step
>3, 62/195, d1=0.613, d2=0.449 g=1.605
4/4 [==============================] - 0s 7ms/step
>3, 63/195, d1=0.604, d2=0.753 g=1.591
4/4 [==============================] - 0s 7ms/step
>3, 64/195, d1=0.801, d2=0.553 g=1.424
4/4 [==============================] - 0s 7ms/step
>3, 65/195, d1=0.642, d2=0.618 g=1.357
4/4 [==============================] - 0s 7ms/step
>3, 66/195, d1=0.575, d2=0.711 g=1.303
4/4 [==============================] - 0s 7ms/step
>3, 67/195, d1=0.581, d2=0.776 g=1.139
4/4 [==============================] - 0s 7ms/step
>3, 68/195, d1=0.650, d2=0.732 g=1.091
4/4 [==============================] - 0s 7ms/step
>3, 69/195, d1=0.644, d2=0.651 g=1.128
4/4 [==============================] - 0s 7ms/step
>3, 70/195, d1=0.585, d2=0.586 g=1.219
4/4 [==============================] - 0s 7ms/step
>3, 71/195, d1=0.583, d2=0.624 g=1.315
4/4 [==============================] - 0s 7ms/step
>3, 72/195, d1=0.653, d2=0.660 g=1.307
4/4 [==============================] - 0s 7ms/step
>3, 73/195, d1=0.683, d2=0.654 g=1.222
4/4 [==============================] - 0s 7ms/step
>3, 74/195, d1=0.731, d2=0.730 g=1.186
4/4 [==============================] - 0s 7ms/step
>3, 75/195, d1=0.724, d2=0.655 g=1.109
4/4 [==============================] - 0s 7ms/step
```

```
>3, 76/195, d1=0.792, d2=0.609 g=1.058
4/4 [==============================] - 0s 7ms/step
>3, 77/195, d1=0.742, d2=0.595 g=1.132
4/4 [==============================] - 0s 7ms/step
>3, 78/195, d1=0.649, d2=0.556 g=1.227
4/4 [==============================] - 0s 7ms/step
>3, 79/195, d1=0.627, d2=0.526 g=1.396
4/4 [==============================] - 0s 7ms/step
>3, 80/195, d1=0.604, d2=0.506 g=1.482
4/4 [==============================] - 0s 7ms/step
>3, 81/195, d1=0.602, d2=0.550 g=1.393
4/4 [==============================] - 0s 7ms/step
>3, 82/195, d1=0.612, d2=0.770 g=1.351
4/4 [==============================] - 0s 7ms/step
>3, 83/195, d1=0.614, d2=0.898 g=1.431
4/4 [==============================] - 0s 7ms/step
>3, 84/195, d1=0.656, d2=0.855 g=1.981
4/4 [==============================] - 0s 7ms/step
>3, 85/195, d1=0.975, d2=0.450 g=1.514
4/4 [==============================] - 0s 7ms/step
>3, 86/195, d1=0.650, d2=0.516 g=1.376
4/4 [==============================] - 0s 7ms/step
>3, 87/195, d1=0.666, d2=0.542 g=1.271
4/4 [==============================] - 0s 7ms/step
>3, 88/195, d1=0.647, d2=0.628 g=1.165
4/4 [==============================] - 0s 7ms/step
>3, 89/195, d1=0.614, d2=0.700 g=1.210
4/4 [==============================] - 0s 7ms/step
>3, 90/195, d1=0.516, d2=0.593 g=1.397
4/4 [==============================] - 0s 7ms/step
>3, 91/195, d1=0.532, d2=0.751 g=1.590
4/4 [==============================] - 0s 7ms/step
>3, 92/195, d1=0.519, d2=0.508 g=1.593
4/4 [==============================] - 0s 7ms/step
>3, 93/195, d1=0.486, d2=0.662 g=1.449
4/4 [==============================] - 0s 7ms/step
>3, 94/195, d1=0.455, d2=0.876 g=1.614
4/4 [==============================] - 0s 7ms/step
>3, 95/195, d1=0.663, d2=0.634 g=1.450
4/4 [==============================] - 0s 8ms/step
>3, 96/195, d1=0.685, d2=0.866 g=1.362
4/4 [==============================] - 0s 8ms/step
>3, 97/195, d1=0.684, d2=0.774 g=1.589
4/4 [==============================] - 0s 7ms/step
>3, 98/195, d1=0.737, d2=0.460 g=1.488
4/4 [==============================] - 0s 7ms/step
>3, 99/195, d1=0.617, d2=0.679 g=1.581
4/4 [==============================] - 0s 7ms/step
```

```
>3, 100/195, d1=0.648, d2=0.613 g=1.463
4/4 [==============================] - 0s 7ms/step
>3, 101/195, d1=0.631, d2=0.689 g=1.611
4/4 [==============================] - 0s 7ms/step
>3, 102/195, d1=0.760, d2=0.491 g=1.491
4/4 [==============================] - 0s 7ms/step
>3, 103/195, d1=0.616, d2=0.482 g=1.514
4/4 [==============================] - 0s 7ms/step
>3, 104/195, d1=0.600, d2=0.465 g=1.580
4/4 [==============================] - 0s 7ms/step
>3, 105/195, d1=0.627, d2=0.445 g=1.629
4/4 [==============================] - 0s 7ms/step
>3, 106/195, d1=0.533, d2=0.473 g=1.660
4/4 [==============================] - 0s 7ms/step
>3, 107/195, d1=0.573, d2=0.703 g=1.701
4/4 [==============================] - 0s 7ms/step
>3, 108/195, d1=0.561, d2=0.499 g=1.737
4/4 [==============================] - 0s 7ms/step
>3, 109/195, d1=0.493, d2=1.030 g=2.206
4/4 [==============================] - 0s 7ms/step
>3, 110/195, d1=0.723, d2=0.685 g=1.596
4/4 [==============================] - 0s 7ms/step
>3, 111/195, d1=0.646, d2=0.532 g=1.218
4/4 [==============================] - 0s 7ms/step
>3, 112/195, d1=0.403, d2=0.753 g=1.211
4/4 [==============================] - 0s 7ms/step
>3, 113/195, d1=0.341, d2=1.100 g=1.592
4/4 [==============================] - 0s 7ms/step
>3, 114/195, d1=0.660, d2=0.494 g=1.321
4/4 [==============================] - 0s 7ms/step
>3, 115/195, d1=0.558, d2=0.587 g=1.275
4/4 [==============================] - 0s 7ms/step
>3, 116/195, d1=0.603, d2=0.676 g=1.248
4/4 [==============================] - 0s 7ms/step
>3, 117/195, d1=0.598, d2=0.793 g=1.355
4/4 [==============================] - 0s 7ms/step
>3, 118/195, d1=0.732, d2=0.658 g=1.270
4/4 [==============================] - 0s 7ms/step
>3, 119/195, d1=0.682, d2=0.561 g=1.277
4/4 [==============================] - 0s 7ms/step
>3, 120/195, d1=0.603, d2=0.517 g=1.509
4/4 [==============================] - 0s 7ms/step
>3, 121/195, d1=0.646, d2=0.501 g=1.534
4/4 [==============================] - 0s 7ms/step
>3, 122/195, d1=0.636, d2=0.615 g=1.452
4/4 [==============================] - 0s 7ms/step
>3, 123/195, d1=0.647, d2=0.740 g=1.379
4/4 [==============================] - 0s 7ms/step
```

```
>3, 124/195, d1=0.742, d2=0.663 g=1.283
4/4 [==============================] - 0s 8ms/step
>3, 125/195, d1=0.753, d2=0.566 g=1.239
4/4 [==============================] - 0s 7ms/step
>3, 126/195, d1=0.697, d2=0.573 g=1.237
4/4 [==============================] - 0s 7ms/step
>3, 127/195, d1=0.657, d2=0.636 g=1.195
4/4 [==============================] - 0s 7ms/step
>3, 128/195, d1=0.596, d2=0.658 g=1.208
4/4 [==============================] - 0s 7ms/step
>3, 129/195, d1=0.608, d2=0.657 g=1.289
4/4 [==============================] - 0s 7ms/step
>3, 130/195, d1=0.607, d2=0.532 g=1.321
4/4 [==============================] - 0s 7ms/step
>3, 131/195, d1=0.593, d2=0.476 g=1.365
4/4 [==============================] - 0s 7ms/step
>3, 132/195, d1=0.563, d2=0.540 g=1.354
4/4 [==============================] - 0s 7ms/step
>3, 133/195, d1=0.489, d2=0.560 g=1.455
4/4 [==============================] - 0s 7ms/step
>3, 134/195, d1=0.569, d2=0.575 g=1.386
4/4 [==============================] - 0s 7ms/step
>3, 135/195, d1=0.478, d2=0.716 g=1.265
4/4 [==============================] - 0s 7ms/step
>3, 136/195, d1=0.574, d2=0.680 g=1.256
4/4 [==============================] - 0s 7ms/step
>3, 137/195, d1=0.487, d2=0.839 g=1.424
4/4 [==============================] - 0s 7ms/step
>3, 138/195, d1=0.508, d2=0.723 g=1.768
4/4 [==============================] - 0s 7ms/step
>3, 139/195, d1=0.710, d2=1.027 g=1.748
4/4 [==============================] - 0s 7ms/step
>3, 140/195, d1=0.729, d2=0.569 g=1.935
4/4 [==============================] - 0s 7ms/step
>3, 141/195, d1=0.965, d2=0.466 g=1.464
4/4 [==============================] - 0s 7ms/step
>3, 142/195, d1=0.762, d2=0.712 g=1.190
4/4 [==============================] - 0s 7ms/step
>3, 143/195, d1=0.678, d2=0.549 g=1.349
4/4 [==============================] - 0s 7ms/step
>3, 144/195, d1=0.662, d2=0.454 g=1.551
4/4 [==============================] - 0s 7ms/step
>3, 145/195, d1=0.587, d2=0.516 g=1.665
4/4 [==============================] - 0s 7ms/step
>3, 146/195, d1=0.629, d2=0.468 g=1.364
4/4 [==============================] - 0s 7ms/step
>3, 147/195, d1=0.602, d2=0.576 g=1.292
4/4 [==============================] - 0s 7ms/step
```

```
>3, 148/195, d1=0.574, d2=0.646 g=1.319
4/4 [==============================] - 0s 7ms/step
>3, 149/195, d1=0.614, d2=0.938 g=2.002
4/4 [==============================] - 0s 7ms/step
>3, 150/195, d1=0.984, d2=0.902 g=1.547
4/4 [==============================] - 0s 7ms/step
>3, 151/195, d1=0.945, d2=0.512 g=1.207
4/4 [==============================] - 0s 8ms/step
>3, 152/195, d1=0.774, d2=0.618 g=1.061
4/4 [==============================] - 0s 7ms/step
>3, 153/195, d1=0.636, d2=0.790 g=1.157
4/4 [==============================] - 0s 8ms/step
>3, 154/195, d1=0.659, d2=0.657 g=1.661
4/4 [==============================] - 0s 7ms/step
>3, 155/195, d1=0.601, d2=0.539 g=1.317
4/4 [==============================] - 0s 7ms/step
>3, 156/195, d1=0.530, d2=0.582 g=1.527
4/4 [==============================] - 0s 7ms/step
>3, 157/195, d1=0.504, d2=0.694 g=1.389
4/4 [==============================] - 0s 7ms/step
>3, 158/195, d1=0.614, d2=0.771 g=1.317
4/4 [==============================] - 0s 7ms/step
>3, 159/195, d1=0.768, d2=0.705 g=1.085
4/4 [==============================] - 0s 7ms/step
>3, 160/195, d1=0.654, d2=0.663 g=1.165
4/4 [==============================] - 0s 7ms/step
>3, 161/195, d1=0.647, d2=0.541 g=1.353
4/4 [==============================] - 0s 7ms/step
>3, 162/195, d1=0.661, d2=0.476 g=1.419
4/4 [==============================] - 0s 7ms/step
>3, 163/195, d1=0.604, d2=0.638 g=1.377
4/4 [==============================] - 0s 7ms/step
>3, 164/195, d1=0.636, d2=0.723 g=1.318
4/4 [==============================] - 0s 7ms/step
>3, 165/195, d1=0.753, d2=0.718 g=1.322
4/4 [==============================] - 0s 7ms/step
>3, 166/195, d1=0.906, d2=0.807 g=1.194
4/4 [==============================] - 0s 7ms/step
>3, 167/195, d1=0.855, d2=0.581 g=1.217
4/4 [==============================] - 0s 7ms/step
>3, 168/195, d1=0.666, d2=0.550 g=1.387
4/4 [==============================] - 0s 7ms/step
>3, 169/195, d1=0.682, d2=0.608 g=1.224
4/4 [==============================] - 0s 7ms/step
>3, 170/195, d1=0.616, d2=0.546 g=1.290
4/4 [==============================] - 0s 7ms/step
>3, 171/195, d1=0.700, d2=0.537 g=1.238
4/4 [==============================] - 0s 7ms/step
```

```
>3, 172/195, d1=0.593, d2=0.648 g=1.160
4/4 [==============================] - 0s 7ms/step
>3, 173/195, d1=0.519, d2=0.789 g=1.185
4/4 [==============================] - 0s 7ms/step
>3, 174/195, d1=0.680, d2=0.758 g=1.155
4/4 [==============================] - 0s 7ms/step
>3, 175/195, d1=0.694, d2=0.746 g=1.066
4/4 [==============================] - 0s 7ms/step
>3, 176/195, d1=0.545, d2=0.718 g=1.369
4/4 [==============================] - 0s 7ms/step
>3, 177/195, d1=0.606, d2=0.595 g=1.577
4/4 [==============================] - 0s 7ms/step
>3, 178/195, d1=0.736, d2=0.477 g=1.568
4/4 [==============================] - 0s 7ms/step
>3, 179/195, d1=0.689, d2=0.604 g=1.394
4/4 [==============================] - 0s 8ms/step
>3, 180/195, d1=0.639, d2=0.606 g=1.388
4/4 [==============================] - 0s 7ms/step
>3, 181/195, d1=0.692, d2=0.563 g=1.328
4/4 [==============================] - 0s 8ms/step
>3, 182/195, d1=0.665, d2=0.616 g=1.336
4/4 [==============================] - 0s 7ms/step
>3, 183/195, d1=0.640, d2=0.546 g=1.396
4/4 [==============================] - 0s 7ms/step
>3, 184/195, d1=0.560, d2=0.557 g=1.600
4/4 [==============================] - 0s 7ms/step
>3, 185/195, d1=0.606, d2=0.776 g=1.785
4/4 [==============================] - 0s 7ms/step
>3, 186/195, d1=0.676, d2=0.553 g=1.467
4/4 [==============================] - 0s 7ms/step
>3, 187/195, d1=0.566, d2=0.627 g=1.285
4/4 [==============================] - 0s 7ms/step
>3, 188/195, d1=0.476, d2=0.768 g=1.474
4/4 [==============================] - 0s 7ms/step
>3, 189/195, d1=0.510, d2=0.656 g=1.334
4/4 [==============================] - 0s 7ms/step
>3, 190/195, d1=0.618, d2=0.778 g=1.153
4/4 [==============================] - 0s 7ms/step
>3, 191/195, d1=0.717, d2=0.676 g=1.115
4/4 [==============================] - 0s 7ms/step
>3, 192/195, d1=0.661, d2=0.576 g=1.142
4/4 [==============================] - 0s 7ms/step
>3, 193/195, d1=0.742, d2=0.614 g=1.114
4/4 [==============================] - 0s 7ms/step
>3, 194/195, d1=0.688, d2=1.080 g=1.212
4/4 [==============================] - 0s 7ms/step
>3, 195/195, d1=0.739, d2=0.535 g=1.250
5/5 [==============================] - 0s 7ms/step
```

```
>Accuracy real: 41%, fake: 91%

WARNING:tensorflow:Compiled the loaded model, but the compiled metrics have yet
to be built. `model.compile_metrics` will be empty until you train or evaluate
the model.

4/4 [==============================] - 0s 7ms/step
>4, 1/195, d1=0.765, d2=0.532 g=1.183
4/4 [==============================] - 0s 7ms/step
>4, 2/195, d1=0.616, d2=0.567 g=1.290
4/4 [==============================] - 0s 7ms/step
>4, 3/195, d1=0.638, d2=0.565 g=1.286
4/4 [==============================] - 0s 7ms/step
>4, 4/195, d1=0.611, d2=0.702 g=1.274
4/4 [==============================] - 0s 7ms/step
>4, 5/195, d1=0.624, d2=0.765 g=1.265
4/4 [==============================] - 0s 7ms/step
>4, 6/195, d1=0.824, d2=0.709 g=1.154
4/4 [==============================] - 0s 7ms/step
>4, 7/195, d1=0.715, d2=0.670 g=1.166
4/4 [==============================] - 0s 7ms/step
>4, 8/195, d1=0.684, d2=0.555 g=1.270
4/4 [==============================] - 0s 7ms/step
>4, 9/195, d1=0.647, d2=0.593 g=1.185
4/4 [==============================] - 0s 7ms/step
>4, 10/195, d1=0.632, d2=0.629 g=1.165
4/4 [==============================] - 0s 7ms/step
>4, 11/195, d1=0.593, d2=0.686 g=1.081
4/4 [==============================] - 0s 7ms/step
>4, 12/195, d1=0.582, d2=0.639 g=1.072
4/4 [==============================] - 0s 7ms/step
>4, 13/195, d1=0.617, d2=0.592 g=1.120
4/4 [==============================] - 0s 7ms/step
>4, 14/195, d1=0.577, d2=0.577 g=1.237
4/4 [==============================] - 0s 7ms/step
>4, 15/195, d1=0.599, d2=0.687 g=1.489
4/4 [==============================] - 0s 7ms/step
>4, 16/195, d1=0.665, d2=0.731 g=1.416
4/4 [==============================] - 0s 7ms/step
>4, 17/195, d1=0.657, d2=0.654 g=1.345
4/4 [==============================] - 0s 7ms/step
>4, 18/195, d1=0.695, d2=0.490 g=1.365
4/4 [==============================] - 0s 7ms/step
>4, 19/195, d1=0.619, d2=0.521 g=1.426
4/4 [==============================] - 0s 7ms/step
>4, 20/195, d1=0.603, d2=0.632 g=1.715
4/4 [==============================] - 0s 7ms/step
>4, 21/195, d1=0.643, d2=0.485 g=1.919
4/4 [==============================] - 0s 7ms/step
```

```
>4, 22/195, d1=0.615, d2=0.543 g=1.804
4/4 [==============================] - 0s 7ms/step
>4, 23/195, d1=0.569, d2=0.752 g=1.705
4/4 [==============================] - 0s 7ms/step
>4, 24/195, d1=0.687, d2=0.633 g=1.609
4/4 [==============================] - 0s 7ms/step
>4, 25/195, d1=0.722, d2=0.559 g=1.701
4/4 [==============================] - 0s 7ms/step
>4, 26/195, d1=0.789, d2=0.650 g=1.361
4/4 [==============================] - 0s 7ms/step
>4, 27/195, d1=0.618, d2=0.750 g=1.232
4/4 [==============================] - 0s 7ms/step
>4, 28/195, d1=0.596, d2=0.624 g=1.138
4/4 [==============================] - 0s 7ms/step
>4, 29/195, d1=0.571, d2=0.652 g=1.038
4/4 [==============================] - 0s 7ms/step
>4, 30/195, d1=0.592, d2=0.869 g=1.076
4/4 [==============================] - 0s 7ms/step
>4, 31/195, d1=0.591, d2=0.665 g=1.154
4/4 [==============================] - 0s 7ms/step
>4, 32/195, d1=0.615, d2=0.686 g=1.113
4/4 [==============================] - 0s 7ms/step
>4, 33/195, d1=0.616, d2=0.781 g=1.134
4/4 [==============================] - 0s 7ms/step
>4, 34/195, d1=0.552, d2=0.676 g=1.464
4/4 [==============================] - 0s 7ms/step
>4, 35/195, d1=0.622, d2=0.498 g=1.587
4/4 [==============================] - 0s 7ms/step
>4, 36/195, d1=0.651, d2=0.601 g=1.364
4/4 [==============================] - 0s 7ms/step
>4, 37/195, d1=0.629, d2=0.614 g=1.286
4/4 [==============================] - 0s 7ms/step
>4, 38/195, d1=0.621, d2=0.564 g=1.295
4/4 [==============================] - 0s 7ms/step
>4, 39/195, d1=0.725, d2=0.692 g=1.082
4/4 [==============================] - 0s 8ms/step
>4, 40/195, d1=0.665, d2=0.777 g=0.985
4/4 [==============================] - 0s 7ms/step
>4, 41/195, d1=0.639, d2=0.808 g=1.035
4/4 [==============================] - 0s 7ms/step
>4, 42/195, d1=0.703, d2=0.756 g=1.079
4/4 [==============================] - 0s 7ms/step
>4, 43/195, d1=0.700, d2=0.816 g=1.328
4/4 [==============================] - 0s 7ms/step
>4, 44/195, d1=0.698, d2=0.520 g=1.427
4/4 [==============================] - 0s 7ms/step
>4, 45/195, d1=0.643, d2=0.645 g=1.317
4/4 [==============================] - 0s 7ms/step
```

```
>4, 46/195, d1=0.623, d2=0.557 g=1.407
4/4 [==============================] - 0s 7ms/step
>4, 47/195, d1=0.682, d2=0.576 g=1.246
4/4 [==============================] - 0s 7ms/step
>4, 48/195, d1=0.622, d2=0.718 g=1.140
4/4 [==============================] - 0s 7ms/step
>4, 49/195, d1=0.626, d2=0.725 g=1.135
4/4 [==============================] - 0s 7ms/step
>4, 50/195, d1=0.675, d2=0.641 g=1.163
4/4 [==============================] - 0s 7ms/step
>4, 51/195, d1=0.730, d2=0.602 g=1.139
4/4 [==============================] - 0s 7ms/step
>4, 52/195, d1=0.690, d2=0.613 g=1.176
4/4 [==============================] - 0s 7ms/step
>4, 53/195, d1=0.700, d2=0.645 g=1.169
4/4 [==============================] - 0s 7ms/step
>4, 54/195, d1=0.643, d2=0.603 g=1.077
4/4 [==============================] - 0s 7ms/step
>4, 55/195, d1=0.562, d2=0.662 g=1.095
4/4 [==============================] - 0s 7ms/step
>4, 56/195, d1=0.523, d2=0.651 g=1.065
4/4 [==============================] - 0s 7ms/step
>4, 57/195, d1=0.589, d2=0.728 g=1.035
4/4 [==============================] - 0s 7ms/step
>4, 58/195, d1=0.614, d2=0.732 g=1.143
4/4 [==============================] - 0s 7ms/step
>4, 59/195, d1=0.662, d2=0.670 g=1.326
4/4 [==============================] - 0s 7ms/step
>4, 60/195, d1=0.685, d2=0.521 g=1.532
4/4 [==============================] - 0s 7ms/step
>4, 61/195, d1=0.668, d2=0.592 g=1.427
4/4 [==============================] - 0s 7ms/step
>4, 62/195, d1=0.610, d2=0.695 g=1.442
4/4 [==============================] - 0s 7ms/step
>4, 63/195, d1=0.621, d2=0.674 g=1.441
4/4 [==============================] - 0s 7ms/step
>4, 64/195, d1=0.664, d2=0.761 g=1.391
4/4 [==============================] - 0s 8ms/step
>4, 65/195, d1=0.788, d2=0.736 g=1.250
4/4 [==============================] - 0s 8ms/step
>4, 66/195, d1=0.623, d2=0.571 g=1.339
4/4 [==============================] - 0s 7ms/step
>4, 67/195, d1=0.703, d2=0.537 g=1.386
4/4 [==============================] - 0s 7ms/step
>4, 68/195, d1=0.607, d2=0.702 g=1.397
4/4 [==============================] - 0s 7ms/step
>4, 69/195, d1=0.745, d2=3.510 g=2.165
4/4 [==============================] - 0s 7ms/step
```

```
>4, 70/195, d1=1.120, d2=0.381 g=1.589
4/4 [==============================] - 0s 7ms/step
>4, 71/195, d1=0.981, d2=0.577 g=1.348
4/4 [==============================] - 0s 7ms/step
>4, 72/195, d1=0.908, d2=0.627 g=1.051
4/4 [==============================] - 0s 7ms/step
>4, 73/195, d1=0.753, d2=0.617 g=1.043
4/4 [==============================] - 0s 7ms/step
>4, 74/195, d1=0.688, d2=0.622 g=1.020
4/4 [==============================] - 0s 7ms/step
>4, 75/195, d1=0.708, d2=0.707 g=1.042
4/4 [==============================] - 0s 7ms/step
>4, 76/195, d1=0.660, d2=0.673 g=1.011
4/4 [==============================] - 0s 7ms/step
>4, 77/195, d1=0.616, d2=0.676 g=1.004
4/4 [==============================] - 0s 7ms/step
>4, 78/195, d1=0.586, d2=0.658 g=1.074
4/4 [==============================] - 0s 7ms/step
>4, 79/195, d1=0.565, d2=0.681 g=1.136
4/4 [==============================] - 0s 7ms/step
>4, 80/195, d1=0.569, d2=0.718 g=1.213
4/4 [==============================] - 0s 7ms/step
>4, 81/195, d1=0.564, d2=0.697 g=1.308
4/4 [==============================] - 0s 7ms/step
>4, 82/195, d1=0.648, d2=0.675 g=1.264
4/4 [==============================] - 0s 7ms/step
>4, 83/195, d1=0.635, d2=0.657 g=1.271
4/4 [==============================] - 0s 7ms/step
>4, 84/195, d1=0.612, d2=0.671 g=1.303
4/4 [==============================] - 0s 7ms/step
>4, 85/195, d1=0.675, d2=0.722 g=1.221
4/4 [==============================] - 0s 7ms/step
>4, 86/195, d1=0.732, d2=0.670 g=1.197
4/4 [==============================] - 0s 7ms/step
>4, 87/195, d1=0.643, d2=0.593 g=1.338
4/4 [==============================] - 0s 7ms/step
>4, 88/195, d1=0.642, d2=0.624 g=1.370
4/4 [==============================] - 0s 7ms/step
>4, 89/195, d1=0.666, d2=0.783 g=1.186
4/4 [==============================] - 0s 7ms/step
>4, 90/195, d1=0.787, d2=0.725 g=1.070
4/4 [==============================] - 0s 7ms/step
>4, 91/195, d1=0.654, d2=0.622 g=1.164
4/4 [==============================] - 0s 7ms/step
>4, 92/195, d1=0.650, d2=0.664 g=1.190
4/4 [==============================] - 0s 7ms/step
>4, 93/195, d1=0.593, d2=0.894 g=0.963
4/4 [==============================] - 0s 7ms/step
```

```
>4, 94/195, d1=0.481, d2=0.754 g=1.285
4/4 [==============================] - 0s 7ms/step
>4, 95/195, d1=0.534, d2=0.430 g=1.833
4/4 [==============================] - 0s 7ms/step
>4, 96/195, d1=0.575, d2=0.645 g=1.644
4/4 [==============================] - 0s 7ms/step
>4, 97/195, d1=0.430, d2=0.714 g=2.100
4/4 [==============================] - 0s 7ms/step
>4, 98/195, d1=0.644, d2=0.569 g=2.024
4/4 [==============================] - 0s 7ms/step
>4, 99/195, d1=0.747, d2=1.202 g=1.882
4/4 [==============================] - 0s 7ms/step
>4, 100/195, d1=1.060, d2=0.407 g=1.400
4/4 [==============================] - 0s 7ms/step
>4, 101/195, d1=0.833, d2=0.562 g=1.219
4/4 [==============================] - 0s 7ms/step
>4, 102/195, d1=0.620, d2=0.712 g=1.345
4/4 [==============================] - 0s 7ms/step
>4, 103/195, d1=0.590, d2=0.646 g=1.497
4/4 [==============================] - 0s 7ms/step
>4, 104/195, d1=0.736, d2=0.728 g=1.218
4/4 [==============================] - 0s 7ms/step
>4, 105/195, d1=0.593, d2=0.715 g=1.363
4/4 [==============================] - 0s 7ms/step
>4, 106/195, d1=0.620, d2=0.571 g=1.478
4/4 [==============================] - 0s 7ms/step
>4, 107/195, d1=0.651, d2=1.092 g=1.182
4/4 [==============================] - 0s 7ms/step
>4, 108/195, d1=0.643, d2=0.586 g=1.370
4/4 [==============================] - 0s 7ms/step
>4, 109/195, d1=0.673, d2=0.546 g=1.340
4/4 [==============================] - 0s 7ms/step
>4, 110/195, d1=0.706, d2=0.858 g=1.016
4/4 [==============================] - 0s 7ms/step
>4, 111/195, d1=0.709, d2=0.668 g=1.166
4/4 [==============================] - 0s 7ms/step
>4, 112/195, d1=0.661, d2=0.559 g=1.370
4/4 [==============================] - 0s 8ms/step
>4, 113/195, d1=0.576, d2=0.648 g=1.553
4/4 [==============================] - 0s 7ms/step
>4, 114/195, d1=0.549, d2=0.594 g=1.438
4/4 [==============================] - 0s 7ms/step
>4, 115/195, d1=0.617, d2=0.896 g=1.507
4/4 [==============================] - 0s 7ms/step
>4, 116/195, d1=0.776, d2=0.772 g=1.331
4/4 [==============================] - 0s 7ms/step
>4, 117/195, d1=0.899, d2=0.600 g=1.141
4/4 [==============================] - 0s 7ms/step
```

```
>4, 118/195, d1=0.803, d2=0.587 g=1.272
4/4 [==============================] - 0s 7ms/step
>4, 119/195, d1=0.681, d2=0.464 g=1.443
4/4 [==============================] - 0s 7ms/step
>4, 120/195, d1=0.621, d2=0.508 g=1.326
4/4 [==============================] - 0s 7ms/step
>4, 121/195, d1=0.682, d2=0.706 g=1.168
4/4 [==============================] - 0s 9ms/step
>4, 122/195, d1=0.600, d2=0.738 g=1.091
4/4 [==============================] - 0s 8ms/step
>4, 123/195, d1=0.635, d2=0.666 g=1.142
4/4 [==============================] - 0s 7ms/step
>4, 124/195, d1=0.669, d2=0.652 g=1.331
4/4 [==============================] - 0s 7ms/step
>4, 125/195, d1=0.693, d2=0.593 g=1.365
4/4 [==============================] - 0s 7ms/step
>4, 126/195, d1=0.630, d2=0.883 g=1.117
4/4 [==============================] - 0s 7ms/step
>4, 127/195, d1=0.674, d2=0.699 g=1.170
4/4 [==============================] - 0s 7ms/step
>4, 128/195, d1=0.620, d2=0.610 g=1.419
4/4 [==============================] - 0s 7ms/step
>4, 129/195, d1=0.545, d2=0.505 g=1.640
4/4 [==============================] - 0s 7ms/step
>4, 130/195, d1=0.545, d2=0.713 g=1.536
4/4 [==============================] - 0s 7ms/step
>4, 131/195, d1=0.580, d2=0.759 g=1.677
4/4 [==============================] - 0s 7ms/step
>4, 132/195, d1=0.727, d2=0.661 g=1.543
4/4 [==============================] - 0s 7ms/step
>4, 133/195, d1=0.875, d2=0.741 g=1.226
4/4 [==============================] - 0s 7ms/step
>4, 134/195, d1=0.745, d2=0.682 g=1.220
4/4 [==============================] - 0s 7ms/step
>4, 135/195, d1=0.705, d2=0.663 g=1.208
4/4 [==============================] - 0s 7ms/step
>4, 136/195, d1=0.694, d2=0.592 g=1.337
4/4 [==============================] - 0s 7ms/step
>4, 137/195, d1=0.634, d2=0.488 g=1.465
4/4 [==============================] - 0s 7ms/step
>4, 138/195, d1=0.636, d2=0.508 g=1.586
4/4 [==============================] - 0s 7ms/step
>4, 139/195, d1=0.513, d2=0.615 g=1.461
4/4 [==============================] - 0s 7ms/step
>4, 140/195, d1=0.496, d2=0.982 g=1.236
4/4 [==============================] - 0s 7ms/step
>4, 141/195, d1=0.705, d2=0.612 g=1.157
4/4 [==============================] - 0s 7ms/step
```

```
>4, 142/195, d1=0.592, d2=0.627 g=1.158
4/4 [==============================] - 0s 8ms/step
>4, 143/195, d1=0.604, d2=1.036 g=1.291
4/4 [==============================] - 0s 7ms/step
>4, 144/195, d1=0.683, d2=0.588 g=1.548
4/4 [==============================] - 0s 7ms/step
>4, 145/195, d1=0.801, d2=0.458 g=1.543
4/4 [==============================] - 0s 7ms/step
>4, 146/195, d1=0.611, d2=0.743 g=1.357
4/4 [==============================] - 0s 7ms/step
>4, 147/195, d1=0.685, d2=0.711 g=1.370
4/4 [==============================] - 0s 7ms/step
>4, 148/195, d1=0.710, d2=0.606 g=1.619
4/4 [==============================] - 0s 7ms/step
>4, 149/195, d1=0.627, d2=0.881 g=1.470
4/4 [==============================] - 0s 8ms/step
>4, 150/195, d1=0.709, d2=0.582 g=1.300
4/4 [==============================] - 0s 7ms/step
>4, 151/195, d1=0.708, d2=0.733 g=1.137
4/4 [==============================] - 0s 7ms/step
>4, 152/195, d1=0.684, d2=0.769 g=1.167
4/4 [==============================] - 0s 7ms/step
>4, 153/195, d1=0.672, d2=0.718 g=1.171
4/4 [==============================] - 0s 7ms/step
>4, 154/195, d1=0.680, d2=0.777 g=1.248
4/4 [==============================] - 0s 7ms/step
>4, 155/195, d1=0.799, d2=0.610 g=1.172
4/4 [==============================] - 0s 7ms/step
>4, 156/195, d1=0.835, d2=0.621 g=1.141
4/4 [==============================] - 0s 7ms/step
>4, 157/195, d1=0.696, d2=0.571 g=1.144
4/4 [==============================] - 0s 7ms/step
>4, 158/195, d1=0.661, d2=0.680 g=1.248
4/4 [==============================] - 0s 7ms/step
>4, 159/195, d1=0.740, d2=0.644 g=1.190
4/4 [==============================] - 0s 7ms/step
>4, 160/195, d1=0.706, d2=0.765 g=1.199
4/4 [==============================] - 0s 7ms/step
>4, 161/195, d1=0.764, d2=0.594 g=1.256
4/4 [==============================] - 0s 7ms/step
>4, 162/195, d1=0.696, d2=0.537 g=1.262
4/4 [==============================] - 0s 7ms/step
>4, 163/195, d1=0.605, d2=0.556 g=1.187
4/4 [==============================] - 0s 7ms/step
>4, 164/195, d1=0.579, d2=0.603 g=1.167
4/4 [==============================] - 0s 7ms/step
>4, 165/195, d1=0.568, d2=0.659 g=1.295
4/4 [==============================] - 0s 7ms/step
```

```
>4, 166/195, d1=0.565, d2=0.691 g=1.387
4/4 [==============================] - 0s 7ms/step
>4, 167/195, d1=0.670, d2=0.694 g=1.339
4/4 [==============================] - 0s 7ms/step
>4, 168/195, d1=0.672, d2=0.644 g=1.334
4/4 [==============================] - 0s 7ms/step
>4, 169/195, d1=0.668, d2=0.602 g=1.451
4/4 [==============================] - 0s 7ms/step
>4, 170/195, d1=0.680, d2=0.561 g=1.448
4/4 [==============================] - 0s 7ms/step
>4, 171/195, d1=0.670, d2=0.571 g=1.420
4/4 [==============================] - 0s 7ms/step
>4, 172/195, d1=0.681, d2=0.763 g=1.344
4/4 [==============================] - 0s 7ms/step
>4, 173/195, d1=0.695, d2=0.591 g=1.500
4/4 [==============================] - 0s 7ms/step
>4, 174/195, d1=0.851, d2=0.517 g=1.488
4/4 [==============================] - 0s 7ms/step
>4, 175/195, d1=0.779, d2=0.556 g=1.589
4/4 [==============================] - 0s 7ms/step
>4, 176/195, d1=0.819, d2=0.571 g=1.454
4/4 [==============================] - 0s 7ms/step
>4, 177/195, d1=0.827, d2=0.475 g=1.626
4/4 [==============================] - 0s 8ms/step
>4, 178/195, d1=0.764, d2=0.418 g=1.561
4/4 [==============================] - 0s 9ms/step
>4, 179/195, d1=0.723, d2=0.558 g=1.265
4/4 [==============================] - 0s 8ms/step
>4, 180/195, d1=0.551, d2=0.772 g=1.075
4/4 [==============================] - 0s 7ms/step
>4, 181/195, d1=0.566, d2=0.742 g=0.975
4/4 [==============================] - 0s 7ms/step
>4, 182/195, d1=0.555, d2=0.809 g=1.048
4/4 [==============================] - 0s 7ms/step
>4, 183/195, d1=0.564, d2=0.692 g=1.115
4/4 [==============================] - 0s 7ms/step
>4, 184/195, d1=0.543, d2=0.702 g=1.107
4/4 [==============================] - 0s 7ms/step
>4, 185/195, d1=0.516, d2=0.735 g=1.271
4/4 [==============================] - 0s 8ms/step
>4, 186/195, d1=0.692, d2=0.533 g=1.707
4/4 [==============================] - 0s 7ms/step
>4, 187/195, d1=0.674, d2=0.406 g=1.726
4/4 [==============================] - 0s 7ms/step
>4, 188/195, d1=0.578, d2=0.682 g=1.491
4/4 [==============================] - 0s 7ms/step
>4, 189/195, d1=0.574, d2=0.660 g=1.519
4/4 [==============================] - 0s 7ms/step
```

```
>4, 190/195, d1=0.698, d2=0.724 g=1.273
4/4 [==============================] - 0s 7ms/step
>4, 191/195, d1=0.705, d2=0.695 g=1.188
4/4 [==============================] - 0s 7ms/step
>4, 192/195, d1=0.716, d2=0.649 g=1.219
4/4 [==============================] - 0s 7ms/step
>4, 193/195, d1=0.709, d2=0.618 g=1.244
4/4 [==============================] - 0s 7ms/step
>4, 194/195, d1=0.672, d2=0.633 g=1.222
4/4 [==============================] - 0s 7ms/step
>4, 195/195, d1=0.680, d2=0.647 g=1.173
5/5 [==============================] - 0s 7ms/step
>Accuracy real: 63%, fake: 82%

WARNING:tensorflow:Compiled the loaded model, but the compiled metrics have yet
to be built. `model.compile_metrics` will be empty until you train or evaluate
the model.

4/4 [==============================] - 0s 7ms/step
>5, 1/195, d1=0.631, d2=0.587 g=1.263
4/4 [==============================] - 0s 7ms/step
>5, 2/195, d1=0.588, d2=0.536 g=1.307
4/4 [==============================] - 0s 7ms/step
>5, 3/195, d1=0.542, d2=0.728 g=1.442
4/4 [==============================] - 0s 7ms/step
>5, 4/195, d1=0.607, d2=0.724 g=1.405
4/4 [==============================] - 0s 7ms/step
>5, 5/195, d1=0.590, d2=0.640 g=1.425
4/4 [==============================] - 0s 7ms/step
>5, 6/195, d1=0.688, d2=0.519 g=1.384
4/4 [==============================] - 0s 7ms/step
>5, 7/195, d1=0.623, d2=0.572 g=1.357
4/4 [==============================] - 0s 7ms/step
>5, 8/195, d1=0.527, d2=0.913 g=1.541
4/4 [==============================] - 0s 8ms/step
>5, 9/195, d1=0.566, d2=0.596 g=1.707
4/4 [==============================] - 0s 7ms/step
>5, 10/195, d1=0.674, d2=0.528 g=1.554
4/4 [==============================] - 0s 9ms/step
>5, 11/195, d1=0.699, d2=0.797 g=1.491
4/4 [==============================] - 0s 7ms/step
>5, 12/195, d1=0.795, d2=0.736 g=1.528
4/4 [==============================] - 0s 7ms/step
>5, 13/195, d1=0.774, d2=0.585 g=1.590
4/4 [==============================] - 0s 8ms/step
>5, 14/195, d1=0.824, d2=0.508 g=1.500
4/4 [==============================] - 0s 7ms/step
>5, 15/195, d1=0.680, d2=0.604 g=1.440
4/4 [==============================] - 0s 7ms/step
```

```
>5, 16/195, d1=0.667, d2=0.642 g=1.245
4/4 [==============================] - 0s 7ms/step
>5, 17/195, d1=0.680, d2=0.744 g=1.233
4/4 [==============================] - 0s 7ms/step
>5, 18/195, d1=0.634, d2=0.552 g=1.279
4/4 [==============================] - 0s 7ms/step
>5, 19/195, d1=0.650, d2=0.557 g=1.351
4/4 [==============================] - 0s 7ms/step
>5, 20/195, d1=0.628, d2=0.541 g=1.446
4/4 [==============================] - 0s 7ms/step
>5, 21/195, d1=0.569, d2=0.670 g=1.306
4/4 [==============================] - 0s 7ms/step
>5, 22/195, d1=0.564, d2=0.680 g=1.368
4/4 [==============================] - 0s 7ms/step
>5, 23/195, d1=0.621, d2=0.655 g=1.452
4/4 [==============================] - 0s 7ms/step
>5, 24/195, d1=0.681, d2=0.666 g=1.422
4/4 [==============================] - 0s 7ms/step
>5, 25/195, d1=0.611, d2=0.690 g=1.446
4/4 [==============================] - 0s 7ms/step
>5, 26/195, d1=0.715, d2=0.580 g=1.388
4/4 [==============================] - 0s 7ms/step
>5, 27/195, d1=0.569, d2=0.552 g=1.326
4/4 [==============================] - 0s 7ms/step
>5, 28/195, d1=0.553, d2=0.706 g=1.352
4/4 [==============================] - 0s 7ms/step
>5, 29/195, d1=0.599, d2=0.706 g=1.412
4/4 [==============================] - 0s 7ms/step
>5, 30/195, d1=0.672, d2=0.564 g=1.283
4/4 [==============================] - 0s 7ms/step
>5, 31/195, d1=0.581, d2=0.589 g=1.174
4/4 [==============================] - 0s 7ms/step
>5, 32/195, d1=0.453, d2=0.660 g=1.084
4/4 [==============================] - 0s 7ms/step
>5, 33/195, d1=0.469, d2=0.765 g=1.197
4/4 [==============================] - 0s 7ms/step
>5, 34/195, d1=0.513, d2=0.636 g=1.416
4/4 [==============================] - 0s 7ms/step
>5, 35/195, d1=0.566, d2=0.419 g=1.427
4/4 [==============================] - 0s 7ms/step
>5, 36/195, d1=0.573, d2=0.569 g=1.333
4/4 [==============================] - 0s 7ms/step
>5, 37/195, d1=0.596, d2=0.784 g=1.340
4/4 [==============================] - 0s 7ms/step
>5, 38/195, d1=0.570, d2=0.563 g=1.426
4/4 [==============================] - 0s 7ms/step
>5, 39/195, d1=0.734, d2=0.650 g=1.349
4/4 [==============================] - 0s 8ms/step
```

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>5, 40/195, d1=0.620, d2=0.595 g=1.435
4/4 [==============================] - 0s 7ms/step
>5, 41/195, d1=0.783, d2=0.682 g=1.626
4/4 [==============================] - 0s 7ms/step
>5, 42/195, d1=0.762, d2=0.488 g=1.582
4/4 [==============================] - 0s 7ms/step
>5, 43/195, d1=0.764, d2=0.630 g=1.263
4/4 [==============================] - 0s 7ms/step
>5, 44/195, d1=0.727, d2=0.642 g=1.124
4/4 [==============================] - 0s 8ms/step
>5, 45/195, d1=0.684, d2=0.792 g=1.019
4/4 [==============================] - 0s 7ms/step
>5, 46/195, d1=0.668, d2=0.729 g=1.064
4/4 [==============================] - 0s 7ms/step
>5, 47/195, d1=0.684, d2=0.627 g=1.065
4/4 [==============================] - 0s 7ms/step
>5, 48/195, d1=0.659, d2=0.634 g=1.159
4/4 [==============================] - 0s 7ms/step
>5, 49/195, d1=0.638, d2=0.567 g=1.214
4/4 [==============================] - 0s 7ms/step
>5, 50/195, d1=0.594, d2=0.605 g=1.251
4/4 [==============================] - 0s 7ms/step
>5, 51/195, d1=0.587, d2=0.664 g=1.384
4/4 [==============================] - 0s 7ms/step
>5, 52/195, d1=0.563, d2=0.678 g=1.380
4/4 [==============================] - 0s 7ms/step
>5, 53/195, d1=0.646, d2=0.601 g=1.514
4/4 [==============================] - 0s 7ms/step
>5, 54/195, d1=0.741, d2=0.660 g=1.307
4/4 [==============================] - 0s 7ms/step
>5, 55/195, d1=0.719, d2=0.806 g=1.259
4/4 [==============================] - 0s 7ms/step
>5, 56/195, d1=0.713, d2=0.912 g=1.247
4/4 [==============================] - 0s 7ms/step
>5, 57/195, d1=0.782, d2=0.699 g=1.206
4/4 [==============================] - 0s 7ms/step
>5, 58/195, d1=0.891, d2=0.543 g=1.316
4/4 [==============================] - 0s 7ms/step
>5, 59/195, d1=0.740, d2=0.466 g=1.472
4/4 [==============================] - 0s 7ms/step
>5, 60/195, d1=0.806, d2=0.531 g=1.218
4/4 [==============================] - 0s 7ms/step
>5, 61/195, d1=0.751, d2=0.560 g=1.235
4/4 [==============================] - 0s 7ms/step
>5, 62/195, d1=0.779, d2=0.523 g=1.147
4/4 [==============================] - 0s 7ms/step
>5, 63/195, d1=0.670, d2=0.591 g=1.068
4/4 [==============================] - 0s 8ms/step
```

```
>5, 64/195, d1=0.662, d2=0.854 g=1.034
4/4 [==============================] - 0s 8ms/step
>5, 65/195, d1=0.548, d2=0.643 g=1.121
4/4 [==============================] - 0s 7ms/step
>5, 66/195, d1=0.598, d2=0.586 g=1.098
4/4 [==============================] - 0s 7ms/step
>5, 67/195, d1=0.517, d2=0.845 g=1.077
4/4 [==============================] - 0s 7ms/step
>5, 68/195, d1=0.588, d2=0.792 g=1.121
4/4 [==============================] - 0s 7ms/step
>5, 69/195, d1=0.732, d2=0.657 g=1.115
4/4 [==============================] - 0s 7ms/step
>5, 70/195, d1=0.763, d2=0.624 g=1.176
4/4 [==============================] - 0s 7ms/step
>5, 71/195, d1=0.735, d2=0.568 g=1.285
4/4 [==============================] - 0s 7ms/step
>5, 72/195, d1=0.692, d2=0.528 g=1.425
4/4 [==============================] - 0s 7ms/step
>5, 73/195, d1=0.671, d2=0.618 g=1.269
4/4 [==============================] - 0s 7ms/step
>5, 74/195, d1=0.607, d2=0.663 g=1.218
4/4 [==============================] - 0s 7ms/step
>5, 75/195, d1=0.745, d2=0.673 g=1.085
4/4 [==============================] - 0s 7ms/step
>5, 76/195, d1=0.643, d2=0.674 g=1.100
4/4 [==============================] - 0s 7ms/step
>5, 77/195, d1=0.654, d2=0.664 g=1.137
4/4 [==============================] - 0s 7ms/step
>5, 78/195, d1=0.716, d2=0.646 g=1.099
4/4 [==============================] - 0s 7ms/step
>5, 79/195, d1=0.582, d2=0.745 g=1.202
4/4 [==============================] - 0s 7ms/step
>5, 80/195, d1=0.643, d2=0.636 g=1.183
4/4 [==============================] - 0s 7ms/step
>5, 81/195, d1=0.637, d2=0.614 g=1.198
4/4 [==============================] - 0s 7ms/step
>5, 82/195, d1=0.638, d2=0.612 g=1.145
4/4 [==============================] - 0s 7ms/step
>5, 83/195, d1=0.648, d2=0.736 g=1.144
4/4 [==============================] - 0s 7ms/step
>5, 84/195, d1=0.647, d2=0.763 g=1.287
4/4 [==============================] - 0s 7ms/step
>5, 85/195, d1=0.620, d2=0.532 g=1.415
4/4 [==============================] - 0s 7ms/step
>5, 86/195, d1=0.605, d2=0.595 g=1.307
4/4 [==============================] - 0s 8ms/step
>5, 87/195, d1=0.630, d2=0.696 g=1.268
4/4 [==============================] - 0s 7ms/step
```

```
>5, 88/195, d1=0.634, d2=0.573 g=1.252
4/4 [==============================] - 0s 7ms/step
>5, 89/195, d1=0.710, d2=0.674 g=1.233
4/4 [==============================] - 0s 7ms/step
>5, 90/195, d1=0.662, d2=0.652 g=1.255
4/4 [==============================] - 0s 7ms/step
>5, 91/195, d1=0.652, d2=0.743 g=1.395
4/4 [==============================] - 0s 7ms/step
>5, 92/195, d1=0.708, d2=0.711 g=1.227
4/4 [==============================] - 0s 7ms/step
>5, 93/195, d1=0.658, d2=0.805 g=1.302
4/4 [==============================] - 0s 7ms/step
>5, 94/195, d1=0.653, d2=0.480 g=1.365
4/4 [==============================] - 0s 7ms/step
>5, 95/195, d1=0.520, d2=0.753 g=1.240
4/4 [==============================] - 0s 7ms/step
>5, 96/195, d1=0.566, d2=0.761 g=1.323
4/4 [==============================] - 0s 7ms/step
>5, 97/195, d1=0.747, d2=0.519 g=1.271
4/4 [==============================] - 0s 7ms/step
>5, 98/195, d1=0.655, d2=0.585 g=1.235
4/4 [==============================] - 0s 7ms/step
>5, 99/195, d1=0.647, d2=0.652 g=1.215
4/4 [==============================] - 0s 7ms/step
>5, 100/195, d1=0.733, d2=0.646 g=1.291
4/4 [==============================] - 0s 7ms/step
>5, 101/195, d1=0.787, d2=0.670 g=1.139
4/4 [==============================] - 0s 7ms/step
>5, 102/195, d1=0.638, d2=0.654 g=1.191
4/4 [==============================] - 0s 7ms/step
>5, 103/195, d1=0.692, d2=0.699 g=1.184
4/4 [==============================] - 0s 7ms/step
>5, 104/195, d1=0.697, d2=0.751 g=1.311
4/4 [==============================] - 0s 7ms/step
>5, 105/195, d1=0.832, d2=0.582 g=1.517
4/4 [==============================] - 0s 7ms/step
>5, 106/195, d1=0.829, d2=0.505 g=1.685
4/4 [==============================] - 0s 7ms/step
>5, 107/195, d1=0.730, d2=0.603 g=1.733
4/4 [==============================] - 0s 7ms/step
>5, 108/195, d1=0.731, d2=0.583 g=1.448
4/4 [==============================] - 0s 7ms/step
>5, 109/195, d1=0.751, d2=0.643 g=1.405
4/4 [==============================] - 0s 7ms/step
>5, 110/195, d1=0.676, d2=0.571 g=1.440
4/4 [==============================] - 0s 7ms/step
>5, 111/195, d1=0.721, d2=0.702 g=1.295
4/4 [==============================] - 0s 7ms/step
```

```
>5, 112/195, d1=0.745, d2=0.760 g=1.126
4/4 [==============================] - 0s 7ms/step
>5, 113/195, d1=0.689, d2=0.637 g=1.158
4/4 [==============================] - 0s 7ms/step
>5, 114/195, d1=0.629, d2=0.724 g=1.045
4/4 [==============================] - 0s 7ms/step
>5, 115/195, d1=0.588, d2=0.701 g=1.118
4/4 [==============================] - 0s 7ms/step
>5, 116/195, d1=0.538, d2=0.595 g=1.187
4/4 [==============================] - 0s 7ms/step
>5, 117/195, d1=0.509, d2=0.735 g=1.177
4/4 [==============================] - 0s 8ms/step
>5, 118/195, d1=0.610, d2=0.680 g=1.186
4/4 [==============================] - 0s 8ms/step
>5, 119/195, d1=0.624, d2=0.829 g=1.305
4/4 [==============================] - 0s 8ms/step
>5, 120/195, d1=0.674, d2=0.544 g=1.444
4/4 [==============================] - 0s 7ms/step
>5, 121/195, d1=0.751, d2=0.552 g=1.348
4/4 [==============================] - 0s 7ms/step
>5, 122/195, d1=0.616, d2=0.539 g=1.447
4/4 [==============================] - 0s 7ms/step
>5, 123/195, d1=0.651, d2=0.658 g=1.428
4/4 [==============================] - 0s 7ms/step
>5, 124/195, d1=0.650, d2=0.858 g=1.410
4/4 [==============================] - 0s 7ms/step
>5, 125/195, d1=0.782, d2=0.655 g=1.364
4/4 [==============================] - 0s 7ms/step
>5, 126/195, d1=0.744, d2=0.560 g=1.296
4/4 [==============================] - 0s 7ms/step
>5, 127/195, d1=0.753, d2=0.808 g=1.118
4/4 [==============================] - 0s 7ms/step
>5, 128/195, d1=0.743, d2=0.802 g=1.363
4/4 [==============================] - 0s 7ms/step
>5, 129/195, d1=0.841, d2=0.520 g=1.342
4/4 [==============================] - 0s 7ms/step
>5, 130/195, d1=0.770, d2=0.552 g=1.254
4/4 [==============================] - 0s 7ms/step
>5, 131/195, d1=0.756, d2=0.681 g=1.064
4/4 [==============================] - 0s 7ms/step
>5, 132/195, d1=0.670, d2=0.746 g=0.947
4/4 [==============================] - 0s 7ms/step
>5, 133/195, d1=0.720, d2=0.809 g=0.883
4/4 [==============================] - 0s 7ms/step
>5, 134/195, d1=0.676, d2=0.785 g=0.935
4/4 [==============================] - 0s 7ms/step
>5, 135/195, d1=0.622, d2=0.677 g=1.028
4/4 [==============================] - 0s 7ms/step
```

```
>5, 136/195, d1=0.693, d2=0.577 g=1.087
4/4 [==============================] - 0s 7ms/step
>5, 137/195, d1=0.581, d2=0.600 g=1.084
4/4 [==============================] - 0s 7ms/step
>5, 138/195, d1=0.562, d2=0.739 g=1.016
4/4 [==============================] - 0s 7ms/step
>5, 139/195, d1=0.619, d2=0.689 g=1.032
4/4 [==============================] - 0s 7ms/step
>5, 140/195, d1=0.635, d2=0.661 g=1.154
4/4 [==============================] - 0s 8ms/step
>5, 141/195, d1=0.651, d2=0.797 g=1.220
4/4 [==============================] - 0s 7ms/step
>5, 142/195, d1=0.738, d2=0.846 g=1.214
4/4 [==============================] - 0s 7ms/step
>5, 143/195, d1=0.761, d2=0.547 g=1.614
4/4 [==============================] - 0s 7ms/step
>5, 144/195, d1=0.772, d2=0.495 g=1.861
4/4 [==============================] - 0s 7ms/step
>5, 145/195, d1=0.784, d2=0.630 g=1.312
4/4 [==============================] - 0s 8ms/step
>5, 146/195, d1=0.802, d2=0.600 g=1.169
4/4 [==============================] - 0s 8ms/step
>5, 147/195, d1=0.797, d2=0.617 g=1.174
4/4 [==============================] - 0s 7ms/step
>5, 148/195, d1=0.810, d2=0.604 g=1.139
4/4 [==============================] - 0s 7ms/step
>5, 149/195, d1=0.712, d2=0.563 g=1.190
4/4 [==============================] - 0s 7ms/step
>5, 150/195, d1=0.724, d2=0.657 g=1.086
4/4 [==============================] - 0s 7ms/step
>5, 151/195, d1=0.609, d2=0.700 g=1.143
4/4 [==============================] - 0s 7ms/step
>5, 152/195, d1=0.641, d2=0.569 g=1.302
4/4 [==============================] - 0s 7ms/step
>5, 153/195, d1=0.574, d2=0.600 g=1.234
4/4 [==============================] - 0s 7ms/step
>5, 154/195, d1=0.609, d2=0.881 g=1.039
4/4 [==============================] - 0s 7ms/step
>5, 155/195, d1=0.614, d2=0.671 g=1.244
4/4 [==============================] - 0s 7ms/step
>5, 156/195, d1=0.520, d2=0.552 g=1.572
4/4 [==============================] - 0s 7ms/step
>5, 157/195, d1=0.450, d2=0.695 g=1.498
4/4 [==============================] - 0s 7ms/step
>5, 158/195, d1=0.537, d2=0.956 g=1.426
4/4 [==============================] - 0s 7ms/step
>5, 159/195, d1=0.791, d2=0.721 g=1.429
4/4 [==============================] - 0s 7ms/step
```

```
>5, 160/195, d1=0.734, d2=0.911 g=1.004
4/4 [==============================] - 0s 8ms/step
>5, 161/195, d1=0.706, d2=1.229 g=1.197
4/4 [==============================] - 0s 7ms/step
>5, 162/195, d1=0.878, d2=0.649 g=1.389
4/4 [==============================] - 0s 7ms/step
>5, 163/195, d1=0.850, d2=0.444 g=1.446
4/4 [==============================] - 0s 7ms/step
>5, 164/195, d1=0.918, d2=0.480 g=1.270
4/4 [==============================] - 0s 7ms/step
>5, 165/195, d1=0.747, d2=0.550 g=1.322
4/4 [==============================] - 0s 7ms/step
>5, 166/195, d1=0.707, d2=0.529 g=1.283
4/4 [==============================] - 0s 7ms/step
>5, 167/195, d1=0.776, d2=0.678 g=1.056
4/4 [==============================] - 0s 7ms/step
>5, 168/195, d1=0.673, d2=0.719 g=0.967
4/4 [==============================] - 0s 7ms/step
>5, 169/195, d1=0.665, d2=0.748 g=0.968
4/4 [==============================] - 0s 7ms/step
>5, 170/195, d1=0.669, d2=0.703 g=0.951
4/4 [==============================] - 0s 7ms/step
>5, 171/195, d1=0.689, d2=0.757 g=0.953
4/4 [==============================] - 0s 7ms/step
>5, 172/195, d1=0.684, d2=0.692 g=0.971
4/4 [==============================] - 0s 7ms/step
>5, 173/195, d1=0.680, d2=0.654 g=0.943
4/4 [==============================] - 0s 8ms/step
>5, 174/195, d1=0.631, d2=0.630 g=0.953
4/4 [==============================] - 0s 7ms/step
>5, 175/195, d1=0.616, d2=0.662 g=0.992
4/4 [==============================] - 0s 7ms/step
>5, 176/195, d1=0.590, d2=0.633 g=1.042
4/4 [==============================] - 0s 8ms/step
>5, 177/195, d1=0.611, d2=0.620 g=1.053
4/4 [==============================] - 0s 7ms/step
>5, 178/195, d1=0.608, d2=0.623 g=1.132
4/4 [==============================] - 0s 7ms/step
>5, 179/195, d1=0.648, d2=0.673 g=1.103
4/4 [==============================] - 0s 7ms/step
>5, 180/195, d1=0.671, d2=0.631 g=1.088
4/4 [==============================] - 0s 7ms/step
>5, 181/195, d1=0.663, d2=0.650 g=1.073
4/4 [==============================] - 0s 7ms/step
>5, 182/195, d1=0.701, d2=0.665 g=1.083
4/4 [==============================] - 0s 7ms/step
>5, 183/195, d1=0.740, d2=0.626 g=1.020
4/4 [==============================] - 0s 7ms/step
```

```
>5, 184/195, d1=0.604, d2=0.631 g=1.063
4/4 [==============================] - 0s 7ms/step
>5, 185/195, d1=0.633, d2=0.595 g=1.097
4/4 [==============================] - 0s 7ms/step
>5, 186/195, d1=0.594, d2=0.578 g=1.094
4/4 [==============================] - 0s 7ms/step
>5, 187/195, d1=0.559, d2=0.609 g=1.083
4/4 [==============================] - 0s 7ms/step
>5, 188/195, d1=0.585, d2=0.700 g=1.198
4/4 [==============================] - 0s 7ms/step
>5, 189/195, d1=0.595, d2=0.588 g=1.255
4/4 [==============================] - 0s 7ms/step
>5, 190/195, d1=0.672, d2=0.617 g=1.153
4/4 [==============================] - 0s 7ms/step
>5, 191/195, d1=0.670, d2=0.720 g=1.118
4/4 [==============================] - 0s 7ms/step
>5, 192/195, d1=0.553, d2=0.634 g=1.234
4/4 [==============================] - 0s 7ms/step
>5, 193/195, d1=0.631, d2=0.554 g=1.258
4/4 [==============================] - 0s 7ms/step
>5, 194/195, d1=0.479, d2=0.947 g=1.364
4/4 [==============================] - 0s 7ms/step
>5, 195/195, d1=0.642, d2=0.668 g=1.472
5/5 [==============================] - 0s 7ms/step
>Accuracy real: 45%, fake: 73%

WARNING:tensorflow:Compiled the loaded model, but the compiled metrics have yet
to be built. `model.compile_metrics` will be empty until you train or evaluate
the model.

4/4 [==============================] - 0s 7ms/step
>6, 1/195, d1=0.744, d2=0.622 g=1.221
4/4 [==============================] - 0s 7ms/step
>6, 2/195, d1=0.693, d2=0.756 g=1.116
4/4 [==============================] - 0s 7ms/step
>6, 3/195, d1=0.682, d2=0.717 g=1.024
4/4 [==============================] - 0s 7ms/step
>6, 4/195, d1=0.668, d2=0.669 g=1.077
4/4 [==============================] - 0s 8ms/step
>6, 5/195, d1=0.704, d2=0.745 g=1.107
4/4 [==============================] - 0s 8ms/step
>6, 6/195, d1=0.668, d2=0.629 g=1.093
4/4 [==============================] - 0s 7ms/step
>6, 7/195, d1=0.623, d2=0.610 g=1.102
4/4 [==============================] - 0s 7ms/step
>6, 8/195, d1=0.671, d2=0.655 g=1.123
4/4 [==============================] - 0s 7ms/step
>6, 9/195, d1=0.609, d2=0.678 g=1.063
4/4 [==============================] - 0s 7ms/step
```

```
>6, 10/195, d1=0.627, d2=0.744 g=1.033
4/4 [==============================] - 0s 7ms/step
>6, 11/195, d1=0.670, d2=0.606 g=1.131
4/4 [==============================] - 0s 7ms/step
>6, 12/195, d1=0.697, d2=0.568 g=1.201
4/4 [==============================] - 0s 7ms/step
>6, 13/195, d1=0.704, d2=0.604 g=1.175
4/4 [==============================] - 0s 7ms/step
>6, 14/195, d1=0.672, d2=0.705 g=1.258
4/4 [==============================] - 0s 7ms/step
>6, 15/195, d1=0.685, d2=0.612 g=1.165
4/4 [==============================] - 0s 7ms/step
>6, 16/195, d1=0.772, d2=0.682 g=1.085
4/4 [==============================] - 0s 7ms/step
>6, 17/195, d1=0.684, d2=0.640 g=1.078
4/4 [==============================] - 0s 7ms/step
>6, 18/195, d1=0.668, d2=0.600 g=1.067
4/4 [==============================] - 0s 7ms/step
>6, 19/195, d1=0.645, d2=0.614 g=1.114
4/4 [==============================] - 0s 7ms/step
>6, 20/195, d1=0.583, d2=0.600 g=1.243
4/4 [==============================] - 0s 7ms/step
>6, 21/195, d1=0.597, d2=0.522 g=1.332
4/4 [==============================] - 0s 7ms/step
>6, 22/195, d1=0.613, d2=0.567 g=1.398
4/4 [==============================] - 0s 7ms/step
>6, 23/195, d1=0.567, d2=0.569 g=1.346
4/4 [==============================] - 0s 7ms/step
>6, 24/195, d1=0.599, d2=0.864 g=1.354
4/4 [==============================] - 0s 7ms/step
>6, 25/195, d1=0.690, d2=0.694 g=1.481
4/4 [==============================] - 0s 7ms/step
>6, 26/195, d1=0.742, d2=0.442 g=1.462
4/4 [==============================] - 0s 7ms/step
>6, 27/195, d1=0.642, d2=0.549 g=1.402
4/4 [==============================] - 0s 7ms/step
>6, 28/195, d1=0.622, d2=0.551 g=1.336
4/4 [==============================] - 0s 7ms/step
>6, 29/195, d1=0.461, d2=0.706 g=1.296
4/4 [==============================] - 0s 7ms/step
>6, 30/195, d1=0.468, d2=0.708 g=1.338
4/4 [==============================] - 0s 8ms/step
>6, 31/195, d1=0.479, d2=1.329 g=1.752
4/4 [==============================] - 0s 9ms/step
>6, 32/195, d1=0.953, d2=0.524 g=1.364
4/4 [==============================] - 0s 7ms/step
>6, 33/195, d1=0.854, d2=0.916 g=1.375
4/4 [==============================] - 0s 8ms/step
```

```
>6, 34/195, d1=0.856, d2=0.439 g=1.304
4/4 [==============================] - 0s 8ms/step
>6, 35/195, d1=0.700, d2=0.483 g=1.259
4/4 [==============================] - 0s 7ms/step
>6, 36/195, d1=0.583, d2=0.681 g=1.189
4/4 [==============================] - 0s 7ms/step
>6, 37/195, d1=0.522, d2=0.699 g=1.286
4/4 [==============================] - 0s 7ms/step
>6, 38/195, d1=0.545, d2=0.649 g=1.330
4/4 [==============================] - 0s 7ms/step
>6, 39/195, d1=0.566, d2=0.743 g=1.237
4/4 [==============================] - 0s 7ms/step
>6, 40/195, d1=0.592, d2=0.702 g=1.451
4/4 [==============================] - 0s 7ms/step
>6, 41/195, d1=0.724, d2=0.575 g=1.215
4/4 [==============================] - 0s 7ms/step
>6, 42/195, d1=0.593, d2=0.686 g=1.138
4/4 [==============================] - 0s 7ms/step
>6, 43/195, d1=0.655, d2=0.762 g=1.409
4/4 [==============================] - 0s 7ms/step
>6, 44/195, d1=0.672, d2=0.693 g=1.440
4/4 [==============================] - 0s 7ms/step
>6, 45/195, d1=0.734, d2=0.569 g=1.386
4/4 [==============================] - 0s 7ms/step
>6, 46/195, d1=0.753, d2=0.473 g=1.348
4/4 [==============================] - 0s 7ms/step
>6, 47/195, d1=0.640, d2=0.547 g=1.260
4/4 [==============================] - 0s 7ms/step
>6, 48/195, d1=0.663, d2=0.866 g=1.126
4/4 [==============================] - 0s 7ms/step
>6, 49/195, d1=0.691, d2=1.597 g=1.403
4/4 [==============================] - 0s 7ms/step
>6, 50/195, d1=0.880, d2=0.575 g=1.148
4/4 [==============================] - 0s 7ms/step
>6, 51/195, d1=0.773, d2=0.598 g=1.284
4/4 [==============================] - 0s 7ms/step
>6, 52/195, d1=0.702, d2=0.749 g=1.002
4/4 [==============================] - 0s 7ms/step
>6, 53/195, d1=0.681, d2=0.846 g=0.914
4/4 [==============================] - 0s 7ms/step
>6, 54/195, d1=0.617, d2=0.659 g=1.009
4/4 [==============================] - 0s 7ms/step
>6, 55/195, d1=0.625, d2=0.659 g=1.127
4/4 [==============================] - 0s 7ms/step
>6, 56/195, d1=0.592, d2=0.556 g=1.189
4/4 [==============================] - 0s 7ms/step
>6, 57/195, d1=0.611, d2=0.743 g=1.194
4/4 [==============================] - 0s 7ms/step
```

```
>6, 58/195, d1=0.685, d2=0.744 g=1.059
4/4 [==============================] - 0s 7ms/step
>6, 59/195, d1=0.709, d2=0.725 g=1.028
4/4 [==============================] - 0s 8ms/step
>6, 60/195, d1=0.652, d2=0.662 g=1.041
4/4 [==============================] - 0s 8ms/step
>6, 61/195, d1=0.708, d2=0.692 g=1.058
4/4 [==============================] - 0s 7ms/step
>6, 62/195, d1=0.684, d2=0.623 g=1.151
4/4 [==============================] - 0s 7ms/step
>6, 63/195, d1=0.737, d2=0.664 g=1.216
4/4 [==============================] - 0s 7ms/step
>6, 64/195, d1=0.690, d2=0.561 g=1.300
4/4 [==============================] - 0s 7ms/step
>6, 65/195, d1=0.730, d2=0.649 g=1.231
4/4 [==============================] - 0s 7ms/step
>6, 66/195, d1=0.653, d2=0.637 g=1.154
4/4 [==============================] - 0s 7ms/step
>6, 67/195, d1=0.634, d2=0.689 g=1.066
4/4 [==============================] - 0s 7ms/step
>6, 68/195, d1=0.662, d2=0.691 g=1.063
4/4 [==============================] - 0s 7ms/step
>6, 69/195, d1=0.669, d2=0.713 g=1.026
4/4 [==============================] - 0s 7ms/step
>6, 70/195, d1=0.629, d2=0.624 g=1.086
4/4 [==============================] - 0s 7ms/step
>6, 71/195, d1=0.627, d2=0.635 g=1.145
4/4 [==============================] - 0s 7ms/step
>6, 72/195, d1=0.636, d2=0.726 g=1.171
4/4 [==============================] - 0s 7ms/step
>6, 73/195, d1=0.661, d2=0.695 g=1.344
4/4 [==============================] - 0s 7ms/step
>6, 74/195, d1=0.740, d2=0.565 g=1.250
4/4 [==============================] - 0s 7ms/step
>6, 75/195, d1=0.672, d2=0.633 g=1.156
4/4 [==============================] - 0s 7ms/step
>6, 76/195, d1=0.730, d2=0.779 g=1.013
4/4 [==============================] - 0s 7ms/step
>6, 77/195, d1=0.642, d2=0.817 g=1.031
4/4 [==============================] - 0s 7ms/step
>6, 78/195, d1=0.668, d2=0.725 g=1.082
4/4 [==============================] - 0s 7ms/step
>6, 79/195, d1=0.648, d2=0.694 g=1.132
4/4 [==============================] - 0s 7ms/step
>6, 80/195, d1=0.657, d2=0.655 g=1.166
4/4 [==============================] - 0s 7ms/step
>6, 81/195, d1=0.676, d2=0.718 g=1.246
4/4 [==============================] - 0s 7ms/step
```

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>6, 82/195, d1=0.699, d2=0.674 g=1.188
4/4 [==============================] - 0s 7ms/step
>6, 83/195, d1=0.714, d2=0.609 g=1.279
4/4 [==============================] - 0s 7ms/step
>6, 84/195, d1=0.723, d2=0.620 g=1.280
4/4 [==============================] - 0s 7ms/step
>6, 85/195, d1=0.705, d2=0.745 g=1.208
4/4 [==============================] - 0s 7ms/step
>6, 86/195, d1=0.719, d2=0.601 g=1.211
4/4 [==============================] - 0s 7ms/step
>6, 87/195, d1=0.726, d2=0.663 g=1.009
4/4 [==============================] - 0s 8ms/step
>6, 88/195, d1=0.618, d2=0.680 g=1.015
4/4 [==============================] - 0s 7ms/step
>6, 89/195, d1=0.588, d2=0.668 g=1.165
4/4 [==============================] - 0s 7ms/step
>6, 90/195, d1=0.675, d2=0.582 g=1.258
4/4 [==============================] - 0s 7ms/step
>6, 91/195, d1=0.598, d2=0.634 g=1.196
4/4 [==============================] - 0s 7ms/step
>6, 92/195, d1=0.589, d2=0.641 g=1.353
4/4 [==============================] - 0s 7ms/step
>6, 93/195, d1=0.658, d2=0.621 g=1.405
4/4 [==============================] - 0s 7ms/step
>6, 94/195, d1=0.672, d2=0.629 g=1.341
4/4 [==============================] - 0s 7ms/step
>6, 95/195, d1=0.608, d2=0.770 g=1.288
4/4 [==============================] - 0s 7ms/step
>6, 96/195, d1=0.675, d2=0.958 g=1.400
4/4 [==============================] - 0s 7ms/step
>6, 97/195, d1=0.777, d2=0.474 g=1.420
4/4 [==============================] - 0s 7ms/step
>6, 98/195, d1=0.674, d2=0.620 g=1.077
4/4 [==============================] - 0s 7ms/step
>6, 99/195, d1=0.659, d2=0.733 g=1.015
4/4 [==============================] - 0s 7ms/step
>6, 100/195, d1=0.643, d2=0.608 g=1.110
4/4 [==============================] - 0s 7ms/step
>6, 101/195, d1=0.613, d2=0.604 g=1.173
4/4 [==============================] - 0s 7ms/step
>6, 102/195, d1=0.664, d2=0.532 g=1.171
4/4 [==============================] - 0s 7ms/step
>6, 103/195, d1=0.590, d2=0.657 g=1.198
4/4 [==============================] - 0s 7ms/step
>6, 104/195, d1=0.633, d2=0.717 g=1.102
4/4 [==============================] - 0s 7ms/step
>6, 105/195, d1=0.574, d2=0.652 g=1.226
4/4 [==============================] - 0s 7ms/step
```

```
>6, 106/195, d1=0.635, d2=0.668 g=1.327
4/4 [==============================] - 0s 7ms/step
>6, 107/195, d1=0.626, d2=0.787 g=1.310
4/4 [==============================] - 0s 7ms/step
>6, 108/195, d1=0.701, d2=0.623 g=1.462
4/4 [==============================] - 0s 7ms/step
>6, 109/195, d1=0.665, d2=0.523 g=1.282
4/4 [==============================] - 0s 7ms/step
>6, 110/195, d1=0.549, d2=0.762 g=1.328
4/4 [==============================] - 0s 7ms/step
>6, 111/195, d1=0.647, d2=0.712 g=1.466
4/4 [==============================] - 0s 7ms/step
>6, 112/195, d1=0.745, d2=0.527 g=1.520
4/4 [==============================] - 0s 7ms/step
>6, 113/195, d1=0.657, d2=0.596 g=1.430
4/4 [==============================] - 0s 7ms/step
>6, 114/195, d1=0.721, d2=0.804 g=1.369
4/4 [==============================] - 0s 7ms/step
>6, 115/195, d1=0.708, d2=0.726 g=1.339
4/4 [==============================] - 0s 7ms/step
>6, 116/195, d1=0.755, d2=0.641 g=1.548
4/4 [==============================] - 0s 8ms/step
>6, 117/195, d1=0.746, d2=0.565 g=1.434
4/4 [==============================] - 0s 6ms/step
>6, 118/195, d1=0.696, d2=0.671 g=1.213
4/4 [==============================] - 0s 7ms/step
>6, 119/195, d1=0.706, d2=0.616 g=1.217
4/4 [==============================] - 0s 7ms/step
>6, 120/195, d1=0.676, d2=0.568 g=1.232
4/4 [==============================] - 0s 7ms/step
>6, 121/195, d1=0.684, d2=0.680 g=1.219
4/4 [==============================] - 0s 7ms/step
>6, 122/195, d1=0.724, d2=0.843 g=1.190
4/4 [==============================] - 0s 7ms/step
>6, 123/195, d1=0.736, d2=0.552 g=1.979
4/4 [==============================] - 0s 7ms/step
>6, 124/195, d1=0.702, d2=0.660 g=1.256
4/4 [==============================] - 0s 7ms/step
>6, 125/195, d1=0.598, d2=0.650 g=1.191
4/4 [==============================] - 0s 7ms/step
>6, 126/195, d1=0.728, d2=0.674 g=1.151
4/4 [==============================] - 0s 7ms/step
>6, 127/195, d1=0.703, d2=0.592 g=1.113
4/4 [==============================] - 0s 7ms/step
>6, 128/195, d1=0.656, d2=0.674 g=1.164
4/4 [==============================] - 0s 7ms/step
>6, 129/195, d1=0.697, d2=0.729 g=1.136
4/4 [==============================] - 0s 8ms/step
```

```
>6, 130/195, d1=0.641, d2=0.630 g=1.167
4/4 [==============================] - 0s 7ms/step
>6, 131/195, d1=0.669, d2=0.660 g=1.216
4/4 [==============================] - 0s 7ms/step
>6, 132/195, d1=0.719, d2=0.431 g=1.473
4/4 [==============================] - 0s 7ms/step
>6, 133/195, d1=0.614, d2=0.610 g=1.088
4/4 [==============================] - 0s 7ms/step
>6, 134/195, d1=0.586, d2=0.616 g=1.147
4/4 [==============================] - 0s 8ms/step
>6, 135/195, d1=0.570, d2=0.769 g=1.245
4/4 [==============================] - 0s 7ms/step
>6, 136/195, d1=0.629, d2=0.670 g=1.283
4/4 [==============================] - 0s 7ms/step
>6, 137/195, d1=0.640, d2=0.493 g=1.339
4/4 [==============================] - 0s 7ms/step
>6, 138/195, d1=0.663, d2=0.617 g=1.202
4/4 [==============================] - 0s 7ms/step
>6, 139/195, d1=0.710, d2=0.674 g=1.222
4/4 [==============================] - 0s 7ms/step
>6, 140/195, d1=0.676, d2=0.748 g=1.213
4/4 [==============================] - 0s 7ms/step
>6, 141/195, d1=0.763, d2=0.614 g=1.079
4/4 [==============================] - 0s 7ms/step
>6, 142/195, d1=0.704, d2=0.577 g=1.036
4/4 [==============================] - 0s 7ms/step
>6, 143/195, d1=0.632, d2=0.582 g=1.057
4/4 [==============================] - 0s 8ms/step
>6, 144/195, d1=0.647, d2=0.766 g=1.099
4/4 [==============================] - 0s 7ms/step
>6, 145/195, d1=0.680, d2=0.662 g=1.228
4/4 [==============================] - 0s 7ms/step
>6, 146/195, d1=0.721, d2=0.690 g=1.288
4/4 [==============================] - 0s 7ms/step
>6, 147/195, d1=0.740, d2=0.696 g=1.203
4/4 [==============================] - 0s 7ms/step
>6, 148/195, d1=0.702, d2=0.609 g=1.390
4/4 [==============================] - 0s 7ms/step
>6, 149/195, d1=0.683, d2=0.521 g=1.601
4/4 [==============================] - 0s 7ms/step
>6, 150/195, d1=0.641, d2=0.598 g=1.546
4/4 [==============================] - 0s 7ms/step
>6, 151/195, d1=0.647, d2=0.706 g=1.233
4/4 [==============================] - 0s 7ms/step
>6, 152/195, d1=0.655, d2=0.800 g=1.209
4/4 [==============================] - 0s 8ms/step
>6, 153/195, d1=0.616, d2=0.573 g=1.277
4/4 [==============================] - 0s 7ms/step
```

```
>6, 154/195, d1=0.665, d2=0.554 g=1.251
4/4 [==============================] - 0s 8ms/step
>6, 155/195, d1=0.552, d2=0.695 g=1.252
4/4 [==============================] - 0s 7ms/step
>6, 156/195, d1=0.595, d2=0.650 g=1.286
4/4 [==============================] - 0s 7ms/step
>6, 157/195, d1=0.681, d2=0.656 g=1.322
4/4 [==============================] - 0s 7ms/step
>6, 158/195, d1=0.663, d2=0.597 g=1.403
4/4 [==============================] - 0s 7ms/step
>6, 159/195, d1=0.677, d2=0.757 g=1.395
4/4 [==============================] - 0s 7ms/step
>6, 160/195, d1=0.703, d2=0.547 g=1.344
4/4 [==============================] - 0s 7ms/step
>6, 161/195, d1=0.652, d2=0.659 g=1.314
4/4 [==============================] - 0s 7ms/step
>6, 162/195, d1=0.634, d2=0.581 g=1.316
4/4 [==============================] - 0s 7ms/step
>6, 163/195, d1=0.615, d2=0.658 g=1.296
4/4 [==============================] - 0s 7ms/step
>6, 164/195, d1=0.567, d2=0.775 g=1.336
4/4 [==============================] - 0s 7ms/step
>6, 165/195, d1=0.668, d2=0.774 g=1.495
4/4 [==============================] - 0s 7ms/step
>6, 166/195, d1=0.832, d2=0.681 g=1.381
4/4 [==============================] - 0s 8ms/step
>6, 167/195, d1=0.723, d2=0.570 g=1.141
4/4 [==============================] - 0s 7ms/step
>6, 168/195, d1=0.692, d2=0.678 g=1.059
4/4 [==============================] - 0s 7ms/step
>6, 169/195, d1=0.585, d2=0.648 g=1.208
4/4 [==============================] - 0s 7ms/step
>6, 170/195, d1=0.640, d2=0.603 g=1.210
4/4 [==============================] - 0s 8ms/step
>6, 171/195, d1=0.644, d2=0.582 g=1.201
4/4 [==============================] - 0s 8ms/step
>6, 172/195, d1=0.605, d2=0.709 g=1.355
4/4 [==============================] - 0s 7ms/step
>6, 173/195, d1=0.654, d2=0.509 g=1.527
4/4 [==============================] - 0s 7ms/step
>6, 174/195, d1=0.677, d2=0.759 g=1.280
4/4 [==============================] - 0s 8ms/step
>6, 175/195, d1=0.737, d2=0.700 g=1.405
4/4 [==============================] - 0s 7ms/step
>6, 176/195, d1=0.672, d2=0.504 g=1.402
4/4 [==============================] - 0s 7ms/step
>6, 177/195, d1=0.708, d2=0.821 g=1.227
4/4 [==============================] - 0s 7ms/step
```

```
>6, 178/195, d1=0.710, d2=0.561 g=1.414
4/4 [==============================] - 0s 7ms/step
>6, 179/195, d1=0.750, d2=0.521 g=1.268
4/4 [==============================] - 0s 7ms/step
>6, 180/195, d1=0.711, d2=0.596 g=1.144
4/4 [==============================] - 0s 7ms/step
>6, 181/195, d1=0.701, d2=0.670 g=1.014
4/4 [==============================] - 0s 7ms/step
>6, 182/195, d1=0.594, d2=0.695 g=1.065
4/4 [==============================] - 0s 7ms/step
>6, 183/195, d1=0.598, d2=0.709 g=1.054
4/4 [==============================] - 0s 7ms/step
>6, 184/195, d1=0.589, d2=0.731 g=1.075
4/4 [==============================] - 0s 7ms/step
>6, 185/195, d1=0.599, d2=0.625 g=1.177
4/4 [==============================] - 0s 7ms/step
>6, 186/195, d1=0.623, d2=0.586 g=1.182
4/4 [==============================] - 0s 7ms/step
>6, 187/195, d1=0.558, d2=0.662 g=1.331
4/4 [==============================] - 0s 8ms/step
>6, 188/195, d1=0.608, d2=0.670 g=1.354
4/4 [==============================] - 0s 7ms/step
>6, 189/195, d1=0.591, d2=0.586 g=1.306
4/4 [==============================] - 0s 7ms/step
>6, 190/195, d1=0.584, d2=0.759 g=1.424
4/4 [==============================] - 0s 7ms/step
>6, 191/195, d1=0.621, d2=0.565 g=1.513
4/4 [==============================] - 0s 7ms/step
>6, 192/195, d1=0.635, d2=0.693 g=1.443
4/4 [==============================] - 0s 7ms/step
>6, 193/195, d1=0.720, d2=0.772 g=1.368
4/4 [==============================] - 0s 7ms/step
>6, 194/195, d1=0.692, d2=1.484 g=1.860
4/4 [==============================] - 0s 7ms/step
>6, 195/195, d1=1.094, d2=2.321 g=1.518
5/5 [==============================] - 0s 7ms/step
>Accuracy real: 13%, fake: 99%

WARNING:tensorflow:Compiled the loaded model, but the compiled metrics have yet
to be built. `model.compile_metrics` will be empty until you train or evaluate
the model.

4/4 [==============================] - 0s 16ms/step
>7, 1/195, d1=1.019, d2=0.886 g=1.140
4/4 [==============================] - 0s 8ms/step
>7, 2/195, d1=0.892, d2=0.720 g=1.089
4/4 [==============================] - 0s 7ms/step
>7, 3/195, d1=0.808, d2=0.572 g=1.034
4/4 [==============================] - 0s 7ms/step
```

```
>7, 4/195, d1=0.699, d2=0.678 g=1.019
4/4 [==============================] - 0s 7ms/step
>7, 5/195, d1=0.662, d2=0.591 g=1.091
4/4 [==============================] - 0s 7ms/step
>7, 6/195, d1=0.599, d2=0.645 g=1.165
4/4 [==============================] - 0s 7ms/step
>7, 7/195, d1=0.601, d2=0.690 g=1.382
4/4 [==============================] - 0s 7ms/step
>7, 8/195, d1=0.661, d2=0.633 g=1.399
4/4 [==============================] - 0s 7ms/step
>7, 9/195, d1=0.742, d2=0.764 g=1.089
4/4 [==============================] - 0s 7ms/step
>7, 10/195, d1=0.700, d2=0.657 g=1.223
4/4 [==============================] - 0s 7ms/step
>7, 11/195, d1=0.690, d2=0.504 g=1.381
4/4 [==============================] - 0s 7ms/step
>7, 12/195, d1=0.643, d2=0.649 g=1.284
4/4 [==============================] - 0s 7ms/step
>7, 13/195, d1=0.652, d2=0.743 g=1.125
4/4 [==============================] - 0s 7ms/step
>7, 14/195, d1=0.662, d2=0.830 g=1.088
4/4 [==============================] - 0s 7ms/step
>7, 15/195, d1=0.735, d2=0.593 g=1.135
4/4 [==============================] - 0s 7ms/step
>7, 16/195, d1=0.685, d2=0.606 g=1.201
4/4 [==============================] - 0s 7ms/step
>7, 17/195, d1=0.580, d2=0.698 g=1.186
4/4 [==============================] - 0s 7ms/step
>7, 18/195, d1=0.702, d2=0.666 g=1.122
4/4 [==============================] - 0s 7ms/step
>7, 19/195, d1=0.698, d2=0.650 g=1.211
4/4 [==============================] - 0s 7ms/step
>7, 20/195, d1=0.653, d2=0.782 g=1.200
4/4 [==============================] - 0s 7ms/step
>7, 21/195, d1=0.694, d2=0.646 g=1.230
4/4 [==============================] - 0s 7ms/step
>7, 22/195, d1=0.716, d2=0.587 g=1.197
4/4 [==============================] - 0s 7ms/step
>7, 23/195, d1=0.709, d2=0.606 g=1.163
4/4 [==============================] - 0s 7ms/step
>7, 24/195, d1=0.649, d2=0.676 g=1.085
4/4 [==============================] - 0s 7ms/step
>7, 25/195, d1=0.709, d2=0.701 g=1.068
4/4 [==============================] - 0s 7ms/step
>7, 26/195, d1=0.701, d2=0.734 g=1.080
4/4 [==============================] - 0s 7ms/step
>7, 27/195, d1=0.703, d2=0.650 g=1.025
4/4 [==============================] - 0s 8ms/step
```

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>7, 28/195, d1=0.715, d2=0.664 g=1.016
4/4 [==============================] - 0s 7ms/step
>7, 29/195, d1=0.693, d2=0.628 g=1.050
4/4 [==============================] - 0s 7ms/step
>7, 30/195, d1=0.657, d2=0.616 g=1.118
4/4 [==============================] - 0s 7ms/step
>7, 31/195, d1=0.604, d2=0.584 g=1.156
4/4 [==============================] - 0s 7ms/step
>7, 32/195, d1=0.633, d2=0.608 g=1.166
4/4 [==============================] - 0s 7ms/step
>7, 33/195, d1=0.671, d2=0.635 g=1.140
4/4 [==============================] - 0s 7ms/step
>7, 34/195, d1=0.641, d2=0.715 g=1.239
4/4 [==============================] - 0s 7ms/step
>7, 35/195, d1=0.635, d2=0.662 g=1.416
4/4 [==============================] - 0s 7ms/step
>7, 36/195, d1=0.713, d2=0.569 g=1.430
4/4 [==============================] - 0s 7ms/step
>7, 37/195, d1=0.702, d2=0.645 g=1.330
4/4 [==============================] - 0s 7ms/step
>7, 38/195, d1=0.603, d2=0.733 g=1.262
4/4 [==============================] - 0s 7ms/step
>7, 39/195, d1=0.682, d2=0.786 g=1.078
4/4 [==============================] - 0s 8ms/step
>7, 40/195, d1=0.709, d2=0.661 g=1.119
4/4 [==============================] - 0s 7ms/step
>7, 41/195, d1=0.628, d2=0.584 g=1.169
4/4 [==============================] - 0s 7ms/step
>7, 42/195, d1=0.604, d2=0.742 g=1.112
4/4 [==============================] - 0s 7ms/step
>7, 43/195, d1=0.604, d2=0.738 g=1.148
4/4 [==============================] - 0s 7ms/step
>7, 44/195, d1=0.645, d2=0.608 g=1.248
4/4 [==============================] - 0s 7ms/step
>7, 45/195, d1=0.702, d2=0.617 g=1.238
4/4 [==============================] - 0s 7ms/step
>7, 46/195, d1=0.697, d2=0.698 g=1.240
4/4 [==============================] - 0s 7ms/step
>7, 47/195, d1=0.668, d2=0.691 g=1.378
4/4 [==============================] - 0s 7ms/step
>7, 48/195, d1=0.734, d2=0.498 g=1.475
4/4 [==============================] - 0s 7ms/step
>7, 49/195, d1=0.718, d2=0.574 g=1.373
4/4 [==============================] - 0s 7ms/step
>7, 50/195, d1=0.689, d2=0.687 g=1.280
4/4 [==============================] - 0s 7ms/step
>7, 51/195, d1=0.732, d2=1.107 g=1.413
4/4 [==============================] - 0s 7ms/step
```

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>7, 52/195, d1=0.742, d2=0.741 g=1.515
4/4 [==============================] - 0s 7ms/step
>7, 53/195, d1=0.878, d2=0.570 g=1.138
4/4 [==============================] - 0s 7ms/step
>7, 54/195, d1=0.796, d2=0.691 g=1.075
4/4 [==============================] - 0s 7ms/step
>7, 55/195, d1=0.610, d2=0.668 g=1.183
4/4 [==============================] - 0s 7ms/step
>7, 56/195, d1=0.507, d2=0.610 g=1.440
4/4 [==============================] - 0s 8ms/step
>7, 57/195, d1=0.560, d2=0.587 g=1.661
4/4 [==============================] - 0s 8ms/step
>7, 58/195, d1=0.508, d2=0.846 g=1.867
4/4 [==============================] - 0s 7ms/step
>7, 59/195, d1=0.767, d2=0.542 g=1.330
4/4 [==============================] - 0s 7ms/step
>7, 60/195, d1=0.679, d2=0.672 g=1.183
4/4 [==============================] - 0s 7ms/step
>7, 61/195, d1=0.684, d2=0.624 g=1.294
4/4 [==============================] - 0s 7ms/step
>7, 62/195, d1=0.636, d2=0.596 g=1.506
4/4 [==============================] - 0s 7ms/step
>7, 63/195, d1=0.669, d2=0.669 g=1.533
4/4 [==============================] - 0s 7ms/step
>7, 64/195, d1=0.572, d2=0.663 g=1.602
4/4 [==============================] - 0s 7ms/step
>7, 65/195, d1=0.711, d2=0.644 g=1.406
4/4 [==============================] - 0s 7ms/step
>7, 66/195, d1=0.691, d2=0.947 g=1.188
4/4 [==============================] - 0s 7ms/step
>7, 67/195, d1=0.756, d2=0.739 g=1.139
4/4 [==============================] - 0s 7ms/step
>7, 68/195, d1=0.685, d2=0.679 g=1.181
4/4 [==============================] - 0s 7ms/step
>7, 69/195, d1=0.677, d2=0.723 g=1.243
4/4 [==============================] - 0s 7ms/step
>7, 70/195, d1=0.697, d2=0.651 g=1.332
4/4 [==============================] - 0s 7ms/step
>7, 71/195, d1=0.641, d2=0.604 g=1.345
4/4 [==============================] - 0s 7ms/step
>7, 72/195, d1=0.527, d2=0.765 g=1.054
4/4 [==============================] - 0s 7ms/step
>7, 73/195, d1=0.611, d2=0.748 g=1.134
4/4 [==============================] - 0s 7ms/step
>7, 74/195, d1=0.625, d2=0.649 g=1.139
4/4 [==============================] - 0s 7ms/step
>7, 75/195, d1=0.840, d2=0.672 g=1.106
4/4 [==============================] - 0s 7ms/step
```

```
>7, 76/195, d1=0.707, d2=0.606 g=1.173
4/4 [==============================] - 0s 7ms/step
>7, 77/195, d1=0.668, d2=0.569 g=1.282
4/4 [==============================] - 0s 7ms/step
>7, 78/195, d1=0.679, d2=0.502 g=1.321
4/4 [==============================] - 0s 7ms/step
>7, 79/195, d1=0.611, d2=0.676 g=1.262
4/4 [==============================] - 0s 7ms/step
>7, 80/195, d1=0.601, d2=0.665 g=1.265
4/4 [==============================] - 0s 7ms/step
>7, 81/195, d1=0.600, d2=0.622 g=1.283
4/4 [==============================] - 0s 7ms/step
>7, 82/195, d1=0.650, d2=0.700 g=1.357
4/4 [==============================] - 0s 7ms/step
>7, 83/195, d1=0.635, d2=0.753 g=1.394
4/4 [==============================] - 0s 7ms/step
>7, 84/195, d1=0.736, d2=0.527 g=1.415
4/4 [==============================] - 0s 9ms/step
>7, 85/195, d1=0.678, d2=0.593 g=1.565
4/4 [==============================] - 0s 8ms/step
>7, 86/195, d1=0.602, d2=0.675 g=1.471
4/4 [==============================] - 0s 7ms/step
>7, 87/195, d1=0.665, d2=0.799 g=1.448
4/4 [==============================] - 0s 7ms/step
>7, 88/195, d1=0.661, d2=0.511 g=1.677
4/4 [==============================] - 0s 7ms/step
>7, 89/195, d1=0.652, d2=1.014 g=1.279
4/4 [==============================] - 0s 7ms/step
>7, 90/195, d1=0.754, d2=0.732 g=1.111
4/4 [==============================] - 0s 7ms/step
>7, 91/195, d1=0.805, d2=0.615 g=1.103
4/4 [==============================] - 0s 7ms/step
>7, 92/195, d1=0.766, d2=0.583 g=1.193
4/4 [==============================] - 0s 7ms/step
>7, 93/195, d1=0.663, d2=0.589 g=1.208
4/4 [==============================] - 0s 7ms/step
>7, 94/195, d1=0.688, d2=0.574 g=1.222
4/4 [==============================] - 0s 8ms/step
>7, 95/195, d1=0.688, d2=0.542 g=1.221
4/4 [==============================] - 0s 7ms/step
>7, 96/195, d1=0.685, d2=0.611 g=1.220
4/4 [==============================] - 0s 7ms/step
>7, 97/195, d1=0.594, d2=0.859 g=1.363
4/4 [==============================] - 0s 7ms/step
>7, 98/195, d1=0.686, d2=0.573 g=1.257
4/4 [==============================] - 0s 7ms/step
>7, 99/195, d1=0.689, d2=0.729 g=1.159
4/4 [==============================] - 0s 7ms/step
```

```
>7, 100/195, d1=0.669, d2=0.667 g=1.194
4/4 [==============================] - 0s 7ms/step
>7, 101/195, d1=0.709, d2=0.546 g=1.492
4/4 [==============================] - 0s 7ms/step
>7, 102/195, d1=0.631, d2=0.615 g=1.259
4/4 [==============================] - 0s 7ms/step
>7, 103/195, d1=0.665, d2=0.714 g=1.188
4/4 [==============================] - 0s 7ms/step
>7, 104/195, d1=0.646, d2=0.592 g=1.203
4/4 [==============================] - 0s 7ms/step
>7, 105/195, d1=0.627, d2=0.608 g=1.303
4/4 [==============================] - 0s 7ms/step
>7, 106/195, d1=0.619, d2=0.596 g=1.205
4/4 [==============================] - 0s 7ms/step
>7, 107/195, d1=0.576, d2=1.000 g=1.166
4/4 [==============================] - 0s 7ms/step
>7, 108/195, d1=0.678, d2=0.574 g=1.258
4/4 [==============================] - 0s 7ms/step
>7, 109/195, d1=0.684, d2=0.677 g=1.234
4/4 [==============================] - 0s 7ms/step
>7, 110/195, d1=0.722, d2=0.727 g=1.176
4/4 [==============================] - 0s 8ms/step
>7, 111/195, d1=0.640, d2=0.593 g=1.327
4/4 [==============================] - 0s 7ms/step
>7, 112/195, d1=0.705, d2=0.720 g=1.344
4/4 [==============================] - 0s 7ms/step
>7, 113/195, d1=0.747, d2=0.699 g=1.292
4/4 [==============================] - 0s 8ms/step
>7, 114/195, d1=0.697, d2=0.568 g=1.298
4/4 [==============================] - 0s 7ms/step
>7, 115/195, d1=0.659, d2=0.625 g=1.107
4/4 [==============================] - 0s 7ms/step
>7, 116/195, d1=0.651, d2=0.767 g=1.051
4/4 [==============================] - 0s 7ms/step
>7, 117/195, d1=0.594, d2=0.665 g=1.000
4/4 [==============================] - 0s 7ms/step
>7, 118/195, d1=0.670, d2=0.647 g=1.006
4/4 [==============================] - 0s 7ms/step
>7, 119/195, d1=0.696, d2=0.749 g=1.021
4/4 [==============================] - 0s 7ms/step
>7, 120/195, d1=0.708, d2=0.718 g=1.069
4/4 [==============================] - 0s 7ms/step
>7, 121/195, d1=0.687, d2=0.738 g=1.144
4/4 [==============================] - 0s 7ms/step
>7, 122/195, d1=0.703, d2=0.671 g=1.372
4/4 [==============================] - 0s 7ms/step
>7, 123/195, d1=0.676, d2=0.498 g=1.473
4/4 [==============================] - 0s 7ms/step
```

```
>7, 124/195, d1=0.650, d2=0.713 g=1.097
4/4 [==============================] - 0s 7ms/step
>7, 125/195, d1=0.699, d2=0.844 g=1.108
4/4 [==============================] - 0s 7ms/step
>7, 126/195, d1=0.703, d2=0.583 g=1.174
4/4 [==============================] - 0s 7ms/step
>7, 127/195, d1=0.687, d2=0.589 g=1.045
4/4 [==============================] - 0s 7ms/step
>7, 128/195, d1=0.680, d2=0.714 g=0.946
4/4 [==============================] - 0s 7ms/step
>7, 129/195, d1=0.635, d2=0.666 g=1.035
4/4 [==============================] - 0s 7ms/step
>7, 130/195, d1=0.648, d2=0.661 g=1.133
4/4 [==============================] - 0s 7ms/step
>7, 131/195, d1=0.630, d2=0.587 g=1.241
4/4 [==============================] - 0s 7ms/step
>7, 132/195, d1=0.723, d2=0.606 g=1.256
4/4 [==============================] - 0s 7ms/step
>7, 133/195, d1=0.629, d2=0.648 g=1.271
4/4 [==============================] - 0s 7ms/step
>7, 134/195, d1=0.695, d2=0.892 g=1.421
4/4 [==============================] - 0s 7ms/step
>7, 135/195, d1=0.839, d2=0.503 g=1.264
4/4 [==============================] - 0s 7ms/step
>7, 136/195, d1=0.711, d2=0.644 g=1.154
4/4 [==============================] - 0s 7ms/step
>7, 137/195, d1=0.716, d2=0.755 g=1.299
4/4 [==============================] - 0s 7ms/step
>7, 138/195, d1=0.643, d2=0.538 g=1.514
4/4 [==============================] - 0s 7ms/step
>7, 139/195, d1=0.676, d2=0.721 g=1.378
4/4 [==============================] - 0s 7ms/step
>7, 140/195, d1=0.587, d2=0.762 g=1.330
4/4 [==============================] - 0s 7ms/step
>7, 141/195, d1=0.611, d2=0.643 g=1.309
4/4 [==============================] - 0s 8ms/step
>7, 142/195, d1=0.613, d2=0.627 g=1.283
4/4 [==============================] - 0s 8ms/step
>7, 143/195, d1=0.638, d2=0.611 g=1.184
4/4 [==============================] - 0s 7ms/step
>7, 144/195, d1=0.520, d2=0.600 g=1.246
4/4 [==============================] - 0s 7ms/step
>7, 145/195, d1=0.559, d2=0.727 g=1.355
4/4 [==============================] - 0s 7ms/step
>7, 146/195, d1=0.519, d2=0.815 g=1.566
4/4 [==============================] - 0s 7ms/step
>7, 147/195, d1=0.761, d2=0.696 g=1.380
4/4 [==============================] - 0s 7ms/step
```

```
>7, 148/195, d1=0.810, d2=0.863 g=1.453
4/4 [==============================] - 0s 7ms/step
>7, 149/195, d1=0.674, d2=0.520 g=1.687
4/4 [==============================] - 0s 7ms/step
>7, 150/195, d1=0.722, d2=0.500 g=1.571
4/4 [==============================] - 0s 7ms/step
>7, 151/195, d1=0.640, d2=0.694 g=1.268
4/4 [==============================] - 0s 7ms/step
>7, 152/195, d1=0.703, d2=0.694 g=1.213
4/4 [==============================] - 0s 7ms/step
>7, 153/195, d1=0.736, d2=0.638 g=1.167
4/4 [==============================] - 0s 7ms/step
>7, 154/195, d1=0.799, d2=0.653 g=1.086
4/4 [==============================] - 0s 7ms/step
>7, 155/195, d1=0.664, d2=0.599 g=1.080
4/4 [==============================] - 0s 7ms/step
>7, 156/195, d1=0.688, d2=0.577 g=1.083
4/4 [==============================] - 0s 7ms/step
>7, 157/195, d1=0.552, d2=0.613 g=1.174
4/4 [==============================] - 0s 7ms/step
>7, 158/195, d1=0.540, d2=0.597 g=1.225
4/4 [==============================] - 0s 7ms/step
>7, 159/195, d1=0.523, d2=0.595 g=1.321
4/4 [==============================] - 0s 7ms/step
>7, 160/195, d1=0.568, d2=0.531 g=1.333
4/4 [==============================] - 0s 7ms/step
>7, 161/195, d1=0.492, d2=0.717 g=1.542
4/4 [==============================] - 0s 7ms/step
>7, 162/195, d1=0.639, d2=0.556 g=1.355
4/4 [==============================] - 0s 8ms/step
>7, 163/195, d1=0.654, d2=0.671 g=1.419
4/4 [==============================] - 0s 7ms/step
>7, 164/195, d1=0.758, d2=0.637 g=1.440
4/4 [==============================] - 0s 7ms/step
>7, 165/195, d1=0.704, d2=0.616 g=1.391
4/4 [==============================] - 0s 7ms/step
>7, 166/195, d1=0.737, d2=0.758 g=1.385
4/4 [==============================] - 0s 7ms/step
>7, 167/195, d1=0.754, d2=0.539 g=1.476
4/4 [==============================] - 0s 7ms/step
>7, 168/195, d1=0.715, d2=0.472 g=1.391
4/4 [==============================] - 0s 8ms/step
>7, 169/195, d1=0.608, d2=0.619 g=1.352
4/4 [==============================] - 0s 8ms/step
>7, 170/195, d1=0.595, d2=0.633 g=1.356
4/4 [==============================] - 0s 8ms/step
>7, 171/195, d1=0.635, d2=0.579 g=1.326
4/4 [==============================] - 0s 7ms/step
```

```
>7, 172/195, d1=0.628, d2=0.607 g=1.297
4/4 [==============================] - 0s 7ms/step
>7, 173/195, d1=0.615, d2=0.825 g=1.226
4/4 [==============================] - 0s 7ms/step
>7, 174/195, d1=0.692, d2=0.998 g=1.508
4/4 [==============================] - 0s 7ms/step
>7, 175/195, d1=0.796, d2=0.679 g=1.443
4/4 [==============================] - 0s 7ms/step
>7, 176/195, d1=0.836, d2=0.517 g=1.500
4/4 [==============================] - 0s 8ms/step
>7, 177/195, d1=0.817, d2=0.540 g=1.372
4/4 [==============================] - 0s 7ms/step
>7, 178/195, d1=0.641, d2=0.622 g=1.263
4/4 [==============================] - 0s 7ms/step
>7, 179/195, d1=0.697, d2=0.658 g=1.257
4/4 [==============================] - 0s 7ms/step
>7, 180/195, d1=0.654, d2=0.602 g=1.244
4/4 [==============================] - 0s 7ms/step
>7, 181/195, d1=0.654, d2=0.729 g=1.213
4/4 [==============================] - 0s 8ms/step
>7, 182/195, d1=0.602, d2=0.861 g=1.267
4/4 [==============================] - 0s 7ms/step
>7, 183/195, d1=0.630, d2=0.549 g=1.465
4/4 [==============================] - 0s 7ms/step
>7, 184/195, d1=0.618, d2=0.669 g=1.629
4/4 [==============================] - 0s 7ms/step
>7, 185/195, d1=0.681, d2=0.811 g=1.383
4/4 [==============================] - 0s 7ms/step
>7, 186/195, d1=0.725, d2=0.535 g=1.363
4/4 [==============================] - 0s 7ms/step
>7, 187/195, d1=0.721, d2=0.549 g=1.279
4/4 [==============================] - 0s 7ms/step
>7, 188/195, d1=0.633, d2=0.681 g=1.175
4/4 [==============================] - 0s 7ms/step
>7, 189/195, d1=0.645, d2=0.783 g=1.187
4/4 [==============================] - 0s 7ms/step
>7, 190/195, d1=0.611, d2=0.905 g=1.304
4/4 [==============================] - 0s 7ms/step
>7, 191/195, d1=0.722, d2=0.802 g=1.289
4/4 [==============================] - 0s 9ms/step
>7, 192/195, d1=0.787, d2=0.491 g=1.260
4/4 [==============================] - 0s 7ms/step
>7, 193/195, d1=0.765, d2=0.571 g=1.125
4/4 [==============================] - 0s 7ms/step
>7, 194/195, d1=0.636, d2=0.613 g=1.170
4/4 [==============================] - 0s 7ms/step
>7, 195/195, d1=0.640, d2=0.619 g=1.190
5/5 [==============================] - 0s 7ms/step
```

```
>Accuracy real: 59%, fake: 65%

WARNING:tensorflow:Compiled the loaded model, but the compiled metrics have yet
to be built. `model.compile_metrics` will be empty until you train or evaluate
the model.

4/4 [==============================] - 0s 15ms/step
>8, 1/195, d1=0.654, d2=0.701 g=1.229
4/4 [==============================] - 0s 7ms/step
>8, 2/195, d1=0.552, d2=0.721 g=1.340
4/4 [==============================] - 0s 7ms/step
>8, 3/195, d1=0.666, d2=0.721 g=1.213
4/4 [==============================] - 0s 7ms/step
>8, 4/195, d1=0.580, d2=0.740 g=1.142
4/4 [==============================] - 0s 7ms/step
>8, 5/195, d1=0.606, d2=0.641 g=1.158
4/4 [==============================] - 0s 7ms/step
>8, 6/195, d1=0.560, d2=0.661 g=1.225
4/4 [==============================] - 0s 7ms/step
>8, 7/195, d1=0.553, d2=0.593 g=1.339
4/4 [==============================] - 0s 7ms/step
>8, 8/195, d1=0.688, d2=0.727 g=1.282
4/4 [==============================] - 0s 7ms/step
>8, 9/195, d1=0.653, d2=0.685 g=1.265
4/4 [==============================] - 0s 7ms/step
>8, 10/195, d1=0.654, d2=0.646 g=1.299
4/4 [==============================] - 0s 7ms/step
>8, 11/195, d1=0.733, d2=0.587 g=1.279
4/4 [==============================] - 0s 7ms/step
>8, 12/195, d1=0.706, d2=0.580 g=1.356
4/4 [==============================] - 0s 7ms/step
>8, 13/195, d1=0.559, d2=0.582 g=1.530
4/4 [==============================] - 0s 7ms/step
>8, 14/195, d1=0.568, d2=0.621 g=1.973
4/4 [==============================] - 0s 7ms/step
>8, 15/195, d1=0.750, d2=0.510 g=1.563
4/4 [==============================] - 0s 7ms/step
>8, 16/195, d1=0.666, d2=0.771 g=1.261
4/4 [==============================] - 0s 7ms/step
>8, 17/195, d1=0.662, d2=0.648 g=1.256
4/4 [==============================] - 0s 7ms/step
>8, 18/195, d1=0.767, d2=0.599 g=1.206
4/4 [==============================] - 0s 7ms/step
>8, 19/195, d1=0.700, d2=0.662 g=1.124
4/4 [==============================] - 0s 7ms/step
>8, 20/195, d1=0.689, d2=0.664 g=1.204
4/4 [==============================] - 0s 7ms/step
>8, 21/195, d1=0.609, d2=0.555 g=1.322
4/4 [==============================] - 0s 7ms/step
```

```
>8, 22/195, d1=0.580, d2=0.536 g=1.367
4/4 [==============================] - 0s 7ms/step
>8, 23/195, d1=0.546, d2=0.667 g=1.488
4/4 [==============================] - 0s 7ms/step
>8, 24/195, d1=0.578, d2=0.598 g=1.494
4/4 [==============================] - 0s 8ms/step
>8, 25/195, d1=0.608, d2=0.730 g=1.540
4/4 [==============================] - 0s 7ms/step
>8, 26/195, d1=0.692, d2=0.504 g=1.440
4/4 [==============================] - 0s 7ms/step
>8, 27/195, d1=0.628, d2=0.654 g=1.484
4/4 [==============================] - 0s 7ms/step
>8, 28/195, d1=0.481, d2=0.586 g=1.556
4/4 [==============================] - 0s 7ms/step
>8, 29/195, d1=0.566, d2=0.816 g=1.795
4/4 [==============================] - 0s 7ms/step
>8, 30/195, d1=0.766, d2=0.787 g=1.272
4/4 [==============================] - 0s 7ms/step
>8, 31/195, d1=0.584, d2=2.093 g=1.484
4/4 [==============================] - 0s 7ms/step
>8, 32/195, d1=0.939, d2=1.158 g=2.328
4/4 [==============================] - 0s 7ms/step
>8, 33/195, d1=1.498, d2=0.671 g=1.244
4/4 [==============================] - 0s 7ms/step
>8, 34/195, d1=0.712, d2=0.711 g=1.069
4/4 [==============================] - 0s 7ms/step
>8, 35/195, d1=0.595, d2=0.669 g=1.209
4/4 [==============================] - 0s 7ms/step
>8, 36/195, d1=0.604, d2=0.587 g=1.264
4/4 [==============================] - 0s 8ms/step
>8, 37/195, d1=0.588, d2=0.980 g=1.166
4/4 [==============================] - 0s 7ms/step
>8, 38/195, d1=0.683, d2=0.750 g=1.242
4/4 [==============================] - 0s 7ms/step
>8, 39/195, d1=0.793, d2=0.650 g=1.243
4/4 [==============================] - 0s 7ms/step
>8, 40/195, d1=0.749, d2=0.619 g=1.217
4/4 [==============================] - 0s 7ms/step
>8, 41/195, d1=0.739, d2=0.650 g=1.295
4/4 [==============================] - 0s 7ms/step
>8, 42/195, d1=0.754, d2=0.576 g=1.382
4/4 [==============================] - 0s 7ms/step
>8, 43/195, d1=0.781, d2=0.659 g=1.294
4/4 [==============================] - 0s 7ms/step
>8, 44/195, d1=0.711, d2=0.611 g=1.108
4/4 [==============================] - 0s 7ms/step
>8, 45/195, d1=0.649, d2=0.678 g=0.976
4/4 [==============================] - 0s 7ms/step
```

```
>8, 46/195, d1=0.619, d2=0.803 g=0.997
4/4 [==============================] - 0s 8ms/step
>8, 47/195, d1=0.560, d2=0.792 g=1.051
4/4 [==============================] - 0s 7ms/step
>8, 48/195, d1=0.629, d2=0.780 g=1.207
4/4 [==============================] - 0s 7ms/step
>8, 49/195, d1=0.688, d2=0.527 g=1.387
4/4 [==============================] - 0s 7ms/step
>8, 50/195, d1=0.760, d2=0.685 g=1.458
4/4 [==============================] - 0s 7ms/step
>8, 51/195, d1=0.740, d2=0.603 g=1.283
4/4 [==============================] - 0s 7ms/step
>8, 52/195, d1=0.641, d2=0.757 g=1.274
4/4 [==============================] - 0s 7ms/step
>8, 53/195, d1=0.698, d2=0.581 g=1.321
4/4 [==============================] - 0s 7ms/step
>8, 54/195, d1=0.742, d2=0.609 g=1.190
4/4 [==============================] - 0s 7ms/step
>8, 55/195, d1=0.707, d2=0.638 g=1.086
4/4 [==============================] - 0s 8ms/step
>8, 56/195, d1=0.733, d2=0.603 g=1.074
4/4 [==============================] - 0s 7ms/step
>8, 57/195, d1=0.669, d2=0.680 g=1.161
4/4 [==============================] - 0s 8ms/step
>8, 58/195, d1=0.692, d2=0.573 g=1.202
4/4 [==============================] - 0s 7ms/step
>8, 59/195, d1=0.703, d2=0.686 g=1.211
4/4 [==============================] - 0s 7ms/step
>8, 60/195, d1=0.677, d2=1.023 g=1.293
4/4 [==============================] - 0s 7ms/step
>8, 61/195, d1=0.678, d2=0.728 g=1.319
4/4 [==============================] - 0s 7ms/step
>8, 62/195, d1=0.697, d2=0.632 g=1.158
4/4 [==============================] - 0s 7ms/step
>8, 63/195, d1=0.702, d2=0.774 g=1.202
4/4 [==============================] - 0s 7ms/step
>8, 64/195, d1=0.707, d2=0.881 g=1.335
4/4 [==============================] - 0s 7ms/step
>8, 65/195, d1=0.726, d2=0.430 g=1.496
4/4 [==============================] - 0s 7ms/step
>8, 66/195, d1=0.728, d2=0.540 g=1.347
4/4 [==============================] - 0s 7ms/step
>8, 67/195, d1=0.640, d2=0.662 g=1.192
4/4 [==============================] - 0s 7ms/step
>8, 68/195, d1=0.677, d2=0.669 g=1.558
4/4 [==============================] - 0s 7ms/step
>8, 69/195, d1=0.724, d2=0.601 g=1.357
4/4 [==============================] - 0s 7ms/step
```

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>8, 70/195, d1=0.710, d2=1.016 g=1.498
4/4 [==============================] - 0s 7ms/step
>8, 71/195, d1=0.937, d2=0.469 g=1.291
4/4 [==============================] - 0s 7ms/step
>8, 72/195, d1=0.747, d2=0.528 g=1.182
4/4 [==============================] - 0s 7ms/step
>8, 73/195, d1=0.681, d2=0.529 g=1.180
4/4 [==============================] - 0s 7ms/step
>8, 74/195, d1=0.589, d2=0.654 g=1.092
4/4 [==============================] - 0s 7ms/step
>8, 75/195, d1=0.529, d2=0.575 g=1.172
4/4 [==============================] - 0s 7ms/step
>8, 76/195, d1=0.577, d2=0.599 g=1.146
4/4 [==============================] - 0s 7ms/step
>8, 77/195, d1=0.553, d2=0.689 g=1.223
4/4 [==============================] - 0s 7ms/step
>8, 78/195, d1=0.625, d2=0.678 g=1.411
4/4 [==============================] - 0s 7ms/step
>8, 79/195, d1=0.607, d2=0.661 g=1.208
4/4 [==============================] - 0s 7ms/step
>8, 80/195, d1=0.673, d2=0.902 g=1.261
4/4 [==============================] - 0s 7ms/step
>8, 81/195, d1=0.697, d2=0.677 g=1.465
4/4 [==============================] - 0s 7ms/step
>8, 82/195, d1=0.752, d2=0.543 g=1.354
4/4 [==============================] - 0s 7ms/step
>8, 83/195, d1=0.715, d2=0.681 g=1.245
4/4 [==============================] - 0s 8ms/step
>8, 84/195, d1=0.674, d2=0.555 g=1.316
4/4 [==============================] - 0s 7ms/step
>8, 85/195, d1=0.599, d2=0.566 g=1.334
4/4 [==============================] - 0s 8ms/step
>8, 86/195, d1=0.684, d2=0.601 g=1.180
4/4 [==============================] - 0s 7ms/step
>8, 87/195, d1=0.600, d2=0.671 g=1.146
4/4 [==============================] - 0s 7ms/step
>8, 88/195, d1=0.633, d2=0.644 g=1.193
4/4 [==============================] - 0s 7ms/step
>8, 89/195, d1=0.594, d2=0.576 g=1.223
4/4 [==============================] - 0s 7ms/step
>8, 90/195, d1=0.595, d2=0.642 g=1.282
4/4 [==============================] - 0s 7ms/step
>8, 91/195, d1=0.561, d2=0.614 g=1.468
4/4 [==============================] - 0s 7ms/step
>8, 92/195, d1=0.668, d2=0.630 g=1.638
4/4 [==============================] - 0s 7ms/step
>8, 93/195, d1=0.720, d2=0.553 g=1.691
4/4 [==============================] - 0s 7ms/step
```

```
>8, 94/195, d1=0.631, d2=1.087 g=1.735
4/4 [==============================] - 0s 7ms/step
>8, 95/195, d1=0.695, d2=1.031 g=1.445
4/4 [==============================] - 0s 7ms/step
>8, 96/195, d1=0.873, d2=0.613 g=1.168
4/4 [==============================] - 0s 7ms/step
>8, 97/195, d1=0.805, d2=0.583 g=1.138
4/4 [==============================] - 0s 7ms/step
>8, 98/195, d1=0.770, d2=0.554 g=1.401
4/4 [==============================] - 0s 7ms/step
>8, 99/195, d1=0.647, d2=0.605 g=1.321
4/4 [==============================] - 0s 7ms/step
>8, 100/195, d1=0.652, d2=0.886 g=1.159
4/4 [==============================] - 0s 7ms/step
>8, 101/195, d1=0.746, d2=0.733 g=1.101
4/4 [==============================] - 0s 7ms/step
>8, 102/195, d1=0.765, d2=0.629 g=1.185
4/4 [==============================] - 0s 7ms/step
>8, 103/195, d1=0.670, d2=0.535 g=1.245
4/4 [==============================] - 0s 7ms/step
>8, 104/195, d1=0.615, d2=0.609 g=1.088
4/4 [==============================] - 0s 7ms/step
>8, 105/195, d1=0.617, d2=0.749 g=1.176
4/4 [==============================] - 0s 7ms/step
>8, 106/195, d1=0.659, d2=0.600 g=1.142
4/4 [==============================] - 0s 7ms/step
>8, 107/195, d1=0.686, d2=0.707 g=1.141
4/4 [==============================] - 0s 7ms/step
>8, 108/195, d1=0.674, d2=0.690 g=1.114
4/4 [==============================] - 0s 7ms/step
>8, 109/195, d1=0.680, d2=0.631 g=1.220
4/4 [==============================] - 0s 7ms/step
>8, 110/195, d1=0.702, d2=0.589 g=1.256
4/4 [==============================] - 0s 7ms/step
>8, 111/195, d1=0.661, d2=0.691 g=1.093
4/4 [==============================] - 0s 8ms/step
>8, 112/195, d1=0.627, d2=0.639 g=1.186
4/4 [==============================] - 0s 7ms/step
>8, 113/195, d1=0.588, d2=0.598 g=1.256
4/4 [==============================] - 0s 8ms/step
>8, 114/195, d1=0.584, d2=0.749 g=1.273
4/4 [==============================] - 0s 8ms/step
>8, 115/195, d1=0.666, d2=0.677 g=1.242
4/4 [==============================] - 0s 7ms/step
>8, 116/195, d1=0.730, d2=0.606 g=1.235
4/4 [==============================] - 0s 7ms/step
>8, 117/195, d1=0.786, d2=0.624 g=1.297
4/4 [==============================] - 0s 7ms/step
```

```
>8, 118/195, d1=0.685, d2=0.530 g=1.363
4/4 [==============================] - 0s 7ms/step
>8, 119/195, d1=0.626, d2=0.582 g=1.245
4/4 [==============================] - 0s 7ms/step
>8, 120/195, d1=0.588, d2=0.689 g=1.256
4/4 [==============================] - 0s 7ms/step
>8, 121/195, d1=0.606, d2=0.706 g=1.278
4/4 [==============================] - 0s 7ms/step
>8, 122/195, d1=0.657, d2=0.651 g=1.233
4/4 [==============================] - 0s 7ms/step
>8, 123/195, d1=0.612, d2=0.585 g=1.365
4/4 [==============================] - 0s 7ms/step
>8, 124/195, d1=0.641, d2=0.529 g=1.449
4/4 [==============================] - 0s 7ms/step
>8, 125/195, d1=0.624, d2=0.515 g=1.643
4/4 [==============================] - 0s 7ms/step
>8, 126/195, d1=0.561, d2=0.530 g=1.563
4/4 [==============================] - 0s 7ms/step
>8, 127/195, d1=0.587, d2=1.081 g=1.733
4/4 [==============================] - 0s 7ms/step
>8, 128/195, d1=0.826, d2=0.623 g=1.438
4/4 [==============================] - 0s 7ms/step
>8, 129/195, d1=0.742, d2=0.724 g=1.345
4/4 [==============================] - 0s 7ms/step
>8, 130/195, d1=0.657, d2=0.628 g=1.536
4/4 [==============================] - 0s 7ms/step
>8, 131/195, d1=0.669, d2=0.591 g=1.479
4/4 [==============================] - 0s 7ms/step
>8, 132/195, d1=0.617, d2=0.692 g=1.429
4/4 [==============================] - 0s 7ms/step
>8, 133/195, d1=0.639, d2=0.824 g=1.437
4/4 [==============================] - 0s 8ms/step
>8, 134/195, d1=0.762, d2=0.568 g=1.279
4/4 [==============================] - 0s 7ms/step
>8, 135/195, d1=0.652, d2=0.518 g=1.220
4/4 [==============================] - 0s 7ms/step
>8, 136/195, d1=0.525, d2=0.582 g=1.311
4/4 [==============================] - 0s 7ms/step
>8, 137/195, d1=0.488, d2=0.584 g=1.379
4/4 [==============================] - 0s 7ms/step
>8, 138/195, d1=0.539, d2=0.753 g=1.409
4/4 [==============================] - 0s 7ms/step
>8, 139/195, d1=0.593, d2=0.667 g=1.551
4/4 [==============================] - 0s 7ms/step
>8, 140/195, d1=0.664, d2=0.698 g=1.742
4/4 [==============================] - 0s 8ms/step
>8, 141/195, d1=0.593, d2=0.582 g=1.664
4/4 [==============================] - 0s 7ms/step
```

```
>8, 142/195, d1=0.697, d2=0.994 g=1.550
4/4 [==============================] - 0s 8ms/step
>8, 143/195, d1=0.957, d2=0.683 g=1.299
4/4 [==============================] - 0s 7ms/step
>8, 144/195, d1=0.857, d2=0.542 g=1.334
4/4 [==============================] - 0s 7ms/step
>8, 145/195, d1=0.690, d2=0.507 g=1.382
4/4 [==============================] - 0s 8ms/step
>8, 146/195, d1=0.561, d2=0.640 g=1.252
4/4 [==============================] - 0s 7ms/step
>8, 147/195, d1=0.610, d2=0.650 g=1.214
4/4 [==============================] - 0s 7ms/step
>8, 148/195, d1=0.660, d2=0.676 g=1.122
4/4 [==============================] - 0s 7ms/step
>8, 149/195, d1=0.613, d2=0.711 g=1.152
4/4 [==============================] - 0s 7ms/step
>8, 150/195, d1=0.569, d2=0.571 g=1.335
4/4 [==============================] - 0s 7ms/step
>8, 151/195, d1=0.628, d2=0.646 g=1.429
4/4 [==============================] - 0s 7ms/step
>8, 152/195, d1=0.688, d2=0.585 g=1.603
4/4 [==============================] - 0s 7ms/step
>8, 153/195, d1=0.617, d2=0.531 g=1.557
4/4 [==============================] - 0s 7ms/step
>8, 154/195, d1=0.649, d2=0.658 g=1.367
4/4 [==============================] - 0s 7ms/step
>8, 155/195, d1=0.572, d2=0.674 g=1.346
4/4 [==============================] - 0s 7ms/step
>8, 156/195, d1=0.577, d2=0.709 g=1.394
4/4 [==============================] - 0s 7ms/step
>8, 157/195, d1=0.790, d2=0.712 g=1.298
4/4 [==============================] - 0s 7ms/step
>8, 158/195, d1=0.669, d2=0.677 g=1.350
4/4 [==============================] - 0s 7ms/step
>8, 159/195, d1=0.699, d2=0.526 g=1.311
4/4 [==============================] - 0s 7ms/step
>8, 160/195, d1=0.696, d2=0.625 g=1.343
4/4 [==============================] - 0s 7ms/step
>8, 161/195, d1=0.635, d2=0.523 g=1.450
4/4 [==============================] - 0s 7ms/step
>8, 162/195, d1=0.543, d2=0.627 g=1.439
4/4 [==============================] - 0s 7ms/step
>8, 163/195, d1=0.622, d2=0.650 g=1.618
4/4 [==============================] - 0s 7ms/step
>8, 164/195, d1=0.662, d2=0.626 g=1.577
4/4 [==============================] - 0s 7ms/step
>8, 165/195, d1=0.688, d2=0.661 g=1.666
4/4 [==============================] - 0s 7ms/step
```

```
>8, 166/195, d1=0.650, d2=0.650 g=1.460
4/4 [==============================] - 0s 7ms/step
>8, 167/195, d1=0.673, d2=1.058 g=1.371
4/4 [==============================] - 0s 7ms/step
>8, 168/195, d1=0.913, d2=0.630 g=1.183
4/4 [==============================] - 0s 7ms/step
>8, 169/195, d1=0.736, d2=0.608 g=1.235
4/4 [==============================] - 0s 7ms/step
>8, 170/195, d1=0.670, d2=0.583 g=1.328
4/4 [==============================] - 0s 8ms/step
>8, 171/195, d1=0.601, d2=0.636 g=1.269
4/4 [==============================] - 0s 7ms/step
>8, 172/195, d1=0.661, d2=0.598 g=1.178
4/4 [==============================] - 0s 7ms/step
>8, 173/195, d1=0.635, d2=0.538 g=1.173
4/4 [==============================] - 0s 7ms/step
>8, 174/195, d1=0.657, d2=0.554 g=1.205
4/4 [==============================] - 0s 7ms/step
>8, 175/195, d1=0.584, d2=0.634 g=1.177
4/4 [==============================] - 0s 7ms/step
>8, 176/195, d1=0.544, d2=0.766 g=1.282
4/4 [==============================] - 0s 7ms/step
>8, 177/195, d1=0.595, d2=0.897 g=1.423
4/4 [==============================] - 0s 7ms/step
>8, 178/195, d1=0.636, d2=0.593 g=1.599
4/4 [==============================] - 0s 7ms/step
>8, 179/195, d1=0.542, d2=0.697 g=1.544
4/4 [==============================] - 0s 7ms/step
>8, 180/195, d1=0.646, d2=0.507 g=1.607
4/4 [==============================] - 0s 7ms/step
>8, 181/195, d1=0.562, d2=0.739 g=1.858
4/4 [==============================] - 0s 7ms/step
>8, 182/195, d1=0.673, d2=0.657 g=1.707
4/4 [==============================] - 0s 7ms/step
>8, 183/195, d1=0.758, d2=0.963 g=1.467
4/4 [==============================] - 0s 7ms/step
>8, 184/195, d1=0.902, d2=0.853 g=1.437
4/4 [==============================] - 0s 7ms/step
>8, 185/195, d1=0.804, d2=0.492 g=1.234
4/4 [==============================] - 0s 7ms/step
>8, 186/195, d1=0.698, d2=0.629 g=1.121
4/4 [==============================] - 0s 7ms/step
>8, 187/195, d1=0.615, d2=0.660 g=1.122
4/4 [==============================] - 0s 7ms/step
>8, 188/195, d1=0.699, d2=0.638 g=1.200
4/4 [==============================] - 0s 7ms/step
>8, 189/195, d1=0.693, d2=0.528 g=1.278
4/4 [==============================] - 0s 7ms/step
```

```
>8, 190/195, d1=0.690, d2=0.671 g=1.353
4/4 [==============================] - 0s 7ms/step
>8, 191/195, d1=0.643, d2=0.651 g=1.334
4/4 [==============================] - 0s 7ms/step
>8, 192/195, d1=0.645, d2=0.612 g=1.287
4/4 [==============================] - 0s 7ms/step
>8, 193/195, d1=0.703, d2=0.593 g=1.210
4/4 [==============================] - 0s 7ms/step
>8, 194/195, d1=0.658, d2=0.649 g=1.232
4/4 [==============================] - 0s 7ms/step
>8, 195/195, d1=0.652, d2=0.649 g=1.211
5/5 [==============================] - 0s 7ms/step
>Accuracy real: 53%, fake: 82%

WARNING:tensorflow:Compiled the loaded model, but the compiled metrics have yet
to be built. `model.compile_metrics` will be empty until you train or evaluate
the model.

4/4 [==============================] - 0s 15ms/step
>9, 1/195, d1=0.609, d2=0.628 g=1.231
4/4 [==============================] - 0s 7ms/step
>9, 2/195, d1=0.555, d2=0.609 g=1.384
4/4 [==============================] - 0s 7ms/step
>9, 3/195, d1=0.569, d2=0.543 g=1.608
4/4 [==============================] - 0s 7ms/step
>9, 4/195, d1=0.553, d2=0.538 g=1.669
4/4 [==============================] - 0s 7ms/step
>9, 5/195, d1=0.533, d2=0.674 g=1.545
4/4 [==============================] - 0s 7ms/step
>9, 6/195, d1=0.695, d2=0.759 g=1.279
4/4 [==============================] - 0s 7ms/step
>9, 7/195, d1=0.726, d2=0.678 g=1.225
4/4 [==============================] - 0s 7ms/step
>9, 8/195, d1=0.667, d2=0.646 g=1.275
4/4 [==============================] - 0s 8ms/step
>9, 9/195, d1=0.609, d2=0.552 g=1.290
4/4 [==============================] - 0s 7ms/step
>9, 10/195, d1=0.628, d2=0.707 g=1.363
4/4 [==============================] - 0s 7ms/step
>9, 11/195, d1=0.680, d2=0.753 g=1.234
4/4 [==============================] - 0s 7ms/step
>9, 12/195, d1=0.741, d2=0.638 g=1.184
4/4 [==============================] - 0s 7ms/step
>9, 13/195, d1=0.713, d2=0.552 g=1.272
4/4 [==============================] - 0s 7ms/step
>9, 14/195, d1=0.618, d2=0.467 g=1.542
4/4 [==============================] - 0s 7ms/step
>9, 15/195, d1=0.467, d2=0.459 g=1.747
4/4 [==============================] - 0s 7ms/step
```

```
>9, 16/195, d1=0.445, d2=0.895 g=1.672
4/4 [==============================] - 0s 7ms/step
>9, 17/195, d1=0.712, d2=0.783 g=1.946
4/4 [==============================] - 0s 7ms/step
>9, 18/195, d1=0.856, d2=0.458 g=1.686
4/4 [==============================] - 0s 7ms/step
>9, 19/195, d1=0.694, d2=0.692 g=1.237
4/4 [==============================] - 0s 8ms/step
>9, 20/195, d1=0.555, d2=0.870 g=1.307
4/4 [==============================] - 0s 7ms/step
>9, 21/195, d1=0.645, d2=0.485 g=1.410
4/4 [==============================] - 0s 7ms/step
>9, 22/195, d1=0.674, d2=0.477 g=1.381
4/4 [==============================] - 0s 7ms/step
>9, 23/195, d1=0.571, d2=0.615 g=1.392
4/4 [==============================] - 0s 7ms/step
>9, 24/195, d1=0.603, d2=0.809 g=1.408
4/4 [==============================] - 0s 7ms/step
>9, 25/195, d1=0.691, d2=3.291 g=1.647
4/4 [==============================] - 0s 7ms/step
>9, 26/195, d1=1.048, d2=1.422 g=1.456
4/4 [==============================] - 0s 7ms/step
>9, 27/195, d1=0.983, d2=0.681 g=1.125
4/4 [==============================] - 0s 8ms/step
>9, 28/195, d1=0.688, d2=0.635 g=1.188
4/4 [==============================] - 0s 7ms/step
>9, 29/195, d1=0.614, d2=0.626 g=1.280
4/4 [==============================] - 0s 7ms/step
>9, 30/195, d1=0.677, d2=0.597 g=1.217
4/4 [==============================] - 0s 7ms/step
>9, 31/195, d1=0.583, d2=0.747 g=1.376
4/4 [==============================] - 0s 7ms/step
>9, 32/195, d1=0.625, d2=0.630 g=1.478
4/4 [==============================] - 0s 7ms/step
>9, 33/195, d1=0.620, d2=0.770 g=1.134
4/4 [==============================] - 0s 7ms/step
>9, 34/195, d1=0.616, d2=0.764 g=1.180
4/4 [==============================] - 0s 7ms/step
>9, 35/195, d1=0.686, d2=0.646 g=1.194
4/4 [==============================] - 0s 7ms/step
>9, 36/195, d1=0.728, d2=0.666 g=1.191
4/4 [==============================] - 0s 7ms/step
>9, 37/195, d1=0.718, d2=0.562 g=1.275
4/4 [==============================] - 0s 7ms/step
>9, 38/195, d1=0.628, d2=0.632 g=1.305
4/4 [==============================] - 0s 7ms/step
>9, 39/195, d1=0.667, d2=0.693 g=1.346
4/4 [==============================] - 0s 7ms/step
```

```
>9, 40/195, d1=0.683, d2=0.727 g=1.258
4/4 [==============================] - 0s 7ms/step
>9, 41/195, d1=0.728, d2=0.690 g=1.475
4/4 [==============================] - 0s 7ms/step
>9, 42/195, d1=0.667, d2=0.590 g=1.642
4/4 [==============================] - 0s 7ms/step
>9, 43/195, d1=0.726, d2=0.659 g=1.274
4/4 [==============================] - 0s 7ms/step
>9, 44/195, d1=0.720, d2=0.783 g=1.217
4/4 [==============================] - 0s 7ms/step
>9, 45/195, d1=0.748, d2=0.598 g=1.243
4/4 [==============================] - 0s 7ms/step
>9, 46/195, d1=0.697, d2=0.614 g=1.384
4/4 [==============================] - 0s 7ms/step
>9, 47/195, d1=0.691, d2=0.731 g=1.193
4/4 [==============================] - 0s 7ms/step
>9, 48/195, d1=0.620, d2=0.742 g=1.122
4/4 [==============================] - 0s 7ms/step
>9, 49/195, d1=0.566, d2=0.704 g=1.152
4/4 [==============================] - 0s 7ms/step
>9, 50/195, d1=0.661, d2=0.663 g=1.253
4/4 [==============================] - 0s 7ms/step
>9, 51/195, d1=0.639, d2=0.822 g=1.396
4/4 [==============================] - 0s 7ms/step
>9, 52/195, d1=0.736, d2=0.691 g=1.308
4/4 [==============================] - 0s 7ms/step
>9, 53/195, d1=0.651, d2=0.860 g=1.322
4/4 [==============================] - 0s 7ms/step
>9, 54/195, d1=0.731, d2=0.845 g=1.488
4/4 [==============================] - 0s 7ms/step
>9, 55/195, d1=0.662, d2=0.576 g=1.720
4/4 [==============================] - 0s 7ms/step
>9, 56/195, d1=0.757, d2=0.637 g=1.514
4/4 [==============================] - 0s 7ms/step
>9, 57/195, d1=0.833, d2=0.533 g=1.214
4/4 [==============================] - 0s 8ms/step
>9, 58/195, d1=0.707, d2=0.588 g=1.036
4/4 [==============================] - 0s 7ms/step
>9, 59/195, d1=0.599, d2=0.694 g=1.052
4/4 [==============================] - 0s 7ms/step
>9, 60/195, d1=0.517, d2=0.631 g=1.136
4/4 [==============================] - 0s 7ms/step
>9, 61/195, d1=0.576, d2=0.587 g=1.189
4/4 [==============================] - 0s 7ms/step
>9, 62/195, d1=0.573, d2=0.706 g=1.330
4/4 [==============================] - 0s 7ms/step
>9, 63/195, d1=0.589, d2=0.570 g=1.387
4/4 [==============================] - 0s 7ms/step
```

```
>9, 64/195, d1=0.700, d2=0.680 g=1.407
4/4 [==============================] - 0s 7ms/step
>9, 65/195, d1=0.687, d2=0.568 g=1.486
4/4 [==============================] - 0s 7ms/step
>9, 66/195, d1=0.718, d2=0.591 g=1.641
4/4 [==============================] - 0s 7ms/step
>9, 67/195, d1=0.738, d2=0.614 g=1.633
4/4 [==============================] - 0s 7ms/step
>9, 68/195, d1=0.660, d2=0.657 g=1.628
4/4 [==============================] - 0s 7ms/step
>9, 69/195, d1=0.739, d2=0.652 g=1.417
4/4 [==============================] - 0s 7ms/step
>9, 70/195, d1=0.671, d2=0.689 g=1.192
4/4 [==============================] - 0s 7ms/step
>9, 71/195, d1=0.671, d2=0.702 g=1.175
4/4 [==============================] - 0s 7ms/step
>9, 72/195, d1=0.626, d2=0.685 g=1.271
4/4 [==============================] - 0s 7ms/step
>9, 73/195, d1=0.659, d2=0.670 g=1.464
4/4 [==============================] - 0s 7ms/step
>9, 74/195, d1=0.677, d2=0.598 g=1.359
4/4 [==============================] - 0s 7ms/step
>9, 75/195, d1=0.631, d2=0.676 g=1.273
4/4 [==============================] - 0s 7ms/step
>9, 76/195, d1=0.595, d2=0.769 g=1.267
4/4 [==============================] - 0s 7ms/step
>9, 77/195, d1=0.623, d2=0.560 g=1.420
4/4 [==============================] - 0s 7ms/step
>9, 78/195, d1=0.613, d2=0.516 g=1.681
4/4 [==============================] - 0s 7ms/step
>9, 79/195, d1=0.599, d2=0.663 g=1.340
4/4 [==============================] - 0s 7ms/step
>9, 80/195, d1=0.586, d2=0.627 g=1.455
4/4 [==============================] - 0s 7ms/step
>9, 81/195, d1=0.657, d2=0.563 g=1.557
4/4 [==============================] - 0s 7ms/step
>9, 82/195, d1=0.665, d2=0.819 g=1.519
4/4 [==============================] - 0s 7ms/step
>9, 83/195, d1=0.786, d2=0.720 g=1.654
4/4 [==============================] - 0s 7ms/step
>9, 84/195, d1=0.922, d2=0.523 g=1.545
4/4 [==============================] - 0s 9ms/step
>9, 85/195, d1=0.733, d2=0.623 g=1.200
4/4 [==============================] - 0s 7ms/step
>9, 86/195, d1=0.570, d2=0.809 g=1.162
4/4 [==============================] - 0s 7ms/step
>9, 87/195, d1=0.577, d2=0.603 g=1.226
4/4 [==============================] - 0s 7ms/step
```

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>9, 88/195, d1=0.570, d2=0.596 g=1.395
4/4 [==============================] - 0s 7ms/step
>9, 89/195, d1=0.590, d2=0.647 g=1.501
4/4 [==============================] - 0s 7ms/step
>9, 90/195, d1=0.607, d2=0.645 g=1.553
4/4 [==============================] - 0s 7ms/step
>9, 91/195, d1=0.665, d2=0.818 g=1.781
4/4 [==============================] - 0s 7ms/step
>9, 92/195, d1=0.782, d2=0.476 g=1.525
4/4 [==============================] - 0s 7ms/step
>9, 93/195, d1=0.761, d2=0.534 g=1.350
4/4 [==============================] - 0s 7ms/step
>9, 94/195, d1=0.726, d2=0.719 g=1.285
4/4 [==============================] - 0s 7ms/step
>9, 95/195, d1=0.665, d2=0.657 g=1.371
4/4 [==============================] - 0s 7ms/step
>9, 96/195, d1=0.651, d2=0.487 g=1.654
4/4 [==============================] - 0s 7ms/step
>9, 97/195, d1=0.661, d2=0.467 g=1.613
4/4 [==============================] - 0s 7ms/step
>9, 98/195, d1=0.539, d2=0.802 g=1.661
4/4 [==============================] - 0s 7ms/step
>9, 99/195, d1=0.600, d2=0.413 g=1.825
4/4 [==============================] - 0s 7ms/step
>9, 100/195, d1=0.602, d2=0.570 g=1.695
4/4 [==============================] - 0s 7ms/step
>9, 101/195, d1=0.680, d2=0.752 g=1.562
4/4 [==============================] - 0s 7ms/step
>9, 102/195, d1=0.624, d2=0.567 g=1.439
4/4 [==============================] - 0s 7ms/step
>9, 103/195, d1=0.702, d2=0.968 g=1.089
4/4 [==============================] - 0s 7ms/step
>9, 104/195, d1=0.666, d2=1.014 g=1.332
4/4 [==============================] - 0s 7ms/step
>9, 105/195, d1=0.800, d2=0.460 g=1.358
4/4 [==============================] - 0s 7ms/step
>9, 106/195, d1=0.716, d2=0.597 g=1.160
4/4 [==============================] - 0s 7ms/step
>9, 107/195, d1=0.631, d2=0.895 g=1.193
4/4 [==============================] - 0s 7ms/step
>9, 108/195, d1=0.617, d2=0.533 g=1.576
4/4 [==============================] - 0s 7ms/step
>9, 109/195, d1=0.595, d2=0.745 g=1.466
4/4 [==============================] - 0s 7ms/step
>9, 110/195, d1=0.684, d2=0.631 g=1.434
4/4 [==============================] - 0s 7ms/step
>9, 111/195, d1=0.702, d2=0.758 g=1.474
4/4 [==============================] - 0s 7ms/step
```

```
>9, 112/195, d1=0.780, d2=0.541 g=1.452
4/4 [==============================] - 0s 7ms/step
>9, 113/195, d1=0.793, d2=0.508 g=1.376
4/4 [==============================] - 0s 7ms/step
>9, 114/195, d1=0.675, d2=0.494 g=1.474
4/4 [==============================] - 0s 7ms/step
>9, 115/195, d1=0.662, d2=0.494 g=1.547
4/4 [==============================] - 0s 7ms/step
>9, 116/195, d1=0.684, d2=0.680 g=1.215
4/4 [==============================] - 0s 7ms/step
>9, 117/195, d1=0.606, d2=0.658 g=1.353
4/4 [==============================] - 0s 7ms/step
>9, 118/195, d1=0.722, d2=0.512 g=1.384
4/4 [==============================] - 0s 7ms/step
>9, 119/195, d1=0.569, d2=0.607 g=1.390
4/4 [==============================] - 0s 7ms/step
>9, 120/195, d1=0.554, d2=0.753 g=1.394
4/4 [==============================] - 0s 7ms/step
>9, 121/195, d1=0.571, d2=0.927 g=1.628
4/4 [==============================] - 0s 7ms/step
>9, 122/195, d1=0.796, d2=0.546 g=1.700
4/4 [==============================] - 0s 7ms/step
>9, 123/195, d1=0.552, d2=0.626 g=1.920
4/4 [==============================] - 0s 7ms/step
>9, 124/195, d1=0.516, d2=0.645 g=2.535
4/4 [==============================] - 0s 7ms/step
>9, 125/195, d1=0.923, d2=0.748 g=1.225
4/4 [==============================] - 0s 7ms/step
>9, 126/195, d1=0.627, d2=0.694 g=1.097
4/4 [==============================] - 0s 7ms/step
>9, 127/195, d1=0.689, d2=0.580 g=1.129
4/4 [==============================] - 0s 7ms/step
>9, 128/195, d1=0.603, d2=0.606 g=1.139
4/4 [==============================] - 0s 7ms/step
>9, 129/195, d1=0.558, d2=0.581 g=1.207
4/4 [==============================] - 0s 7ms/step
>9, 130/195, d1=0.622, d2=0.626 g=1.210
4/4 [==============================] - 0s 7ms/step
>9, 131/195, d1=0.666, d2=0.602 g=1.304
4/4 [==============================] - 0s 7ms/step
>9, 132/195, d1=0.574, d2=0.545 g=1.515
4/4 [==============================] - 0s 7ms/step
>9, 133/195, d1=0.615, d2=0.435 g=1.730
4/4 [==============================] - 0s 7ms/step
>9, 134/195, d1=0.565, d2=0.879 g=1.835
4/4 [==============================] - 0s 7ms/step
>9, 135/195, d1=0.630, d2=0.497 g=1.802
4/4 [==============================] - 0s 7ms/step
```

```
>9, 136/195, d1=0.691, d2=0.525 g=1.732
4/4 [==============================] - 0s 7ms/step
>9, 137/195, d1=0.582, d2=0.554 g=1.840
4/4 [==============================] - 0s 7ms/step
>9, 138/195, d1=0.659, d2=0.444 g=1.770
4/4 [==============================] - 0s 7ms/step
>9, 139/195, d1=0.587, d2=1.941 g=1.032
4/4 [==============================] - 0s 7ms/step
>9, 140/195, d1=0.595, d2=3.358 g=2.835
4/4 [==============================] - 0s 8ms/step
>9, 141/195, d1=1.641, d2=0.657 g=1.311
4/4 [==============================] - 0s 7ms/step
>9, 142/195, d1=0.797, d2=0.871 g=0.973
4/4 [==============================] - 0s 7ms/step
>9, 143/195, d1=0.605, d2=0.709 g=1.197
4/4 [==============================] - 0s 7ms/step
>9, 144/195, d1=0.641, d2=0.543 g=1.362
4/4 [==============================] - 0s 7ms/step
>9, 145/195, d1=0.659, d2=0.692 g=1.446
4/4 [==============================] - 0s 7ms/step
>9, 146/195, d1=0.632, d2=0.610 g=1.321
4/4 [==============================] - 0s 7ms/step
>9, 147/195, d1=0.634, d2=0.675 g=1.222
4/4 [==============================] - 0s 7ms/step
>9, 148/195, d1=0.604, d2=0.725 g=1.291
4/4 [==============================] - 0s 7ms/step
>9, 149/195, d1=0.636, d2=0.676 g=1.467
4/4 [==============================] - 0s 7ms/step
>9, 150/195, d1=0.730, d2=0.622 g=1.563
4/4 [==============================] - 0s 7ms/step
>9, 151/195, d1=0.743, d2=0.721 g=1.483
4/4 [==============================] - 0s 7ms/step
>9, 152/195, d1=0.763, d2=0.787 g=1.407
4/4 [==============================] - 0s 7ms/step
>9, 153/195, d1=0.842, d2=0.653 g=1.290
4/4 [==============================] - 0s 7ms/step
>9, 154/195, d1=0.813, d2=0.607 g=1.144
4/4 [==============================] - 0s 7ms/step
>9, 155/195, d1=0.651, d2=0.686 g=1.095
4/4 [==============================] - 0s 7ms/step
>9, 156/195, d1=0.650, d2=0.667 g=1.150
4/4 [==============================] - 0s 8ms/step
>9, 157/195, d1=0.683, d2=0.590 g=1.312
4/4 [==============================] - 0s 7ms/step
>9, 158/195, d1=0.507, d2=0.507 g=1.480
4/4 [==============================] - 0s 7ms/step
>9, 159/195, d1=0.476, d2=0.666 g=1.376
4/4 [==============================] - 0s 7ms/step
```

```
>9, 160/195, d1=0.490, d2=0.707 g=1.588
4/4 [==============================] - 0s 7ms/step
>9, 161/195, d1=0.576, d2=0.844 g=1.672
4/4 [==============================] - 0s 7ms/step
>9, 162/195, d1=0.773, d2=0.535 g=1.622
4/4 [==============================] - 0s 7ms/step
>9, 163/195, d1=0.707, d2=0.560 g=1.576
4/4 [==============================] - 0s 7ms/step
>9, 164/195, d1=0.672, d2=0.788 g=1.517
4/4 [==============================] - 0s 7ms/step
>9, 165/195, d1=0.701, d2=0.517 g=1.351
4/4 [==============================] - 0s 9ms/step
>9, 166/195, d1=0.587, d2=0.641 g=1.272
4/4 [==============================] - 0s 7ms/step
>9, 167/195, d1=0.555, d2=1.050 g=1.484
4/4 [==============================] - 0s 10ms/step
>9, 168/195, d1=0.648, d2=0.579 g=1.781
4/4 [==============================] - 0s 7ms/step
>9, 169/195, d1=0.568, d2=0.469 g=1.733
4/4 [==============================] - 0s 8ms/step
>9, 170/195, d1=0.562, d2=0.961 g=1.345
4/4 [==============================] - 0s 7ms/step
>9, 171/195, d1=0.695, d2=0.599 g=1.531
4/4 [==============================] - 0s 7ms/step
>9, 172/195, d1=0.770, d2=0.551 g=1.398
4/4 [==============================] - 0s 7ms/step
>9, 173/195, d1=0.631, d2=0.537 g=1.479
4/4 [==============================] - 0s 7ms/step
>9, 174/195, d1=0.612, d2=0.591 g=1.546
4/4 [==============================] - 0s 7ms/step
>9, 175/195, d1=0.664, d2=0.660 g=1.473
4/4 [==============================] - 0s 8ms/step
>9, 176/195, d1=0.703, d2=0.559 g=1.589
4/4 [==============================] - 0s 7ms/step
>9, 177/195, d1=0.607, d2=0.546 g=1.513
4/4 [==============================] - 0s 7ms/step
>9, 178/195, d1=0.650, d2=0.579 g=1.485
4/4 [==============================] - 0s 7ms/step
>9, 179/195, d1=0.619, d2=0.752 g=1.529
4/4 [==============================] - 0s 7ms/step
>9, 180/195, d1=0.680, d2=0.691 g=1.365
4/4 [==============================] - 0s 7ms/step
>9, 181/195, d1=0.759, d2=0.900 g=1.571
4/4 [==============================] - 0s 7ms/step
>9, 182/195, d1=0.641, d2=0.454 g=2.017
4/4 [==============================] - 0s 7ms/step
>9, 183/195, d1=0.582, d2=1.203 g=1.829
4/4 [==============================] - 0s 7ms/step
```

```
>9, 184/195, d1=0.823, d2=0.834 g=1.654
4/4 [==============================] - 0s 7ms/step
>9, 185/195, d1=0.864, d2=0.671 g=1.461
4/4 [==============================] - 0s 7ms/step
>9, 186/195, d1=0.786, d2=0.704 g=1.300
4/4 [==============================] - 0s 7ms/step
>9, 187/195, d1=0.738, d2=0.684 g=1.253
4/4 [==============================] - 0s 7ms/step
>9, 188/195, d1=0.751, d2=0.600 g=1.271
4/4 [==============================] - 0s 7ms/step
>9, 189/195, d1=0.660, d2=0.629 g=1.333
4/4 [==============================] - 0s 7ms/step
>9, 190/195, d1=0.597, d2=0.631 g=1.250
4/4 [==============================] - 0s 7ms/step
>9, 191/195, d1=0.654, d2=0.600 g=1.313
4/4 [==============================] - 0s 7ms/step
>9, 192/195, d1=0.695, d2=0.662 g=1.257
4/4 [==============================] - 0s 7ms/step
>9, 193/195, d1=0.632, d2=0.605 g=1.316
4/4 [==============================] - 0s 7ms/step
>9, 194/195, d1=0.684, d2=0.551 g=1.130
4/4 [==============================] - 0s 7ms/step
>9, 195/195, d1=0.707, d2=0.709 g=1.221
5/5 [==============================] - 0s 7ms/step
>Accuracy real: 64%, fake: 67%

WARNING:tensorflow:Compiled the loaded model, but the compiled metrics have yet
to be built. `model.compile_metrics` will be empty until you train or evaluate
the model.

4/4 [==============================] - 0s 16ms/step
>10, 1/195, d1=0.645, d2=0.665 g=1.285
4/4 [==============================] - 0s 7ms/step
>10, 2/195, d1=0.643, d2=0.635 g=1.412
4/4 [==============================] - 0s 7ms/step
>10, 3/195, d1=0.601, d2=0.634 g=1.611
4/4 [==============================] - 0s 7ms/step
>10, 4/195, d1=0.731, d2=0.784 g=1.586
4/4 [==============================] - 0s 7ms/step
>10, 5/195, d1=0.809, d2=0.577 g=1.466
4/4 [==============================] - 0s 7ms/step
>10, 6/195, d1=0.722, d2=0.565 g=1.348
4/4 [==============================] - 0s 7ms/step
>10, 7/195, d1=0.677, d2=0.637 g=1.236
4/4 [==============================] - 0s 7ms/step
>10, 8/195, d1=0.694, d2=0.613 g=1.234
4/4 [==============================] - 0s 7ms/step
>10, 9/195, d1=0.639, d2=0.551 g=1.277
4/4 [==============================] - 0s 7ms/step
```

```
>10, 10/195, d1=0.604, d2=0.550 g=1.362
4/4 [==============================] - 0s 7ms/step
>10, 11/195, d1=0.521, d2=0.595 g=1.427
4/4 [==============================] - 0s 7ms/step
>10, 12/195, d1=0.664, d2=0.606 g=1.360
4/4 [==============================] - 0s 7ms/step
>10, 13/195, d1=0.688, d2=0.726 g=1.402
4/4 [==============================] - 0s 7ms/step
>10, 14/195, d1=0.642, d2=0.634 g=1.508
4/4 [==============================] - 0s 7ms/step
>10, 15/195, d1=0.716, d2=0.744 g=1.443
4/4 [==============================] - 0s 7ms/step
>10, 16/195, d1=0.742, d2=0.595 g=1.574
4/4 [==============================] - 0s 7ms/step
>10, 17/195, d1=0.766, d2=0.590 g=1.437
4/4 [==============================] - 0s 7ms/step
>10, 18/195, d1=0.671, d2=0.652 g=1.475
4/4 [==============================] - 0s 7ms/step
>10, 19/195, d1=0.656, d2=0.715 g=1.320
4/4 [==============================] - 0s 7ms/step
>10, 20/195, d1=0.680, d2=0.600 g=1.225
4/4 [==============================] - 0s 7ms/step
>10, 21/195, d1=0.596, d2=0.705 g=1.207
4/4 [==============================] - 0s 7ms/step
>10, 22/195, d1=0.592, d2=0.689 g=1.434
4/4 [==============================] - 0s 7ms/step
>10, 23/195, d1=0.678, d2=0.643 g=1.642
4/4 [==============================] - 0s 7ms/step
>10, 24/195, d1=0.541, d2=0.496 g=1.810
4/4 [==============================] - 0s 8ms/step
>10, 25/195, d1=0.478, d2=0.618 g=1.714
4/4 [==============================] - 0s 8ms/step
>10, 26/195, d1=0.467, d2=1.151 g=1.864
4/4 [==============================] - 0s 8ms/step
>10, 27/195, d1=0.879, d2=2.440 g=1.684
4/4 [==============================] - 0s 7ms/step
>10, 28/195, d1=1.257, d2=0.768 g=1.374
4/4 [==============================] - 0s 7ms/step
>10, 29/195, d1=1.080, d2=0.833 g=1.141
4/4 [==============================] - 0s 7ms/step
>10, 30/195, d1=0.728, d2=0.648 g=1.234
4/4 [==============================] - 0s 7ms/step
>10, 31/195, d1=0.719, d2=0.642 g=1.125
4/4 [==============================] - 0s 7ms/step
>10, 32/195, d1=0.637, d2=0.646 g=1.195
4/4 [==============================] - 0s 7ms/step
>10, 33/195, d1=0.656, d2=0.603 g=1.281
4/4 [==============================] - 0s 9ms/step
```

```
>10, 34/195, d1=0.664, d2=0.591 g=1.308
4/4 [==============================] - 0s 7ms/step
>10, 35/195, d1=0.705, d2=0.643 g=1.279
4/4 [==============================] - 0s 7ms/step
>10, 36/195, d1=0.715, d2=0.733 g=1.162
4/4 [==============================] - 0s 7ms/step
>10, 37/195, d1=0.646, d2=0.637 g=1.278
4/4 [==============================] - 0s 7ms/step
>10, 38/195, d1=0.662, d2=0.587 g=1.246
4/4 [==============================] - 0s 7ms/step
>10, 39/195, d1=0.617, d2=0.679 g=1.133
4/4 [==============================] - 0s 7ms/step
>10, 40/195, d1=0.543, d2=0.685 g=1.183
4/4 [==============================] - 0s 7ms/step
>10, 41/195, d1=0.672, d2=0.583 g=1.131
4/4 [==============================] - 0s 7ms/step
>10, 42/195, d1=0.696, d2=0.662 g=1.153
4/4 [==============================] - 0s 7ms/step
>10, 43/195, d1=0.718, d2=0.674 g=1.163
4/4 [==============================] - 0s 7ms/step
>10, 44/195, d1=0.614, d2=0.752 g=1.252
4/4 [==============================] - 0s 7ms/step
>10, 45/195, d1=0.642, d2=0.665 g=1.355
4/4 [==============================] - 0s 7ms/step
>10, 46/195, d1=0.710, d2=0.556 g=1.386
4/4 [==============================] - 0s 7ms/step
>10, 47/195, d1=0.689, d2=0.798 g=1.101
4/4 [==============================] - 0s 7ms/step
>10, 48/195, d1=0.714, d2=0.668 g=1.175
4/4 [==============================] - 0s 7ms/step
>10, 49/195, d1=0.742, d2=0.653 g=1.137
4/4 [==============================] - 0s 7ms/step
>10, 50/195, d1=0.693, d2=0.678 g=1.082
4/4 [==============================] - 0s 7ms/step
>10, 51/195, d1=0.733, d2=0.729 g=1.253
4/4 [==============================] - 0s 7ms/step
>10, 52/195, d1=0.730, d2=0.603 g=1.408
4/4 [==============================] - 0s 7ms/step
>10, 53/195, d1=0.679, d2=0.653 g=1.107
4/4 [==============================] - 0s 8ms/step
>10, 54/195, d1=0.612, d2=0.880 g=1.058
4/4 [==============================] - 0s 8ms/step
>10, 55/195, d1=0.762, d2=0.674 g=1.032
4/4 [==============================] - 0s 7ms/step
>10, 56/195, d1=0.720, d2=0.550 g=1.070
4/4 [==============================] - 0s 7ms/step
>10, 57/195, d1=0.670, d2=0.544 g=1.147
4/4 [==============================] - 0s 7ms/step
```

```
>10, 58/195, d1=0.688, d2=0.557 g=1.189
4/4 [==============================] - 0s 7ms/step
>10, 59/195, d1=0.615, d2=0.558 g=1.262
4/4 [==============================] - 0s 7ms/step
>10, 60/195, d1=0.539, d2=0.600 g=1.308
4/4 [==============================] - 0s 7ms/step
>10, 61/195, d1=0.654, d2=0.632 g=1.214
4/4 [==============================] - 0s 7ms/step
>10, 62/195, d1=0.674, d2=0.720 g=1.234
4/4 [==============================] - 0s 7ms/step
>10, 63/195, d1=0.706, d2=0.597 g=1.346
4/4 [==============================] - 0s 7ms/step
>10, 64/195, d1=0.678, d2=0.569 g=1.490
4/4 [==============================] - 0s 7ms/step
>10, 65/195, d1=0.719, d2=0.509 g=1.487
4/4 [==============================] - 0s 7ms/step
>10, 66/195, d1=0.650, d2=0.654 g=1.405
4/4 [==============================] - 0s 7ms/step
>10, 67/195, d1=0.636, d2=0.728 g=1.322
4/4 [==============================] - 0s 7ms/step
>10, 68/195, d1=0.739, d2=0.563 g=1.192
4/4 [==============================] - 0s 7ms/step
>10, 69/195, d1=0.724, d2=0.651 g=1.270
4/4 [==============================] - 0s 7ms/step
>10, 70/195, d1=0.558, d2=0.673 g=1.431
4/4 [==============================] - 0s 7ms/step
>10, 71/195, d1=0.679, d2=0.678 g=1.513
4/4 [==============================] - 0s 7ms/step
>10, 72/195, d1=0.634, d2=0.593 g=1.722
4/4 [==============================] - 0s 7ms/step
>10, 73/195, d1=0.536, d2=0.451 g=1.888
4/4 [==============================] - 0s 7ms/step
>10, 74/195, d1=0.489, d2=0.801 g=1.539
4/4 [==============================] - 0s 8ms/step
>10, 75/195, d1=0.713, d2=2.135 g=2.378
4/4 [==============================] - 0s 7ms/step
>10, 76/195, d1=1.533, d2=0.685 g=0.936
4/4 [==============================] - 0s 7ms/step
>10, 77/195, d1=0.665, d2=0.713 g=1.083
4/4 [==============================] - 0s 7ms/step
>10, 78/195, d1=0.610, d2=0.591 g=1.211
4/4 [==============================] - 0s 7ms/step
>10, 79/195, d1=0.676, d2=0.635 g=1.152
4/4 [==============================] - 0s 7ms/step
>10, 80/195, d1=0.614, d2=0.625 g=1.162
4/4 [==============================] - 0s 7ms/step
>10, 81/195, d1=0.597, d2=0.675 g=1.175
4/4 [==============================] - 0s 7ms/step
```

```
>10, 82/195, d1=0.657, d2=0.628 g=1.273
4/4 [==============================] - 0s 8ms/step
>10, 83/195, d1=0.718, d2=0.558 g=1.332
4/4 [==============================] - 0s 7ms/step
>10, 84/195, d1=0.627, d2=0.540 g=1.389
4/4 [==============================] - 0s 7ms/step
>10, 85/195, d1=0.597, d2=0.534 g=1.552
4/4 [==============================] - 0s 7ms/step
>10, 86/195, d1=0.636, d2=0.617 g=1.400
4/4 [==============================] - 0s 7ms/step
>10, 87/195, d1=0.654, d2=0.636 g=1.204
4/4 [==============================] - 0s 7ms/step
>10, 88/195, d1=0.622, d2=0.733 g=1.078
4/4 [==============================] - 0s 7ms/step
>10, 89/195, d1=0.733, d2=0.731 g=1.036
4/4 [==============================] - 0s 7ms/step
>10, 90/195, d1=0.649, d2=0.643 g=1.159
4/4 [==============================] - 0s 7ms/step
>10, 91/195, d1=0.759, d2=0.618 g=1.168
4/4 [==============================] - 0s 7ms/step
>10, 92/195, d1=0.688, d2=0.532 g=1.240
4/4 [==============================] - 0s 7ms/step
>10, 93/195, d1=0.633, d2=0.552 g=1.255
4/4 [==============================] - 0s 7ms/step
>10, 94/195, d1=0.575, d2=0.618 g=1.214
4/4 [==============================] - 0s 7ms/step
>10, 95/195, d1=0.633, d2=0.652 g=1.300
4/4 [==============================] - 0s 7ms/step
>10, 96/195, d1=0.657, d2=0.614 g=1.277
4/4 [==============================] - 0s 7ms/step
>10, 97/195, d1=0.606, d2=0.638 g=1.322
4/4 [==============================] - 0s 7ms/step
>10, 98/195, d1=0.655, d2=0.624 g=1.380
4/4 [==============================] - 0s 7ms/step
>10, 99/195, d1=0.640, d2=0.634 g=1.334
4/4 [==============================] - 0s 7ms/step
>10, 100/195, d1=0.702, d2=0.712 g=1.247
4/4 [==============================] - 0s 7ms/step
>10, 101/195, d1=0.745, d2=0.780 g=1.140
4/4 [==============================] - 0s 7ms/step
>10, 102/195, d1=0.608, d2=0.789 g=1.199
4/4 [==============================] - 0s 7ms/step
>10, 103/195, d1=0.686, d2=0.767 g=1.289
4/4 [==============================] - 0s 7ms/step
>10, 104/195, d1=0.721, d2=0.514 g=1.430
4/4 [==============================] - 0s 7ms/step
>10, 105/195, d1=0.673, d2=0.485 g=1.574
4/4 [==============================] - 0s 7ms/step
```

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>10, 106/195, d1=0.721, d2=0.731 g=1.288
4/4 [==============================] - 0s 7ms/step
>10, 107/195, d1=0.647, d2=0.653 g=1.317
4/4 [==============================] - 0s 7ms/step
>10, 108/195, d1=0.667, d2=0.619 g=1.474
4/4 [==============================] - 0s 7ms/step
>10, 109/195, d1=0.690, d2=0.595 g=1.324
4/4 [==============================] - 0s 7ms/step
>10, 110/195, d1=0.691, d2=0.633 g=1.410
4/4 [==============================] - 0s 7ms/step
>10, 111/195, d1=0.772, d2=0.898 g=1.312
4/4 [==============================] - 0s 8ms/step
>10, 112/195, d1=0.695, d2=0.943 g=1.555
4/4 [==============================] - 0s 7ms/step
>10, 113/195, d1=0.658, d2=0.450 g=1.914
4/4 [==============================] - 0s 7ms/step
>10, 114/195, d1=0.603, d2=0.707 g=1.157
4/4 [==============================] - 0s 7ms/step
>10, 115/195, d1=0.589, d2=0.636 g=1.134
4/4 [==============================] - 0s 7ms/step
>10, 116/195, d1=0.655, d2=0.518 g=1.245
4/4 [==============================] - 0s 7ms/step
>10, 117/195, d1=0.566, d2=0.732 g=1.234
4/4 [==============================] - 0s 7ms/step
>10, 118/195, d1=0.670, d2=1.146 g=1.359
4/4 [==============================] - 0s 7ms/step
>10, 119/195, d1=0.820, d2=0.519 g=1.829
4/4 [==============================] - 0s 7ms/step
>10, 120/195, d1=0.761, d2=0.351 g=1.981
4/4 [==============================] - 0s 7ms/step
>10, 121/195, d1=0.696, d2=0.590 g=1.433
4/4 [==============================] - 0s 7ms/step
>10, 122/195, d1=0.690, d2=1.042 g=0.957
4/4 [==============================] - 0s 7ms/step
>10, 123/195, d1=0.733, d2=0.906 g=0.996
4/4 [==============================] - 0s 7ms/step
>10, 124/195, d1=0.766, d2=0.565 g=1.108
4/4 [==============================] - 0s 7ms/step
>10, 125/195, d1=0.724, d2=0.662 g=1.088
4/4 [==============================] - 0s 7ms/step
>10, 126/195, d1=0.740, d2=0.713 g=1.060
4/4 [==============================] - 0s 7ms/step
>10, 127/195, d1=0.634, d2=0.610 g=1.153
4/4 [==============================] - 0s 7ms/step
>10, 128/195, d1=0.686, d2=0.551 g=1.229
4/4 [==============================] - 0s 7ms/step
>10, 129/195, d1=0.666, d2=0.661 g=1.168
4/4 [==============================] - 0s 7ms/step
```

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>10, 130/195, d1=0.667, d2=0.675 g=1.254
4/4 [==============================] - 0s 7ms/step
>10, 131/195, d1=0.819, d2=0.529 g=1.350
4/4 [==============================] - 0s 7ms/step
>10, 132/195, d1=0.700, d2=0.520 g=1.423
4/4 [==============================] - 0s 7ms/step
>10, 133/195, d1=0.770, d2=0.637 g=1.211
4/4 [==============================] - 0s 7ms/step
>10, 134/195, d1=0.743, d2=0.581 g=1.165
4/4 [==============================] - 0s 7ms/step
>10, 135/195, d1=0.697, d2=0.696 g=1.152
4/4 [==============================] - 0s 7ms/step
>10, 136/195, d1=0.723, d2=0.700 g=1.039
4/4 [==============================] - 0s 7ms/step
>10, 137/195, d1=0.774, d2=0.695 g=1.074
4/4 [==============================] - 0s 7ms/step
>10, 138/195, d1=0.652, d2=0.561 g=1.133
4/4 [==============================] - 0s 7ms/step
>10, 139/195, d1=0.658, d2=0.582 g=1.145
4/4 [==============================] - 0s 8ms/step
>10, 140/195, d1=0.638, d2=0.635 g=1.159
4/4 [==============================] - 0s 7ms/step
>10, 141/195, d1=0.599, d2=0.591 g=1.199
4/4 [==============================] - 0s 7ms/step
>10, 142/195, d1=0.704, d2=0.630 g=1.216
4/4 [==============================] - 0s 7ms/step
>10, 143/195, d1=0.641, d2=0.537 g=1.273
4/4 [==============================] - 0s 7ms/step
>10, 144/195, d1=0.584, d2=0.554 g=1.445
4/4 [==============================] - 0s 7ms/step
>10, 145/195, d1=0.627, d2=0.617 g=1.438
4/4 [==============================] - 0s 7ms/step
>10, 146/195, d1=0.624, d2=0.490 g=1.448
4/4 [==============================] - 0s 7ms/step
>10, 147/195, d1=0.646, d2=0.588 g=1.331
4/4 [==============================] - 0s 7ms/step
>10, 148/195, d1=0.621, d2=0.672 g=1.188
4/4 [==============================] - 0s 7ms/step
>10, 149/195, d1=0.587, d2=0.715 g=1.146
4/4 [==============================] - 0s 7ms/step
>10, 150/195, d1=0.672, d2=0.760 g=1.149
4/4 [==============================] - 0s 7ms/step
>10, 151/195, d1=0.703, d2=0.767 g=1.155
4/4 [==============================] - 0s 7ms/step
>10, 152/195, d1=0.655, d2=0.567 g=1.409
4/4 [==============================] - 0s 7ms/step
>10, 153/195, d1=0.701, d2=0.483 g=1.420
4/4 [==============================] - 0s 7ms/step
```

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>10, 154/195, d1=0.548, d2=0.635 g=1.054
4/4 [==============================] - 0s 7ms/step
>10, 155/195, d1=0.606, d2=0.731 g=1.019
4/4 [==============================] - 0s 7ms/step
>10, 156/195, d1=0.575, d2=0.658 g=1.112
4/4 [==============================] - 0s 7ms/step
>10, 157/195, d1=0.673, d2=0.656 g=1.183
4/4 [==============================] - 0s 7ms/step
>10, 158/195, d1=0.681, d2=0.643 g=1.266
4/4 [==============================] - 0s 7ms/step
>10, 159/195, d1=0.631, d2=0.583 g=1.408
4/4 [==============================] - 0s 7ms/step
>10, 160/195, d1=0.670, d2=0.601 g=1.380
4/4 [==============================] - 0s 7ms/step
>10, 161/195, d1=0.635, d2=0.671 g=1.260
4/4 [==============================] - 0s 7ms/step
>10, 162/195, d1=0.616, d2=0.680 g=1.287
4/4 [==============================] - 0s 7ms/step
>10, 163/195, d1=0.695, d2=0.657 g=1.185
4/4 [==============================] - 0s 7ms/step
>10, 164/195, d1=0.745, d2=0.692 g=1.095
4/4 [==============================] - 0s 7ms/step
>10, 165/195, d1=0.673, d2=0.715 g=1.213
4/4 [==============================] - 0s 8ms/step
>10, 166/195, d1=0.687, d2=0.579 g=1.253
4/4 [==============================] - 0s 8ms/step
>10, 167/195, d1=0.647, d2=0.667 g=1.278
4/4 [==============================] - 0s 8ms/step
>10, 168/195, d1=0.578, d2=0.640 g=1.475
4/4 [==============================] - 0s 7ms/step
>10, 169/195, d1=0.675, d2=0.503 g=1.687
4/4 [==============================] - 0s 7ms/step
>10, 170/195, d1=0.631, d2=0.533 g=1.798
4/4 [==============================] - 0s 7ms/step
>10, 171/195, d1=0.554, d2=0.593 g=1.512
4/4 [==============================] - 0s 8ms/step
>10, 172/195, d1=0.549, d2=0.716 g=1.291
4/4 [==============================] - 0s 7ms/step
>10, 173/195, d1=0.606, d2=0.707 g=1.348
4/4 [==============================] - 0s 7ms/step
>10, 174/195, d1=0.664, d2=0.717 g=1.284
4/4 [==============================] - 0s 7ms/step
>10, 175/195, d1=0.770, d2=0.806 g=1.403
4/4 [==============================] - 0s 7ms/step
>10, 176/195, d1=0.809, d2=0.490 g=1.402
4/4 [==============================] - 0s 8ms/step
>10, 177/195, d1=0.662, d2=0.543 g=1.239
4/4 [==============================] - 0s 7ms/step
```

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>10, 178/195, d1=0.568, d2=0.546 g=1.178
4/4 [==============================] - 0s 7ms/step
>10, 179/195, d1=0.489, d2=0.693 g=1.191
4/4 [==============================] - 0s 7ms/step
>10, 180/195, d1=0.456, d2=0.542 g=1.302
4/4 [==============================] - 0s 7ms/step
>10, 181/195, d1=0.429, d2=0.709 g=1.404
4/4 [==============================] - 0s 7ms/step
>10, 182/195, d1=0.530, d2=0.549 g=1.660
4/4 [==============================] - 0s 7ms/step
>10, 183/195, d1=0.664, d2=0.662 g=1.759
4/4 [==============================] - 0s 7ms/step
>10, 184/195, d1=0.727, d2=0.502 g=1.547
4/4 [==============================] - 0s 7ms/step
>10, 185/195, d1=0.757, d2=0.875 g=1.451
4/4 [==============================] - 0s 7ms/step
>10, 186/195, d1=0.823, d2=0.585 g=1.340
4/4 [==============================] - 0s 7ms/step
>10, 187/195, d1=0.741, d2=0.573 g=1.307
4/4 [==============================] - 0s 7ms/step
>10, 188/195, d1=0.714, d2=0.635 g=1.303
4/4 [==============================] - 0s 7ms/step
>10, 189/195, d1=0.661, d2=0.665 g=1.307
4/4 [==============================] - 0s 7ms/step
>10, 190/195, d1=0.640, d2=0.526 g=1.543
4/4 [==============================] - 0s 7ms/step
>10, 191/195, d1=0.702, d2=0.541 g=1.390
4/4 [==============================] - 0s 7ms/step
>10, 192/195, d1=0.498, d2=0.714 g=1.212
4/4 [==============================] - 0s 7ms/step
>10, 193/195, d1=0.581, d2=0.708 g=1.248
4/4 [==============================] - 0s 7ms/step
>10, 194/195, d1=0.599, d2=0.625 g=1.406
4/4 [==============================] - 0s 7ms/step
>10, 195/195, d1=0.572, d2=0.577 g=1.552
5/5 [==============================] - 0s 7ms/step
>Accuracy real: 69%, fake: 81%

WARNING:tensorflow:Compiled the loaded model, but the compiled metrics have yet
to be built. `model.compile_metrics` will be empty until you train or evaluate
the model.
```
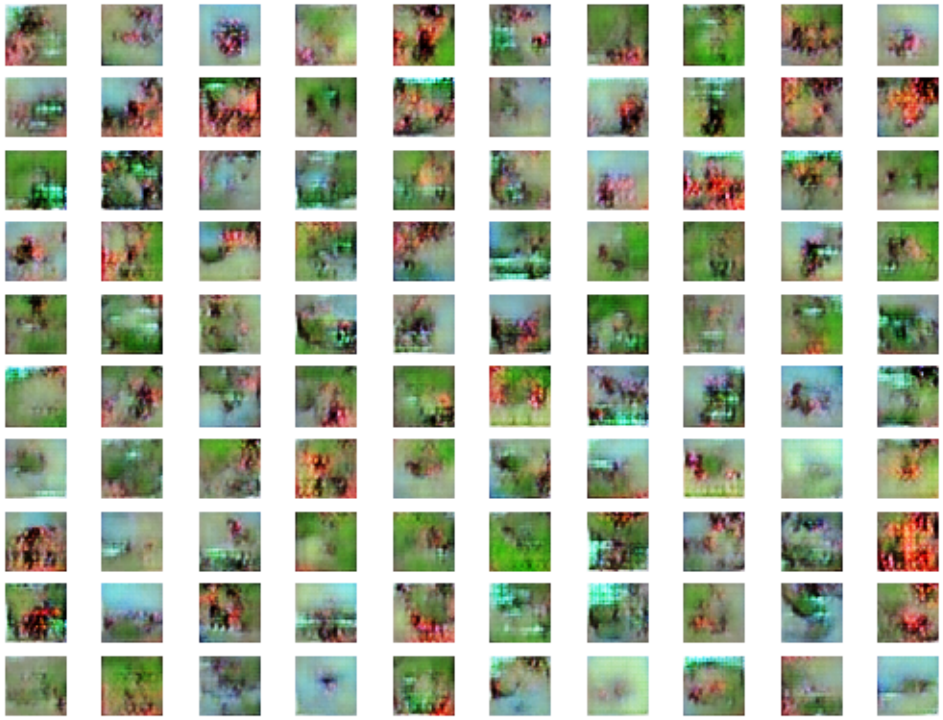

[ ]:
```
from keras.models import load_model

# plot the generated images
def create_plot(examples, n):
 for i in range(n * n):
  pyplot.subplot(n, n, 1 + i)
```

```
  pyplot.axis('off')
  pyplot.imshow(examples[i, :, :])
 pyplot.show()

model = load_model('generator_model_010.h5')
latent_points = generate_latent_points(100, 100)
# generate images
X = model.predict(latent_points)
# scale from [-1,1] to [0,1]
X = (X + 1) / 2.0
# plot the result
create_plot(X, 10)
```

```
WARNING:tensorflow:No training configuration found in the save file, so the
model was *not* compiled. Compile it manually.
```

```
4/4 [==============================] - 1s 139ms/step
```



[ ]: