

Examen Final

January 31, 2021

1 Examen Final - Edgar Gerardo Alarcón González

1.1 Número de cuenta: 31210231-9

```
[1]: # Librerías

# General
import pandas as pd
import numpy as np
from scipy import integrate
from sklearn.metrics import mean_squared_error, mean_squared_log_error, \
    mean_absolute_error, median_absolute_error
from scipy.integrate import odeint
from scipy.optimize import differential_evolution, minimize
import matplotlib.pyplot as plt

# Ejercicio 1
import numpy.polynomial.polynomial as poly
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LinearRegression
from sklearn.preprocessing import PolynomialFeatures
from sklearn.model_selection import cross_val_score

# Ejercicio 2
from keras.models import Sequential
from keras.layers import Dense

# Ejercicio 3
from mpl_toolkits.mplot3d import Axes3D
from sklearn.linear_model import LogisticRegression
from sklearn.model_selection import train_test_split
from sklearn.metrics import classification_report, confusion_matrix
from sklearn.metrics import roc_curve
from sklearn.metrics import roc_auc_score

# Ejercicio 4
import random
from mpl_toolkits import mplot3d
```

```
import math
import plotly.graph_objects as go
from plotly.subplots import make_subplots
```

1.2 Ejercicio 1

Usando el data set llamado problem1.csv “(x_training, y_training)”:

- Encuentra el polinomio que mejor ajusta los datos de entrenamiento.
- Usando el criterio del AIC, encuentra el mejor polinomio que puede ajustar los datos.
- Realiza validación cruzada del polinomio con los datos llamados “problem1.csv (x_test, y_test)”

1.2.1 Solución

Comenzamos haciendo una lectura de los datos

```
[2]: # Lectura de datos
datos = pd.read_csv('problem1.csv')
datos.head()
```

```
[2]:   X_training  Y_training  X_test  Y_test
0      -2.00    22.067387    2.00  6.024049
1      -1.97    19.944915    2.05  6.885408
2      -1.94    18.062490    2.10  7.578968
3      -1.91    16.384313    2.15  8.439467
4      -1.88    14.567798    2.20  9.554611
```

Vamos ahora a guardar los datos de entrenamiento y de prueba

```
[3]: # Separar datos
train = datos[["X_training", "Y_training"]]
train.head()
```

```
[3]:   X_training  Y_training
0      -2.00    22.067387
1      -1.97    19.944915
2      -1.94    18.062490
3      -1.91    16.384313
4      -1.88    14.567798
```

```
[4]: test = datos[["X_test", "Y_test"]]
test.head()
```

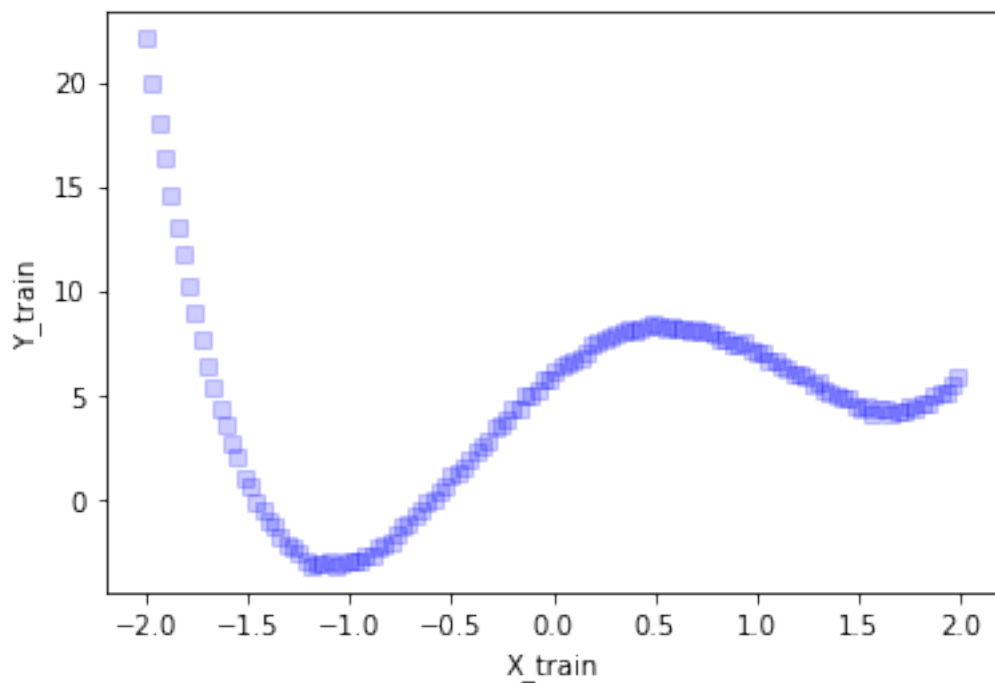
```
[4]:   X_test  Y_test
0    2.00  6.024049
1    2.05  6.885408
2    2.10  7.578968
```

```
3    2.15  8.439467
4    2.20  9.554611
```

Ahora hacemos un gráfico de los datos.

```
[5]: plt.plot(train.X_training,train.Y_training,'bs',alpha=0.2,)
plt.xlabel('X_train')
plt.ylabel('Y_train')
#plt.savefig('fdx.pdf', format='pdf', dpi=1200, bbox_inches="tight")
#plt.show()
```

```
[5]: Text(0, 0.5, 'Y_train')
```



1.2.2 Ajuste polinomial

Primero, vamos a proponer un ajuste polinomial de grado 8.

```
[6]: coef = poly.polyfit(train["X_training"], train["Y_training"], 8,
    ↪rcond=None, w=None)
```

Veamos los coeficientes del modelo propuesto.

```
[7]: model = poly.Polynomial(coef)
model
```

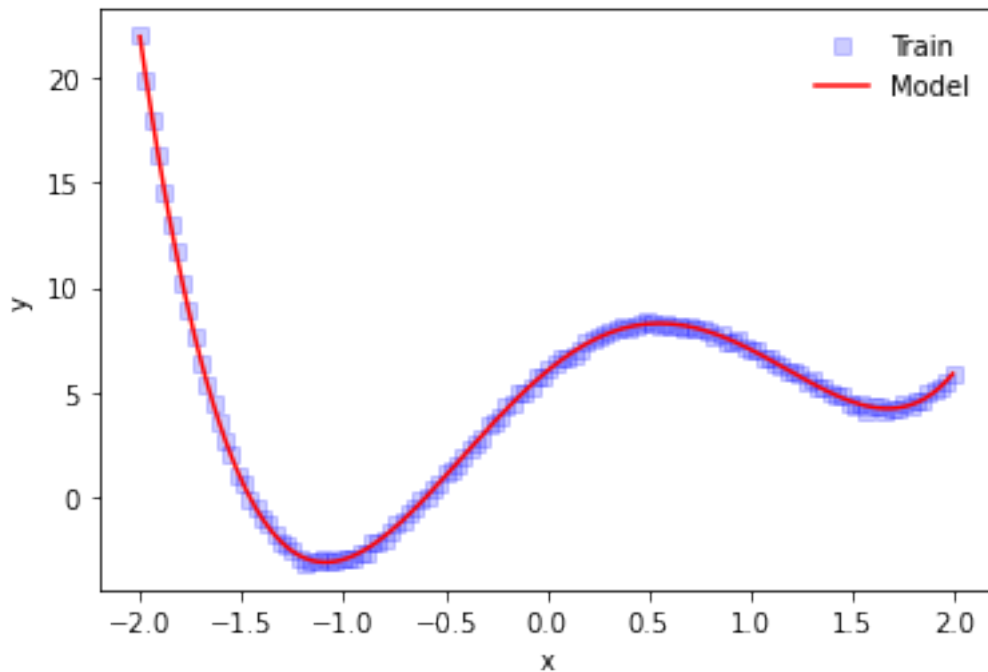
```
[7]:
```

$$x \mapsto 6.007938949185448 + 8.037968100328241 x - 6.063208668293313 x^2 - 3.0250349986092737 x^3 + 2.0950040571004287 x^4 + 0.008001051821489162 x^5 - 0.04294316587789839 x^6 - 0.001121137939318037 x^7 + 0.005735129230567836 x^8$$

Notemos que los coeficientes del polinomio a partir del grado 5 parecen ser bastante pequeños.

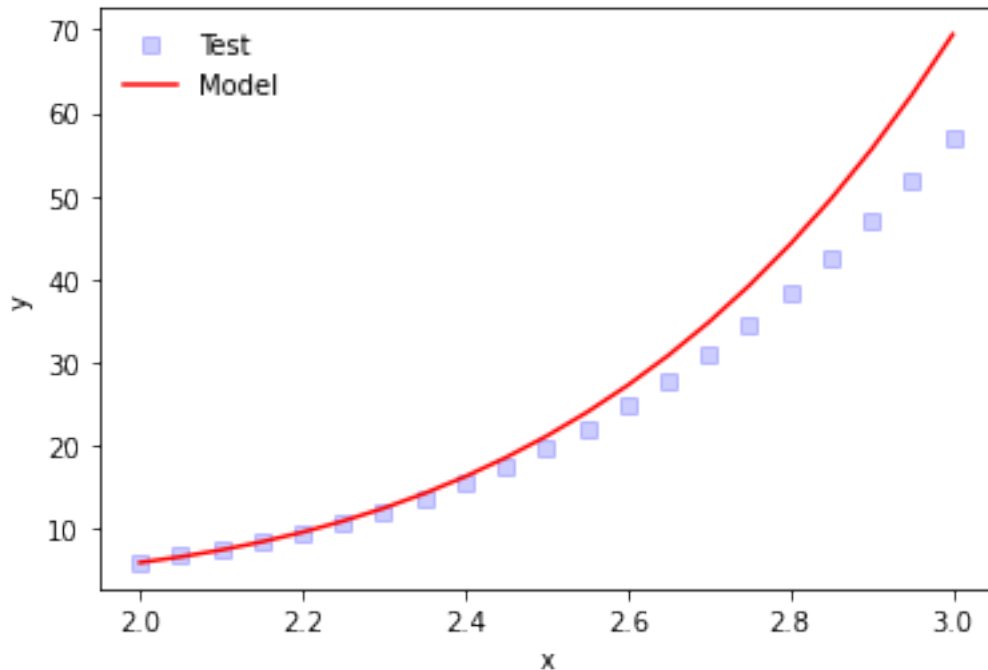
Veamos el ajuste del polinomio y nuestros datos.

```
[8]: plt.plot(train["X_training"], train["Y_training"], 'bs', alpha=0.2, label='Train')
plt.plot(train["X_training"], model(train["X_training"]), 'r', label='Model')
plt.legend(loc='best', frameon=False)
plt.xlabel('x')
plt.ylabel('y')
plt.show()
```



Ahora, ajustando este polinomio a los datos de prueba

```
[9]: plt.plot(test["X_test"], test["Y_test"], 'bs', alpha=0.2, label='Test')
plt.plot(test["X_test"], model(test["X_test"]), 'r', label='Model')
plt.legend(loc='best', frameon=False)
plt.xlabel('x')
plt.ylabel('y')
plt.show()
```



Donde vemos que el ajuste es bueno pero sí presenta errores en los valores alejados de los datos de entrenamiento.

1.2.3 Selección de Modelo

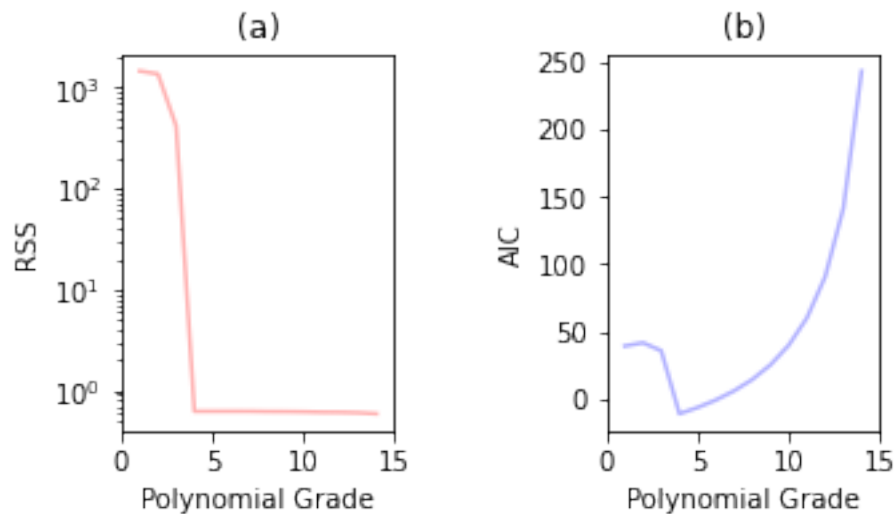
Realizaremos un ajuste de modelo usando los datos de entrenamiento y con base en el AIC y en la suma de los cuadrados de los residuales (RSS). Esto lo haremos asumiendo un grado máximo de polinomio de 15 y mostrando un gráfico para seleccionar aquel modelo que tenga un menor AIC y menor RSS.

```
[10]: Pol_Max = 15 # Highest degree polynomial we are going to check.
# empty arrays
RSSv = []
RSSv = np.zeros(Pol_Max-1)
AICv = []
AICv = np.zeros(Pol_Max-1)
# Cycle to check different polynomials
x = np.arange(1,10,0.5)
for i in np.arange(0,Pol_Max-1,1):
    coef = poly.polyfit(train["X_training"], train["Y_training"], i+1)
    model = poly.Polynomial(coef)
    RSSv[i]=0.5*np.sum((train["Y_training"]-model(train["X_training"]))**2)
    AICv[i]=len(x)*math.log10(RSSv[i]/len(x))+ 2*len(coef)*len(x)/
    ↪ (len(x)-len(coef)-1)
# Plotting RSS and AIC
```

```

fig, (ax1, ax2) = plt.subplots(1, 2)
ax1.plot(np.arange(0, Pol_Max-1, 1)+1, RSSv, 'r', alpha=0.3)
ax1.set_yscale('log')
ax1.set_xlabel('Polynomial Grade', ylabel='RSS')
ax1.set_xlim=(0, Pol_Max)
ax1.set_title('(a)')
# Second #figure
fig.tight_layout(pad=5.0)
ax2.plot(np.arange(0, Pol_Max-1, 1)+1, AICv, 'b', alpha=0.3)
ax2.set_xlabel('Polynomial Grade', ylabel='RSS')
ax2.set_xlabel('Polynomial Grade', ylabel='AIC')
ax2.set_xlim=(0, Pol_Max)
ax2.set_title('(b)')
plt.show()

```



Donde podemos observar que el mínimo de los AIC se alcanza cuando el grado es 4 y justo ahí es donde el RSS parece estabilizarse. Algo que coincide con lo que mencionamos en el primer ajuste de modelo.

```

[11]: grade = np.argmin(AICv)+1
      grade

```

[11]: 4

Donde ahora continuamos haciendo un ajuste de modelo con este grado

```

[12]: coef = poly.polyfit(train["X_training"], train["Y_training"], grade)

```

Veamos los coeficientes del modelo propuesto.

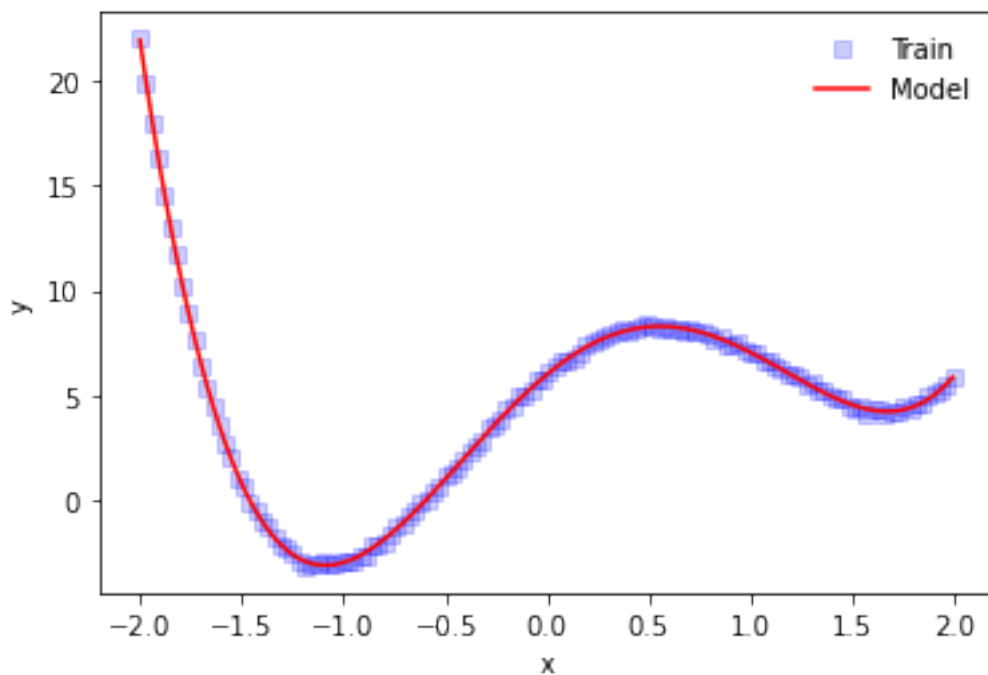
```
[13]: model = poly.Polynomial(coef)
      model
```

```
[13]:  $x \mapsto 6.000059202668212 + 8.029567412979475x - 5.991414146668381x^2 - 3.0086947131582313x^3 + 1.9958810906630031x^4$ 
```

Notemos que los coeficientes del polinomio ya lucen todos diferentes de cero.

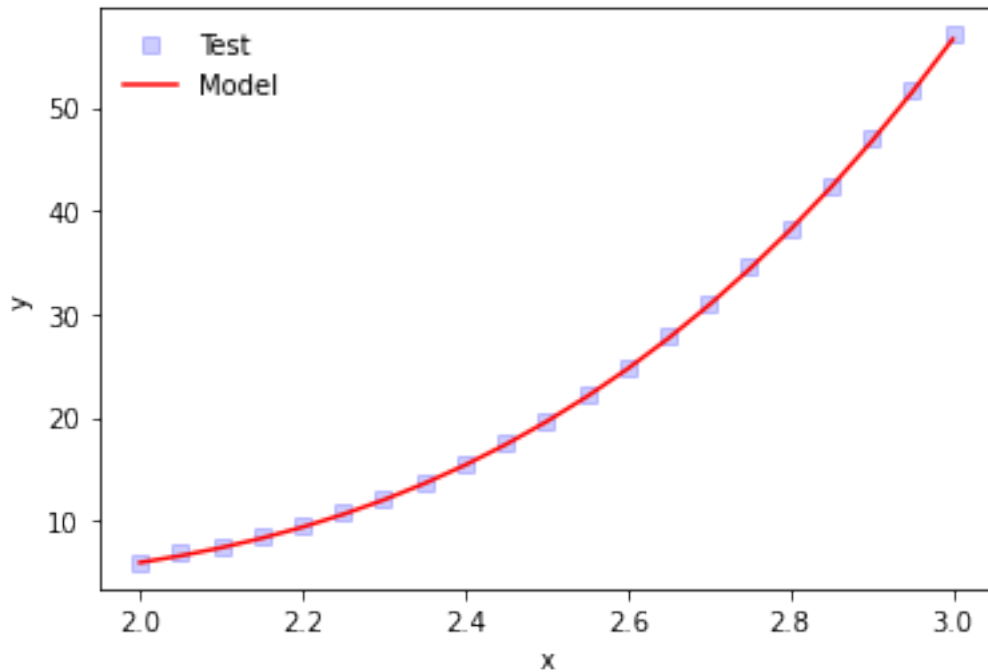
Veamos el ajuste del polinomio y nuestros datos.

```
[14]: plt.plot(train["X_training"], train["Y_training"], 'bs', alpha=0.2, label='Train')
      plt.plot(train["X_training"], model(train["X_training"]), 'r', label='Model')
      plt.legend(loc='best', frameon=False)
      plt.xlabel('x')
      plt.ylabel('y')
      plt.show()
```



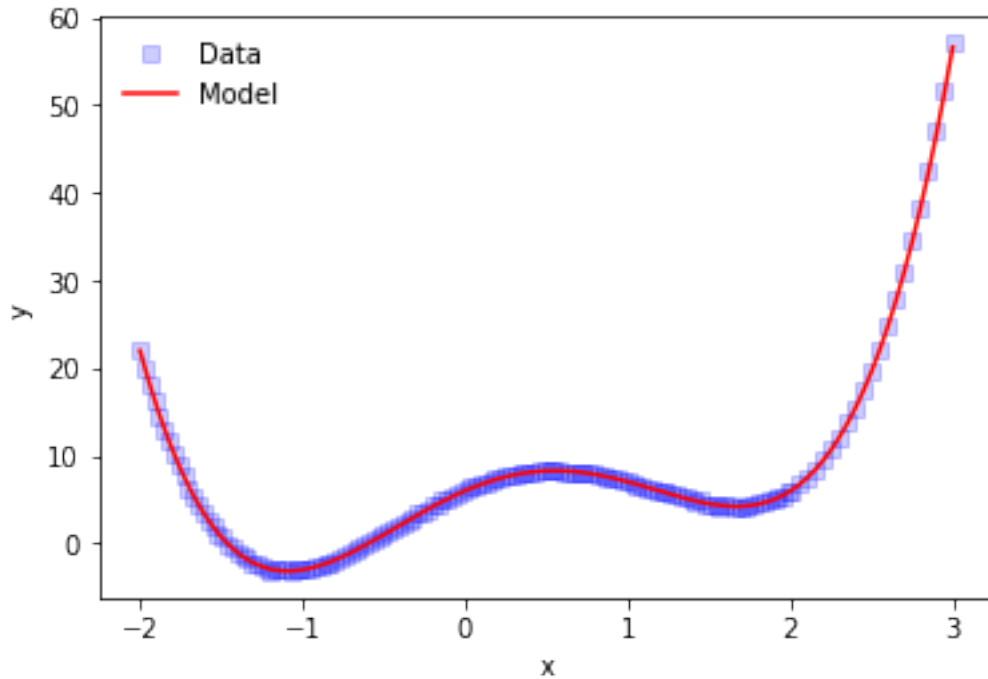
Ahora, ajustando este polinomio a los datos de prueba

```
[15]: plt.plot(test["X_test"], test["Y_test"], 'bs', alpha=0.2, label='Test')
      plt.plot(test["X_test"], model(test["X_test"]), 'r', label='Model')
      plt.legend(loc='best', frameon=False)
      plt.xlabel('x')
      plt.ylabel('y')
      plt.show()
```



Donde vemos que el ajuste es muy superior que el visto anteriormente y además sí predice los valores alejados de los datos de entrenamiento. Finalmente, veamos la figura completa de los datos que tenemos y su ajuste.

```
[16]: x = np.concatenate((train["X_training"], test["X_test"]))
y = np.concatenate((train["Y_training"], test["Y_test"]))
# Gráfico
plt.plot(x, y, 'bs', alpha=0.2, label='Data')
plt.plot(x, model(x), 'r', label='Model')
plt.legend(loc='best', frameon=False)
plt.xlabel('x')
plt.ylabel('y')
plt.show()
```

1.2.4 Validación Cruzada

Vamos a evaluar la calificación de validación cruzada de nuestro modelo

```
[17]: # C-V para el modelo que tenemos.
test = test.dropna()
poly_features = PolynomialFeatures(degree=grade)
X_poly = poly_features.fit_transform(test)
poly = LinearRegression()
np.mean(cross_val_score(poly, X_poly, test["Y_test"], cv=5))
```

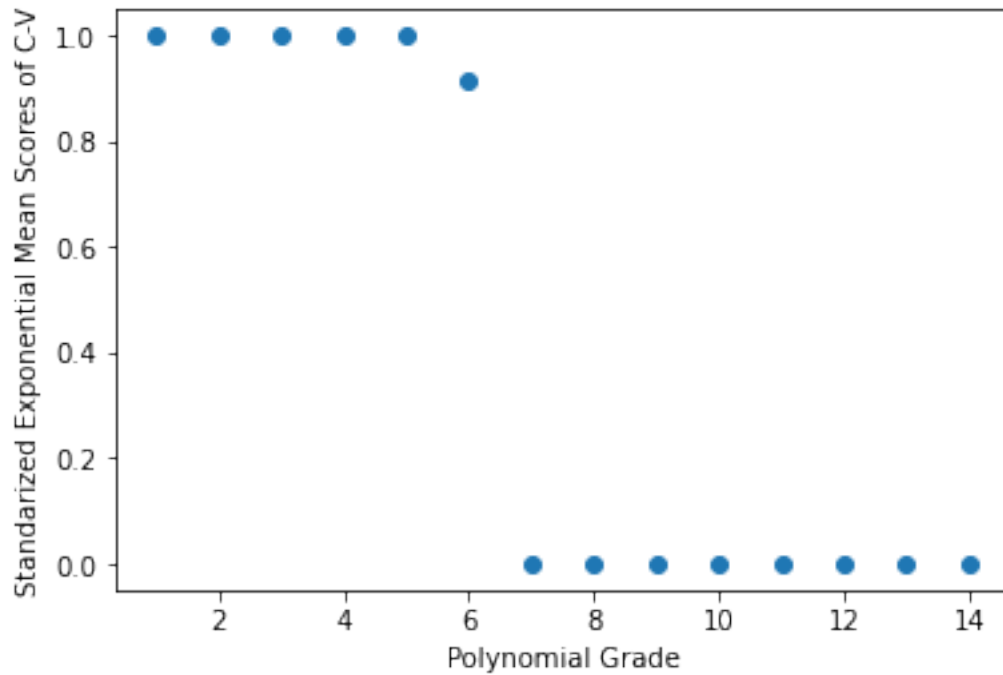
[17]: 1.0

Esto nos indica que el modelo es muy bueno. Finalmente comparémoslo contra otros grados del polinomio

```
[18]: def create_polynomial_regression_model(degree):
    poly_features = PolynomialFeatures(degree=degree)
    X_poly = poly_features.fit_transform(test)
    poly = LinearRegression()
    return np.exp(np.mean(cross_val_score(poly, X_poly, test["Y_test"], cv=5)))/np.
    ↳exp(1)
poly_cv = []
for i in range(1,15):
    poly_cv.append(create_polynomial_regression_model(i))
```

```
plt.scatter(range(1,15),poly_cv)
plt.xlabel('Polynomial Grade')
plt.ylabel('Standarized Exponential Mean Scores of C-V')
```

[18]: Text(0, 0.5, 'Standarized Exponential Mean Scores of C-V')



Donde vemos que justo el grado elegido es adecuado.

1.3 Ejercicio 2

Tener la siguiente tabla lógica

x_1	x_2	$x_1 \& x_2$
0	0	1
1	0	1
0	1	1
1	1	0

x_1	x_2	$x_1 \$ x_2$
0	0	0
1	0	0
0	1	0
1	1	1

Usando Keras, construye un operador & y \$ con un perceptron simple. Si A=[1.001 0 0.001 1], B=[0 1 0 1] y C=[0 1 1 0]. Calcula la operación (A&B)\$C

1.3.1 Solución

1.3.2 Operador &

```
[19]: # The input and output, i.e. truth table, of a NAND gate
x_train = np.array([[0,0],[1,0],[0,1],[1,1]], "uint8")
y_train = np.array([[1],[1],[1],[0]], "uint8")

# Create neural networks model
model_Ampersand = Sequential()
# Add layers to the model
model_Ampersand.add(Dense(5, activation='relu', input_dim=2))      # first
    ↪ hidden layer
model_Ampersand.add(Dense(3, activation='relu'))                  # second
    ↪ hidden layer
model_Ampersand.add(Dense(1, activation='sigmoid'))              # output
    ↪ layer

# Compile the neural networks model
model_Ampersand.compile(optimizer='adam', loss='binary_crossentropy',
    ↪ metrics=['accuracy'])
# Train the neural networks model
model_Ampersand.fit(x_train, y_train, epochs=5000)
```

Epoch 1/5000

1/1 [=====] - 0s 0s/step - loss: 0.6608 - accuracy:
0.5000

Epoch 2/5000

1/1 [=====] - 0s 0s/step - loss: 0.6597 - accuracy:
0.7500

Epoch 3/5000

1/1 [=====] - 0s 0s/step - loss: 0.6585 - accuracy:
0.7500

Epoch 4/5000

1/1 [=====] - 0s 998us/step - loss: 0.6574 - accuracy:
0.7500

Epoch 5/5000

1/1 [=====] - 0s 997us/step - loss: 0.6563 - accuracy:
0.7500

Epoch 6/5000

1/1 [=====] - 0s 0s/step - loss: 0.6551 - accuracy:
0.7500

Epoch 7/5000

1/1 [=====] - 0s 0s/step - loss: 0.6540 - accuracy:
0.7500

Epoch 8/5000
1/1 [=====] - 0s 0s/step - loss: 0.6529 - accuracy:
0.7500

Epoch 9/5000
1/1 [=====] - 0s 0s/step - loss: 0.6518 - accuracy:
0.7500

Epoch 10/5000
1/1 [=====] - 0s 0s/step - loss: 0.6507 - accuracy:
0.7500

Epoch 11/5000
1/1 [=====] - 0s 0s/step - loss: 0.6496 - accuracy:
0.7500

Epoch 12/5000
1/1 [=====] - 0s 0s/step - loss: 0.6485 - accuracy:
0.7500

Epoch 13/5000
1/1 [=====] - 0s 0s/step - loss: 0.6475 - accuracy:
0.7500

Epoch 14/5000
1/1 [=====] - 0s 997us/step - loss: 0.6464 - accuracy:
0.7500

Epoch 15/5000
1/1 [=====] - 0s 997us/step - loss: 0.6453 - accuracy:
0.7500

Epoch 16/5000
1/1 [=====] - 0s 998us/step - loss: 0.6442 - accuracy:
0.7500

Epoch 17/5000
1/1 [=====] - 0s 0s/step - loss: 0.6432 - accuracy:
0.7500

Epoch 18/5000
1/1 [=====] - 0s 0s/step - loss: 0.6421 - accuracy:
0.7500

Epoch 19/5000
1/1 [=====] - 0s 998us/step - loss: 0.6411 - accuracy:
0.7500

Epoch 20/5000
1/1 [=====] - 0s 0s/step - loss: 0.6400 - accuracy:
0.7500

Epoch 21/5000
1/1 [=====] - 0s 0s/step - loss: 0.6390 - accuracy:
0.7500

Epoch 22/5000
1/1 [=====] - 0s 0s/step - loss: 0.6379 - accuracy:
0.7500

Epoch 23/5000
1/1 [=====] - 0s 998us/step - loss: 0.6369 - accuracy:
0.7500

Epoch 24/5000
1/1 [=====] - 0s 1ms/step - loss: 0.6358 - accuracy:
0.7500
Epoch 25/5000
1/1 [=====] - 0s 0s/step - loss: 0.6348 - accuracy:
0.7500
Epoch 26/5000
1/1 [=====] - 0s 0s/step - loss: 0.6338 - accuracy:
0.7500
Epoch 27/5000
1/1 [=====] - 0s 0s/step - loss: 0.6328 - accuracy:
0.7500
Epoch 28/5000
1/1 [=====] - 0s 998us/step - loss: 0.6317 - accuracy:
0.7500
Epoch 29/5000
1/1 [=====] - 0s 0s/step - loss: 0.6307 - accuracy:
0.7500
Epoch 30/5000
1/1 [=====] - 0s 997us/step - loss: 0.6297 - accuracy:
0.7500
Epoch 31/5000
1/1 [=====] - 0s 998us/step - loss: 0.6287 - accuracy:
0.7500
Epoch 32/5000
1/1 [=====] - 0s 0s/step - loss: 0.6277 - accuracy:
0.7500
Epoch 33/5000
1/1 [=====] - 0s 0s/step - loss: 0.6267 - accuracy:
0.7500
Epoch 34/5000
1/1 [=====] - 0s 0s/step - loss: 0.6258 - accuracy:
0.7500
Epoch 35/5000
1/1 [=====] - 0s 0s/step - loss: 0.6249 - accuracy:
0.7500
Epoch 36/5000
1/1 [=====] - 0s 0s/step - loss: 0.6241 - accuracy:
0.7500
Epoch 37/5000
1/1 [=====] - 0s 998us/step - loss: 0.6233 - accuracy:
0.7500
Epoch 38/5000
1/1 [=====] - 0s 996us/step - loss: 0.6225 - accuracy:
0.7500
Epoch 39/5000
1/1 [=====] - 0s 996us/step - loss: 0.6217 - accuracy:
0.7500

Epoch 40/5000
1/1 [=====] - 0s 0s/step - loss: 0.6209 - accuracy:
0.7500
Epoch 41/5000
1/1 [=====] - 0s 999us/step - loss: 0.6201 - accuracy:
0.7500
Epoch 42/5000
1/1 [=====] - 0s 0s/step - loss: 0.6193 - accuracy:
0.7500
Epoch 43/5000
1/1 [=====] - 0s 998us/step - loss: 0.6185 - accuracy:
0.7500
Epoch 44/5000
1/1 [=====] - 0s 998us/step - loss: 0.6177 - accuracy:
0.7500
Epoch 45/5000
1/1 [=====] - 0s 0s/step - loss: 0.6169 - accuracy:
0.7500
Epoch 46/5000
1/1 [=====] - 0s 0s/step - loss: 0.6161 - accuracy:
0.7500
Epoch 47/5000
1/1 [=====] - 0s 0s/step - loss: 0.6153 - accuracy:
0.7500
Epoch 48/5000
1/1 [=====] - 0s 0s/step - loss: 0.6145 - accuracy:
0.7500
Epoch 49/5000
1/1 [=====] - 0s 0s/step - loss: 0.6137 - accuracy:
0.7500
Epoch 50/5000
1/1 [=====] - 0s 0s/step - loss: 0.6129 - accuracy:
0.7500
Epoch 51/5000
1/1 [=====] - 0s 0s/step - loss: 0.6121 - accuracy:
0.7500
Epoch 52/5000
1/1 [=====] - 0s 998us/step - loss: 0.6113 - accuracy:
0.7500
Epoch 53/5000
1/1 [=====] - 0s 998us/step - loss: 0.6105 - accuracy:
0.7500
Epoch 54/5000
1/1 [=====] - 0s 997us/step - loss: 0.6098 - accuracy:
0.7500
Epoch 55/5000
1/1 [=====] - 0s 998us/step - loss: 0.6090 - accuracy:
0.7500

Epoch 56/5000
1/1 [=====] - 0s 997us/step - loss: 0.6082 - accuracy:
0.7500

Epoch 57/5000
1/1 [=====] - 0s 998us/step - loss: 0.6074 - accuracy:
0.7500

Epoch 58/5000
1/1 [=====] - 0s 997us/step - loss: 0.6066 - accuracy:
0.7500

Epoch 59/5000
1/1 [=====] - 0s 998us/step - loss: 0.6059 - accuracy:
0.7500

Epoch 60/5000
1/1 [=====] - 0s 1000us/step - loss: 0.6051 - accuracy:
0.7500

Epoch 61/5000
1/1 [=====] - 0s 1ms/step - loss: 0.6043 - accuracy:
0.7500

Epoch 62/5000
1/1 [=====] - 0s 998us/step - loss: 0.6035 - accuracy:
0.7500

Epoch 63/5000
1/1 [=====] - 0s 998us/step - loss: 0.6028 - accuracy:
0.7500

Epoch 64/5000
1/1 [=====] - 0s 996us/step - loss: 0.6020 - accuracy:
0.7500

Epoch 65/5000
1/1 [=====] - 0s 998us/step - loss: 0.6012 - accuracy:
0.7500

Epoch 66/5000
1/1 [=====] - 0s 998us/step - loss: 0.6005 - accuracy:
0.7500

Epoch 67/5000
1/1 [=====] - 0s 0s/step - loss: 0.5997 - accuracy:
0.7500

Epoch 68/5000
1/1 [=====] - 0s 999us/step - loss: 0.5989 - accuracy:
0.7500

Epoch 69/5000
1/1 [=====] - 0s 998us/step - loss: 0.5982 - accuracy:
0.7500

Epoch 70/5000
1/1 [=====] - 0s 0s/step - loss: 0.5974 - accuracy:
0.7500

Epoch 71/5000
1/1 [=====] - 0s 0s/step - loss: 0.5966 - accuracy:
0.7500

Epoch 72/5000
1/1 [=====] - 0s 0s/step - loss: 0.5959 - accuracy:
0.7500

Epoch 73/5000
1/1 [=====] - 0s 0s/step - loss: 0.5951 - accuracy:
0.7500

Epoch 74/5000
1/1 [=====] - 0s 0s/step - loss: 0.5944 - accuracy:
0.7500

Epoch 75/5000
1/1 [=====] - 0s 0s/step - loss: 0.5936 - accuracy:
0.7500

Epoch 76/5000
1/1 [=====] - 0s 0s/step - loss: 0.5928 - accuracy:
0.7500

Epoch 77/5000
1/1 [=====] - 0s 0s/step - loss: 0.5921 - accuracy:
0.7500

Epoch 78/5000
1/1 [=====] - 0s 0s/step - loss: 0.5913 - accuracy:
0.7500

Epoch 79/5000
1/1 [=====] - 0s 0s/step - loss: 0.5906 - accuracy:
0.7500

Epoch 80/5000
1/1 [=====] - 0s 997us/step - loss: 0.5898 - accuracy:
0.7500

Epoch 81/5000
1/1 [=====] - 0s 0s/step - loss: 0.5891 - accuracy:
0.7500

Epoch 82/5000
1/1 [=====] - 0s 998us/step - loss: 0.5883 - accuracy:
0.7500

Epoch 83/5000
1/1 [=====] - 0s 0s/step - loss: 0.5875 - accuracy:
0.7500

Epoch 84/5000
1/1 [=====] - 0s 998us/step - loss: 0.5868 - accuracy:
0.7500

Epoch 85/5000
1/1 [=====] - 0s 998us/step - loss: 0.5860 - accuracy:
0.7500

Epoch 86/5000
1/1 [=====] - 0s 0s/step - loss: 0.5853 - accuracy:
0.7500

Epoch 87/5000
1/1 [=====] - 0s 1000us/step - loss: 0.5845 - accuracy:
0.7500

Epoch 88/5000
1/1 [=====] - 0s 0s/step - loss: 0.5838 - accuracy:
0.7500

Epoch 89/5000
1/1 [=====] - 0s 998us/step - loss: 0.5830 - accuracy:
0.7500

Epoch 90/5000
1/1 [=====] - 0s 999us/step - loss: 0.5823 - accuracy:
0.7500

Epoch 91/5000
1/1 [=====] - 0s 997us/step - loss: 0.5815 - accuracy:
0.7500

Epoch 92/5000
1/1 [=====] - 0s 0s/step - loss: 0.5808 - accuracy:
0.7500

Epoch 93/5000
1/1 [=====] - 0s 0s/step - loss: 0.5800 - accuracy:
0.7500

Epoch 94/5000
1/1 [=====] - 0s 0s/step - loss: 0.5793 - accuracy:
0.7500

Epoch 95/5000
1/1 [=====] - 0s 0s/step - loss: 0.5785 - accuracy:
0.7500

Epoch 96/5000
1/1 [=====] - 0s 0s/step - loss: 0.5778 - accuracy:
0.7500

Epoch 97/5000
1/1 [=====] - 0s 0s/step - loss: 0.5770 - accuracy:
0.7500

Epoch 98/5000
1/1 [=====] - 0s 0s/step - loss: 0.5763 - accuracy:
0.7500

Epoch 99/5000
1/1 [=====] - 0s 0s/step - loss: 0.5755 - accuracy:
0.7500

Epoch 100/5000
1/1 [=====] - 0s 0s/step - loss: 0.5748 - accuracy:
0.7500

Epoch 101/5000
1/1 [=====] - 0s 0s/step - loss: 0.5740 - accuracy:
0.7500

Epoch 102/5000
1/1 [=====] - 0s 0s/step - loss: 0.5733 - accuracy:
0.7500

Epoch 103/5000
1/1 [=====] - 0s 998us/step - loss: 0.5725 - accuracy:
0.7500

Epoch 104/5000
1/1 [=====] - 0s 999us/step - loss: 0.5718 - accuracy:
0.7500

Epoch 105/5000
1/1 [=====] - 0s 0s/step - loss: 0.5710 - accuracy:
0.7500

Epoch 106/5000
1/1 [=====] - 0s 0s/step - loss: 0.5703 - accuracy:
0.7500

Epoch 107/5000
1/1 [=====] - 0s 998us/step - loss: 0.5695 - accuracy:
0.7500

Epoch 108/5000
1/1 [=====] - 0s 997us/step - loss: 0.5688 - accuracy:
0.7500

Epoch 109/5000
1/1 [=====] - 0s 0s/step - loss: 0.5680 - accuracy:
0.7500

Epoch 110/5000
1/1 [=====] - 0s 998us/step - loss: 0.5673 - accuracy:
0.7500

Epoch 111/5000
1/1 [=====] - 0s 0s/step - loss: 0.5665 - accuracy:
0.7500

Epoch 112/5000
1/1 [=====] - 0s 0s/step - loss: 0.5658 - accuracy:
0.7500

Epoch 113/5000
1/1 [=====] - 0s 999us/step - loss: 0.5650 - accuracy:
0.7500

Epoch 114/5000
1/1 [=====] - 0s 0s/step - loss: 0.5643 - accuracy:
0.7500

Epoch 115/5000
1/1 [=====] - 0s 0s/step - loss: 0.5635 - accuracy:
0.7500

Epoch 116/5000
1/1 [=====] - 0s 998us/step - loss: 0.5628 - accuracy:
0.7500

Epoch 117/5000
1/1 [=====] - 0s 0s/step - loss: 0.5620 - accuracy:
0.7500

Epoch 118/5000
1/1 [=====] - 0s 0s/step - loss: 0.5613 - accuracy:
0.7500

Epoch 119/5000
1/1 [=====] - 0s 0s/step - loss: 0.5605 - accuracy:
0.7500

Epoch 120/5000
1/1 [=====] - 0s 997us/step - loss: 0.5598 - accuracy:
0.7500

Epoch 121/5000
1/1 [=====] - 0s 997us/step - loss: 0.5590 - accuracy:
0.7500

Epoch 122/5000
1/1 [=====] - 0s 997us/step - loss: 0.5583 - accuracy:
0.7500

Epoch 123/5000
1/1 [=====] - 0s 998us/step - loss: 0.5575 - accuracy:
0.7500

Epoch 124/5000
1/1 [=====] - 0s 0s/step - loss: 0.5568 - accuracy:
0.7500

Epoch 125/5000
1/1 [=====] - 0s 997us/step - loss: 0.5560 - accuracy:
0.7500

Epoch 126/5000
1/1 [=====] - 0s 0s/step - loss: 0.5552 - accuracy:
0.7500

Epoch 127/5000
1/1 [=====] - 0s 0s/step - loss: 0.5545 - accuracy:
0.7500

Epoch 128/5000
1/1 [=====] - 0s 997us/step - loss: 0.5537 - accuracy:
0.7500

Epoch 129/5000
1/1 [=====] - 0s 0s/step - loss: 0.5530 - accuracy:
0.7500

Epoch 130/5000
1/1 [=====] - 0s 0s/step - loss: 0.5522 - accuracy:
0.7500

Epoch 131/5000
1/1 [=====] - 0s 998us/step - loss: 0.5515 - accuracy:
0.7500

Epoch 132/5000
1/1 [=====] - 0s 997us/step - loss: 0.5507 - accuracy:
0.7500

Epoch 133/5000
1/1 [=====] - 0s 998us/step - loss: 0.5499 - accuracy:
0.7500

Epoch 134/5000
1/1 [=====] - 0s 0s/step - loss: 0.5492 - accuracy:
0.7500

Epoch 135/5000
1/1 [=====] - 0s 0s/step - loss: 0.5484 - accuracy:
0.7500

Epoch 136/5000
1/1 [=====] - 0s 0s/step - loss: 0.5477 - accuracy:
0.7500
Epoch 137/5000
1/1 [=====] - 0s 998us/step - loss: 0.5470 - accuracy:
0.7500
Epoch 138/5000
1/1 [=====] - 0s 998us/step - loss: 0.5463 - accuracy:
0.7500
Epoch 139/5000
1/1 [=====] - 0s 0s/step - loss: 0.5456 - accuracy:
0.7500
Epoch 140/5000
1/1 [=====] - 0s 997us/step - loss: 0.5449 - accuracy:
0.7500
Epoch 141/5000
1/1 [=====] - 0s 998us/step - loss: 0.5441 - accuracy:
0.7500
Epoch 142/5000
1/1 [=====] - 0s 0s/step - loss: 0.5433 - accuracy:
0.7500
Epoch 143/5000
1/1 [=====] - 0s 0s/step - loss: 0.5426 - accuracy:
0.7500
Epoch 144/5000
1/1 [=====] - 0s 998us/step - loss: 0.5419 - accuracy:
0.7500
Epoch 145/5000
1/1 [=====] - 0s 0s/step - loss: 0.5412 - accuracy:
0.7500
Epoch 146/5000
1/1 [=====] - 0s 0s/step - loss: 0.5405 - accuracy:
0.7500
Epoch 147/5000
1/1 [=====] - 0s 0s/step - loss: 0.5398 - accuracy:
0.7500
Epoch 148/5000
1/1 [=====] - 0s 998us/step - loss: 0.5391 - accuracy:
0.7500
Epoch 149/5000
1/1 [=====] - 0s 998us/step - loss: 0.5383 - accuracy:
0.7500
Epoch 150/5000
1/1 [=====] - 0s 998us/step - loss: 0.5376 - accuracy:
0.7500
Epoch 151/5000
1/1 [=====] - 0s 0s/step - loss: 0.5369 - accuracy:
0.7500

Epoch 152/5000
1/1 [=====] - 0s 994us/step - loss: 0.5361 - accuracy:
0.7500

Epoch 153/5000
1/1 [=====] - 0s 998us/step - loss: 0.5354 - accuracy:
0.7500

Epoch 154/5000
1/1 [=====] - 0s 0s/step - loss: 0.5347 - accuracy:
0.7500

Epoch 155/5000
1/1 [=====] - 0s 997us/step - loss: 0.5340 - accuracy:
0.7500

Epoch 156/5000
1/1 [=====] - 0s 0s/step - loss: 0.5332 - accuracy:
0.7500

Epoch 157/5000
1/1 [=====] - 0s 1ms/step - loss: 0.5325 - accuracy:
0.7500

Epoch 158/5000
1/1 [=====] - 0s 998us/step - loss: 0.5318 - accuracy:
1.0000

Epoch 159/5000
1/1 [=====] - 0s 0s/step - loss: 0.5311 - accuracy:
1.0000

Epoch 160/5000
1/1 [=====] - 0s 998us/step - loss: 0.5303 - accuracy:
1.0000

Epoch 161/5000
1/1 [=====] - 0s 996us/step - loss: 0.5296 - accuracy:
1.0000

Epoch 162/5000
1/1 [=====] - 0s 998us/step - loss: 0.5289 - accuracy:
1.0000

Epoch 163/5000
1/1 [=====] - 0s 997us/step - loss: 0.5282 - accuracy:
1.0000

Epoch 164/5000
1/1 [=====] - 0s 0s/step - loss: 0.5275 - accuracy:
1.0000

Epoch 165/5000
1/1 [=====] - 0s 998us/step - loss: 0.5267 - accuracy:
1.0000

Epoch 166/5000
1/1 [=====] - 0s 997us/step - loss: 0.5260 - accuracy:
1.0000

Epoch 167/5000
1/1 [=====] - 0s 999us/step - loss: 0.5253 - accuracy:
1.0000

Epoch 168/5000
1/1 [=====] - 0s 1ms/step - loss: 0.5246 - accuracy:
1.0000

Epoch 169/5000
1/1 [=====] - 0s 998us/step - loss: 0.5239 - accuracy:
1.0000

Epoch 170/5000
1/1 [=====] - 0s 996us/step - loss: 0.5232 - accuracy:
1.0000

Epoch 171/5000
1/1 [=====] - 0s 0s/step - loss: 0.5225 - accuracy:
1.0000

Epoch 172/5000
1/1 [=====] - 0s 997us/step - loss: 0.5217 - accuracy:
1.0000

Epoch 173/5000
1/1 [=====] - 0s 998us/step - loss: 0.5210 - accuracy:
1.0000

Epoch 174/5000
1/1 [=====] - 0s 0s/step - loss: 0.5203 - accuracy:
1.0000

Epoch 175/5000
1/1 [=====] - 0s 998us/step - loss: 0.5195 - accuracy:
1.0000

Epoch 176/5000
1/1 [=====] - 0s 1000us/step - loss: 0.5188 - accuracy:
1.0000

Epoch 177/5000
1/1 [=====] - 0s 997us/step - loss: 0.5181 - accuracy:
1.0000

Epoch 178/5000
1/1 [=====] - 0s 2ms/step - loss: 0.5174 - accuracy:
1.0000

Epoch 179/5000
1/1 [=====] - 0s 0s/step - loss: 0.5167 - accuracy:
1.0000

Epoch 180/5000
1/1 [=====] - 0s 998us/step - loss: 0.5160 - accuracy:
1.0000

Epoch 181/5000
1/1 [=====] - 0s 998us/step - loss: 0.5153 - accuracy:
1.0000

Epoch 182/5000
1/1 [=====] - 0s 0s/step - loss: 0.5145 - accuracy:
1.0000

Epoch 183/5000
1/1 [=====] - 0s 0s/step - loss: 0.5138 - accuracy:
1.0000

Epoch 184/5000
1/1 [=====] - 0s 998us/step - loss: 0.5131 - accuracy:
1.0000

Epoch 185/5000
1/1 [=====] - 0s 1000us/step - loss: 0.5123 - accuracy:
1.0000

Epoch 186/5000
1/1 [=====] - 0s 997us/step - loss: 0.5116 - accuracy:
1.0000

Epoch 187/5000
1/1 [=====] - 0s 1ms/step - loss: 0.5109 - accuracy:
1.0000

Epoch 188/5000
1/1 [=====] - 0s 997us/step - loss: 0.5102 - accuracy:
1.0000

Epoch 189/5000
1/1 [=====] - 0s 1ms/step - loss: 0.5094 - accuracy:
1.0000

Epoch 190/5000
1/1 [=====] - 0s 0s/step - loss: 0.5087 - accuracy:
1.0000

Epoch 191/5000
1/1 [=====] - 0s 996us/step - loss: 0.5080 - accuracy:
1.0000

Epoch 192/5000
1/1 [=====] - 0s 996us/step - loss: 0.5073 - accuracy:
1.0000

Epoch 193/5000
1/1 [=====] - 0s 0s/step - loss: 0.5066 - accuracy:
1.0000

Epoch 194/5000
1/1 [=====] - 0s 998us/step - loss: 0.5059 - accuracy:
1.0000

Epoch 195/5000
1/1 [=====] - 0s 0s/step - loss: 0.5051 - accuracy:
1.0000

Epoch 196/5000
1/1 [=====] - 0s 998us/step - loss: 0.5044 - accuracy:
1.0000

Epoch 197/5000
1/1 [=====] - 0s 0s/step - loss: 0.5037 - accuracy:
1.0000

Epoch 198/5000
1/1 [=====] - 0s 997us/step - loss: 0.5030 - accuracy:
1.0000

Epoch 199/5000
1/1 [=====] - 0s 0s/step - loss: 0.5022 - accuracy:
1.0000

Epoch 200/5000
1/1 [=====] - 0s 0s/step - loss: 0.5015 - accuracy:
1.0000

Epoch 201/5000
1/1 [=====] - 0s 997us/step - loss: 0.5008 - accuracy:
1.0000

Epoch 202/5000
1/1 [=====] - 0s 0s/step - loss: 0.5001 - accuracy:
1.0000

Epoch 203/5000
1/1 [=====] - 0s 0s/step - loss: 0.4994 - accuracy:
1.0000

Epoch 204/5000
1/1 [=====] - 0s 0s/step - loss: 0.4986 - accuracy:
1.0000

Epoch 205/5000
1/1 [=====] - 0s 999us/step - loss: 0.4979 - accuracy:
1.0000

Epoch 206/5000
1/1 [=====] - 0s 997us/step - loss: 0.4972 - accuracy:
1.0000

Epoch 207/5000
1/1 [=====] - 0s 1ms/step - loss: 0.4965 - accuracy:
1.0000

Epoch 208/5000
1/1 [=====] - 0s 999us/step - loss: 0.4958 - accuracy:
1.0000

Epoch 209/5000
1/1 [=====] - 0s 998us/step - loss: 0.4950 - accuracy:
1.0000

Epoch 210/5000
1/1 [=====] - 0s 995us/step - loss: 0.4943 - accuracy:
1.0000

Epoch 211/5000
1/1 [=====] - 0s 0s/step - loss: 0.4936 - accuracy:
1.0000

Epoch 212/5000
1/1 [=====] - 0s 998us/step - loss: 0.4929 - accuracy:
1.0000

Epoch 213/5000
1/1 [=====] - 0s 0s/step - loss: 0.4921 - accuracy:
1.0000

Epoch 214/5000
1/1 [=====] - 0s 996us/step - loss: 0.4914 - accuracy:
1.0000

Epoch 215/5000
1/1 [=====] - 0s 998us/step - loss: 0.4907 - accuracy:
1.0000

Epoch 216/5000
1/1 [=====] - 0s 0s/step - loss: 0.4899 - accuracy:
1.0000

Epoch 217/5000
1/1 [=====] - 0s 0s/step - loss: 0.4892 - accuracy:
1.0000

Epoch 218/5000
1/1 [=====] - 0s 997us/step - loss: 0.4885 - accuracy:
1.0000

Epoch 219/5000
1/1 [=====] - 0s 998us/step - loss: 0.4878 - accuracy:
1.0000

Epoch 220/5000
1/1 [=====] - 0s 996us/step - loss: 0.4871 - accuracy:
1.0000

Epoch 221/5000
1/1 [=====] - 0s 0s/step - loss: 0.4863 - accuracy:
1.0000

Epoch 222/5000
1/1 [=====] - 0s 0s/step - loss: 0.4856 - accuracy:
1.0000

Epoch 223/5000
1/1 [=====] - 0s 0s/step - loss: 0.4849 - accuracy:
1.0000

Epoch 224/5000
1/1 [=====] - 0s 999us/step - loss: 0.4842 - accuracy:
1.0000

Epoch 225/5000
1/1 [=====] - 0s 998us/step - loss: 0.4834 - accuracy:
1.0000

Epoch 226/5000
1/1 [=====] - 0s 997us/step - loss: 0.4827 - accuracy:
1.0000

Epoch 227/5000
1/1 [=====] - 0s 0s/step - loss: 0.4820 - accuracy:
1.0000

Epoch 228/5000
1/1 [=====] - 0s 997us/step - loss: 0.4813 - accuracy:
1.0000

Epoch 229/5000
1/1 [=====] - 0s 995us/step - loss: 0.4806 - accuracy:
1.0000

Epoch 230/5000
1/1 [=====] - 0s 997us/step - loss: 0.4798 - accuracy:
1.0000

Epoch 231/5000
1/1 [=====] - 0s 997us/step - loss: 0.4791 - accuracy:
1.0000

Epoch 232/5000
1/1 [=====] - 0s 998us/step - loss: 0.4784 - accuracy:
1.0000

Epoch 233/5000
1/1 [=====] - 0s 0s/step - loss: 0.4777 - accuracy:
1.0000

Epoch 234/5000
1/1 [=====] - 0s 998us/step - loss: 0.4770 - accuracy:
1.0000

Epoch 235/5000
1/1 [=====] - 0s 997us/step - loss: 0.4762 - accuracy:
1.0000

Epoch 236/5000
1/1 [=====] - 0s 997us/step - loss: 0.4755 - accuracy:
1.0000

Epoch 237/5000
1/1 [=====] - 0s 997us/step - loss: 0.4748 - accuracy:
1.0000

Epoch 238/5000
1/1 [=====] - 0s 995us/step - loss: 0.4741 - accuracy:
1.0000

Epoch 239/5000
1/1 [=====] - 0s 998us/step - loss: 0.4734 - accuracy:
1.0000

Epoch 240/5000
1/1 [=====] - 0s 0s/step - loss: 0.4726 - accuracy:
1.0000

Epoch 241/5000
1/1 [=====] - 0s 0s/step - loss: 0.4719 - accuracy:
1.0000

Epoch 242/5000
1/1 [=====] - 0s 997us/step - loss: 0.4712 - accuracy:
1.0000

Epoch 243/5000
1/1 [=====] - 0s 996us/step - loss: 0.4705 - accuracy:
1.0000

Epoch 244/5000
1/1 [=====] - 0s 0s/step - loss: 0.4698 - accuracy:
1.0000

Epoch 245/5000
1/1 [=====] - 0s 0s/step - loss: 0.4690 - accuracy:
1.0000

Epoch 246/5000
1/1 [=====] - 0s 0s/step - loss: 0.4683 - accuracy:
1.0000

Epoch 247/5000
1/1 [=====] - 0s 998us/step - loss: 0.4676 - accuracy:
1.0000

Epoch 248/5000
1/1 [=====] - 0s 997us/step - loss: 0.4669 - accuracy:
1.0000

Epoch 249/5000
1/1 [=====] - 0s 0s/step - loss: 0.4662 - accuracy:
1.0000

Epoch 250/5000
1/1 [=====] - 0s 0s/step - loss: 0.4654 - accuracy:
1.0000

Epoch 251/5000
1/1 [=====] - 0s 0s/step - loss: 0.4647 - accuracy:
1.0000

Epoch 252/5000
1/1 [=====] - 0s 998us/step - loss: 0.4640 - accuracy:
1.0000

Epoch 253/5000
1/1 [=====] - 0s 0s/step - loss: 0.4633 - accuracy:
1.0000

Epoch 254/5000
1/1 [=====] - 0s 999us/step - loss: 0.4626 - accuracy:
1.0000

Epoch 255/5000
1/1 [=====] - 0s 0s/step - loss: 0.4619 - accuracy:
1.0000

Epoch 256/5000
1/1 [=====] - 0s 998us/step - loss: 0.4612 - accuracy:
1.0000

Epoch 257/5000
1/1 [=====] - 0s 0s/step - loss: 0.4604 - accuracy:
1.0000

Epoch 258/5000
1/1 [=====] - 0s 997us/step - loss: 0.4597 - accuracy:
1.0000

Epoch 259/5000
1/1 [=====] - 0s 0s/step - loss: 0.4590 - accuracy:
1.0000

Epoch 260/5000
1/1 [=====] - 0s 995us/step - loss: 0.4583 - accuracy:
1.0000

Epoch 261/5000
1/1 [=====] - 0s 997us/step - loss: 0.4575 - accuracy:
1.0000

Epoch 262/5000
1/1 [=====] - 0s 997us/step - loss: 0.4568 - accuracy:
1.0000

Epoch 263/5000
1/1 [=====] - 0s 0s/step - loss: 0.4561 - accuracy:
1.0000

Epoch 264/5000
1/1 [=====] - 0s 998us/step - loss: 0.4554 - accuracy:
1.0000

Epoch 265/5000
1/1 [=====] - 0s 0s/step - loss: 0.4547 - accuracy:
1.0000

Epoch 266/5000
1/1 [=====] - 0s 998us/step - loss: 0.4540 - accuracy:
1.0000

Epoch 267/5000
1/1 [=====] - 0s 0s/step - loss: 0.4532 - accuracy:
1.0000

Epoch 268/5000
1/1 [=====] - 0s 0s/step - loss: 0.4525 - accuracy:
1.0000

Epoch 269/5000
1/1 [=====] - 0s 997us/step - loss: 0.4518 - accuracy:
1.0000

Epoch 270/5000
1/1 [=====] - 0s 997us/step - loss: 0.4511 - accuracy:
1.0000

Epoch 271/5000
1/1 [=====] - 0s 998us/step - loss: 0.4504 - accuracy:
1.0000

Epoch 272/5000
1/1 [=====] - 0s 0s/step - loss: 0.4497 - accuracy:
1.0000

Epoch 273/5000
1/1 [=====] - 0s 0s/step - loss: 0.4489 - accuracy:
1.0000

Epoch 274/5000
1/1 [=====] - 0s 997us/step - loss: 0.4482 - accuracy:
1.0000

Epoch 275/5000
1/1 [=====] - 0s 994us/step - loss: 0.4475 - accuracy:
1.0000

Epoch 276/5000
1/1 [=====] - 0s 0s/step - loss: 0.4468 - accuracy:
1.0000

Epoch 277/5000
1/1 [=====] - 0s 0s/step - loss: 0.4461 - accuracy:
1.0000

Epoch 278/5000
1/1 [=====] - 0s 0s/step - loss: 0.4454 - accuracy:
1.0000

Epoch 279/5000
1/1 [=====] - 0s 998us/step - loss: 0.4447 - accuracy:
1.0000

Epoch 280/5000
1/1 [=====] - 0s 996us/step - loss: 0.4440 - accuracy:
1.0000

Epoch 281/5000
1/1 [=====] - 0s 0s/step - loss: 0.4433 - accuracy:
1.0000

Epoch 282/5000
1/1 [=====] - 0s 998us/step - loss: 0.4425 - accuracy:
1.0000

Epoch 283/5000
1/1 [=====] - 0s 996us/step - loss: 0.4418 - accuracy:
1.0000

Epoch 284/5000
1/1 [=====] - 0s 0s/step - loss: 0.4411 - accuracy:
1.0000

Epoch 285/5000
1/1 [=====] - 0s 997us/step - loss: 0.4404 - accuracy:
1.0000

Epoch 286/5000
1/1 [=====] - 0s 998us/step - loss: 0.4397 - accuracy:
1.0000

Epoch 287/5000
1/1 [=====] - 0s 997us/step - loss: 0.4390 - accuracy:
1.0000

Epoch 288/5000
1/1 [=====] - 0s 998us/step - loss: 0.4383 - accuracy:
1.0000

Epoch 289/5000
1/1 [=====] - 0s 997us/step - loss: 0.4376 - accuracy:
1.0000

Epoch 290/5000
1/1 [=====] - 0s 0s/step - loss: 0.4369 - accuracy:
1.0000

Epoch 291/5000
1/1 [=====] - 0s 997us/step - loss: 0.4362 - accuracy:
1.0000

Epoch 292/5000
1/1 [=====] - 0s 997us/step - loss: 0.4355 - accuracy:
1.0000

Epoch 293/5000
1/1 [=====] - 0s 996us/step - loss: 0.4348 - accuracy:
1.0000

Epoch 294/5000
1/1 [=====] - 0s 998us/step - loss: 0.4340 - accuracy:
1.0000

Epoch 295/5000
1/1 [=====] - 0s 994us/step - loss: 0.4333 - accuracy:
1.0000

Epoch 296/5000
1/1 [=====] - 0s 1ms/step - loss: 0.4326 - accuracy:
1.0000

Epoch 297/5000
1/1 [=====] - 0s 994us/step - loss: 0.4319 - accuracy:
1.0000

Epoch 298/5000
1/1 [=====] - 0s 997us/step - loss: 0.4312 - accuracy:
1.0000

Epoch 299/5000
1/1 [=====] - 0s 0s/step - loss: 0.4305 - accuracy:
1.0000

Epoch 300/5000
1/1 [=====] - 0s 0s/step - loss: 0.4298 - accuracy:
1.0000

Epoch 301/5000
1/1 [=====] - 0s 998us/step - loss: 0.4291 - accuracy:
1.0000

Epoch 302/5000
1/1 [=====] - 0s 996us/step - loss: 0.4284 - accuracy:
1.0000

Epoch 303/5000
1/1 [=====] - 0s 997us/step - loss: 0.4277 - accuracy:
1.0000

Epoch 304/5000
1/1 [=====] - 0s 0s/step - loss: 0.4270 - accuracy:
1.0000

Epoch 305/5000
1/1 [=====] - 0s 996us/step - loss: 0.4262 - accuracy:
1.0000

Epoch 306/5000
1/1 [=====] - 0s 999us/step - loss: 0.4255 - accuracy:
1.0000

Epoch 307/5000
1/1 [=====] - 0s 997us/step - loss: 0.4248 - accuracy:
1.0000

Epoch 308/5000
1/1 [=====] - 0s 998us/step - loss: 0.4241 - accuracy:
1.0000

Epoch 309/5000
1/1 [=====] - 0s 998us/step - loss: 0.4234 - accuracy:
1.0000

Epoch 310/5000
1/1 [=====] - 0s 0s/step - loss: 0.4227 - accuracy:
1.0000

Epoch 311/5000
1/1 [=====] - 0s 0s/step - loss: 0.4220 - accuracy:
1.0000

Epoch 312/5000
1/1 [=====] - 0s 0s/step - loss: 0.4213 - accuracy:
1.0000

Epoch 313/5000
1/1 [=====] - 0s 0s/step - loss: 0.4206 - accuracy:
1.0000

Epoch 314/5000
1/1 [=====] - 0s 996us/step - loss: 0.4199 - accuracy:
1.0000

Epoch 315/5000
1/1 [=====] - 0s 998us/step - loss: 0.4192 - accuracy:
1.0000

Epoch 316/5000
1/1 [=====] - 0s 0s/step - loss: 0.4185 - accuracy:
1.0000

Epoch 317/5000
1/1 [=====] - 0s 998us/step - loss: 0.4178 - accuracy:
1.0000

Epoch 318/5000
1/1 [=====] - 0s 0s/step - loss: 0.4171 - accuracy:
1.0000

Epoch 319/5000
1/1 [=====] - 0s 997us/step - loss: 0.4164 - accuracy:
1.0000

Epoch 320/5000
1/1 [=====] - 0s 998us/step - loss: 0.4157 - accuracy:
1.0000

Epoch 321/5000
1/1 [=====] - 0s 995us/step - loss: 0.4150 - accuracy:
1.0000

Epoch 322/5000
1/1 [=====] - 0s 999us/step - loss: 0.4143 - accuracy:
1.0000

Epoch 323/5000
1/1 [=====] - 0s 0s/step - loss: 0.4136 - accuracy:
1.0000

Epoch 324/5000
1/1 [=====] - 0s 997us/step - loss: 0.4130 - accuracy:
1.0000

Epoch 325/5000
1/1 [=====] - 0s 0s/step - loss: 0.4122 - accuracy:
1.0000

Epoch 326/5000
1/1 [=====] - 0s 997us/step - loss: 0.4115 - accuracy:
1.0000

Epoch 327/5000
1/1 [=====] - 0s 0s/step - loss: 0.4108 - accuracy:
1.0000

Epoch 328/5000
1/1 [=====] - 0s 998us/step - loss: 0.4102 - accuracy:
1.0000

Epoch 329/5000
1/1 [=====] - 0s 0s/step - loss: 0.4095 - accuracy:
1.0000

Epoch 330/5000
1/1 [=====] - 0s 0s/step - loss: 0.4088 - accuracy:
1.0000

Epoch 331/5000
1/1 [=====] - 0s 998us/step - loss: 0.4081 - accuracy:
1.0000

Epoch 332/5000
1/1 [=====] - 0s 0s/step - loss: 0.4074 - accuracy:
1.0000

Epoch 333/5000
1/1 [=====] - 0s 998us/step - loss: 0.4067 - accuracy:
1.0000

Epoch 334/5000
1/1 [=====] - 0s 997us/step - loss: 0.4060 - accuracy:
1.0000

Epoch 335/5000
1/1 [=====] - 0s 998us/step - loss: 0.4053 - accuracy:
1.0000

Epoch 336/5000
1/1 [=====] - 0s 997us/step - loss: 0.4046 - accuracy:
1.0000

Epoch 337/5000
1/1 [=====] - 0s 998us/step - loss: 0.4039 - accuracy:
1.0000

Epoch 338/5000
1/1 [=====] - 0s 0s/step - loss: 0.4032 - accuracy:
1.0000

Epoch 339/5000
1/1 [=====] - 0s 0s/step - loss: 0.4025 - accuracy:
1.0000

Epoch 340/5000
1/1 [=====] - 0s 997us/step - loss: 0.4018 - accuracy:
1.0000

Epoch 341/5000
1/1 [=====] - 0s 998us/step - loss: 0.4011 - accuracy:
1.0000

Epoch 342/5000
1/1 [=====] - 0s 0s/step - loss: 0.4004 - accuracy:
1.0000

Epoch 343/5000
1/1 [=====] - 0s 997us/step - loss: 0.3997 - accuracy:
1.0000

Epoch 344/5000
1/1 [=====] - 0s 997us/step - loss: 0.3990 - accuracy:
1.0000

Epoch 345/5000
1/1 [=====] - 0s 997us/step - loss: 0.3983 - accuracy:
1.0000

Epoch 346/5000
1/1 [=====] - 0s 0s/step - loss: 0.3976 - accuracy:
1.0000

Epoch 347/5000
1/1 [=====] - 0s 998us/step - loss: 0.3970 - accuracy:
1.0000

Epoch 348/5000
1/1 [=====] - 0s 0s/step - loss: 0.3963 - accuracy:
1.0000

Epoch 349/5000
1/1 [=====] - 0s 0s/step - loss: 0.3956 - accuracy:
1.0000

Epoch 350/5000
1/1 [=====] - 0s 0s/step - loss: 0.3949 - accuracy:
1.0000

Epoch 351/5000
1/1 [=====] - 0s 0s/step - loss: 0.3942 - accuracy:
1.0000

Epoch 352/5000
1/1 [=====] - 0s 998us/step - loss: 0.3935 - accuracy:
1.0000

Epoch 353/5000
1/1 [=====] - 0s 0s/step - loss: 0.3928 - accuracy:
1.0000

Epoch 354/5000
1/1 [=====] - 0s 997us/step - loss: 0.3922 - accuracy:
1.0000

Epoch 355/5000
1/1 [=====] - 0s 998us/step - loss: 0.3915 - accuracy:
1.0000

Epoch 356/5000
1/1 [=====] - 0s 998us/step - loss: 0.3908 - accuracy:
1.0000

Epoch 357/5000
1/1 [=====] - 0s 998us/step - loss: 0.3901 - accuracy:
1.0000

Epoch 358/5000
1/1 [=====] - 0s 0s/step - loss: 0.3894 - accuracy:
1.0000

Epoch 359/5000
1/1 [=====] - 0s 997us/step - loss: 0.3887 - accuracy:
1.0000

Epoch 360/5000
1/1 [=====] - 0s 998us/step - loss: 0.3880 - accuracy:
1.0000

Epoch 361/5000
1/1 [=====] - 0s 997us/step - loss: 0.3873 - accuracy:
1.0000

Epoch 362/5000
1/1 [=====] - 0s 997us/step - loss: 0.3867 - accuracy:
1.0000

Epoch 363/5000
1/1 [=====] - 0s 0s/step - loss: 0.3860 - accuracy:
1.0000

Epoch 364/5000
1/1 [=====] - 0s 998us/step - loss: 0.3853 - accuracy:
1.0000

Epoch 365/5000
1/1 [=====] - 0s 0s/step - loss: 0.3846 - accuracy:
1.0000

Epoch 366/5000
1/1 [=====] - 0s 0s/step - loss: 0.3840 - accuracy:
1.0000

Epoch 367/5000
1/1 [=====] - 0s 0s/step - loss: 0.3833 - accuracy:
1.0000

Epoch 368/5000
1/1 [=====] - 0s 997us/step - loss: 0.3826 - accuracy:
1.0000

Epoch 369/5000
1/1 [=====] - 0s 997us/step - loss: 0.3819 - accuracy:
1.0000

Epoch 370/5000
1/1 [=====] - 0s 998us/step - loss: 0.3812 - accuracy:
1.0000

Epoch 371/5000
1/1 [=====] - 0s 997us/step - loss: 0.3806 - accuracy:
1.0000

Epoch 372/5000
1/1 [=====] - 0s 997us/step - loss: 0.3799 - accuracy:
1.0000

Epoch 373/5000
1/1 [=====] - 0s 0s/step - loss: 0.3792 - accuracy:
1.0000

Epoch 374/5000
1/1 [=====] - 0s 2ms/step - loss: 0.3785 - accuracy:
1.0000

Epoch 375/5000
1/1 [=====] - 0s 0s/step - loss: 0.3779 - accuracy:
1.0000

Epoch 376/5000
1/1 [=====] - 0s 998us/step - loss: 0.3772 - accuracy:
1.0000

Epoch 377/5000
1/1 [=====] - 0s 0s/step - loss: 0.3765 - accuracy:
1.0000

Epoch 378/5000
1/1 [=====] - 0s 0s/step - loss: 0.3758 - accuracy:
1.0000

Epoch 379/5000
1/1 [=====] - 0s 997us/step - loss: 0.3752 - accuracy:
1.0000

Epoch 380/5000
1/1 [=====] - 0s 998us/step - loss: 0.3745 - accuracy:
1.0000

Epoch 381/5000
1/1 [=====] - 0s 998us/step - loss: 0.3738 - accuracy:
1.0000

Epoch 382/5000
1/1 [=====] - 0s 997us/step - loss: 0.3731 - accuracy:
1.0000

Epoch 383/5000
1/1 [=====] - 0s 0s/step - loss: 0.3725 - accuracy:
1.0000

Epoch 384/5000
1/1 [=====] - 0s 0s/step - loss: 0.3718 - accuracy:
1.0000

Epoch 385/5000
1/1 [=====] - 0s 997us/step - loss: 0.3711 - accuracy:
1.0000

Epoch 386/5000
1/1 [=====] - 0s 998us/step - loss: 0.3705 - accuracy:
1.0000

Epoch 387/5000
1/1 [=====] - 0s 998us/step - loss: 0.3698 - accuracy:
1.0000

Epoch 388/5000
1/1 [=====] - 0s 998us/step - loss: 0.3691 - accuracy:
1.0000

Epoch 389/5000
1/1 [=====] - 0s 0s/step - loss: 0.3685 - accuracy:
1.0000

Epoch 390/5000
1/1 [=====] - 0s 0s/step - loss: 0.3678 - accuracy:
1.0000

Epoch 391/5000
1/1 [=====] - 0s 0s/step - loss: 0.3671 - accuracy:
1.0000

Epoch 392/5000
1/1 [=====] - 0s 0s/step - loss: 0.3665 - accuracy:
1.0000

Epoch 393/5000
1/1 [=====] - 0s 0s/step - loss: 0.3658 - accuracy:
1.0000

Epoch 394/5000
1/1 [=====] - 0s 0s/step - loss: 0.3652 - accuracy:
1.0000

Epoch 395/5000
1/1 [=====] - 0s 0s/step - loss: 0.3645 - accuracy:
1.0000

Epoch 396/5000
1/1 [=====] - 0s 0s/step - loss: 0.3638 - accuracy:
1.0000

Epoch 397/5000
1/1 [=====] - 0s 998us/step - loss: 0.3631 - accuracy:
1.0000

Epoch 398/5000
1/1 [=====] - 0s 0s/step - loss: 0.3624 - accuracy:
1.0000

Epoch 399/5000
1/1 [=====] - 0s 998us/step - loss: 0.3618 - accuracy:
1.0000

Epoch 400/5000
1/1 [=====] - 0s 0s/step - loss: 0.3612 - accuracy:
1.0000

Epoch 401/5000
1/1 [=====] - 0s 0s/step - loss: 0.3605 - accuracy:
1.0000

Epoch 402/5000
1/1 [=====] - 0s 0s/step - loss: 0.3598 - accuracy:
1.0000

Epoch 403/5000
1/1 [=====] - 0s 997us/step - loss: 0.3591 - accuracy:
1.0000

Epoch 404/5000
1/1 [=====] - 0s 996us/step - loss: 0.3585 - accuracy:
1.0000

Epoch 405/5000
1/1 [=====] - 0s 0s/step - loss: 0.3579 - accuracy:
1.0000

Epoch 406/5000
1/1 [=====] - 0s 0s/step - loss: 0.3572 - accuracy:
1.0000

Epoch 407/5000
1/1 [=====] - 0s 997us/step - loss: 0.3566 - accuracy:
1.0000

Epoch 408/5000
1/1 [=====] - 0s 0s/step - loss: 0.3559 - accuracy:
1.0000

Epoch 409/5000
1/1 [=====] - 0s 997us/step - loss: 0.3552 - accuracy:
1.0000

Epoch 410/5000
1/1 [=====] - 0s 0s/step - loss: 0.3546 - accuracy:
1.0000

Epoch 411/5000
1/1 [=====] - 0s 0s/step - loss: 0.3539 - accuracy:
1.0000

Epoch 412/5000
1/1 [=====] - 0s 997us/step - loss: 0.3533 - accuracy:
1.0000

Epoch 413/5000
1/1 [=====] - 0s 998us/step - loss: 0.3526 - accuracy:
1.0000

Epoch 414/5000
1/1 [=====] - 0s 0s/step - loss: 0.3520 - accuracy:
1.0000

Epoch 415/5000
1/1 [=====] - 0s 998us/step - loss: 0.3513 - accuracy:
1.0000

Epoch 416/5000
1/1 [=====] - 0s 999us/step - loss: 0.3506 - accuracy:
1.0000

Epoch 417/5000
1/1 [=====] - 0s 998us/step - loss: 0.3500 - accuracy:
1.0000

Epoch 418/5000
1/1 [=====] - 0s 998us/step - loss: 0.3493 - accuracy:
1.0000

Epoch 419/5000
1/1 [=====] - 0s 996us/step - loss: 0.3487 - accuracy:
1.0000

Epoch 420/5000
1/1 [=====] - 0s 0s/step - loss: 0.3480 - accuracy:
1.0000

Epoch 421/5000
1/1 [=====] - 0s 0s/step - loss: 0.3474 - accuracy:
1.0000

Epoch 422/5000
1/1 [=====] - 0s 0s/step - loss: 0.3467 - accuracy:
1.0000

Epoch 423/5000
1/1 [=====] - 0s 997us/step - loss: 0.3460 - accuracy:
1.0000

Epoch 424/5000
1/1 [=====] - 0s 0s/step - loss: 0.3454 - accuracy:
1.0000

Epoch 425/5000
1/1 [=====] - 0s 997us/step - loss: 0.3448 - accuracy:
1.0000

Epoch 426/5000
1/1 [=====] - 0s 0s/step - loss: 0.3442 - accuracy:
1.0000

Epoch 427/5000
1/1 [=====] - 0s 997us/step - loss: 0.3435 - accuracy:
1.0000

Epoch 428/5000
1/1 [=====] - 0s 996us/step - loss: 0.3428 - accuracy:
1.0000

Epoch 429/5000
1/1 [=====] - 0s 998us/step - loss: 0.3422 - accuracy:
1.0000

Epoch 430/5000
1/1 [=====] - 0s 997us/step - loss: 0.3415 - accuracy:
1.0000

Epoch 431/5000
1/1 [=====] - 0s 998us/step - loss: 0.3409 - accuracy:
1.0000

Epoch 432/5000
1/1 [=====] - 0s 0s/step - loss: 0.3402 - accuracy:
1.0000

Epoch 433/5000
1/1 [=====] - 0s 997us/step - loss: 0.3396 - accuracy:
1.0000

Epoch 434/5000
1/1 [=====] - 0s 997us/step - loss: 0.3390 - accuracy:
1.0000

Epoch 435/5000
1/1 [=====] - 0s 0s/step - loss: 0.3383 - accuracy:
1.0000

Epoch 436/5000
1/1 [=====] - 0s 0s/step - loss: 0.3377 - accuracy:
1.0000

Epoch 437/5000
1/1 [=====] - 0s 999us/step - loss: 0.3371 - accuracy:
1.0000

Epoch 438/5000
1/1 [=====] - 0s 0s/step - loss: 0.3364 - accuracy:
1.0000

Epoch 439/5000
1/1 [=====] - 0s 0s/step - loss: 0.3358 - accuracy:
1.0000

Epoch 440/5000
1/1 [=====] - 0s 0s/step - loss: 0.3351 - accuracy:
1.0000

Epoch 441/5000
1/1 [=====] - 0s 0s/step - loss: 0.3345 - accuracy:
1.0000

Epoch 442/5000
1/1 [=====] - 0s 0s/step - loss: 0.3339 - accuracy:
1.0000

Epoch 443/5000
1/1 [=====] - 0s 0s/step - loss: 0.3332 - accuracy:
1.0000

Epoch 444/5000
1/1 [=====] - 0s 997us/step - loss: 0.3326 - accuracy:
1.0000

Epoch 445/5000
1/1 [=====] - 0s 0s/step - loss: 0.3320 - accuracy:
1.0000

Epoch 446/5000
1/1 [=====] - 0s 997us/step - loss: 0.3313 - accuracy:
1.0000

Epoch 447/5000
1/1 [=====] - 0s 997us/step - loss: 0.3307 - accuracy:
1.0000

Epoch 448/5000
1/1 [=====] - 0s 0s/step - loss: 0.3301 - accuracy:
1.0000

Epoch 449/5000
1/1 [=====] - 0s 997us/step - loss: 0.3294 - accuracy:
1.0000

Epoch 450/5000
1/1 [=====] - 0s 0s/step - loss: 0.3288 - accuracy:
1.0000

Epoch 451/5000
1/1 [=====] - 0s 996us/step - loss: 0.3282 - accuracy:
1.0000

Epoch 452/5000
1/1 [=====] - 0s 997us/step - loss: 0.3276 - accuracy:
1.0000

Epoch 453/5000
1/1 [=====] - 0s 998us/step - loss: 0.3269 - accuracy:
1.0000

Epoch 454/5000
1/1 [=====] - 0s 997us/step - loss: 0.3263 - accuracy:
1.0000

Epoch 455/5000
1/1 [=====] - 0s 0s/step - loss: 0.3257 - accuracy:
1.0000

Epoch 456/5000
1/1 [=====] - 0s 995us/step - loss: 0.3251 - accuracy:
1.0000

Epoch 457/5000
1/1 [=====] - 0s 1ms/step - loss: 0.3244 - accuracy:
1.0000

Epoch 458/5000
1/1 [=====] - 0s 997us/step - loss: 0.3238 - accuracy:
1.0000

Epoch 459/5000
1/1 [=====] - 0s 0s/step - loss: 0.3232 - accuracy:
1.0000

Epoch 460/5000
1/1 [=====] - 0s 710us/step - loss: 0.3226 - accuracy:
1.0000

Epoch 461/5000
1/1 [=====] - 0s 997us/step - loss: 0.3219 - accuracy:
1.0000

Epoch 462/5000
1/1 [=====] - 0s 997us/step - loss: 0.3213 - accuracy:
1.0000

Epoch 463/5000
1/1 [=====] - 0s 995us/step - loss: 0.3207 - accuracy:
1.0000

Epoch 464/5000
1/1 [=====] - 0s 998us/step - loss: 0.3201 - accuracy:
1.0000

Epoch 465/5000
1/1 [=====] - 0s 996us/step - loss: 0.3195 - accuracy:
1.0000

Epoch 466/5000
1/1 [=====] - 0s 997us/step - loss: 0.3188 - accuracy:
1.0000

Epoch 467/5000
1/1 [=====] - 0s 997us/step - loss: 0.3182 - accuracy:
1.0000

Epoch 468/5000
1/1 [=====] - 0s 997us/step - loss: 0.3176 - accuracy:
1.0000

Epoch 469/5000
1/1 [=====] - 0s 998us/step - loss: 0.3170 - accuracy:
1.0000

Epoch 470/5000
1/1 [=====] - 0s 995us/step - loss: 0.3164 - accuracy:
1.0000

Epoch 471/5000
1/1 [=====] - 0s 0s/step - loss: 0.3158 - accuracy:
1.0000

Epoch 472/5000
1/1 [=====] - 0s 0s/step - loss: 0.3152 - accuracy:
1.0000

Epoch 473/5000
1/1 [=====] - 0s 0s/step - loss: 0.3145 - accuracy:
1.0000

Epoch 474/5000
1/1 [=====] - 0s 0s/step - loss: 0.3139 - accuracy:
1.0000

Epoch 475/5000
1/1 [=====] - 0s 0s/step - loss: 0.3133 - accuracy:
1.0000

Epoch 476/5000
1/1 [=====] - 0s 0s/step - loss: 0.3127 - accuracy:
1.0000

Epoch 477/5000
1/1 [=====] - 0s 997us/step - loss: 0.3121 - accuracy:
1.0000

Epoch 478/5000
1/1 [=====] - 0s 997us/step - loss: 0.3115 - accuracy:
1.0000

Epoch 479/5000
1/1 [=====] - 0s 997us/step - loss: 0.3109 - accuracy:
1.0000

Epoch 480/5000
1/1 [=====] - 0s 0s/step - loss: 0.3103 - accuracy:
1.0000

Epoch 481/5000
1/1 [=====] - 0s 0s/step - loss: 0.3097 - accuracy:
1.0000

Epoch 482/5000
1/1 [=====] - 0s 0s/step - loss: 0.3091 - accuracy:
1.0000

Epoch 483/5000
1/1 [=====] - 0s 0s/step - loss: 0.3085 - accuracy:
1.0000

Epoch 484/5000
1/1 [=====] - 0s 998us/step - loss: 0.3079 - accuracy:
1.0000

Epoch 485/5000
1/1 [=====] - 0s 998us/step - loss: 0.3073 - accuracy:
1.0000

Epoch 486/5000
1/1 [=====] - 0s 998us/step - loss: 0.3067 - accuracy:
1.0000

Epoch 487/5000
1/1 [=====] - 0s 998us/step - loss: 0.3061 - accuracy:
1.0000

Epoch 488/5000
1/1 [=====] - 0s 996us/step - loss: 0.3055 - accuracy:
1.0000

Epoch 489/5000
1/1 [=====] - 0s 997us/step - loss: 0.3049 - accuracy:
1.0000

Epoch 490/5000
1/1 [=====] - 0s 997us/step - loss: 0.3043 - accuracy:
1.0000

Epoch 491/5000
1/1 [=====] - 0s 0s/step - loss: 0.3037 - accuracy:
1.0000

Epoch 492/5000
1/1 [=====] - 0s 1ms/step - loss: 0.3031 - accuracy:
1.0000

Epoch 493/5000
1/1 [=====] - 0s 0s/step - loss: 0.3025 - accuracy:
1.0000

Epoch 494/5000
1/1 [=====] - 0s 997us/step - loss: 0.3019 - accuracy:
1.0000

Epoch 495/5000
1/1 [=====] - 0s 998us/step - loss: 0.3013 - accuracy:
1.0000

Epoch 496/5000
1/1 [=====] - 0s 997us/step - loss: 0.3007 - accuracy:
1.0000

Epoch 497/5000
1/1 [=====] - 0s 0s/step - loss: 0.3001 - accuracy:
1.0000

Epoch 498/5000
1/1 [=====] - 0s 997us/step - loss: 0.2995 - accuracy:
1.0000

Epoch 499/5000
1/1 [=====] - 0s 997us/step - loss: 0.2989 - accuracy:
1.0000

Epoch 500/5000
1/1 [=====] - 0s 999us/step - loss: 0.2983 - accuracy:
1.0000

Epoch 501/5000
1/1 [=====] - 0s 998us/step - loss: 0.2977 - accuracy:
1.0000

Epoch 502/5000
1/1 [=====] - 0s 998us/step - loss: 0.2972 - accuracy:
1.0000

Epoch 503/5000
1/1 [=====] - 0s 0s/step - loss: 0.2966 - accuracy:
1.0000

Epoch 504/5000
1/1 [=====] - 0s 997us/step - loss: 0.2960 - accuracy:
1.0000

Epoch 505/5000
1/1 [=====] - 0s 0s/step - loss: 0.2954 - accuracy:
1.0000

Epoch 506/5000
1/1 [=====] - 0s 995us/step - loss: 0.2948 - accuracy:
1.0000

Epoch 507/5000
1/1 [=====] - 0s 0s/step - loss: 0.2942 - accuracy:
1.0000

Epoch 508/5000
1/1 [=====] - 0s 0s/step - loss: 0.2936 - accuracy:
1.0000

Epoch 509/5000
1/1 [=====] - 0s 0s/step - loss: 0.2931 - accuracy:
1.0000

Epoch 510/5000
1/1 [=====] - 0s 997us/step - loss: 0.2925 - accuracy:
1.0000

Epoch 511/5000
1/1 [=====] - 0s 0s/step - loss: 0.2919 - accuracy:
1.0000

Epoch 512/5000
1/1 [=====] - 0s 0s/step - loss: 0.2913 - accuracy:
1.0000

Epoch 513/5000
1/1 [=====] - 0s 997us/step - loss: 0.2907 - accuracy:
1.0000

Epoch 514/5000
1/1 [=====] - 0s 998us/step - loss: 0.2902 - accuracy:
1.0000

Epoch 515/5000
1/1 [=====] - 0s 0s/step - loss: 0.2896 - accuracy:
1.0000

Epoch 516/5000
1/1 [=====] - 0s 997us/step - loss: 0.2890 - accuracy:
1.0000

Epoch 517/5000
1/1 [=====] - 0s 0s/step - loss: 0.2884 - accuracy:
1.0000

Epoch 518/5000
1/1 [=====] - 0s 0s/step - loss: 0.2879 - accuracy:
1.0000

Epoch 519/5000
1/1 [=====] - 0s 0s/step - loss: 0.2873 - accuracy:
1.0000

Epoch 520/5000
1/1 [=====] - 0s 996us/step - loss: 0.2867 - accuracy:
1.0000

Epoch 521/5000
1/1 [=====] - 0s 997us/step - loss: 0.2861 - accuracy:
1.0000

Epoch 522/5000
1/1 [=====] - 0s 996us/step - loss: 0.2856 - accuracy:
1.0000

Epoch 523/5000
1/1 [=====] - 0s 0s/step - loss: 0.2850 - accuracy:
1.0000

Epoch 524/5000
1/1 [=====] - 0s 997us/step - loss: 0.2844 - accuracy:
1.0000

Epoch 525/5000
1/1 [=====] - 0s 997us/step - loss: 0.2839 - accuracy:
1.0000

Epoch 526/5000
1/1 [=====] - 0s 997us/step - loss: 0.2833 - accuracy:
1.0000

Epoch 527/5000
1/1 [=====] - 0s 997us/step - loss: 0.2827 - accuracy:
1.0000

Epoch 528/5000
1/1 [=====] - 0s 0s/step - loss: 0.2822 - accuracy:
1.0000

Epoch 529/5000
1/1 [=====] - 0s 0s/step - loss: 0.2816 - accuracy:
1.0000

Epoch 530/5000
1/1 [=====] - 0s 998us/step - loss: 0.2811 - accuracy:
1.0000

Epoch 531/5000
1/1 [=====] - 0s 0s/step - loss: 0.2805 - accuracy:
1.0000

Epoch 532/5000
1/1 [=====] - 0s 0s/step - loss: 0.2799 - accuracy:
1.0000

Epoch 533/5000
1/1 [=====] - 0s 0s/step - loss: 0.2794 - accuracy:
1.0000

Epoch 534/5000
1/1 [=====] - 0s 0s/step - loss: 0.2788 - accuracy:
1.0000

Epoch 535/5000
1/1 [=====] - 0s 0s/step - loss: 0.2782 - accuracy:
1.0000

Epoch 536/5000
1/1 [=====] - 0s 998us/step - loss: 0.2777 - accuracy:
1.0000

Epoch 537/5000
1/1 [=====] - 0s 0s/step - loss: 0.2771 - accuracy:
1.0000

Epoch 538/5000
1/1 [=====] - 0s 997us/step - loss: 0.2766 - accuracy:
1.0000

Epoch 539/5000
1/1 [=====] - 0s 0s/step - loss: 0.2760 - accuracy:
1.0000

Epoch 540/5000
1/1 [=====] - 0s 0s/step - loss: 0.2755 - accuracy:
1.0000

Epoch 541/5000
1/1 [=====] - 0s 0s/step - loss: 0.2749 - accuracy:
1.0000

Epoch 542/5000
1/1 [=====] - 0s 1ms/step - loss: 0.2744 - accuracy:
1.0000

Epoch 543/5000
1/1 [=====] - 0s 998us/step - loss: 0.2738 - accuracy:
1.0000

Epoch 544/5000
1/1 [=====] - 0s 997us/step - loss: 0.2732 - accuracy:
1.0000

Epoch 545/5000
1/1 [=====] - 0s 997us/step - loss: 0.2727 - accuracy:
1.0000

Epoch 546/5000
1/1 [=====] - 0s 998us/step - loss: 0.2721 - accuracy:
1.0000

Epoch 547/5000
1/1 [=====] - 0s 0s/step - loss: 0.2716 - accuracy:
1.0000

Epoch 548/5000
1/1 [=====] - 0s 998us/step - loss: 0.2710 - accuracy:
1.0000

Epoch 549/5000
1/1 [=====] - 0s 997us/step - loss: 0.2705 - accuracy:
1.0000

Epoch 550/5000
1/1 [=====] - 0s 997us/step - loss: 0.2700 - accuracy:
1.0000

Epoch 551/5000
1/1 [=====] - 0s 997us/step - loss: 0.2694 - accuracy:
1.0000

Epoch 552/5000
1/1 [=====] - 0s 997us/step - loss: 0.2689 - accuracy:
1.0000

Epoch 553/5000
1/1 [=====] - 0s 997us/step - loss: 0.2683 - accuracy:
1.0000

Epoch 554/5000
1/1 [=====] - 0s 997us/step - loss: 0.2678 - accuracy:
1.0000

Epoch 555/5000
1/1 [=====] - 0s 998us/step - loss: 0.2673 - accuracy:
1.0000

Epoch 556/5000
1/1 [=====] - 0s 997us/step - loss: 0.2667 - accuracy:
1.0000

Epoch 557/5000
1/1 [=====] - 0s 0s/step - loss: 0.2662 - accuracy:
1.0000

Epoch 558/5000
1/1 [=====] - 0s 997us/step - loss: 0.2656 - accuracy:
1.0000

Epoch 559/5000
1/1 [=====] - 0s 997us/step - loss: 0.2651 - accuracy:
1.0000

Epoch 560/5000
1/1 [=====] - 0s 0s/step - loss: 0.2646 - accuracy:
1.0000

Epoch 561/5000
1/1 [=====] - 0s 997us/step - loss: 0.2640 - accuracy:
1.0000

Epoch 562/5000
1/1 [=====] - 0s 998us/step - loss: 0.2635 - accuracy:
1.0000

Epoch 563/5000
1/1 [=====] - 0s 0s/step - loss: 0.2629 - accuracy:
1.0000

Epoch 564/5000
1/1 [=====] - 0s 998us/step - loss: 0.2624 - accuracy:
1.0000

Epoch 565/5000
1/1 [=====] - 0s 997us/step - loss: 0.2619 - accuracy:
1.0000

Epoch 566/5000
1/1 [=====] - 0s 0s/step - loss: 0.2614 - accuracy:
1.0000

Epoch 567/5000
1/1 [=====] - 0s 997us/step - loss: 0.2608 - accuracy:
1.0000

Epoch 568/5000
1/1 [=====] - 0s 998us/step - loss: 0.2603 - accuracy:
1.0000
Epoch 569/5000
1/1 [=====] - 0s 0s/step - loss: 0.2598 - accuracy:
1.0000
Epoch 570/5000
1/1 [=====] - 0s 998us/step - loss: 0.2592 - accuracy:
1.0000
Epoch 571/5000
1/1 [=====] - 0s 999us/step - loss: 0.2587 - accuracy:
1.0000
Epoch 572/5000
1/1 [=====] - 0s 0s/step - loss: 0.2582 - accuracy:
1.0000
Epoch 573/5000
1/1 [=====] - 0s 0s/step - loss: 0.2577 - accuracy:
1.0000
Epoch 574/5000
1/1 [=====] - 0s 0s/step - loss: 0.2571 - accuracy:
1.0000
Epoch 575/5000
1/1 [=====] - 0s 997us/step - loss: 0.2566 - accuracy:
1.0000
Epoch 576/5000
1/1 [=====] - 0s 998us/step - loss: 0.2561 - accuracy:
1.0000
Epoch 577/5000
1/1 [=====] - 0s 997us/step - loss: 0.2556 - accuracy:
1.0000
Epoch 578/5000
1/1 [=====] - 0s 0s/step - loss: 0.2551 - accuracy:
1.0000
Epoch 579/5000
1/1 [=====] - 0s 0s/step - loss: 0.2545 - accuracy:
1.0000
Epoch 580/5000
1/1 [=====] - 0s 0s/step - loss: 0.2540 - accuracy:
1.0000
Epoch 581/5000
1/1 [=====] - 0s 0s/step - loss: 0.2535 - accuracy:
1.0000
Epoch 582/5000
1/1 [=====] - 0s 0s/step - loss: 0.2530 - accuracy:
1.0000
Epoch 583/5000
1/1 [=====] - 0s 0s/step - loss: 0.2525 - accuracy:
1.0000

Epoch 584/5000
1/1 [=====] - 0s 997us/step - loss: 0.2519 - accuracy:
1.0000

Epoch 585/5000
1/1 [=====] - 0s 0s/step - loss: 0.2515 - accuracy:
1.0000

Epoch 586/5000
1/1 [=====] - 0s 998us/step - loss: 0.2510 - accuracy:
1.0000

Epoch 587/5000
1/1 [=====] - 0s 997us/step - loss: 0.2504 - accuracy:
1.0000

Epoch 588/5000
1/1 [=====] - 0s 0s/step - loss: 0.2499 - accuracy:
1.0000

Epoch 589/5000
1/1 [=====] - 0s 0s/step - loss: 0.2494 - accuracy:
1.0000

Epoch 590/5000
1/1 [=====] - 0s 0s/step - loss: 0.2489 - accuracy:
1.0000

Epoch 591/5000
1/1 [=====] - 0s 0s/step - loss: 0.2484 - accuracy:
1.0000

Epoch 592/5000
1/1 [=====] - 0s 998us/step - loss: 0.2479 - accuracy:
1.0000

Epoch 593/5000
1/1 [=====] - 0s 997us/step - loss: 0.2474 - accuracy:
1.0000

Epoch 594/5000
1/1 [=====] - 0s 998us/step - loss: 0.2469 - accuracy:
1.0000

Epoch 595/5000
1/1 [=====] - 0s 997us/step - loss: 0.2464 - accuracy:
1.0000

Epoch 596/5000
1/1 [=====] - 0s 0s/step - loss: 0.2459 - accuracy:
1.0000

Epoch 597/5000
1/1 [=====] - 0s 0s/step - loss: 0.2454 - accuracy:
1.0000

Epoch 598/5000
1/1 [=====] - 0s 997us/step - loss: 0.2449 - accuracy:
1.0000

Epoch 599/5000
1/1 [=====] - 0s 997us/step - loss: 0.2443 - accuracy:
1.0000

Epoch 600/5000
1/1 [=====] - 0s 998us/step - loss: 0.2439 - accuracy:
1.0000

Epoch 601/5000
1/1 [=====] - 0s 997us/step - loss: 0.2434 - accuracy:
1.0000

Epoch 602/5000
1/1 [=====] - 0s 0s/step - loss: 0.2429 - accuracy:
1.0000

Epoch 603/5000
1/1 [=====] - 0s 0s/step - loss: 0.2424 - accuracy:
1.0000

Epoch 604/5000
1/1 [=====] - 0s 998us/step - loss: 0.2419 - accuracy:
1.0000

Epoch 605/5000
1/1 [=====] - 0s 998us/step - loss: 0.2414 - accuracy:
1.0000

Epoch 606/5000
1/1 [=====] - 0s 998us/step - loss: 0.2409 - accuracy:
1.0000

Epoch 607/5000
1/1 [=====] - 0s 997us/step - loss: 0.2404 - accuracy:
1.0000

Epoch 608/5000
1/1 [=====] - 0s 0s/step - loss: 0.2399 - accuracy:
1.0000

Epoch 609/5000
1/1 [=====] - 0s 997us/step - loss: 0.2394 - accuracy:
1.0000

Epoch 610/5000
1/1 [=====] - 0s 0s/step - loss: 0.2389 - accuracy:
1.0000

Epoch 611/5000
1/1 [=====] - 0s 997us/step - loss: 0.2384 - accuracy:
1.0000

Epoch 612/5000
1/1 [=====] - 0s 997us/step - loss: 0.2379 - accuracy:
1.0000

Epoch 613/5000
1/1 [=====] - 0s 997us/step - loss: 0.2374 - accuracy:
1.0000

Epoch 614/5000
1/1 [=====] - 0s 998us/step - loss: 0.2370 - accuracy:
1.0000

Epoch 615/5000
1/1 [=====] - 0s 996us/step - loss: 0.2365 - accuracy:
1.0000

Epoch 616/5000
1/1 [=====] - 0s 997us/step - loss: 0.2360 - accuracy:
1.0000

Epoch 617/5000
1/1 [=====] - 0s 0s/step - loss: 0.2355 - accuracy:
1.0000

Epoch 618/5000
1/1 [=====] - 0s 0s/step - loss: 0.2350 - accuracy:
1.0000

Epoch 619/5000
1/1 [=====] - 0s 0s/step - loss: 0.2346 - accuracy:
1.0000

Epoch 620/5000
1/1 [=====] - 0s 0s/step - loss: 0.2341 - accuracy:
1.0000

Epoch 621/5000
1/1 [=====] - 0s 0s/step - loss: 0.2336 - accuracy:
1.0000

Epoch 622/5000
1/1 [=====] - 0s 0s/step - loss: 0.2331 - accuracy:
1.0000

Epoch 623/5000
1/1 [=====] - 0s 0s/step - loss: 0.2326 - accuracy:
1.0000

Epoch 624/5000
1/1 [=====] - 0s 998us/step - loss: 0.2321 - accuracy:
1.0000

Epoch 625/5000
1/1 [=====] - 0s 0s/step - loss: 0.2317 - accuracy:
1.0000

Epoch 626/5000
1/1 [=====] - 0s 0s/step - loss: 0.2312 - accuracy:
1.0000

Epoch 627/5000
1/1 [=====] - 0s 995us/step - loss: 0.2307 - accuracy:
1.0000

Epoch 628/5000
1/1 [=====] - 0s 997us/step - loss: 0.2302 - accuracy:
1.0000

Epoch 629/5000
1/1 [=====] - 0s 999us/step - loss: 0.2298 - accuracy:
1.0000

Epoch 630/5000
1/1 [=====] - 0s 997us/step - loss: 0.2293 - accuracy:
1.0000

Epoch 631/5000
1/1 [=====] - 0s 0s/step - loss: 0.2288 - accuracy:
1.0000

Epoch 632/5000
1/1 [=====] - 0s 0s/step - loss: 0.2284 - accuracy:
1.0000

Epoch 633/5000
1/1 [=====] - 0s 997us/step - loss: 0.2279 - accuracy:
1.0000

Epoch 634/5000
1/1 [=====] - 0s 0s/step - loss: 0.2274 - accuracy:
1.0000

Epoch 635/5000
1/1 [=====] - 0s 997us/step - loss: 0.2270 - accuracy:
1.0000

Epoch 636/5000
1/1 [=====] - 0s 0s/step - loss: 0.2265 - accuracy:
1.0000

Epoch 637/5000
1/1 [=====] - 0s 997us/step - loss: 0.2260 - accuracy:
1.0000

Epoch 638/5000
1/1 [=====] - 0s 998us/step - loss: 0.2256 - accuracy:
1.0000

Epoch 639/5000
1/1 [=====] - 0s 999us/step - loss: 0.2251 - accuracy:
1.0000

Epoch 640/5000
1/1 [=====] - 0s 995us/step - loss: 0.2246 - accuracy:
1.0000

Epoch 641/5000
1/1 [=====] - 0s 0s/step - loss: 0.2242 - accuracy:
1.0000

Epoch 642/5000
1/1 [=====] - 0s 0s/step - loss: 0.2237 - accuracy:
1.0000

Epoch 643/5000
1/1 [=====] - 0s 996us/step - loss: 0.2233 - accuracy:
1.0000

Epoch 644/5000
1/1 [=====] - 0s 0s/step - loss: 0.2228 - accuracy:
1.0000

Epoch 645/5000
1/1 [=====] - 0s 0s/step - loss: 0.2223 - accuracy:
1.0000

Epoch 646/5000
1/1 [=====] - 0s 997us/step - loss: 0.2219 - accuracy:
1.0000

Epoch 647/5000
1/1 [=====] - 0s 997us/step - loss: 0.2214 - accuracy:
1.0000

Epoch 648/5000
1/1 [=====] - 0s 997us/step - loss: 0.2210 - accuracy:
1.0000

Epoch 649/5000
1/1 [=====] - 0s 0s/step - loss: 0.2205 - accuracy:
1.0000

Epoch 650/5000
1/1 [=====] - 0s 0s/step - loss: 0.2201 - accuracy:
1.0000

Epoch 651/5000
1/1 [=====] - 0s 997us/step - loss: 0.2196 - accuracy:
1.0000

Epoch 652/5000
1/1 [=====] - 0s 0s/step - loss: 0.2192 - accuracy:
1.0000

Epoch 653/5000
1/1 [=====] - 0s 0s/step - loss: 0.2187 - accuracy:
1.0000

Epoch 654/5000
1/1 [=====] - 0s 0s/step - loss: 0.2183 - accuracy:
1.0000

Epoch 655/5000
1/1 [=====] - 0s 0s/step - loss: 0.2178 - accuracy:
1.0000

Epoch 656/5000
1/1 [=====] - 0s 996us/step - loss: 0.2174 - accuracy:
1.0000

Epoch 657/5000
1/1 [=====] - 0s 997us/step - loss: 0.2169 - accuracy:
1.0000

Epoch 658/5000
1/1 [=====] - 0s 998us/step - loss: 0.2165 - accuracy:
1.0000

Epoch 659/5000
1/1 [=====] - 0s 1ms/step - loss: 0.2160 - accuracy:
1.0000

Epoch 660/5000
1/1 [=====] - 0s 0s/step - loss: 0.2156 - accuracy:
1.0000

Epoch 661/5000
1/1 [=====] - 0s 0s/step - loss: 0.2151 - accuracy:
1.0000

Epoch 662/5000
1/1 [=====] - 0s 999us/step - loss: 0.2147 - accuracy:
1.0000

Epoch 663/5000
1/1 [=====] - 0s 0s/step - loss: 0.2142 - accuracy:
1.0000

Epoch 664/5000
1/1 [=====] - 0s 998us/step - loss: 0.2138 - accuracy:
1.0000

Epoch 665/5000
1/1 [=====] - 0s 998us/step - loss: 0.2134 - accuracy:
1.0000

Epoch 666/5000
1/1 [=====] - 0s 0s/step - loss: 0.2129 - accuracy:
1.0000

Epoch 667/5000
1/1 [=====] - 0s 0s/step - loss: 0.2125 - accuracy:
1.0000

Epoch 668/5000
1/1 [=====] - 0s 2ms/step - loss: 0.2120 - accuracy:
1.0000

Epoch 669/5000
1/1 [=====] - 0s 998us/step - loss: 0.2116 - accuracy:
1.0000

Epoch 670/5000
1/1 [=====] - 0s 0s/step - loss: 0.2112 - accuracy:
1.0000

Epoch 671/5000
1/1 [=====] - 0s 997us/step - loss: 0.2107 - accuracy:
1.0000

Epoch 672/5000
1/1 [=====] - 0s 0s/step - loss: 0.2103 - accuracy:
1.0000

Epoch 673/5000
1/1 [=====] - 0s 999us/step - loss: 0.2099 - accuracy:
1.0000

Epoch 674/5000
1/1 [=====] - 0s 0s/step - loss: 0.2094 - accuracy:
1.0000

Epoch 675/5000
1/1 [=====] - 0s 0s/step - loss: 0.2090 - accuracy:
1.0000

Epoch 676/5000
1/1 [=====] - 0s 0s/step - loss: 0.2086 - accuracy:
1.0000

Epoch 677/5000
1/1 [=====] - 0s 997us/step - loss: 0.2081 - accuracy:
1.0000

Epoch 678/5000
1/1 [=====] - 0s 1ms/step - loss: 0.2077 - accuracy:
1.0000

Epoch 679/5000
1/1 [=====] - 0s 0s/step - loss: 0.2073 - accuracy:
1.0000

Epoch 680/5000
1/1 [=====] - 0s 0s/step - loss: 0.2069 - accuracy:
1.0000

Epoch 681/5000
1/1 [=====] - 0s 998us/step - loss: 0.2064 - accuracy:
1.0000

Epoch 682/5000
1/1 [=====] - 0s 998us/step - loss: 0.2060 - accuracy:
1.0000

Epoch 683/5000
1/1 [=====] - 0s 0s/step - loss: 0.2056 - accuracy:
1.0000

Epoch 684/5000
1/1 [=====] - 0s 0s/step - loss: 0.2052 - accuracy:
1.0000

Epoch 685/5000
1/1 [=====] - 0s 0s/step - loss: 0.2048 - accuracy:
1.0000

Epoch 686/5000
1/1 [=====] - 0s 998us/step - loss: 0.2043 - accuracy:
1.0000

Epoch 687/5000
1/1 [=====] - 0s 0s/step - loss: 0.2039 - accuracy:
1.0000

Epoch 688/5000
1/1 [=====] - 0s 998us/step - loss: 0.2035 - accuracy:
1.0000

Epoch 689/5000
1/1 [=====] - 0s 997us/step - loss: 0.2031 - accuracy:
1.0000

Epoch 690/5000
1/1 [=====] - 0s 0s/step - loss: 0.2027 - accuracy:
1.0000

Epoch 691/5000
1/1 [=====] - 0s 0s/step - loss: 0.2023 - accuracy:
1.0000

Epoch 692/5000
1/1 [=====] - 0s 998us/step - loss: 0.2018 - accuracy:
1.0000

Epoch 693/5000
1/1 [=====] - 0s 998us/step - loss: 0.2014 - accuracy:
1.0000

Epoch 694/5000
1/1 [=====] - 0s 999us/step - loss: 0.2010 - accuracy:
1.0000

Epoch 695/5000
1/1 [=====] - 0s 0s/step - loss: 0.2006 - accuracy:
1.0000

Epoch 696/5000
1/1 [=====] - 0s 0s/step - loss: 0.2002 - accuracy:
1.0000

Epoch 697/5000
1/1 [=====] - 0s 0s/step - loss: 0.1998 - accuracy:
1.0000

Epoch 698/5000
1/1 [=====] - 0s 0s/step - loss: 0.1994 - accuracy:
1.0000

Epoch 699/5000
1/1 [=====] - 0s 997us/step - loss: 0.1989 - accuracy:
1.0000

Epoch 700/5000
1/1 [=====] - 0s 0s/step - loss: 0.1985 - accuracy:
1.0000

Epoch 701/5000
1/1 [=====] - 0s 0s/step - loss: 0.1981 - accuracy:
1.0000

Epoch 702/5000
1/1 [=====] - 0s 0s/step - loss: 0.1977 - accuracy:
1.0000

Epoch 703/5000
1/1 [=====] - 0s 0s/step - loss: 0.1973 - accuracy:
1.0000

Epoch 704/5000
1/1 [=====] - 0s 998us/step - loss: 0.1969 - accuracy:
1.0000

Epoch 705/5000
1/1 [=====] - 0s 0s/step - loss: 0.1965 - accuracy:
1.0000

Epoch 706/5000
1/1 [=====] - 0s 0s/step - loss: 0.1961 - accuracy:
1.0000

Epoch 707/5000
1/1 [=====] - 0s 0s/step - loss: 0.1957 - accuracy:
1.0000

Epoch 708/5000
1/1 [=====] - 0s 997us/step - loss: 0.1953 - accuracy:
1.0000

Epoch 709/5000
1/1 [=====] - 0s 997us/step - loss: 0.1949 - accuracy:
1.0000

Epoch 710/5000
1/1 [=====] - 0s 997us/step - loss: 0.1945 - accuracy:
1.0000

Epoch 711/5000
1/1 [=====] - 0s 998us/step - loss: 0.1941 - accuracy:
1.0000

Epoch 712/5000
1/1 [=====] - 0s 998us/step - loss: 0.1937 - accuracy:
1.0000

Epoch 713/5000
1/1 [=====] - 0s 997us/step - loss: 0.1933 - accuracy:
1.0000

Epoch 714/5000
1/1 [=====] - 0s 998us/step - loss: 0.1929 - accuracy:
1.0000

Epoch 715/5000
1/1 [=====] - 0s 997us/step - loss: 0.1925 - accuracy:
1.0000

Epoch 716/5000
1/1 [=====] - 0s 997us/step - loss: 0.1921 - accuracy:
1.0000

Epoch 717/5000
1/1 [=====] - 0s 0s/step - loss: 0.1917 - accuracy:
1.0000

Epoch 718/5000
1/1 [=====] - 0s 0s/step - loss: 0.1913 - accuracy:
1.0000

Epoch 719/5000
1/1 [=====] - 0s 998us/step - loss: 0.1909 - accuracy:
1.0000

Epoch 720/5000
1/1 [=====] - 0s 998us/step - loss: 0.1905 - accuracy:
1.0000

Epoch 721/5000
1/1 [=====] - 0s 0s/step - loss: 0.1901 - accuracy:
1.0000

Epoch 722/5000
1/1 [=====] - 0s 0s/step - loss: 0.1897 - accuracy:
1.0000

Epoch 723/5000
1/1 [=====] - 0s 0s/step - loss: 0.1893 - accuracy:
1.0000

Epoch 724/5000
1/1 [=====] - 0s 998us/step - loss: 0.1890 - accuracy:
1.0000

Epoch 725/5000
1/1 [=====] - 0s 998us/step - loss: 0.1886 - accuracy:
1.0000

Epoch 726/5000
1/1 [=====] - 0s 0s/step - loss: 0.1882 - accuracy:
1.0000

Epoch 727/5000
1/1 [=====] - 0s 998us/step - loss: 0.1878 - accuracy:
1.0000

Epoch 728/5000
1/1 [=====] - 0s 998us/step - loss: 0.1874 - accuracy:
1.0000

Epoch 729/5000
1/1 [=====] - 0s 998us/step - loss: 0.1870 - accuracy:
1.0000

Epoch 730/5000
1/1 [=====] - 0s 0s/step - loss: 0.1866 - accuracy:
1.0000

Epoch 731/5000
1/1 [=====] - 0s 0s/step - loss: 0.1863 - accuracy:
1.0000

Epoch 732/5000
1/1 [=====] - 0s 0s/step - loss: 0.1859 - accuracy:
1.0000

Epoch 733/5000
1/1 [=====] - 0s 0s/step - loss: 0.1855 - accuracy:
1.0000

Epoch 734/5000
1/1 [=====] - 0s 0s/step - loss: 0.1851 - accuracy:
1.0000

Epoch 735/5000
1/1 [=====] - 0s 0s/step - loss: 0.1848 - accuracy:
1.0000

Epoch 736/5000
1/1 [=====] - 0s 997us/step - loss: 0.1844 - accuracy:
1.0000

Epoch 737/5000
1/1 [=====] - 0s 997us/step - loss: 0.1840 - accuracy:
1.0000

Epoch 738/5000
1/1 [=====] - 0s 0s/step - loss: 0.1836 - accuracy:
1.0000

Epoch 739/5000
1/1 [=====] - 0s 997us/step - loss: 0.1832 - accuracy:
1.0000

Epoch 740/5000
1/1 [=====] - 0s 997us/step - loss: 0.1829 - accuracy:
1.0000

Epoch 741/5000
1/1 [=====] - 0s 0s/step - loss: 0.1825 - accuracy:
1.0000

Epoch 742/5000
1/1 [=====] - 0s 997us/step - loss: 0.1821 - accuracy:
1.0000

Epoch 743/5000
1/1 [=====] - 0s 997us/step - loss: 0.1817 - accuracy:
1.0000

Epoch 744/5000
1/1 [=====] - 0s 998us/step - loss: 0.1814 - accuracy:
1.0000

Epoch 745/5000
1/1 [=====] - 0s 0s/step - loss: 0.1810 - accuracy:
1.0000

Epoch 746/5000
1/1 [=====] - 0s 0s/step - loss: 0.1806 - accuracy:
1.0000

Epoch 747/5000
1/1 [=====] - 0s 0s/step - loss: 0.1803 - accuracy:
1.0000

Epoch 748/5000
1/1 [=====] - 0s 0s/step - loss: 0.1799 - accuracy:
1.0000

Epoch 749/5000
1/1 [=====] - 0s 997us/step - loss: 0.1795 - accuracy:
1.0000

Epoch 750/5000
1/1 [=====] - 0s 997us/step - loss: 0.1791 - accuracy:
1.0000

Epoch 751/5000
1/1 [=====] - 0s 0s/step - loss: 0.1788 - accuracy:
1.0000

Epoch 752/5000
1/1 [=====] - 0s 998us/step - loss: 0.1784 - accuracy:
1.0000

Epoch 753/5000
1/1 [=====] - 0s 997us/step - loss: 0.1781 - accuracy:
1.0000

Epoch 754/5000
1/1 [=====] - 0s 999us/step - loss: 0.1777 - accuracy:
1.0000

Epoch 755/5000
1/1 [=====] - 0s 0s/step - loss: 0.1773 - accuracy:
1.0000

Epoch 756/5000
1/1 [=====] - 0s 997us/step - loss: 0.1770 - accuracy:
1.0000

Epoch 757/5000
1/1 [=====] - 0s 998us/step - loss: 0.1766 - accuracy:
1.0000

Epoch 758/5000
1/1 [=====] - 0s 0s/step - loss: 0.1762 - accuracy:
1.0000

Epoch 759/5000
1/1 [=====] - 0s 0s/step - loss: 0.1759 - accuracy:
1.0000

Epoch 760/5000
1/1 [=====] - 0s 0s/step - loss: 0.1755 - accuracy:
1.0000

Epoch 761/5000
1/1 [=====] - 0s 0s/step - loss: 0.1752 - accuracy:
1.0000

Epoch 762/5000
1/1 [=====] - 0s 0s/step - loss: 0.1748 - accuracy:
1.0000

Epoch 763/5000
1/1 [=====] - 0s 0s/step - loss: 0.1745 - accuracy:
1.0000

Epoch 764/5000
1/1 [=====] - 0s 0s/step - loss: 0.1741 - accuracy:
1.0000

Epoch 765/5000
1/1 [=====] - 0s 0s/step - loss: 0.1737 - accuracy:
1.0000

Epoch 766/5000
1/1 [=====] - 0s 0s/step - loss: 0.1734 - accuracy:
1.0000

Epoch 767/5000
1/1 [=====] - 0s 0s/step - loss: 0.1730 - accuracy:
1.0000

Epoch 768/5000
1/1 [=====] - 0s 0s/step - loss: 0.1727 - accuracy:
1.0000

Epoch 769/5000
1/1 [=====] - 0s 0s/step - loss: 0.1723 - accuracy:
1.0000

Epoch 770/5000
1/1 [=====] - 0s 997us/step - loss: 0.1720 - accuracy:
1.0000

Epoch 771/5000
1/1 [=====] - 0s 998us/step - loss: 0.1716 - accuracy:
1.0000

Epoch 772/5000
1/1 [=====] - 0s 0s/step - loss: 0.1713 - accuracy:
1.0000

Epoch 773/5000
1/1 [=====] - 0s 997us/step - loss: 0.1709 - accuracy:
1.0000

Epoch 774/5000
1/1 [=====] - 0s 997us/step - loss: 0.1706 - accuracy:
1.0000

Epoch 775/5000
1/1 [=====] - 0s 998us/step - loss: 0.1702 - accuracy:
1.0000

Epoch 776/5000
1/1 [=====] - 0s 0s/step - loss: 0.1699 - accuracy:
1.0000

Epoch 777/5000
1/1 [=====] - 0s 997us/step - loss: 0.1695 - accuracy:
1.0000

Epoch 778/5000
1/1 [=====] - 0s 999us/step - loss: 0.1692 - accuracy:
1.0000

Epoch 779/5000
1/1 [=====] - 0s 0s/step - loss: 0.1688 - accuracy:
1.0000

Epoch 780/5000
1/1 [=====] - 0s 0s/step - loss: 0.1685 - accuracy:
1.0000

Epoch 781/5000
1/1 [=====] - 0s 998us/step - loss: 0.1682 - accuracy:
1.0000

Epoch 782/5000
1/1 [=====] - 0s 0s/step - loss: 0.1678 - accuracy:
1.0000

Epoch 783/5000
1/1 [=====] - 0s 997us/step - loss: 0.1675 - accuracy:
1.0000

Epoch 784/5000
1/1 [=====] - 0s 996us/step - loss: 0.1671 - accuracy:
1.0000

Epoch 785/5000
1/1 [=====] - 0s 997us/step - loss: 0.1668 - accuracy:
1.0000

Epoch 786/5000
1/1 [=====] - 0s 996us/step - loss: 0.1665 - accuracy:
1.0000

Epoch 787/5000
1/1 [=====] - 0s 0s/step - loss: 0.1661 - accuracy:
1.0000

Epoch 788/5000
1/1 [=====] - 0s 998us/step - loss: 0.1658 - accuracy:
1.0000

Epoch 789/5000
1/1 [=====] - 0s 0s/step - loss: 0.1655 - accuracy:
1.0000

Epoch 790/5000
1/1 [=====] - 0s 997us/step - loss: 0.1651 - accuracy:
1.0000

Epoch 791/5000
1/1 [=====] - 0s 996us/step - loss: 0.1648 - accuracy:
1.0000

Epoch 792/5000
1/1 [=====] - 0s 997us/step - loss: 0.1644 - accuracy:
1.0000

Epoch 793/5000
1/1 [=====] - 0s 0s/step - loss: 0.1641 - accuracy:
1.0000

Epoch 794/5000
1/1 [=====] - 0s 0s/step - loss: 0.1638 - accuracy:
1.0000

Epoch 795/5000
1/1 [=====] - 0s 998us/step - loss: 0.1634 - accuracy:
1.0000

Epoch 796/5000
1/1 [=====] - 0s 0s/step - loss: 0.1631 - accuracy:
1.0000

Epoch 797/5000
1/1 [=====] - 0s 0s/step - loss: 0.1628 - accuracy:
1.0000

Epoch 798/5000
1/1 [=====] - 0s 998us/step - loss: 0.1624 - accuracy:
1.0000

Epoch 799/5000
1/1 [=====] - 0s 998us/step - loss: 0.1621 - accuracy:
1.0000

Epoch 800/5000
1/1 [=====] - 0s 0s/step - loss: 0.1618 - accuracy:
1.0000

Epoch 801/5000
1/1 [=====] - 0s 0s/step - loss: 0.1615 - accuracy:
1.0000

Epoch 802/5000
1/1 [=====] - 0s 996us/step - loss: 0.1611 - accuracy:
1.0000

Epoch 803/5000
1/1 [=====] - 0s 997us/step - loss: 0.1608 - accuracy:
1.0000

Epoch 804/5000
1/1 [=====] - 0s 0s/step - loss: 0.1605 - accuracy:
1.0000

Epoch 805/5000
1/1 [=====] - 0s 995us/step - loss: 0.1602 - accuracy:
1.0000

Epoch 806/5000
1/1 [=====] - 0s 0s/step - loss: 0.1598 - accuracy:
1.0000

Epoch 807/5000
1/1 [=====] - 0s 0s/step - loss: 0.1595 - accuracy:
1.0000

Epoch 808/5000
1/1 [=====] - 0s 0s/step - loss: 0.1592 - accuracy:
1.0000

Epoch 809/5000
1/1 [=====] - 0s 997us/step - loss: 0.1589 - accuracy:
1.0000

Epoch 810/5000
1/1 [=====] - 0s 999us/step - loss: 0.1586 - accuracy:
1.0000

Epoch 811/5000
1/1 [=====] - 0s 998us/step - loss: 0.1582 - accuracy:
1.0000

Epoch 812/5000
1/1 [=====] - 0s 0s/step - loss: 0.1579 - accuracy:
1.0000

Epoch 813/5000
1/1 [=====] - 0s 997us/step - loss: 0.1576 - accuracy:
1.0000

Epoch 814/5000
1/1 [=====] - 0s 997us/step - loss: 0.1573 - accuracy:
1.0000

Epoch 815/5000
1/1 [=====] - 0s 997us/step - loss: 0.1570 - accuracy:
1.0000

Epoch 816/5000
1/1 [=====] - 0s 997us/step - loss: 0.1566 - accuracy:
1.0000

Epoch 817/5000
1/1 [=====] - 0s 0s/step - loss: 0.1563 - accuracy:
1.0000

Epoch 818/5000
1/1 [=====] - 0s 0s/step - loss: 0.1560 - accuracy:
1.0000

Epoch 819/5000
1/1 [=====] - 0s 0s/step - loss: 0.1557 - accuracy:
1.0000

Epoch 820/5000
1/1 [=====] - 0s 0s/step - loss: 0.1554 - accuracy:
1.0000

Epoch 821/5000
1/1 [=====] - 0s 994us/step - loss: 0.1551 - accuracy:
1.0000

Epoch 822/5000
1/1 [=====] - 0s 998us/step - loss: 0.1547 - accuracy:
1.0000

Epoch 823/5000
1/1 [=====] - 0s 0s/step - loss: 0.1544 - accuracy:
1.0000

Epoch 824/5000
1/1 [=====] - 0s 0s/step - loss: 0.1541 - accuracy:
1.0000

Epoch 825/5000
1/1 [=====] - 0s 997us/step - loss: 0.1538 - accuracy:
1.0000

Epoch 826/5000
1/1 [=====] - 0s 0s/step - loss: 0.1535 - accuracy:
1.0000

Epoch 827/5000
1/1 [=====] - 0s 0s/step - loss: 0.1532 - accuracy:
1.0000

Epoch 828/5000
1/1 [=====] - 0s 998us/step - loss: 0.1529 - accuracy:
1.0000

Epoch 829/5000
1/1 [=====] - 0s 0s/step - loss: 0.1526 - accuracy:
1.0000

Epoch 830/5000
1/1 [=====] - 0s 0s/step - loss: 0.1523 - accuracy:
1.0000

Epoch 831/5000
1/1 [=====] - 0s 997us/step - loss: 0.1520 - accuracy:
1.0000

Epoch 832/5000
1/1 [=====] - 0s 0s/step - loss: 0.1517 - accuracy:
1.0000

Epoch 833/5000
1/1 [=====] - 0s 997us/step - loss: 0.1514 - accuracy:
1.0000

Epoch 834/5000
1/1 [=====] - 0s 0s/step - loss: 0.1511 - accuracy:
1.0000

Epoch 835/5000
1/1 [=====] - 0s 998us/step - loss: 0.1507 - accuracy:
1.0000

Epoch 836/5000
1/1 [=====] - 0s 997us/step - loss: 0.1504 - accuracy:
1.0000

Epoch 837/5000
1/1 [=====] - 0s 984us/step - loss: 0.1501 - accuracy:
1.0000

Epoch 838/5000
1/1 [=====] - 0s 0s/step - loss: 0.1499 - accuracy:
1.0000

Epoch 839/5000
1/1 [=====] - 0s 0s/step - loss: 0.1496 - accuracy:
1.0000

Epoch 840/5000
1/1 [=====] - 0s 0s/step - loss: 0.1492 - accuracy:
1.0000

Epoch 841/5000
1/1 [=====] - 0s 997us/step - loss: 0.1489 - accuracy:
1.0000

Epoch 842/5000
1/1 [=====] - 0s 998us/step - loss: 0.1486 - accuracy:
1.0000

Epoch 843/5000
1/1 [=====] - 0s 0s/step - loss: 0.1484 - accuracy:
1.0000

Epoch 844/5000
1/1 [=====] - 0s 997us/step - loss: 0.1481 - accuracy:
1.0000

Epoch 845/5000
1/1 [=====] - 0s 0s/step - loss: 0.1478 - accuracy:
1.0000

Epoch 846/5000
1/1 [=====] - 0s 997us/step - loss: 0.1475 - accuracy:
1.0000

Epoch 847/5000
1/1 [=====] - 0s 0s/step - loss: 0.1472 - accuracy:
1.0000

Epoch 848/5000
1/1 [=====] - 0s 0s/step - loss: 0.1469 - accuracy:
1.0000

Epoch 849/5000
1/1 [=====] - 0s 0s/step - loss: 0.1466 - accuracy:
1.0000

Epoch 850/5000
1/1 [=====] - 0s 998us/step - loss: 0.1463 - accuracy:
1.0000

Epoch 851/5000
1/1 [=====] - 0s 0s/step - loss: 0.1460 - accuracy:
1.0000

Epoch 852/5000
1/1 [=====] - 0s 0s/step - loss: 0.1457 - accuracy:
1.0000

Epoch 853/5000
1/1 [=====] - 0s 997us/step - loss: 0.1454 - accuracy:
1.0000

Epoch 854/5000
1/1 [=====] - 0s 0s/step - loss: 0.1451 - accuracy:
1.0000

Epoch 855/5000
1/1 [=====] - 0s 1ms/step - loss: 0.1448 - accuracy:
1.0000

Epoch 856/5000
1/1 [=====] - 0s 996us/step - loss: 0.1445 - accuracy:
1.0000

Epoch 857/5000
1/1 [=====] - 0s 0s/step - loss: 0.1443 - accuracy:
1.0000

Epoch 858/5000
1/1 [=====] - 0s 993us/step - loss: 0.1440 - accuracy:
1.0000

Epoch 859/5000
1/1 [=====] - 0s 996us/step - loss: 0.1437 - accuracy:
1.0000

Epoch 860/5000
1/1 [=====] - 0s 0s/step - loss: 0.1434 - accuracy:
1.0000

Epoch 861/5000
1/1 [=====] - 0s 998us/step - loss: 0.1431 - accuracy:
1.0000

Epoch 862/5000
1/1 [=====] - 0s 998us/step - loss: 0.1428 - accuracy:
1.0000

Epoch 863/5000
1/1 [=====] - 0s 0s/step - loss: 0.1425 - accuracy:
1.0000

Epoch 864/5000
1/1 [=====] - 0s 0s/step - loss: 0.1423 - accuracy:
1.0000

Epoch 865/5000
1/1 [=====] - 0s 999us/step - loss: 0.1420 - accuracy:
1.0000

Epoch 866/5000
1/1 [=====] - 0s 0s/step - loss: 0.1417 - accuracy:
1.0000

Epoch 867/5000
1/1 [=====] - 0s 997us/step - loss: 0.1414 - accuracy:
1.0000

Epoch 868/5000
1/1 [=====] - 0s 0s/step - loss: 0.1411 - accuracy:
1.0000

Epoch 869/5000
1/1 [=====] - 0s 997us/step - loss: 0.1408 - accuracy:
1.0000

Epoch 870/5000
1/1 [=====] - 0s 997us/step - loss: 0.1405 - accuracy:
1.0000

Epoch 871/5000
1/1 [=====] - 0s 0s/step - loss: 0.1403 - accuracy:
1.0000

Epoch 872/5000
1/1 [=====] - 0s 0s/step - loss: 0.1400 - accuracy:
1.0000

Epoch 873/5000
1/1 [=====] - 0s 0s/step - loss: 0.1397 - accuracy:
1.0000

Epoch 874/5000
1/1 [=====] - 0s 0s/step - loss: 0.1394 - accuracy:
1.0000

Epoch 875/5000
1/1 [=====] - 0s 997us/step - loss: 0.1392 - accuracy:
1.0000

Epoch 876/5000
1/1 [=====] - 0s 0s/step - loss: 0.1389 - accuracy:
1.0000

Epoch 877/5000
1/1 [=====] - 0s 998us/step - loss: 0.1386 - accuracy:
1.0000

Epoch 878/5000
1/1 [=====] - 0s 995us/step - loss: 0.1383 - accuracy:
1.0000

Epoch 879/5000
1/1 [=====] - 0s 997us/step - loss: 0.1380 - accuracy:
1.0000

Epoch 880/5000
1/1 [=====] - 0s 0s/step - loss: 0.1378 - accuracy:
1.0000

Epoch 881/5000
1/1 [=====] - 0s 0s/step - loss: 0.1375 - accuracy:
1.0000

Epoch 882/5000
1/1 [=====] - 0s 998us/step - loss: 0.1372 - accuracy:
1.0000

Epoch 883/5000
1/1 [=====] - 0s 997us/step - loss: 0.1370 - accuracy:
1.0000

Epoch 884/5000
1/1 [=====] - 0s 0s/step - loss: 0.1367 - accuracy:
1.0000

Epoch 885/5000
1/1 [=====] - 0s 997us/step - loss: 0.1364 - accuracy:
1.0000

Epoch 886/5000
1/1 [=====] - 0s 0s/step - loss: 0.1362 - accuracy:
1.0000

Epoch 887/5000
1/1 [=====] - 0s 999us/step - loss: 0.1359 - accuracy:
1.0000

Epoch 888/5000
1/1 [=====] - 0s 0s/step - loss: 0.1356 - accuracy:
1.0000

Epoch 889/5000
1/1 [=====] - 0s 998us/step - loss: 0.1353 - accuracy:
1.0000

Epoch 890/5000
1/1 [=====] - 0s 996us/step - loss: 0.1351 - accuracy:
1.0000

Epoch 891/5000
1/1 [=====] - 0s 1ms/step - loss: 0.1348 - accuracy:
1.0000

Epoch 892/5000
1/1 [=====] - 0s 997us/step - loss: 0.1345 - accuracy:
1.0000

Epoch 893/5000
1/1 [=====] - 0s 0s/step - loss: 0.1343 - accuracy:
1.0000

Epoch 894/5000
1/1 [=====] - 0s 997us/step - loss: 0.1340 - accuracy:
1.0000

Epoch 895/5000
1/1 [=====] - 0s 0s/step - loss: 0.1337 - accuracy:
1.0000

Epoch 896/5000
1/1 [=====] - 0s 0s/step - loss: 0.1335 - accuracy:
1.0000

Epoch 897/5000
1/1 [=====] - 0s 0s/step - loss: 0.1332 - accuracy:
1.0000

Epoch 898/5000
1/1 [=====] - 0s 0s/step - loss: 0.1329 - accuracy:
1.0000

Epoch 899/5000
1/1 [=====] - 0s 998us/step - loss: 0.1327 - accuracy:
1.0000

Epoch 900/5000
1/1 [=====] - 0s 999us/step - loss: 0.1324 - accuracy:
1.0000

Epoch 901/5000
1/1 [=====] - 0s 0s/step - loss: 0.1322 - accuracy:
1.0000

Epoch 902/5000
1/1 [=====] - 0s 0s/step - loss: 0.1319 - accuracy:
1.0000

Epoch 903/5000
1/1 [=====] - 0s 0s/step - loss: 0.1316 - accuracy:
1.0000

Epoch 904/5000
1/1 [=====] - 0s 0s/step - loss: 0.1314 - accuracy:
1.0000

Epoch 905/5000
1/1 [=====] - 0s 0s/step - loss: 0.1311 - accuracy:
1.0000

Epoch 906/5000
1/1 [=====] - 0s 998us/step - loss: 0.1309 - accuracy:
1.0000

Epoch 907/5000
1/1 [=====] - 0s 998us/step - loss: 0.1306 - accuracy:
1.0000

Epoch 908/5000
1/1 [=====] - 0s 0s/step - loss: 0.1303 - accuracy:
1.0000

Epoch 909/5000
1/1 [=====] - 0s 0s/step - loss: 0.1301 - accuracy:
1.0000

Epoch 910/5000
1/1 [=====] - 0s 0s/step - loss: 0.1298 - accuracy:
1.0000

Epoch 911/5000
1/1 [=====] - 0s 0s/step - loss: 0.1296 - accuracy:
1.0000

Epoch 912/5000
1/1 [=====] - 0s 999us/step - loss: 0.1293 - accuracy:
1.0000

Epoch 913/5000
1/1 [=====] - 0s 0s/step - loss: 0.1291 - accuracy:
1.0000

Epoch 914/5000
1/1 [=====] - 0s 998us/step - loss: 0.1288 - accuracy:
1.0000

Epoch 915/5000
1/1 [=====] - 0s 0s/step - loss: 0.1286 - accuracy:
1.0000

Epoch 916/5000
1/1 [=====] - 0s 0s/step - loss: 0.1283 - accuracy:
1.0000

Epoch 917/5000
1/1 [=====] - 0s 0s/step - loss: 0.1281 - accuracy:
1.0000

Epoch 918/5000
1/1 [=====] - 0s 0s/step - loss: 0.1278 - accuracy:
1.0000

Epoch 919/5000
1/1 [=====] - 0s 997us/step - loss: 0.1276 - accuracy:
1.0000

Epoch 920/5000
1/1 [=====] - 0s 998us/step - loss: 0.1273 - accuracy:
1.0000
Epoch 921/5000
1/1 [=====] - 0s 0s/step - loss: 0.1271 - accuracy:
1.0000
Epoch 922/5000
1/1 [=====] - 0s 0s/step - loss: 0.1268 - accuracy:
1.0000
Epoch 923/5000
1/1 [=====] - 0s 0s/step - loss: 0.1266 - accuracy:
1.0000
Epoch 924/5000
1/1 [=====] - 0s 0s/step - loss: 0.1263 - accuracy:
1.0000
Epoch 925/5000
1/1 [=====] - 0s 0s/step - loss: 0.1261 - accuracy:
1.0000
Epoch 926/5000
1/1 [=====] - 0s 0s/step - loss: 0.1258 - accuracy:
1.0000
Epoch 927/5000
1/1 [=====] - 0s 0s/step - loss: 0.1256 - accuracy:
1.0000
Epoch 928/5000
1/1 [=====] - 0s 0s/step - loss: 0.1253 - accuracy:
1.0000
Epoch 929/5000
1/1 [=====] - 0s 998us/step - loss: 0.1251 - accuracy:
1.0000
Epoch 930/5000
1/1 [=====] - 0s 0s/step - loss: 0.1248 - accuracy:
1.0000
Epoch 931/5000
1/1 [=====] - 0s 0s/step - loss: 0.1246 - accuracy:
1.0000
Epoch 932/5000
1/1 [=====] - 0s 0s/step - loss: 0.1244 - accuracy:
1.0000
Epoch 933/5000
1/1 [=====] - 0s 0s/step - loss: 0.1241 - accuracy:
1.0000
Epoch 934/5000
1/1 [=====] - 0s 998us/step - loss: 0.1239 - accuracy:
1.0000
Epoch 935/5000
1/1 [=====] - 0s 0s/step - loss: 0.1236 - accuracy:
1.0000

Epoch 936/5000
1/1 [=====] - ETA: 0s - loss: 0.1234 - accuracy: 1.00 -
0s 997us/step - loss: 0.1234 - accuracy: 1.0000
Epoch 937/5000
1/1 [=====] - 0s 998us/step - loss: 0.1231 - accuracy:
1.0000
Epoch 938/5000
1/1 [=====] - 0s 0s/step - loss: 0.1229 - accuracy:
1.0000
Epoch 939/5000
1/1 [=====] - 0s 0s/step - loss: 0.1227 - accuracy:
1.0000
Epoch 940/5000
1/1 [=====] - 0s 995us/step - loss: 0.1224 - accuracy:
1.0000
Epoch 941/5000
1/1 [=====] - 0s 0s/step - loss: 0.1222 - accuracy:
1.0000
Epoch 942/5000
1/1 [=====] - 0s 0s/step - loss: 0.1220 - accuracy:
1.0000
Epoch 943/5000
1/1 [=====] - 0s 0s/step - loss: 0.1217 - accuracy:
1.0000
Epoch 944/5000
1/1 [=====] - 0s 0s/step - loss: 0.1215 - accuracy:
1.0000
Epoch 945/5000
1/1 [=====] - 0s 0s/step - loss: 0.1212 - accuracy:
1.0000
Epoch 946/5000
1/1 [=====] - 0s 0s/step - loss: 0.1210 - accuracy:
1.0000
Epoch 947/5000
1/1 [=====] - 0s 998us/step - loss: 0.1208 - accuracy:
1.0000
Epoch 948/5000
1/1 [=====] - 0s 997us/step - loss: 0.1205 - accuracy:
1.0000
Epoch 949/5000
1/1 [=====] - 0s 998us/step - loss: 0.1203 - accuracy:
1.0000
Epoch 950/5000
1/1 [=====] - 0s 0s/step - loss: 0.1201 - accuracy:
1.0000
Epoch 951/5000
1/1 [=====] - 0s 998us/step - loss: 0.1198 - accuracy:
1.0000

Epoch 952/5000
1/1 [=====] - 0s 997us/step - loss: 0.1196 - accuracy:
1.0000
Epoch 953/5000
1/1 [=====] - 0s 0s/step - loss: 0.1194 - accuracy:
1.0000
Epoch 954/5000
1/1 [=====] - 0s 0s/step - loss: 0.1191 - accuracy:
1.0000
Epoch 955/5000
1/1 [=====] - 0s 997us/step - loss: 0.1189 - accuracy:
1.0000
Epoch 956/5000
1/1 [=====] - 0s 997us/step - loss: 0.1187 - accuracy:
1.0000
Epoch 957/5000
1/1 [=====] - 0s 0s/step - loss: 0.1185 - accuracy:
1.0000
Epoch 958/5000
1/1 [=====] - 0s 0s/step - loss: 0.1182 - accuracy:
1.0000
Epoch 959/5000
1/1 [=====] - 0s 998us/step - loss: 0.1180 - accuracy:
1.0000
Epoch 960/5000
1/1 [=====] - 0s 998us/step - loss: 0.1178 - accuracy:
1.0000
Epoch 961/5000
1/1 [=====] - 0s 0s/step - loss: 0.1176 - accuracy:
1.0000
Epoch 962/5000
1/1 [=====] - 0s 0s/step - loss: 0.1173 - accuracy:
1.0000
Epoch 963/5000
1/1 [=====] - 0s 0s/step - loss: 0.1171 - accuracy:
1.0000
Epoch 964/5000
1/1 [=====] - 0s 0s/step - loss: 0.1169 - accuracy:
1.0000
Epoch 965/5000
1/1 [=====] - 0s 997us/step - loss: 0.1167 - accuracy:
1.0000
Epoch 966/5000
1/1 [=====] - 0s 0s/step - loss: 0.1164 - accuracy:
1.0000
Epoch 967/5000
1/1 [=====] - 0s 0s/step - loss: 0.1162 - accuracy:
1.0000

Epoch 968/5000
1/1 [=====] - 0s 0s/step - loss: 0.1160 - accuracy:
1.0000
Epoch 969/5000
1/1 [=====] - 0s 998us/step - loss: 0.1157 - accuracy:
1.0000
Epoch 970/5000
1/1 [=====] - 0s 998us/step - loss: 0.1155 - accuracy:
1.0000
Epoch 971/5000
1/1 [=====] - 0s 0s/step - loss: 0.1153 - accuracy:
1.0000
Epoch 972/5000
1/1 [=====] - 0s 0s/step - loss: 0.1151 - accuracy:
1.0000
Epoch 973/5000
1/1 [=====] - 0s 0s/step - loss: 0.1149 - accuracy:
1.0000
Epoch 974/5000
1/1 [=====] - 0s 0s/step - loss: 0.1146 - accuracy:
1.0000
Epoch 975/5000
1/1 [=====] - 0s 0s/step - loss: 0.1144 - accuracy:
1.0000
Epoch 976/5000
1/1 [=====] - 0s 0s/step - loss: 0.1142 - accuracy:
1.0000
Epoch 977/5000
1/1 [=====] - 0s 0s/step - loss: 0.1140 - accuracy:
1.0000
Epoch 978/5000
1/1 [=====] - 0s 0s/step - loss: 0.1138 - accuracy:
1.0000
Epoch 979/5000
1/1 [=====] - 0s 0s/step - loss: 0.1135 - accuracy:
1.0000
Epoch 980/5000
1/1 [=====] - 0s 998us/step - loss: 0.1133 - accuracy:
1.0000
Epoch 981/5000
1/1 [=====] - 0s 997us/step - loss: 0.1131 - accuracy:
1.0000
Epoch 982/5000
1/1 [=====] - 0s 0s/step - loss: 0.1129 - accuracy:
1.0000
Epoch 983/5000
1/1 [=====] - 0s 0s/step - loss: 0.1127 - accuracy:
1.0000

Epoch 984/5000
1/1 [=====] - 0s 998us/step - loss: 0.1125 - accuracy:
1.0000

Epoch 985/5000
1/1 [=====] - 0s 998us/step - loss: 0.1122 - accuracy:
1.0000

Epoch 986/5000
1/1 [=====] - 0s 0s/step - loss: 0.1120 - accuracy:
1.0000

Epoch 987/5000
1/1 [=====] - 0s 997us/step - loss: 0.1118 - accuracy:
1.0000

Epoch 988/5000
1/1 [=====] - 0s 997us/step - loss: 0.1116 - accuracy:
1.0000

Epoch 989/5000
1/1 [=====] - 0s 996us/step - loss: 0.1114 - accuracy:
1.0000

Epoch 990/5000
1/1 [=====] - 0s 997us/step - loss: 0.1112 - accuracy:
1.0000

Epoch 991/5000
1/1 [=====] - 0s 0s/step - loss: 0.1110 - accuracy:
1.0000

Epoch 992/5000
1/1 [=====] - 0s 0s/step - loss: 0.1107 - accuracy:
1.0000

Epoch 993/5000
1/1 [=====] - 0s 0s/step - loss: 0.1105 - accuracy:
1.0000

Epoch 994/5000
1/1 [=====] - 0s 0s/step - loss: 0.1103 - accuracy:
1.0000

Epoch 995/5000
1/1 [=====] - 0s 998us/step - loss: 0.1101 - accuracy:
1.0000

Epoch 996/5000
1/1 [=====] - 0s 997us/step - loss: 0.1099 - accuracy:
1.0000

Epoch 997/5000
1/1 [=====] - 0s 0s/step - loss: 0.1097 - accuracy:
1.0000

Epoch 998/5000
1/1 [=====] - 0s 998us/step - loss: 0.1095 - accuracy:
1.0000

Epoch 999/5000
1/1 [=====] - 0s 997us/step - loss: 0.1093 - accuracy:
1.0000

Epoch 1000/5000
1/1 [=====] - 0s 998us/step - loss: 0.1091 - accuracy:
1.0000

Epoch 1001/5000
1/1 [=====] - 0s 0s/step - loss: 0.1089 - accuracy:
1.0000

Epoch 1002/5000
1/1 [=====] - 0s 997us/step - loss: 0.1086 - accuracy:
1.0000

Epoch 1003/5000
1/1 [=====] - 0s 997us/step - loss: 0.1084 - accuracy:
1.0000

Epoch 1004/5000
1/1 [=====] - 0s 0s/step - loss: 0.1082 - accuracy:
1.0000

Epoch 1005/5000
1/1 [=====] - 0s 998us/step - loss: 0.1080 - accuracy:
1.0000

Epoch 1006/5000
1/1 [=====] - 0s 998us/step - loss: 0.1078 - accuracy:
1.0000

Epoch 1007/5000
1/1 [=====] - 0s 0s/step - loss: 0.1076 - accuracy:
1.0000

Epoch 1008/5000
1/1 [=====] - 0s 997us/step - loss: 0.1074 - accuracy:
1.0000

Epoch 1009/5000
1/1 [=====] - 0s 0s/step - loss: 0.1072 - accuracy:
1.0000

Epoch 1010/5000
1/1 [=====] - 0s 0s/step - loss: 0.1070 - accuracy:
1.0000

Epoch 1011/5000
1/1 [=====] - 0s 999us/step - loss: 0.1068 - accuracy:
1.0000

Epoch 1012/5000
1/1 [=====] - 0s 0s/step - loss: 0.1066 - accuracy:
1.0000

Epoch 1013/5000
1/1 [=====] - 0s 999us/step - loss: 0.1064 - accuracy:
1.0000

Epoch 1014/5000
1/1 [=====] - 0s 2ms/step - loss: 0.1062 - accuracy:
1.0000

Epoch 1015/5000
1/1 [=====] - 0s 998us/step - loss: 0.1060 - accuracy:
1.0000

Epoch 1016/5000
1/1 [=====] - 0s 0s/step - loss: 0.1058 - accuracy:
1.0000

Epoch 1017/5000
1/1 [=====] - 0s 0s/step - loss: 0.1056 - accuracy:
1.0000

Epoch 1018/5000
1/1 [=====] - 0s 0s/step - loss: 0.1054 - accuracy:
1.0000

Epoch 1019/5000
1/1 [=====] - 0s 998us/step - loss: 0.1052 - accuracy:
1.0000

Epoch 1020/5000
1/1 [=====] - 0s 1ms/step - loss: 0.1050 - accuracy:
1.0000

Epoch 1021/5000
1/1 [=====] - 0s 0s/step - loss: 0.1048 - accuracy:
1.0000

Epoch 1022/5000
1/1 [=====] - 0s 997us/step - loss: 0.1046 - accuracy:
1.0000

Epoch 1023/5000
1/1 [=====] - 0s 0s/step - loss: 0.1044 - accuracy:
1.0000

Epoch 1024/5000
1/1 [=====] - 0s 0s/step - loss: 0.1042 - accuracy:
1.0000

Epoch 1025/5000
1/1 [=====] - 0s 998us/step - loss: 0.1040 - accuracy:
1.0000

Epoch 1026/5000
1/1 [=====] - 0s 998us/step - loss: 0.1038 - accuracy:
1.0000

Epoch 1027/5000
1/1 [=====] - 0s 0s/step - loss: 0.1036 - accuracy:
1.0000

Epoch 1028/5000
1/1 [=====] - 0s 997us/step - loss: 0.1034 - accuracy:
1.0000

Epoch 1029/5000
1/1 [=====] - 0s 0s/step - loss: 0.1032 - accuracy:
1.0000

Epoch 1030/5000
1/1 [=====] - 0s 0s/step - loss: 0.1030 - accuracy:
1.0000

Epoch 1031/5000
1/1 [=====] - 0s 0s/step - loss: 0.1028 - accuracy:
1.0000

Epoch 1032/5000
1/1 [=====] - 0s 997us/step - loss: 0.1026 - accuracy:
1.0000

Epoch 1033/5000
1/1 [=====] - 0s 0s/step - loss: 0.1025 - accuracy:
1.0000

Epoch 1034/5000
1/1 [=====] - 0s 998us/step - loss: 0.1023 - accuracy:
1.0000

Epoch 1035/5000
1/1 [=====] - 0s 997us/step - loss: 0.1021 - accuracy:
1.0000

Epoch 1036/5000
1/1 [=====] - 0s 997us/step - loss: 0.1019 - accuracy:
1.0000

Epoch 1037/5000
1/1 [=====] - 0s 0s/step - loss: 0.1017 - accuracy:
1.0000

Epoch 1038/5000
1/1 [=====] - 0s 998us/step - loss: 0.1015 - accuracy:
1.0000

Epoch 1039/5000
1/1 [=====] - 0s 0s/step - loss: 0.1013 - accuracy:
1.0000

Epoch 1040/5000
1/1 [=====] - 0s 0s/step - loss: 0.1011 - accuracy:
1.0000

Epoch 1041/5000
1/1 [=====] - 0s 0s/step - loss: 0.1009 - accuracy:
1.0000

Epoch 1042/5000
1/1 [=====] - 0s 998us/step - loss: 0.1007 - accuracy:
1.0000

Epoch 1043/5000
1/1 [=====] - 0s 0s/step - loss: 0.1006 - accuracy:
1.0000

Epoch 1044/5000
1/1 [=====] - 0s 0s/step - loss: 0.1004 - accuracy:
1.0000

Epoch 1045/5000
1/1 [=====] - 0s 0s/step - loss: 0.1002 - accuracy:
1.0000

Epoch 1046/5000
1/1 [=====] - 0s 0s/step - loss: 0.1000 - accuracy:
1.0000

Epoch 1047/5000
1/1 [=====] - 0s 997us/step - loss: 0.0998 - accuracy:
1.0000

Epoch 1048/5000
1/1 [=====] - 0s 0s/step - loss: 0.0996 - accuracy:
1.0000

Epoch 1049/5000
1/1 [=====] - 0s 0s/step - loss: 0.0994 - accuracy:
1.0000

Epoch 1050/5000
1/1 [=====] - 0s 0s/step - loss: 0.0992 - accuracy:
1.0000

Epoch 1051/5000
1/1 [=====] - 0s 998us/step - loss: 0.0991 - accuracy:
1.0000

Epoch 1052/5000
1/1 [=====] - 0s 996us/step - loss: 0.0989 - accuracy:
1.0000

Epoch 1053/5000
1/1 [=====] - 0s 0s/step - loss: 0.0987 - accuracy:
1.0000

Epoch 1054/5000
1/1 [=====] - 0s 0s/step - loss: 0.0985 - accuracy:
1.0000

Epoch 1055/5000
1/1 [=====] - 0s 0s/step - loss: 0.0983 - accuracy:
1.0000

Epoch 1056/5000
1/1 [=====] - 0s 0s/step - loss: 0.0981 - accuracy:
1.0000

Epoch 1057/5000
1/1 [=====] - 0s 997us/step - loss: 0.0980 - accuracy:
1.0000

Epoch 1058/5000
1/1 [=====] - 0s 0s/step - loss: 0.0978 - accuracy:
1.0000

Epoch 1059/5000
1/1 [=====] - 0s 998us/step - loss: 0.0976 - accuracy:
1.0000

Epoch 1060/5000
1/1 [=====] - 0s 997us/step - loss: 0.0974 - accuracy:
1.0000

Epoch 1061/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0972 - accuracy:
1.0000

Epoch 1062/5000
1/1 [=====] - 0s 998us/step - loss: 0.0971 - accuracy:
1.0000

Epoch 1063/5000
1/1 [=====] - 0s 0s/step - loss: 0.0969 - accuracy:
1.0000

Epoch 1064/5000
1/1 [=====] - 0s 997us/step - loss: 0.0967 - accuracy:
1.0000

Epoch 1065/5000
1/1 [=====] - 0s 998us/step - loss: 0.0965 - accuracy:
1.0000

Epoch 1066/5000
1/1 [=====] - 0s 997us/step - loss: 0.0963 - accuracy:
1.0000

Epoch 1067/5000
1/1 [=====] - 0s 0s/step - loss: 0.0962 - accuracy:
1.0000

Epoch 1068/5000
1/1 [=====] - 0s 997us/step - loss: 0.0960 - accuracy:
1.0000

Epoch 1069/5000
1/1 [=====] - 0s 997us/step - loss: 0.0958 - accuracy:
1.0000

Epoch 1070/5000
1/1 [=====] - 0s 0s/step - loss: 0.0956 - accuracy:
1.0000

Epoch 1071/5000
1/1 [=====] - 0s 996us/step - loss: 0.0954 - accuracy:
1.0000

Epoch 1072/5000
1/1 [=====] - 0s 997us/step - loss: 0.0953 - accuracy:
1.0000

Epoch 1073/5000
1/1 [=====] - 0s 997us/step - loss: 0.0951 - accuracy:
1.0000

Epoch 1074/5000
1/1 [=====] - 0s 997us/step - loss: 0.0949 - accuracy:
1.0000

Epoch 1075/5000
1/1 [=====] - 0s 0s/step - loss: 0.0947 - accuracy:
1.0000

Epoch 1076/5000
1/1 [=====] - 0s 995us/step - loss: 0.0946 - accuracy:
1.0000

Epoch 1077/5000
1/1 [=====] - 0s 0s/step - loss: 0.0944 - accuracy:
1.0000

Epoch 1078/5000
1/1 [=====] - 0s 998us/step - loss: 0.0942 - accuracy:
1.0000

Epoch 1079/5000
1/1 [=====] - 0s 0s/step - loss: 0.0940 - accuracy:
1.0000

Epoch 1080/5000
1/1 [=====] - 0s 997us/step - loss: 0.0939 - accuracy:
1.0000

Epoch 1081/5000
1/1 [=====] - 0s 997us/step - loss: 0.0937 - accuracy:
1.0000

Epoch 1082/5000
1/1 [=====] - 0s 0s/step - loss: 0.0935 - accuracy:
1.0000

Epoch 1083/5000
1/1 [=====] - 0s 0s/step - loss: 0.0934 - accuracy:
1.0000

Epoch 1084/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0932 - accuracy:
1.0000

Epoch 1085/5000
1/1 [=====] - 0s 996us/step - loss: 0.0930 - accuracy:
1.0000

Epoch 1086/5000
1/1 [=====] - 0s 998us/step - loss: 0.0928 - accuracy:
1.0000

Epoch 1087/5000
1/1 [=====] - 0s 995us/step - loss: 0.0927 - accuracy:
1.0000

Epoch 1088/5000
1/1 [=====] - 0s 0s/step - loss: 0.0925 - accuracy:
1.0000

Epoch 1089/5000
1/1 [=====] - 0s 0s/step - loss: 0.0923 - accuracy:
1.0000

Epoch 1090/5000
1/1 [=====] - 0s 0s/step - loss: 0.0922 - accuracy:
1.0000

Epoch 1091/5000
1/1 [=====] - 0s 998us/step - loss: 0.0920 - accuracy:
1.0000

Epoch 1092/5000
1/1 [=====] - 0s 998us/step - loss: 0.0918 - accuracy:
1.0000

Epoch 1093/5000
1/1 [=====] - 0s 997us/step - loss: 0.0917 - accuracy:
1.0000

Epoch 1094/5000
1/1 [=====] - 0s 997us/step - loss: 0.0915 - accuracy:
1.0000

Epoch 1095/5000
1/1 [=====] - 0s 998us/step - loss: 0.0913 - accuracy:
1.0000

Epoch 1096/5000
1/1 [=====] - 0s 0s/step - loss: 0.0911 - accuracy:
1.0000

Epoch 1097/5000
1/1 [=====] - 0s 998us/step - loss: 0.0910 - accuracy:
1.0000

Epoch 1098/5000
1/1 [=====] - 0s 997us/step - loss: 0.0908 - accuracy:
1.0000

Epoch 1099/5000
1/1 [=====] - 0s 998us/step - loss: 0.0907 - accuracy:
1.0000

Epoch 1100/5000
1/1 [=====] - 0s 997us/step - loss: 0.0905 - accuracy:
1.0000

Epoch 1101/5000
1/1 [=====] - 0s 996us/step - loss: 0.0903 - accuracy:
1.0000

Epoch 1102/5000
1/1 [=====] - 0s 0s/step - loss: 0.0902 - accuracy:
1.0000

Epoch 1103/5000
1/1 [=====] - 0s 0s/step - loss: 0.0900 - accuracy:
1.0000

Epoch 1104/5000
1/1 [=====] - 0s 997us/step - loss: 0.0898 - accuracy:
1.0000

Epoch 1105/5000
1/1 [=====] - 0s 0s/step - loss: 0.0897 - accuracy:
1.0000

Epoch 1106/5000
1/1 [=====] - 0s 0s/step - loss: 0.0895 - accuracy:
1.0000

Epoch 1107/5000
1/1 [=====] - 0s 0s/step - loss: 0.0893 - accuracy:
1.0000

Epoch 1108/5000
1/1 [=====] - 0s 0s/step - loss: 0.0892 - accuracy:
1.0000

Epoch 1109/5000
1/1 [=====] - 0s 998us/step - loss: 0.0890 - accuracy:
1.0000

Epoch 1110/5000
1/1 [=====] - 0s 0s/step - loss: 0.0888 - accuracy:
1.0000

Epoch 1111/5000
1/1 [=====] - 0s 0s/step - loss: 0.0887 - accuracy:
1.0000

Epoch 1112/5000
1/1 [=====] - 0s 998us/step - loss: 0.0885 - accuracy: 1.0000

Epoch 1113/5000
1/1 [=====] - 0s 0s/step - loss: 0.0884 - accuracy: 1.0000

Epoch 1114/5000
1/1 [=====] - 0s 995us/step - loss: 0.0882 - accuracy: 1.0000

Epoch 1115/5000
1/1 [=====] - 0s 0s/step - loss: 0.0880 - accuracy: 1.0000

Epoch 1116/5000
1/1 [=====] - 0s 997us/step - loss: 0.0879 - accuracy: 1.0000

Epoch 1117/5000
1/1 [=====] - 0s 0s/step - loss: 0.0877 - accuracy: 1.0000

Epoch 1118/5000
1/1 [=====] - 0s 997us/step - loss: 0.0876 - accuracy: 1.0000

Epoch 1119/5000
1/1 [=====] - 0s 0s/step - loss: 0.0874 - accuracy: 1.0000

Epoch 1120/5000
1/1 [=====] - 0s 0s/step - loss: 0.0872 - accuracy: 1.0000

Epoch 1121/5000
1/1 [=====] - 0s 0s/step - loss: 0.0871 - accuracy: 1.0000

Epoch 1122/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0869 - accuracy: 1.0000

Epoch 1123/5000
1/1 [=====] - 0s 0s/step - loss: 0.0868 - accuracy: 1.0000

Epoch 1124/5000
1/1 [=====] - 0s 0s/step - loss: 0.0866 - accuracy: 1.0000

Epoch 1125/5000
1/1 [=====] - 0s 0s/step - loss: 0.0865 - accuracy: 1.0000

Epoch 1126/5000
1/1 [=====] - 0s 998us/step - loss: 0.0863 - accuracy: 1.0000

Epoch 1127/5000
1/1 [=====] - 0s 0s/step - loss: 0.0861 - accuracy: 1.0000

Epoch 1128/5000
1/1 [=====] - 0s 0s/step - loss: 0.0860 - accuracy:
1.0000

Epoch 1129/5000
1/1 [=====] - 0s 999us/step - loss: 0.0858 - accuracy:
1.0000

Epoch 1130/5000
1/1 [=====] - 0s 0s/step - loss: 0.0857 - accuracy:
1.0000

Epoch 1131/5000
1/1 [=====] - 0s 998us/step - loss: 0.0855 - accuracy:
1.0000

Epoch 1132/5000
1/1 [=====] - 0s 998us/step - loss: 0.0854 - accuracy:
1.0000

Epoch 1133/5000
1/1 [=====] - 0s 0s/step - loss: 0.0852 - accuracy:
1.0000

Epoch 1134/5000
1/1 [=====] - 0s 0s/step - loss: 0.0851 - accuracy:
1.0000

Epoch 1135/5000
1/1 [=====] - 0s 998us/step - loss: 0.0849 - accuracy:
1.0000

Epoch 1136/5000
1/1 [=====] - 0s 0s/step - loss: 0.0848 - accuracy:
1.0000

Epoch 1137/5000
1/1 [=====] - 0s 0s/step - loss: 0.0846 - accuracy:
1.0000

Epoch 1138/5000
1/1 [=====] - 0s 0s/step - loss: 0.0845 - accuracy:
1.0000

Epoch 1139/5000
1/1 [=====] - 0s 0s/step - loss: 0.0843 - accuracy:
1.0000

Epoch 1140/5000
1/1 [=====] - 0s 0s/step - loss: 0.0842 - accuracy:
1.0000

Epoch 1141/5000
1/1 [=====] - 0s 999us/step - loss: 0.0840 - accuracy:
1.0000

Epoch 1142/5000
1/1 [=====] - 0s 0s/step - loss: 0.0838 - accuracy:
1.0000

Epoch 1143/5000
1/1 [=====] - 0s 0s/step - loss: 0.0837 - accuracy:
1.0000

Epoch 1144/5000
1/1 [=====] - 0s 0s/step - loss: 0.0835 - accuracy:
1.0000

Epoch 1145/5000
1/1 [=====] - 0s 997us/step - loss: 0.0834 - accuracy:
1.0000

Epoch 1146/5000
1/1 [=====] - 0s 998us/step - loss: 0.0832 - accuracy:
1.0000

Epoch 1147/5000
1/1 [=====] - 0s 0s/step - loss: 0.0831 - accuracy:
1.0000

Epoch 1148/5000
1/1 [=====] - 0s 998us/step - loss: 0.0830 - accuracy:
1.0000

Epoch 1149/5000
1/1 [=====] - 0s 997us/step - loss: 0.0828 - accuracy:
1.0000

Epoch 1150/5000
1/1 [=====] - 0s 0s/step - loss: 0.0827 - accuracy:
1.0000

Epoch 1151/5000
1/1 [=====] - 0s 998us/step - loss: 0.0825 - accuracy:
1.0000

Epoch 1152/5000
1/1 [=====] - 0s 998us/step - loss: 0.0824 - accuracy:
1.0000

Epoch 1153/5000
1/1 [=====] - 0s 998us/step - loss: 0.0822 - accuracy:
1.0000

Epoch 1154/5000
1/1 [=====] - 0s 0s/step - loss: 0.0821 - accuracy:
1.0000

Epoch 1155/5000
1/1 [=====] - 0s 997us/step - loss: 0.0819 - accuracy:
1.0000

Epoch 1156/5000
1/1 [=====] - 0s 0s/step - loss: 0.0818 - accuracy:
1.0000

Epoch 1157/5000
1/1 [=====] - 0s 996us/step - loss: 0.0816 - accuracy:
1.0000

Epoch 1158/5000
1/1 [=====] - 0s 997us/step - loss: 0.0815 - accuracy:
1.0000

Epoch 1159/5000
1/1 [=====] - 0s 997us/step - loss: 0.0813 - accuracy:
1.0000

Epoch 1160/5000
1/1 [=====] - 0s 0s/step - loss: 0.0812 - accuracy:
1.0000

Epoch 1161/5000
1/1 [=====] - 0s 0s/step - loss: 0.0810 - accuracy:
1.0000

Epoch 1162/5000
1/1 [=====] - 0s 0s/step - loss: 0.0809 - accuracy:
1.0000

Epoch 1163/5000
1/1 [=====] - 0s 0s/step - loss: 0.0808 - accuracy:
1.0000

Epoch 1164/5000
1/1 [=====] - 0s 0s/step - loss: 0.0806 - accuracy:
1.0000

Epoch 1165/5000
1/1 [=====] - 0s 997us/step - loss: 0.0805 - accuracy:
1.0000

Epoch 1166/5000
1/1 [=====] - 0s 997us/step - loss: 0.0803 - accuracy:
1.0000

Epoch 1167/5000
1/1 [=====] - 0s 997us/step - loss: 0.0802 - accuracy:
1.0000

Epoch 1168/5000
1/1 [=====] - 0s 0s/step - loss: 0.0800 - accuracy:
1.0000

Epoch 1169/5000
1/1 [=====] - 0s 0s/step - loss: 0.0799 - accuracy:
1.0000

Epoch 1170/5000
1/1 [=====] - 0s 998us/step - loss: 0.0798 - accuracy:
1.0000

Epoch 1171/5000
1/1 [=====] - 0s 980us/step - loss: 0.0796 - accuracy:
1.0000

Epoch 1172/5000
1/1 [=====] - 0s 0s/step - loss: 0.0795 - accuracy:
1.0000

Epoch 1173/5000
1/1 [=====] - 0s 998us/step - loss: 0.0793 - accuracy:
1.0000

Epoch 1174/5000
1/1 [=====] - 0s 996us/step - loss: 0.0792 - accuracy:
1.0000

Epoch 1175/5000
1/1 [=====] - 0s 997us/step - loss: 0.0791 - accuracy:
1.0000

Epoch 1176/5000
1/1 [=====] - 0s 999us/step - loss: 0.0789 - accuracy:
1.0000

Epoch 1177/5000
1/1 [=====] - 0s 0s/step - loss: 0.0788 - accuracy:
1.0000

Epoch 1178/5000
1/1 [=====] - 0s 0s/step - loss: 0.0786 - accuracy:
1.0000

Epoch 1179/5000
1/1 [=====] - 0s 0s/step - loss: 0.0785 - accuracy:
1.0000

Epoch 1180/5000
1/1 [=====] - 0s 997us/step - loss: 0.0784 - accuracy:
1.0000

Epoch 1181/5000
1/1 [=====] - 0s 998us/step - loss: 0.0782 - accuracy:
1.0000

Epoch 1182/5000
1/1 [=====] - 0s 0s/step - loss: 0.0781 - accuracy:
1.0000

Epoch 1183/5000
1/1 [=====] - 0s 0s/step - loss: 0.0779 - accuracy:
1.0000

Epoch 1184/5000
1/1 [=====] - 0s 0s/step - loss: 0.0778 - accuracy:
1.0000

Epoch 1185/5000
1/1 [=====] - 0s 0s/step - loss: 0.0777 - accuracy:
1.0000

Epoch 1186/5000
1/1 [=====] - 0s 997us/step - loss: 0.0775 - accuracy:
1.0000

Epoch 1187/5000
1/1 [=====] - 0s 998us/step - loss: 0.0774 - accuracy:
1.0000

Epoch 1188/5000
1/1 [=====] - 0s 997us/step - loss: 0.0773 - accuracy:
1.0000

Epoch 1189/5000
1/1 [=====] - 0s 0s/step - loss: 0.0771 - accuracy:
1.0000

Epoch 1190/5000
1/1 [=====] - 0s 0s/step - loss: 0.0770 - accuracy:
1.0000

Epoch 1191/5000
1/1 [=====] - 0s 999us/step - loss: 0.0769 - accuracy:
1.0000

Epoch 1192/5000
1/1 [=====] - 0s 998us/step - loss: 0.0767 - accuracy:
1.0000

Epoch 1193/5000
1/1 [=====] - 0s 998us/step - loss: 0.0766 - accuracy:
1.0000

Epoch 1194/5000
1/1 [=====] - 0s 998us/step - loss: 0.0764 - accuracy:
1.0000

Epoch 1195/5000
1/1 [=====] - 0s 0s/step - loss: 0.0763 - accuracy:
1.0000

Epoch 1196/5000
1/1 [=====] - 0s 0s/step - loss: 0.0762 - accuracy:
1.0000

Epoch 1197/5000
1/1 [=====] - 0s 0s/step - loss: 0.0760 - accuracy:
1.0000

Epoch 1198/5000
1/1 [=====] - 0s 0s/step - loss: 0.0759 - accuracy:
1.0000

Epoch 1199/5000
1/1 [=====] - 0s 997us/step - loss: 0.0758 - accuracy:
1.0000

Epoch 1200/5000
1/1 [=====] - 0s 0s/step - loss: 0.0757 - accuracy:
1.0000

Epoch 1201/5000
1/1 [=====] - 0s 0s/step - loss: 0.0755 - accuracy:
1.0000

Epoch 1202/5000
1/1 [=====] - 0s 996us/step - loss: 0.0754 - accuracy:
1.0000

Epoch 1203/5000
1/1 [=====] - 0s 0s/step - loss: 0.0753 - accuracy:
1.0000

Epoch 1204/5000
1/1 [=====] - 0s 998us/step - loss: 0.0751 - accuracy:
1.0000

Epoch 1205/5000
1/1 [=====] - 0s 0s/step - loss: 0.0750 - accuracy:
1.0000

Epoch 1206/5000
1/1 [=====] - 0s 996us/step - loss: 0.0749 - accuracy:
1.0000

Epoch 1207/5000
1/1 [=====] - 0s 997us/step - loss: 0.0747 - accuracy:
1.0000

Epoch 1208/5000
1/1 [=====] - 0s 0s/step - loss: 0.0746 - accuracy:
1.0000

Epoch 1209/5000
1/1 [=====] - 0s 998us/step - loss: 0.0745 - accuracy:
1.0000

Epoch 1210/5000
1/1 [=====] - 0s 0s/step - loss: 0.0743 - accuracy:
1.0000

Epoch 1211/5000
1/1 [=====] - 0s 998us/step - loss: 0.0742 - accuracy:
1.0000

Epoch 1212/5000
1/1 [=====] - 0s 999us/step - loss: 0.0741 - accuracy:
1.0000

Epoch 1213/5000
1/1 [=====] - 0s 993us/step - loss: 0.0740 - accuracy:
1.0000

Epoch 1214/5000
1/1 [=====] - 0s 0s/step - loss: 0.0738 - accuracy:
1.0000

Epoch 1215/5000
1/1 [=====] - 0s 998us/step - loss: 0.0737 - accuracy:
1.0000

Epoch 1216/5000
1/1 [=====] - 0s 0s/step - loss: 0.0736 - accuracy:
1.0000

Epoch 1217/5000
1/1 [=====] - 0s 997us/step - loss: 0.0734 - accuracy:
1.0000

Epoch 1218/5000
1/1 [=====] - 0s 998us/step - loss: 0.0733 - accuracy:
1.0000

Epoch 1219/5000
1/1 [=====] - 0s 0s/step - loss: 0.0732 - accuracy:
1.0000

Epoch 1220/5000
1/1 [=====] - 0s 997us/step - loss: 0.0731 - accuracy:
1.0000

Epoch 1221/5000
1/1 [=====] - 0s 997us/step - loss: 0.0729 - accuracy:
1.0000

Epoch 1222/5000
1/1 [=====] - 0s 998us/step - loss: 0.0728 - accuracy:
1.0000

Epoch 1223/5000
1/1 [=====] - 0s 0s/step - loss: 0.0727 - accuracy:
1.0000

Epoch 1224/5000
1/1 [=====] - 0s 0s/step - loss: 0.0725 - accuracy:
1.0000

Epoch 1225/5000
1/1 [=====] - 0s 0s/step - loss: 0.0724 - accuracy:
1.0000

Epoch 1226/5000
1/1 [=====] - 0s 998us/step - loss: 0.0723 - accuracy:
1.0000

Epoch 1227/5000
1/1 [=====] - 0s 998us/step - loss: 0.0722 - accuracy:
1.0000

Epoch 1228/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0721 - accuracy:
1.0000

Epoch 1229/5000
1/1 [=====] - 0s 997us/step - loss: 0.0719 - accuracy:
1.0000

Epoch 1230/5000
1/1 [=====] - 0s 998us/step - loss: 0.0718 - accuracy:
1.0000

Epoch 1231/5000
1/1 [=====] - 0s 0s/step - loss: 0.0717 - accuracy:
1.0000

Epoch 1232/5000
1/1 [=====] - 0s 0s/step - loss: 0.0716 - accuracy:
1.0000

Epoch 1233/5000
1/1 [=====] - 0s 997us/step - loss: 0.0714 - accuracy:
1.0000

Epoch 1234/5000
1/1 [=====] - 0s 998us/step - loss: 0.0713 - accuracy:
1.0000

Epoch 1235/5000
1/1 [=====] - 0s 0s/step - loss: 0.0712 - accuracy:
1.0000

Epoch 1236/5000
1/1 [=====] - 0s 0s/step - loss: 0.0711 - accuracy:
1.0000

Epoch 1237/5000
1/1 [=====] - 0s 0s/step - loss: 0.0710 - accuracy:
1.0000

Epoch 1238/5000
1/1 [=====] - 0s 0s/step - loss: 0.0708 - accuracy:
1.0000

Epoch 1239/5000
1/1 [=====] - 0s 998us/step - loss: 0.0707 - accuracy:
1.0000

Epoch 1240/5000
1/1 [=====] - 0s 998us/step - loss: 0.0706 - accuracy:
1.0000

Epoch 1241/5000
1/1 [=====] - 0s 0s/step - loss: 0.0705 - accuracy:
1.0000

Epoch 1242/5000
1/1 [=====] - 0s 0s/step - loss: 0.0704 - accuracy:
1.0000

Epoch 1243/5000
1/1 [=====] - 0s 997us/step - loss: 0.0702 - accuracy:
1.0000

Epoch 1244/5000
1/1 [=====] - 0s 0s/step - loss: 0.0701 - accuracy:
1.0000

Epoch 1245/5000
1/1 [=====] - 0s 979us/step - loss: 0.0700 - accuracy:
1.0000

Epoch 1246/5000
1/1 [=====] - 0s 999us/step - loss: 0.0699 - accuracy:
1.0000

Epoch 1247/5000
1/1 [=====] - 0s 0s/step - loss: 0.0698 - accuracy:
1.0000

Epoch 1248/5000
1/1 [=====] - 0s 0s/step - loss: 0.0696 - accuracy:
1.0000

Epoch 1249/5000
1/1 [=====] - 0s 0s/step - loss: 0.0695 - accuracy:
1.0000

Epoch 1250/5000
1/1 [=====] - 0s 997us/step - loss: 0.0694 - accuracy:
1.0000

Epoch 1251/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0693 - accuracy:
1.0000

Epoch 1252/5000
1/1 [=====] - 0s 0s/step - loss: 0.0692 - accuracy:
1.0000

Epoch 1253/5000
1/1 [=====] - 0s 0s/step - loss: 0.0691 - accuracy:
1.0000

Epoch 1254/5000
1/1 [=====] - 0s 998us/step - loss: 0.0689 - accuracy:
1.0000

Epoch 1255/5000
1/1 [=====] - 0s 998us/step - loss: 0.0688 - accuracy:
1.0000

Epoch 1256/5000
1/1 [=====] - 0s 0s/step - loss: 0.0687 - accuracy:
1.0000

Epoch 1257/5000
1/1 [=====] - 0s 997us/step - loss: 0.0686 - accuracy:
1.0000

Epoch 1258/5000
1/1 [=====] - 0s 0s/step - loss: 0.0685 - accuracy:
1.0000

Epoch 1259/5000
1/1 [=====] - 0s 998us/step - loss: 0.0684 - accuracy:
1.0000

Epoch 1260/5000
1/1 [=====] - 0s 997us/step - loss: 0.0682 - accuracy:
1.0000

Epoch 1261/5000
1/1 [=====] - 0s 998us/step - loss: 0.0681 - accuracy:
1.0000

Epoch 1262/5000
1/1 [=====] - 0s 999us/step - loss: 0.0680 - accuracy:
1.0000

Epoch 1263/5000
1/1 [=====] - 0s 0s/step - loss: 0.0679 - accuracy:
1.0000

Epoch 1264/5000
1/1 [=====] - 0s 0s/step - loss: 0.0678 - accuracy:
1.0000

Epoch 1265/5000
1/1 [=====] - 0s 998us/step - loss: 0.0677 - accuracy:
1.0000

Epoch 1266/5000
1/1 [=====] - 0s 0s/step - loss: 0.0676 - accuracy:
1.0000

Epoch 1267/5000
1/1 [=====] - 0s 997us/step - loss: 0.0674 - accuracy:
1.0000

Epoch 1268/5000
1/1 [=====] - 0s 999us/step - loss: 0.0673 - accuracy:
1.0000

Epoch 1269/5000
1/1 [=====] - 0s 998us/step - loss: 0.0672 - accuracy:
1.0000

Epoch 1270/5000
1/1 [=====] - 0s 0s/step - loss: 0.0671 - accuracy:
1.0000

Epoch 1271/5000
1/1 [=====] - 0s 997us/step - loss: 0.0670 - accuracy:
1.0000

Epoch 1272/5000
1/1 [=====] - 0s 0s/step - loss: 0.0669 - accuracy:
1.0000

Epoch 1273/5000
1/1 [=====] - 0s 998us/step - loss: 0.0668 - accuracy:
1.0000

Epoch 1274/5000
1/1 [=====] - 0s 0s/step - loss: 0.0667 - accuracy:
1.0000

Epoch 1275/5000
1/1 [=====] - 0s 0s/step - loss: 0.0665 - accuracy:
1.0000

Epoch 1276/5000
1/1 [=====] - 0s 997us/step - loss: 0.0664 - accuracy:
1.0000

Epoch 1277/5000
1/1 [=====] - 0s 997us/step - loss: 0.0663 - accuracy:
1.0000

Epoch 1278/5000
1/1 [=====] - 0s 998us/step - loss: 0.0662 - accuracy:
1.0000

Epoch 1279/5000
1/1 [=====] - 0s 997us/step - loss: 0.0661 - accuracy:
1.0000

Epoch 1280/5000
1/1 [=====] - 0s 0s/step - loss: 0.0660 - accuracy:
1.0000

Epoch 1281/5000
1/1 [=====] - 0s 0s/step - loss: 0.0659 - accuracy:
1.0000

Epoch 1282/5000
1/1 [=====] - 0s 997us/step - loss: 0.0658 - accuracy:
1.0000

Epoch 1283/5000
1/1 [=====] - 0s 997us/step - loss: 0.0657 - accuracy:
1.0000

Epoch 1284/5000
1/1 [=====] - 0s 0s/step - loss: 0.0656 - accuracy:
1.0000

Epoch 1285/5000
1/1 [=====] - 0s 997us/step - loss: 0.0654 - accuracy:
1.0000

Epoch 1286/5000
1/1 [=====] - 0s 0s/step - loss: 0.0653 - accuracy:
1.0000

Epoch 1287/5000
1/1 [=====] - 0s 997us/step - loss: 0.0652 - accuracy:
1.0000

Epoch 1288/5000
1/1 [=====] - 0s 998us/step - loss: 0.0651 - accuracy:
1.0000

Epoch 1289/5000
1/1 [=====] - 0s 0s/step - loss: 0.0650 - accuracy:
1.0000

Epoch 1290/5000
1/1 [=====] - 0s 0s/step - loss: 0.0649 - accuracy:
1.0000

Epoch 1291/5000
1/1 [=====] - 0s 0s/step - loss: 0.0648 - accuracy:
1.0000

Epoch 1292/5000
1/1 [=====] - 0s 0s/step - loss: 0.0647 - accuracy:
1.0000

Epoch 1293/5000
1/1 [=====] - 0s 0s/step - loss: 0.0646 - accuracy:
1.0000

Epoch 1294/5000
1/1 [=====] - 0s 998us/step - loss: 0.0645 - accuracy:
1.0000

Epoch 1295/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0644 - accuracy:
1.0000

Epoch 1296/5000
1/1 [=====] - 0s 998us/step - loss: 0.0643 - accuracy:
1.0000

Epoch 1297/5000
1/1 [=====] - 0s 0s/step - loss: 0.0642 - accuracy:
1.0000

Epoch 1298/5000
1/1 [=====] - 0s 996us/step - loss: 0.0640 - accuracy:
1.0000

Epoch 1299/5000
1/1 [=====] - 0s 997us/step - loss: 0.0639 - accuracy:
1.0000

Epoch 1300/5000
1/1 [=====] - 0s 996us/step - loss: 0.0638 - accuracy:
1.0000

Epoch 1301/5000
1/1 [=====] - 0s 997us/step - loss: 0.0637 - accuracy:
1.0000

Epoch 1302/5000
1/1 [=====] - 0s 999us/step - loss: 0.0636 - accuracy:
1.0000

Epoch 1303/5000
1/1 [=====] - 0s 998us/step - loss: 0.0635 - accuracy:
1.0000

Epoch 1304/5000
1/1 [=====] - 0s 0s/step - loss: 0.0634 - accuracy:
1.0000

Epoch 1305/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0633 - accuracy:
1.0000

Epoch 1306/5000
1/1 [=====] - 0s 998us/step - loss: 0.0632 - accuracy:
1.0000

Epoch 1307/5000
1/1 [=====] - 0s 973us/step - loss: 0.0631 - accuracy:
1.0000

Epoch 1308/5000
1/1 [=====] - 0s 998us/step - loss: 0.0630 - accuracy:
1.0000

Epoch 1309/5000
1/1 [=====] - 0s 0s/step - loss: 0.0629 - accuracy:
1.0000

Epoch 1310/5000
1/1 [=====] - 0s 998us/step - loss: 0.0628 - accuracy:
1.0000

Epoch 1311/5000
1/1 [=====] - 0s 0s/step - loss: 0.0627 - accuracy:
1.0000

Epoch 1312/5000
1/1 [=====] - 0s 997us/step - loss: 0.0626 - accuracy:
1.0000

Epoch 1313/5000
1/1 [=====] - 0s 0s/step - loss: 0.0625 - accuracy:
1.0000

Epoch 1314/5000
1/1 [=====] - 0s 996us/step - loss: 0.0624 - accuracy:
1.0000

Epoch 1315/5000
1/1 [=====] - 0s 997us/step - loss: 0.0623 - accuracy:
1.0000

Epoch 1316/5000
1/1 [=====] - 0s 997us/step - loss: 0.0622 - accuracy:
1.0000

Epoch 1317/5000
1/1 [=====] - 0s 0s/step - loss: 0.0621 - accuracy:
1.0000

Epoch 1318/5000
1/1 [=====] - 0s 0s/step - loss: 0.0620 - accuracy:
1.0000

Epoch 1319/5000
1/1 [=====] - 0s 0s/step - loss: 0.0619 - accuracy:
1.0000

Epoch 1320/5000
1/1 [=====] - 0s 0s/step - loss: 0.0618 - accuracy:
1.0000

Epoch 1321/5000
1/1 [=====] - 0s 0s/step - loss: 0.0617 - accuracy:
1.0000

Epoch 1322/5000
1/1 [=====] - 0s 997us/step - loss: 0.0616 - accuracy:
1.0000

Epoch 1323/5000
1/1 [=====] - 0s 0s/step - loss: 0.0615 - accuracy:
1.0000

Epoch 1324/5000
1/1 [=====] - 0s 0s/step - loss: 0.0614 - accuracy:
1.0000

Epoch 1325/5000
1/1 [=====] - 0s 998us/step - loss: 0.0613 - accuracy:
1.0000

Epoch 1326/5000
1/1 [=====] - 0s 0s/step - loss: 0.0612 - accuracy:
1.0000

Epoch 1327/5000
1/1 [=====] - 0s 998us/step - loss: 0.0611 - accuracy:
1.0000

Epoch 1328/5000
1/1 [=====] - 0s 0s/step - loss: 0.0610 - accuracy:
1.0000

Epoch 1329/5000
1/1 [=====] - 0s 0s/step - loss: 0.0609 - accuracy:
1.0000

Epoch 1330/5000
1/1 [=====] - 0s 996us/step - loss: 0.0608 - accuracy:
1.0000

Epoch 1331/5000
1/1 [=====] - 0s 997us/step - loss: 0.0607 - accuracy:
1.0000

Epoch 1332/5000
1/1 [=====] - 0s 0s/step - loss: 0.0606 - accuracy:
1.0000

Epoch 1333/5000
1/1 [=====] - 0s 0s/step - loss: 0.0605 - accuracy:
1.0000

Epoch 1334/5000
1/1 [=====] - 0s 998us/step - loss: 0.0604 - accuracy:
1.0000

Epoch 1335/5000
1/1 [=====] - 0s 998us/step - loss: 0.0603 - accuracy:
1.0000

Epoch 1336/5000
1/1 [=====] - 0s 0s/step - loss: 0.0602 - accuracy:
1.0000

Epoch 1337/5000
1/1 [=====] - 0s 998us/step - loss: 0.0601 - accuracy:
1.0000

Epoch 1338/5000
1/1 [=====] - 0s 997us/step - loss: 0.0600 - accuracy:
1.0000

Epoch 1339/5000
1/1 [=====] - 0s 997us/step - loss: 0.0599 - accuracy:
1.0000

Epoch 1340/5000
1/1 [=====] - 0s 0s/step - loss: 0.0598 - accuracy:
1.0000

Epoch 1341/5000
1/1 [=====] - 0s 0s/step - loss: 0.0597 - accuracy:
1.0000

Epoch 1342/5000
1/1 [=====] - 0s 0s/step - loss: 0.0596 - accuracy:
1.0000

Epoch 1343/5000
1/1 [=====] - 0s 0s/step - loss: 0.0595 - accuracy:
1.0000

Epoch 1344/5000
1/1 [=====] - 0s 997us/step - loss: 0.0594 - accuracy:
1.0000

Epoch 1345/5000
1/1 [=====] - 0s 998us/step - loss: 0.0593 - accuracy:
1.0000

Epoch 1346/5000
1/1 [=====] - 0s 0s/step - loss: 0.0592 - accuracy:
1.0000

Epoch 1347/5000
1/1 [=====] - 0s 997us/step - loss: 0.0591 - accuracy:
1.0000

Epoch 1348/5000
1/1 [=====] - 0s 998us/step - loss: 0.0590 - accuracy:
1.0000

Epoch 1349/5000
1/1 [=====] - 0s 999us/step - loss: 0.0589 - accuracy:
1.0000

Epoch 1350/5000
1/1 [=====] - 0s 0s/step - loss: 0.0588 - accuracy:
1.0000

Epoch 1351/5000
1/1 [=====] - 0s 0s/step - loss: 0.0587 - accuracy:
1.0000

Epoch 1352/5000
1/1 [=====] - 0s 0s/step - loss: 0.0586 - accuracy:
1.0000

Epoch 1353/5000
1/1 [=====] - 0s 0s/step - loss: 0.0585 - accuracy:
1.0000

Epoch 1354/5000
1/1 [=====] - 0s 998us/step - loss: 0.0585 - accuracy:
1.0000

Epoch 1355/5000
1/1 [=====] - 0s 998us/step - loss: 0.0584 - accuracy:
1.0000

Epoch 1356/5000
1/1 [=====] - 0s 0s/step - loss: 0.0583 - accuracy:
1.0000

Epoch 1357/5000
1/1 [=====] - 0s 0s/step - loss: 0.0582 - accuracy:
1.0000

Epoch 1358/5000
1/1 [=====] - 0s 0s/step - loss: 0.0581 - accuracy:
1.0000

Epoch 1359/5000
1/1 [=====] - 0s 0s/step - loss: 0.0580 - accuracy:
1.0000

Epoch 1360/5000
1/1 [=====] - 0s 0s/step - loss: 0.0579 - accuracy:
1.0000

Epoch 1361/5000
1/1 [=====] - 0s 997us/step - loss: 0.0578 - accuracy:
1.0000

Epoch 1362/5000
1/1 [=====] - 0s 997us/step - loss: 0.0577 - accuracy:
1.0000

Epoch 1363/5000
1/1 [=====] - 0s 997us/step - loss: 0.0576 - accuracy:
1.0000

Epoch 1364/5000
1/1 [=====] - 0s 997us/step - loss: 0.0575 - accuracy:
1.0000

Epoch 1365/5000
1/1 [=====] - 0s 0s/step - loss: 0.0574 - accuracy:
1.0000

Epoch 1366/5000
1/1 [=====] - 0s 997us/step - loss: 0.0573 - accuracy:
1.0000

Epoch 1367/5000
1/1 [=====] - 0s 998us/step - loss: 0.0572 - accuracy:
1.0000

Epoch 1368/5000
1/1 [=====] - 0s 999us/step - loss: 0.0572 - accuracy:
1.0000

Epoch 1369/5000
1/1 [=====] - 0s 0s/step - loss: 0.0571 - accuracy:
1.0000

Epoch 1370/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0570 - accuracy:
1.0000

Epoch 1371/5000
1/1 [=====] - 0s 998us/step - loss: 0.0569 - accuracy:
1.0000

Epoch 1372/5000
1/1 [=====] - 0s 0s/step - loss: 0.0568 - accuracy:
1.0000

Epoch 1373/5000
1/1 [=====] - 0s 0s/step - loss: 0.0567 - accuracy:
1.0000

Epoch 1374/5000
1/1 [=====] - 0s 997us/step - loss: 0.0566 - accuracy:
1.0000

Epoch 1375/5000
1/1 [=====] - 0s 997us/step - loss: 0.0565 - accuracy:
1.0000

Epoch 1376/5000
1/1 [=====] - 0s 0s/step - loss: 0.0564 - accuracy:
1.0000

Epoch 1377/5000
1/1 [=====] - 0s 998us/step - loss: 0.0563 - accuracy:
1.0000

Epoch 1378/5000
1/1 [=====] - 0s 0s/step - loss: 0.0563 - accuracy:
1.0000

Epoch 1379/5000
1/1 [=====] - 0s 0s/step - loss: 0.0562 - accuracy:
1.0000

Epoch 1380/5000
1/1 [=====] - 0s 997us/step - loss: 0.0561 - accuracy:
1.0000

Epoch 1381/5000
1/1 [=====] - 0s 0s/step - loss: 0.0560 - accuracy:
1.0000

Epoch 1382/5000
1/1 [=====] - 0s 0s/step - loss: 0.0559 - accuracy:
1.0000

Epoch 1383/5000
1/1 [=====] - 0s 0s/step - loss: 0.0558 - accuracy:
1.0000

Epoch 1384/5000
1/1 [=====] - 0s 0s/step - loss: 0.0557 - accuracy:
1.0000

Epoch 1385/5000
1/1 [=====] - 0s 998us/step - loss: 0.0556 - accuracy:
1.0000

Epoch 1386/5000
1/1 [=====] - 0s 0s/step - loss: 0.0555 - accuracy:
1.0000

Epoch 1387/5000
1/1 [=====] - 0s 0s/step - loss: 0.0555 - accuracy:
1.0000

Epoch 1388/5000
1/1 [=====] - 0s 998us/step - loss: 0.0554 - accuracy:
1.0000

Epoch 1389/5000
1/1 [=====] - 0s 998us/step - loss: 0.0553 - accuracy:
1.0000

Epoch 1390/5000
1/1 [=====] - 0s 997us/step - loss: 0.0552 - accuracy:
1.0000

Epoch 1391/5000
1/1 [=====] - 0s 998us/step - loss: 0.0551 - accuracy:
1.0000

Epoch 1392/5000
1/1 [=====] - 0s 997us/step - loss: 0.0550 - accuracy:
1.0000

Epoch 1393/5000
1/1 [=====] - 0s 997us/step - loss: 0.0549 - accuracy:
1.0000

Epoch 1394/5000
1/1 [=====] - 0s 998us/step - loss: 0.0548 - accuracy:
1.0000

Epoch 1395/5000
1/1 [=====] - 0s 0s/step - loss: 0.0547 - accuracy:
1.0000

Epoch 1396/5000
1/1 [=====] - 0s 0s/step - loss: 0.0547 - accuracy:
1.0000

Epoch 1397/5000
1/1 [=====] - 0s 997us/step - loss: 0.0546 - accuracy:
1.0000

Epoch 1398/5000
1/1 [=====] - 0s 997us/step - loss: 0.0545 - accuracy:
1.0000

Epoch 1399/5000
1/1 [=====] - 0s 0s/step - loss: 0.0544 - accuracy:
1.0000

Epoch 1400/5000
1/1 [=====] - 0s 998us/step - loss: 0.0543 - accuracy:
1.0000

Epoch 1401/5000
1/1 [=====] - 0s 0s/step - loss: 0.0542 - accuracy:
1.0000

Epoch 1402/5000
1/1 [=====] - 0s 0s/step - loss: 0.0541 - accuracy:
1.0000

Epoch 1403/5000
1/1 [=====] - 0s 996us/step - loss: 0.0541 - accuracy:
1.0000

Epoch 1404/5000
1/1 [=====] - 0s 997us/step - loss: 0.0540 - accuracy:
1.0000

Epoch 1405/5000
1/1 [=====] - 0s 5ms/step - loss: 0.0539 - accuracy:
1.0000

Epoch 1406/5000
1/1 [=====] - 0s 994us/step - loss: 0.0538 - accuracy:
1.0000

Epoch 1407/5000
1/1 [=====] - 0s 998us/step - loss: 0.0537 - accuracy:
1.0000

Epoch 1408/5000
1/1 [=====] - 0s 997us/step - loss: 0.0536 - accuracy:
1.0000

Epoch 1409/5000
1/1 [=====] - 0s 997us/step - loss: 0.0536 - accuracy:
1.0000

Epoch 1410/5000
1/1 [=====] - 0s 0s/step - loss: 0.0535 - accuracy:
1.0000

Epoch 1411/5000
1/1 [=====] - 0s 998us/step - loss: 0.0534 - accuracy:
1.0000

Epoch 1412/5000
1/1 [=====] - 0s 996us/step - loss: 0.0533 - accuracy:
1.0000

Epoch 1413/5000
1/1 [=====] - 0s 997us/step - loss: 0.0532 - accuracy:
1.0000

Epoch 1414/5000
1/1 [=====] - 0s 997us/step - loss: 0.0531 - accuracy:
1.0000

Epoch 1415/5000
1/1 [=====] - 0s 997us/step - loss: 0.0530 - accuracy:
1.0000

Epoch 1416/5000
1/1 [=====] - 0s 998us/step - loss: 0.0530 - accuracy:
1.0000

Epoch 1417/5000
1/1 [=====] - 0s 997us/step - loss: 0.0529 - accuracy:
1.0000

Epoch 1418/5000
1/1 [=====] - 0s 997us/step - loss: 0.0528 - accuracy:
1.0000

Epoch 1419/5000
1/1 [=====] - 0s 0s/step - loss: 0.0527 - accuracy:
1.0000

Epoch 1420/5000
1/1 [=====] - 0s 998us/step - loss: 0.0526 - accuracy:
1.0000

Epoch 1421/5000
1/1 [=====] - 0s 997us/step - loss: 0.0526 - accuracy:
1.0000

Epoch 1422/5000
1/1 [=====] - 0s 0s/step - loss: 0.0525 - accuracy:
1.0000

Epoch 1423/5000
1/1 [=====] - 0s 997us/step - loss: 0.0524 - accuracy:
1.0000

Epoch 1424/5000
1/1 [=====] - 0s 997us/step - loss: 0.0523 - accuracy:
1.0000

Epoch 1425/5000
1/1 [=====] - 0s 998us/step - loss: 0.0522 - accuracy:
1.0000

Epoch 1426/5000
1/1 [=====] - 0s 997us/step - loss: 0.0522 - accuracy:
1.0000

Epoch 1427/5000
1/1 [=====] - 0s 997us/step - loss: 0.0521 - accuracy:
1.0000

Epoch 1428/5000
1/1 [=====] - 0s 0s/step - loss: 0.0520 - accuracy:
1.0000

Epoch 1429/5000
1/1 [=====] - 0s 0s/step - loss: 0.0519 - accuracy:
1.0000

Epoch 1430/5000
1/1 [=====] - 0s 998us/step - loss: 0.0518 - accuracy:
1.0000

Epoch 1431/5000
1/1 [=====] - 0s 998us/step - loss: 0.0517 - accuracy:
1.0000

Epoch 1432/5000
1/1 [=====] - 0s 0s/step - loss: 0.0517 - accuracy:
1.0000

Epoch 1433/5000
1/1 [=====] - 0s 0s/step - loss: 0.0516 - accuracy:
1.0000

Epoch 1434/5000
1/1 [=====] - 0s 0s/step - loss: 0.0515 - accuracy:
1.0000

Epoch 1435/5000
1/1 [=====] - 0s 999us/step - loss: 0.0514 - accuracy:
1.0000

Epoch 1436/5000
1/1 [=====] - 0s 998us/step - loss: 0.0513 - accuracy:
1.0000

Epoch 1437/5000
1/1 [=====] - 0s 0s/step - loss: 0.0513 - accuracy:
1.0000

Epoch 1438/5000
1/1 [=====] - 0s 997us/step - loss: 0.0512 - accuracy:
1.0000

Epoch 1439/5000
1/1 [=====] - 0s 998us/step - loss: 0.0511 - accuracy:
1.0000

Epoch 1440/5000
1/1 [=====] - 0s 997us/step - loss: 0.0510 - accuracy:
1.0000

Epoch 1441/5000
1/1 [=====] - 0s 998us/step - loss: 0.0510 - accuracy:
1.0000

Epoch 1442/5000
1/1 [=====] - 0s 0s/step - loss: 0.0509 - accuracy:
1.0000

Epoch 1443/5000
1/1 [=====] - 0s 0s/step - loss: 0.0508 - accuracy:
1.0000

Epoch 1444/5000
1/1 [=====] - 0s 0s/step - loss: 0.0507 - accuracy:
1.0000

Epoch 1445/5000
1/1 [=====] - 0s 0s/step - loss: 0.0506 - accuracy:
1.0000

Epoch 1446/5000
1/1 [=====] - 0s 998us/step - loss: 0.0506 - accuracy:
1.0000

Epoch 1447/5000
1/1 [=====] - 0s 0s/step - loss: 0.0505 - accuracy:
1.0000

Epoch 1448/5000
1/1 [=====] - 0s 0s/step - loss: 0.0504 - accuracy:
1.0000

Epoch 1449/5000
1/1 [=====] - 0s 0s/step - loss: 0.0503 - accuracy:
1.0000

Epoch 1450/5000
1/1 [=====] - 0s 996us/step - loss: 0.0502 - accuracy:
1.0000

Epoch 1451/5000
1/1 [=====] - 0s 0s/step - loss: 0.0502 - accuracy:
1.0000

Epoch 1452/5000
1/1 [=====] - 0s 998us/step - loss: 0.0501 - accuracy:
1.0000

Epoch 1453/5000
1/1 [=====] - 0s 0s/step - loss: 0.0500 - accuracy:
1.0000

Epoch 1454/5000
1/1 [=====] - 0s 0s/step - loss: 0.0499 - accuracy:
1.0000

Epoch 1455/5000
1/1 [=====] - 0s 998us/step - loss: 0.0499 - accuracy:
1.0000

Epoch 1456/5000
1/1 [=====] - 0s 998us/step - loss: 0.0498 - accuracy:
1.0000

Epoch 1457/5000
1/1 [=====] - 0s 0s/step - loss: 0.0497 - accuracy:
1.0000

Epoch 1458/5000
1/1 [=====] - 0s 994us/step - loss: 0.0496 - accuracy:
1.0000

Epoch 1459/5000
1/1 [=====] - 0s 998us/step - loss: 0.0496 - accuracy:
1.0000

Epoch 1460/5000
1/1 [=====] - 0s 0s/step - loss: 0.0495 - accuracy:
1.0000

Epoch 1461/5000
1/1 [=====] - 0s 997us/step - loss: 0.0494 - accuracy:
1.0000

Epoch 1462/5000
1/1 [=====] - 0s 0s/step - loss: 0.0493 - accuracy:
1.0000

Epoch 1463/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0493 - accuracy:
1.0000

Epoch 1464/5000
1/1 [=====] - 0s 0s/step - loss: 0.0492 - accuracy:
1.0000

Epoch 1465/5000
1/1 [=====] - 0s 0s/step - loss: 0.0491 - accuracy:
1.0000

Epoch 1466/5000
1/1 [=====] - 0s 999us/step - loss: 0.0490 - accuracy:
1.0000

Epoch 1467/5000
1/1 [=====] - 0s 997us/step - loss: 0.0489 - accuracy:
1.0000

Epoch 1468/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0489 - accuracy:
1.0000

Epoch 1469/5000
1/1 [=====] - 0s 0s/step - loss: 0.0488 - accuracy:
1.0000

Epoch 1470/5000
1/1 [=====] - 0s 997us/step - loss: 0.0487 - accuracy:
1.0000

Epoch 1471/5000
1/1 [=====] - 0s 0s/step - loss: 0.0487 - accuracy:
1.0000

Epoch 1472/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0486 - accuracy:
1.0000

Epoch 1473/5000
1/1 [=====] - 0s 998us/step - loss: 0.0485 - accuracy:
1.0000

Epoch 1474/5000
1/1 [=====] - 0s 0s/step - loss: 0.0484 - accuracy:
1.0000

Epoch 1475/5000
1/1 [=====] - 0s 997us/step - loss: 0.0484 - accuracy:
1.0000

Epoch 1476/5000
1/1 [=====] - 0s 998us/step - loss: 0.0483 - accuracy:
1.0000

Epoch 1477/5000
1/1 [=====] - 0s 997us/step - loss: 0.0482 - accuracy:
1.0000

Epoch 1478/5000
1/1 [=====] - 0s 0s/step - loss: 0.0481 - accuracy:
1.0000

Epoch 1479/5000
1/1 [=====] - 0s 997us/step - loss: 0.0481 - accuracy:
1.0000

Epoch 1480/5000
1/1 [=====] - 0s 998us/step - loss: 0.0480 - accuracy:
1.0000

Epoch 1481/5000
1/1 [=====] - 0s 0s/step - loss: 0.0479 - accuracy:
1.0000

Epoch 1482/5000
1/1 [=====] - 0s 0s/step - loss: 0.0478 - accuracy:
1.0000

Epoch 1483/5000
1/1 [=====] - 0s 998us/step - loss: 0.0478 - accuracy:
1.0000

Epoch 1484/5000
1/1 [=====] - 0s 997us/step - loss: 0.0477 - accuracy:
1.0000

Epoch 1485/5000
1/1 [=====] - 0s 0s/step - loss: 0.0476 - accuracy:
1.0000

Epoch 1486/5000
1/1 [=====] - 0s 0s/step - loss: 0.0476 - accuracy:
1.0000

Epoch 1487/5000
1/1 [=====] - 0s 0s/step - loss: 0.0475 - accuracy:
1.0000

Epoch 1488/5000
1/1 [=====] - 0s 998us/step - loss: 0.0474 - accuracy:
1.0000

Epoch 1489/5000
1/1 [=====] - 0s 997us/step - loss: 0.0473 - accuracy:
1.0000

Epoch 1490/5000
1/1 [=====] - 0s 0s/step - loss: 0.0473 - accuracy:
1.0000

Epoch 1491/5000
1/1 [=====] - 0s 997us/step - loss: 0.0472 - accuracy:
1.0000

Epoch 1492/5000
1/1 [=====] - 0s 997us/step - loss: 0.0471 - accuracy:
1.0000

Epoch 1493/5000
1/1 [=====] - 0s 998us/step - loss: 0.0471 - accuracy:
1.0000

Epoch 1494/5000
1/1 [=====] - 0s 0s/step - loss: 0.0470 - accuracy:
1.0000

Epoch 1495/5000
1/1 [=====] - 0s 997us/step - loss: 0.0469 - accuracy:
1.0000

Epoch 1496/5000
1/1 [=====] - 0s 998us/step - loss: 0.0468 - accuracy:
1.0000

Epoch 1497/5000
1/1 [=====] - 0s 998us/step - loss: 0.0468 - accuracy:
1.0000

Epoch 1498/5000
1/1 [=====] - 0s 997us/step - loss: 0.0467 - accuracy:
1.0000

Epoch 1499/5000
1/1 [=====] - 0s 997us/step - loss: 0.0466 - accuracy:
1.0000

Epoch 1500/5000
1/1 [=====] - 0s 996us/step - loss: 0.0466 - accuracy:
1.0000

Epoch 1501/5000
1/1 [=====] - 0s 997us/step - loss: 0.0465 - accuracy:
1.0000

Epoch 1502/5000
1/1 [=====] - 0s 0s/step - loss: 0.0464 - accuracy:
1.0000

Epoch 1503/5000
1/1 [=====] - 0s 0s/step - loss: 0.0463 - accuracy:
1.0000

Epoch 1504/5000
1/1 [=====] - 0s 998us/step - loss: 0.0463 - accuracy:
1.0000

Epoch 1505/5000
1/1 [=====] - 0s 999us/step - loss: 0.0462 - accuracy:
1.0000

Epoch 1506/5000
1/1 [=====] - 0s 997us/step - loss: 0.0461 - accuracy:
1.0000

Epoch 1507/5000
1/1 [=====] - 0s 0s/step - loss: 0.0461 - accuracy:
1.0000

Epoch 1508/5000
1/1 [=====] - 0s 0s/step - loss: 0.0460 - accuracy:
1.0000

Epoch 1509/5000
1/1 [=====] - 0s 997us/step - loss: 0.0459 - accuracy:
1.0000

Epoch 1510/5000
1/1 [=====] - 0s 0s/step - loss: 0.0459 - accuracy:
1.0000

Epoch 1511/5000
1/1 [=====] - 0s 996us/step - loss: 0.0458 - accuracy:
1.0000

Epoch 1512/5000
1/1 [=====] - 0s 998us/step - loss: 0.0457 - accuracy:
1.0000

Epoch 1513/5000
1/1 [=====] - 0s 997us/step - loss: 0.0457 - accuracy:
1.0000

Epoch 1514/5000
1/1 [=====] - 0s 0s/step - loss: 0.0456 - accuracy:
1.0000

Epoch 1515/5000
1/1 [=====] - 0s 0s/step - loss: 0.0455 - accuracy:
1.0000

Epoch 1516/5000
1/1 [=====] - 0s 0s/step - loss: 0.0455 - accuracy:
1.0000

Epoch 1517/5000
1/1 [=====] - 0s 998us/step - loss: 0.0454 - accuracy:
1.0000

Epoch 1518/5000
1/1 [=====] - 0s 0s/step - loss: 0.0453 - accuracy:
1.0000

Epoch 1519/5000
1/1 [=====] - 0s 0s/step - loss: 0.0452 - accuracy:
1.0000

Epoch 1520/5000
1/1 [=====] - 0s 0s/step - loss: 0.0452 - accuracy:
1.0000

Epoch 1521/5000
1/1 [=====] - 0s 997us/step - loss: 0.0451 - accuracy:
1.0000

Epoch 1522/5000
1/1 [=====] - 0s 998us/step - loss: 0.0450 - accuracy:
1.0000

Epoch 1523/5000
1/1 [=====] - 0s 998us/step - loss: 0.0450 - accuracy:
1.0000

Epoch 1524/5000
1/1 [=====] - 0s 0s/step - loss: 0.0449 - accuracy:
1.0000

Epoch 1525/5000
1/1 [=====] - 0s 0s/step - loss: 0.0448 - accuracy:
1.0000

Epoch 1526/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0448 - accuracy:
1.0000

Epoch 1527/5000
1/1 [=====] - 0s 0s/step - loss: 0.0447 - accuracy:
1.0000

Epoch 1528/5000
1/1 [=====] - 0s 0s/step - loss: 0.0446 - accuracy:
1.0000

Epoch 1529/5000
1/1 [=====] - 0s 0s/step - loss: 0.0446 - accuracy:
1.0000

Epoch 1530/5000
1/1 [=====] - 0s 0s/step - loss: 0.0445 - accuracy:
1.0000

Epoch 1531/5000
1/1 [=====] - 0s 998us/step - loss: 0.0444 - accuracy:
1.0000

Epoch 1532/5000
1/1 [=====] - 0s 998us/step - loss: 0.0444 - accuracy:
1.0000

Epoch 1533/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0443 - accuracy:
1.0000

Epoch 1534/5000
1/1 [=====] - 0s 0s/step - loss: 0.0443 - accuracy:
1.0000

Epoch 1535/5000
1/1 [=====] - 0s 0s/step - loss: 0.0442 - accuracy:
1.0000

Epoch 1536/5000
1/1 [=====] - 0s 997us/step - loss: 0.0441 - accuracy:
1.0000

Epoch 1537/5000
1/1 [=====] - 0s 997us/step - loss: 0.0441 - accuracy:
1.0000

Epoch 1538/5000
1/1 [=====] - 0s 997us/step - loss: 0.0440 - accuracy:
1.0000

Epoch 1539/5000
1/1 [=====] - 0s 997us/step - loss: 0.0439 - accuracy:
1.0000

Epoch 1540/5000
1/1 [=====] - 0s 0s/step - loss: 0.0439 - accuracy:
1.0000

Epoch 1541/5000
1/1 [=====] - 0s 998us/step - loss: 0.0438 - accuracy:
1.0000

Epoch 1542/5000
1/1 [=====] - 0s 998us/step - loss: 0.0437 - accuracy:
1.0000

Epoch 1543/5000
1/1 [=====] - 0s 997us/step - loss: 0.0437 - accuracy:
1.0000

Epoch 1544/5000
1/1 [=====] - 0s 0s/step - loss: 0.0436 - accuracy:
1.0000

Epoch 1545/5000
1/1 [=====] - 0s 0s/step - loss: 0.0435 - accuracy:
1.0000

Epoch 1546/5000
1/1 [=====] - 0s 0s/step - loss: 0.0435 - accuracy:
1.0000

Epoch 1547/5000
1/1 [=====] - 0s 998us/step - loss: 0.0434 - accuracy:
1.0000

Epoch 1548/5000
1/1 [=====] - 0s 0s/step - loss: 0.0433 - accuracy:
1.0000

Epoch 1549/5000
1/1 [=====] - 0s 0s/step - loss: 0.0433 - accuracy:
1.0000

Epoch 1550/5000
1/1 [=====] - 0s 997us/step - loss: 0.0432 - accuracy:
1.0000

Epoch 1551/5000
1/1 [=====] - 0s 0s/step - loss: 0.0432 - accuracy:
1.0000

Epoch 1552/5000
1/1 [=====] - 0s 0s/step - loss: 0.0431 - accuracy:
1.0000

Epoch 1553/5000
1/1 [=====] - 0s 996us/step - loss: 0.0430 - accuracy:
1.0000

Epoch 1554/5000
1/1 [=====] - 0s 997us/step - loss: 0.0430 - accuracy:
1.0000

Epoch 1555/5000
1/1 [=====] - 0s 998us/step - loss: 0.0429 - accuracy:
1.0000

Epoch 1556/5000
1/1 [=====] - 0s 996us/step - loss: 0.0428 - accuracy:
1.0000

Epoch 1557/5000
1/1 [=====] - 0s 0s/step - loss: 0.0428 - accuracy:
1.0000

Epoch 1558/5000
1/1 [=====] - 0s 997us/step - loss: 0.0427 - accuracy:
1.0000

Epoch 1559/5000
1/1 [=====] - 0s 0s/step - loss: 0.0426 - accuracy:
1.0000

Epoch 1560/5000
1/1 [=====] - 0s 0s/step - loss: 0.0426 - accuracy:
1.0000

Epoch 1561/5000
1/1 [=====] - 0s 998us/step - loss: 0.0425 - accuracy:
1.0000

Epoch 1562/5000
1/1 [=====] - 0s 998us/step - loss: 0.0425 - accuracy:
1.0000

Epoch 1563/5000
1/1 [=====] - 0s 997us/step - loss: 0.0424 - accuracy:
1.0000

Epoch 1564/5000
1/1 [=====] - 0s 0s/step - loss: 0.0423 - accuracy:
1.0000

Epoch 1565/5000
1/1 [=====] - 0s 0s/step - loss: 0.0423 - accuracy:
1.0000

Epoch 1566/5000
1/1 [=====] - 0s 0s/step - loss: 0.0422 - accuracy:
1.0000

Epoch 1567/5000
1/1 [=====] - 0s 998us/step - loss: 0.0422 - accuracy:
1.0000

Epoch 1568/5000
1/1 [=====] - 0s 0s/step - loss: 0.0421 - accuracy:
1.0000

Epoch 1569/5000
1/1 [=====] - 0s 0s/step - loss: 0.0420 - accuracy:
1.0000

Epoch 1570/5000
1/1 [=====] - 0s 998us/step - loss: 0.0420 - accuracy:
1.0000

Epoch 1571/5000
1/1 [=====] - 0s 998us/step - loss: 0.0419 - accuracy:
1.0000

Epoch 1572/5000
1/1 [=====] - 0s 998us/step - loss: 0.0418 - accuracy:
1.0000

Epoch 1573/5000
1/1 [=====] - 0s 998us/step - loss: 0.0418 - accuracy:
1.0000

Epoch 1574/5000
1/1 [=====] - 0s 0s/step - loss: 0.0417 - accuracy:
1.0000

Epoch 1575/5000
1/1 [=====] - 0s 997us/step - loss: 0.0417 - accuracy:
1.0000

Epoch 1576/5000
1/1 [=====] - 0s 997us/step - loss: 0.0416 - accuracy:
1.0000

Epoch 1577/5000
1/1 [=====] - 0s 997us/step - loss: 0.0415 - accuracy:
1.0000

Epoch 1578/5000
1/1 [=====] - 0s 997us/step - loss: 0.0415 - accuracy:
1.0000

Epoch 1579/5000
1/1 [=====] - 0s 0s/step - loss: 0.0414 - accuracy:
1.0000

Epoch 1580/5000
1/1 [=====] - 0s 0s/step - loss: 0.0414 - accuracy:
1.0000

Epoch 1581/5000
1/1 [=====] - 0s 0s/step - loss: 0.0413 - accuracy:
1.0000

Epoch 1582/5000
1/1 [=====] - 0s 998us/step - loss: 0.0412 - accuracy:
1.0000

Epoch 1583/5000
1/1 [=====] - 0s 0s/step - loss: 0.0412 - accuracy:
1.0000

Epoch 1584/5000
1/1 [=====] - 0s 997us/step - loss: 0.0411 - accuracy:
1.0000

Epoch 1585/5000
1/1 [=====] - 0s 997us/step - loss: 0.0411 - accuracy:
1.0000

Epoch 1586/5000
1/1 [=====] - 0s 0s/step - loss: 0.0410 - accuracy:
1.0000

Epoch 1587/5000
1/1 [=====] - 0s 0s/step - loss: 0.0409 - accuracy:
1.0000

Epoch 1588/5000
1/1 [=====] - 0s 997us/step - loss: 0.0409 - accuracy:
1.0000

Epoch 1589/5000
1/1 [=====] - 0s 0s/step - loss: 0.0408 - accuracy:
1.0000

Epoch 1590/5000
1/1 [=====] - 0s 0s/step - loss: 0.0408 - accuracy:
1.0000

Epoch 1591/5000
1/1 [=====] - 0s 0s/step - loss: 0.0407 - accuracy:
1.0000

Epoch 1592/5000
1/1 [=====] - 0s 0s/step - loss: 0.0406 - accuracy:
1.0000

Epoch 1593/5000
1/1 [=====] - 0s 0s/step - loss: 0.0406 - accuracy:
1.0000

Epoch 1594/5000
1/1 [=====] - 0s 998us/step - loss: 0.0405 - accuracy:
1.0000

Epoch 1595/5000
1/1 [=====] - 0s 0s/step - loss: 0.0405 - accuracy:
1.0000

Epoch 1596/5000
1/1 [=====] - 0s 0s/step - loss: 0.0404 - accuracy:
1.0000

Epoch 1597/5000
1/1 [=====] - 0s 0s/step - loss: 0.0404 - accuracy:
1.0000

Epoch 1598/5000
1/1 [=====] - 0s 0s/step - loss: 0.0403 - accuracy:
1.0000

Epoch 1599/5000
1/1 [=====] - 0s 0s/step - loss: 0.0402 - accuracy:
1.0000

Epoch 1600/5000
1/1 [=====] - 0s 997us/step - loss: 0.0402 - accuracy:
1.0000

Epoch 1601/5000
1/1 [=====] - 0s 998us/step - loss: 0.0401 - accuracy:
1.0000

Epoch 1602/5000
1/1 [=====] - 0s 0s/step - loss: 0.0401 - accuracy:
1.0000

Epoch 1603/5000
1/1 [=====] - 0s 0s/step - loss: 0.0400 - accuracy:
1.0000

Epoch 1604/5000
1/1 [=====] - 0s 998us/step - loss: 0.0399 - accuracy:
1.0000

Epoch 1605/5000
1/1 [=====] - 0s 0s/step - loss: 0.0399 - accuracy:
1.0000

Epoch 1606/5000
1/1 [=====] - 0s 996us/step - loss: 0.0398 - accuracy:
1.0000

Epoch 1607/5000
1/1 [=====] - 0s 0s/step - loss: 0.0398 - accuracy:
1.0000

Epoch 1608/5000
1/1 [=====] - 0s 0s/step - loss: 0.0397 - accuracy:
1.0000

Epoch 1609/5000
1/1 [=====] - 0s 997us/step - loss: 0.0397 - accuracy:
1.0000

Epoch 1610/5000
1/1 [=====] - 0s 0s/step - loss: 0.0396 - accuracy:
1.0000

Epoch 1611/5000
1/1 [=====] - 0s 998us/step - loss: 0.0395 - accuracy:
1.0000

Epoch 1612/5000
1/1 [=====] - 0s 998us/step - loss: 0.0395 - accuracy:
1.0000

Epoch 1613/5000
1/1 [=====] - 0s 0s/step - loss: 0.0394 - accuracy:
1.0000

Epoch 1614/5000
1/1 [=====] - 0s 0s/step - loss: 0.0394 - accuracy:
1.0000

Epoch 1615/5000
1/1 [=====] - 0s 0s/step - loss: 0.0393 - accuracy:
1.0000

Epoch 1616/5000
1/1 [=====] - 0s 0s/step - loss: 0.0393 - accuracy:
1.0000

Epoch 1617/5000
1/1 [=====] - 0s 0s/step - loss: 0.0392 - accuracy:
1.0000

Epoch 1618/5000
1/1 [=====] - 0s 0s/step - loss: 0.0392 - accuracy:
1.0000

Epoch 1619/5000
1/1 [=====] - 0s 997us/step - loss: 0.0391 - accuracy:
1.0000

Epoch 1620/5000
1/1 [=====] - 0s 0s/step - loss: 0.0390 - accuracy:
1.0000

Epoch 1621/5000
1/1 [=====] - 0s 0s/step - loss: 0.0390 - accuracy:
1.0000

Epoch 1622/5000
1/1 [=====] - 0s 997us/step - loss: 0.0389 - accuracy:
1.0000

Epoch 1623/5000
1/1 [=====] - 0s 997us/step - loss: 0.0389 - accuracy:
1.0000

Epoch 1624/5000
1/1 [=====] - 0s 998us/step - loss: 0.0388 - accuracy:
1.0000

Epoch 1625/5000
1/1 [=====] - 0s 0s/step - loss: 0.0388 - accuracy:
1.0000

Epoch 1626/5000
1/1 [=====] - 0s 997us/step - loss: 0.0387 - accuracy:
1.0000

Epoch 1627/5000
1/1 [=====] - 0s 0s/step - loss: 0.0387 - accuracy:
1.0000

Epoch 1628/5000
1/1 [=====] - 0s 997us/step - loss: 0.0386 - accuracy:
1.0000

Epoch 1629/5000
1/1 [=====] - 0s 998us/step - loss: 0.0385 - accuracy:
1.0000

Epoch 1630/5000
1/1 [=====] - 0s 997us/step - loss: 0.0385 - accuracy:
1.0000

Epoch 1631/5000
1/1 [=====] - 0s 0s/step - loss: 0.0384 - accuracy:
1.0000

Epoch 1632/5000
1/1 [=====] - 0s 0s/step - loss: 0.0384 - accuracy:
1.0000

Epoch 1633/5000
1/1 [=====] - 0s 0s/step - loss: 0.0383 - accuracy:
1.0000

Epoch 1634/5000
1/1 [=====] - 0s 998us/step - loss: 0.0383 - accuracy:
1.0000

Epoch 1635/5000
1/1 [=====] - 0s 0s/step - loss: 0.0382 - accuracy:
1.0000

Epoch 1636/5000
1/1 [=====] - 0s 997us/step - loss: 0.0382 - accuracy:
1.0000

Epoch 1637/5000
1/1 [=====] - 0s 0s/step - loss: 0.0381 - accuracy:
1.0000

Epoch 1638/5000
1/1 [=====] - 0s 0s/step - loss: 0.0381 - accuracy:
1.0000

Epoch 1639/5000
1/1 [=====] - 0s 998us/step - loss: 0.0380 - accuracy:
1.0000

Epoch 1640/5000
1/1 [=====] - 0s 0s/step - loss: 0.0379 - accuracy:
1.0000

Epoch 1641/5000
1/1 [=====] - 0s 0s/step - loss: 0.0379 - accuracy:
1.0000

Epoch 1642/5000
1/1 [=====] - 0s 0s/step - loss: 0.0378 - accuracy:
1.0000

Epoch 1643/5000
1/1 [=====] - 0s 998us/step - loss: 0.0378 - accuracy:
1.0000

Epoch 1644/5000
1/1 [=====] - 0s 998us/step - loss: 0.0377 - accuracy:
1.0000

Epoch 1645/5000
1/1 [=====] - 0s 997us/step - loss: 0.0377 - accuracy:
1.0000

Epoch 1646/5000
1/1 [=====] - 0s 0s/step - loss: 0.0376 - accuracy:
1.0000

Epoch 1647/5000
1/1 [=====] - 0s 997us/step - loss: 0.0376 - accuracy:
1.0000

Epoch 1648/5000
1/1 [=====] - 0s 998us/step - loss: 0.0375 - accuracy:
1.0000

Epoch 1649/5000
1/1 [=====] - 0s 0s/step - loss: 0.0375 - accuracy:
1.0000

Epoch 1650/5000
1/1 [=====] - 0s 0s/step - loss: 0.0374 - accuracy:
1.0000

Epoch 1651/5000
1/1 [=====] - 0s 0s/step - loss: 0.0374 - accuracy:
1.0000

Epoch 1652/5000
1/1 [=====] - 0s 0s/step - loss: 0.0373 - accuracy:
1.0000

Epoch 1653/5000
1/1 [=====] - 0s 997us/step - loss: 0.0373 - accuracy:
1.0000

Epoch 1654/5000
1/1 [=====] - 0s 997us/step - loss: 0.0372 - accuracy:
1.0000

Epoch 1655/5000
1/1 [=====] - 0s 998us/step - loss: 0.0372 - accuracy:
1.0000

Epoch 1656/5000
1/1 [=====] - 0s 0s/step - loss: 0.0371 - accuracy:
1.0000

Epoch 1657/5000
1/1 [=====] - 0s 0s/step - loss: 0.0370 - accuracy:
1.0000

Epoch 1658/5000
1/1 [=====] - 0s 997us/step - loss: 0.0370 - accuracy:
1.0000

Epoch 1659/5000
1/1 [=====] - 0s 997us/step - loss: 0.0369 - accuracy:
1.0000

Epoch 1660/5000
1/1 [=====] - 0s 997us/step - loss: 0.0369 - accuracy:
1.0000

Epoch 1661/5000
1/1 [=====] - 0s 0s/step - loss: 0.0368 - accuracy:
1.0000

Epoch 1662/5000
1/1 [=====] - 0s 997us/step - loss: 0.0368 - accuracy:
1.0000

Epoch 1663/5000
1/1 [=====] - 0s 0s/step - loss: 0.0367 - accuracy:
1.0000

Epoch 1664/5000
1/1 [=====] - 0s 997us/step - loss: 0.0367 - accuracy:
1.0000

Epoch 1665/5000
1/1 [=====] - 0s 997us/step - loss: 0.0366 - accuracy:
1.0000

Epoch 1666/5000
1/1 [=====] - 0s 997us/step - loss: 0.0366 - accuracy:
1.0000

Epoch 1667/5000
1/1 [=====] - 0s 998us/step - loss: 0.0365 - accuracy:
1.0000

Epoch 1668/5000
1/1 [=====] - 0s 0s/step - loss: 0.0365 - accuracy:
1.0000

Epoch 1669/5000
1/1 [=====] - 0s 0s/step - loss: 0.0364 - accuracy:
1.0000

Epoch 1670/5000
1/1 [=====] - 0s 998us/step - loss: 0.0364 - accuracy:
1.0000

Epoch 1671/5000
1/1 [=====] - 0s 997us/step - loss: 0.0363 - accuracy:
1.0000

Epoch 1672/5000
1/1 [=====] - 0s 998us/step - loss: 0.0363 - accuracy:
1.0000

Epoch 1673/5000
1/1 [=====] - 0s 0s/step - loss: 0.0362 - accuracy:
1.0000

Epoch 1674/5000
1/1 [=====] - 0s 0s/step - loss: 0.0362 - accuracy:
1.0000

Epoch 1675/5000
1/1 [=====] - 0s 998us/step - loss: 0.0361 - accuracy:
1.0000

Epoch 1676/5000
1/1 [=====] - 0s 998us/step - loss: 0.0361 - accuracy:
1.0000

Epoch 1677/5000
1/1 [=====] - 0s 998us/step - loss: 0.0360 - accuracy:
1.0000

Epoch 1678/5000
1/1 [=====] - 0s 0s/step - loss: 0.0360 - accuracy:
1.0000

Epoch 1679/5000
1/1 [=====] - 0s 997us/step - loss: 0.0359 - accuracy:
1.0000

Epoch 1680/5000
1/1 [=====] - 0s 996us/step - loss: 0.0359 - accuracy:
1.0000

Epoch 1681/5000
1/1 [=====] - 0s 995us/step - loss: 0.0358 - accuracy:
1.0000

Epoch 1682/5000
1/1 [=====] - 0s 997us/step - loss: 0.0358 - accuracy:
1.0000

Epoch 1683/5000
1/1 [=====] - 0s 0s/step - loss: 0.0357 - accuracy:
1.0000

Epoch 1684/5000
1/1 [=====] - 0s 0s/step - loss: 0.0357 - accuracy:
1.0000

Epoch 1685/5000
1/1 [=====] - 0s 998us/step - loss: 0.0356 - accuracy:
1.0000

Epoch 1686/5000
1/1 [=====] - 0s 997us/step - loss: 0.0356 - accuracy:
1.0000

Epoch 1687/5000
1/1 [=====] - 0s 997us/step - loss: 0.0355 - accuracy:
1.0000

Epoch 1688/5000
1/1 [=====] - 0s 998us/step - loss: 0.0355 - accuracy:
1.0000

Epoch 1689/5000
1/1 [=====] - 0s 998us/step - loss: 0.0354 - accuracy:
1.0000

Epoch 1690/5000
1/1 [=====] - 0s 998us/step - loss: 0.0354 - accuracy:
1.0000

Epoch 1691/5000
1/1 [=====] - 0s 998us/step - loss: 0.0353 - accuracy:
1.0000

Epoch 1692/5000
1/1 [=====] - 0s 997us/step - loss: 0.0353 - accuracy:
1.0000

Epoch 1693/5000
1/1 [=====] - 0s 0s/step - loss: 0.0352 - accuracy:
1.0000

Epoch 1694/5000
1/1 [=====] - 0s 0s/step - loss: 0.0352 - accuracy:
1.0000

Epoch 1695/5000
1/1 [=====] - 0s 0s/step - loss: 0.0351 - accuracy:
1.0000

Epoch 1696/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0351 - accuracy:
1.0000

Epoch 1697/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0350 - accuracy:
1.0000

Epoch 1698/5000
1/1 [=====] - 0s 0s/step - loss: 0.0350 - accuracy:
1.0000

Epoch 1699/5000
1/1 [=====] - 0s 997us/step - loss: 0.0349 - accuracy:
1.0000

Epoch 1700/5000
1/1 [=====] - 0s 997us/step - loss: 0.0349 - accuracy:
1.0000

Epoch 1701/5000
1/1 [=====] - 0s 998us/step - loss: 0.0348 - accuracy:
1.0000

Epoch 1702/5000
1/1 [=====] - 0s 0s/step - loss: 0.0348 - accuracy:
1.0000

Epoch 1703/5000
1/1 [=====] - 0s 997us/step - loss: 0.0347 - accuracy:
1.0000

Epoch 1704/5000
1/1 [=====] - 0s 998us/step - loss: 0.0347 - accuracy:
1.0000
Epoch 1705/5000
1/1 [=====] - 0s 997us/step - loss: 0.0347 - accuracy:
1.0000
Epoch 1706/5000
1/1 [=====] - 0s 0s/step - loss: 0.0346 - accuracy:
1.0000
Epoch 1707/5000
1/1 [=====] - 0s 0s/step - loss: 0.0346 - accuracy:
1.0000
Epoch 1708/5000
1/1 [=====] - 0s 998us/step - loss: 0.0345 - accuracy:
1.0000
Epoch 1709/5000
1/1 [=====] - 0s 0s/step - loss: 0.0345 - accuracy:
1.0000
Epoch 1710/5000
1/1 [=====] - 0s 998us/step - loss: 0.0344 - accuracy:
1.0000
Epoch 1711/5000
1/1 [=====] - 0s 997us/step - loss: 0.0344 - accuracy:
1.0000
Epoch 1712/5000
1/1 [=====] - 0s 0s/step - loss: 0.0343 - accuracy:
1.0000
Epoch 1713/5000
1/1 [=====] - 0s 0s/step - loss: 0.0343 - accuracy:
1.0000
Epoch 1714/5000
1/1 [=====] - 0s 0s/step - loss: 0.0342 - accuracy:
1.0000
Epoch 1715/5000
1/1 [=====] - 0s 998us/step - loss: 0.0342 - accuracy:
1.0000
Epoch 1716/5000
1/1 [=====] - 0s 998us/step - loss: 0.0341 - accuracy:
1.0000
Epoch 1717/5000
1/1 [=====] - 0s 0s/step - loss: 0.0341 - accuracy:
1.0000
Epoch 1718/5000
1/1 [=====] - 0s 0s/step - loss: 0.0340 - accuracy:
1.0000
Epoch 1719/5000
1/1 [=====] - 0s 997us/step - loss: 0.0340 - accuracy:
1.0000

Epoch 1720/5000
1/1 [=====] - 0s 997us/step - loss: 0.0339 - accuracy:
1.0000

Epoch 1721/5000
1/1 [=====] - 0s 0s/step - loss: 0.0339 - accuracy:
1.0000

Epoch 1722/5000
1/1 [=====] - 0s 997us/step - loss: 0.0339 - accuracy:
1.0000

Epoch 1723/5000
1/1 [=====] - 0s 0s/step - loss: 0.0338 - accuracy:
1.0000

Epoch 1724/5000
1/1 [=====] - 0s 997us/step - loss: 0.0338 - accuracy:
1.0000

Epoch 1725/5000
1/1 [=====] - 0s 0s/step - loss: 0.0337 - accuracy:
1.0000

Epoch 1726/5000
1/1 [=====] - 0s 0s/step - loss: 0.0337 - accuracy:
1.0000

Epoch 1727/5000
1/1 [=====] - 0s 0s/step - loss: 0.0336 - accuracy:
1.0000

Epoch 1728/5000
1/1 [=====] - 0s 997us/step - loss: 0.0336 - accuracy:
1.0000

Epoch 1729/5000
1/1 [=====] - 0s 998us/step - loss: 0.0335 - accuracy:
1.0000

Epoch 1730/5000
1/1 [=====] - 0s 998us/step - loss: 0.0335 - accuracy:
1.0000

Epoch 1731/5000
1/1 [=====] - 0s 998us/step - loss: 0.0334 - accuracy:
1.0000

Epoch 1732/5000
1/1 [=====] - 0s 997us/step - loss: 0.0334 - accuracy:
1.0000

Epoch 1733/5000
1/1 [=====] - 0s 998us/step - loss: 0.0333 - accuracy:
1.0000

Epoch 1734/5000
1/1 [=====] - 0s 0s/step - loss: 0.0333 - accuracy:
1.0000

Epoch 1735/5000
1/1 [=====] - 0s 0s/step - loss: 0.0333 - accuracy:
1.0000

Epoch 1736/5000
1/1 [=====] - 0s 0s/step - loss: 0.0332 - accuracy:
1.0000

Epoch 1737/5000
1/1 [=====] - 0s 0s/step - loss: 0.0332 - accuracy:
1.0000

Epoch 1738/5000
1/1 [=====] - 0s 0s/step - loss: 0.0331 - accuracy:
1.0000

Epoch 1739/5000
1/1 [=====] - 0s 0s/step - loss: 0.0331 - accuracy:
1.0000

Epoch 1740/5000
1/1 [=====] - 0s 997us/step - loss: 0.0330 - accuracy:
1.0000

Epoch 1741/5000
1/1 [=====] - 0s 0s/step - loss: 0.0330 - accuracy:
1.0000

Epoch 1742/5000
1/1 [=====] - 0s 0s/step - loss: 0.0329 - accuracy:
1.0000

Epoch 1743/5000
1/1 [=====] - 0s 997us/step - loss: 0.0329 - accuracy:
1.0000

Epoch 1744/5000
1/1 [=====] - 0s 0s/step - loss: 0.0329 - accuracy:
1.0000

Epoch 1745/5000
1/1 [=====] - 0s 0s/step - loss: 0.0328 - accuracy:
1.0000

Epoch 1746/5000
1/1 [=====] - 0s 0s/step - loss: 0.0328 - accuracy:
1.0000

Epoch 1747/5000
1/1 [=====] - 0s 0s/step - loss: 0.0327 - accuracy:
1.0000

Epoch 1748/5000
1/1 [=====] - 0s 0s/step - loss: 0.0327 - accuracy:
1.0000

Epoch 1749/5000
1/1 [=====] - 0s 0s/step - loss: 0.0326 - accuracy:
1.0000

Epoch 1750/5000
1/1 [=====] - 0s 997us/step - loss: 0.0326 - accuracy:
1.0000

Epoch 1751/5000
1/1 [=====] - 0s 0s/step - loss: 0.0325 - accuracy:
1.0000

Epoch 1752/5000
1/1 [=====] - 0s 997us/step - loss: 0.0325 - accuracy:
1.0000

Epoch 1753/5000
1/1 [=====] - 0s 0s/step - loss: 0.0325 - accuracy:
1.0000

Epoch 1754/5000
1/1 [=====] - 0s 998us/step - loss: 0.0324 - accuracy:
1.0000

Epoch 1755/5000
1/1 [=====] - 0s 998us/step - loss: 0.0324 - accuracy:
1.0000

Epoch 1756/5000
1/1 [=====] - 0s 998us/step - loss: 0.0323 - accuracy:
1.0000

Epoch 1757/5000
1/1 [=====] - 0s 999us/step - loss: 0.0323 - accuracy:
1.0000

Epoch 1758/5000
1/1 [=====] - 0s 0s/step - loss: 0.0322 - accuracy:
1.0000

Epoch 1759/5000
1/1 [=====] - 0s 997us/step - loss: 0.0322 - accuracy:
1.0000

Epoch 1760/5000
1/1 [=====] - 0s 998us/step - loss: 0.0322 - accuracy:
1.0000

Epoch 1761/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0321 - accuracy:
1.0000

Epoch 1762/5000
1/1 [=====] - 0s 998us/step - loss: 0.0321 - accuracy:
1.0000

Epoch 1763/5000
1/1 [=====] - 0s 998us/step - loss: 0.0320 - accuracy:
1.0000

Epoch 1764/5000
1/1 [=====] - 0s 996us/step - loss: 0.0320 - accuracy:
1.0000

Epoch 1765/5000
1/1 [=====] - 0s 0s/step - loss: 0.0319 - accuracy:
1.0000

Epoch 1766/5000
1/1 [=====] - 0s 998us/step - loss: 0.0319 - accuracy:
1.0000

Epoch 1767/5000
1/1 [=====] - 0s 0s/step - loss: 0.0319 - accuracy:
1.0000

Epoch 1768/5000
1/1 [=====] - 0s 997us/step - loss: 0.0318 - accuracy:
1.0000

Epoch 1769/5000
1/1 [=====] - 0s 997us/step - loss: 0.0318 - accuracy:
1.0000

Epoch 1770/5000
1/1 [=====] - 0s 998us/step - loss: 0.0317 - accuracy:
1.0000

Epoch 1771/5000
1/1 [=====] - 0s 998us/step - loss: 0.0317 - accuracy:
1.0000

Epoch 1772/5000
1/1 [=====] - 0s 997us/step - loss: 0.0316 - accuracy:
1.0000

Epoch 1773/5000
1/1 [=====] - 0s 998us/step - loss: 0.0316 - accuracy:
1.0000

Epoch 1774/5000
1/1 [=====] - 0s 0s/step - loss: 0.0316 - accuracy:
1.0000

Epoch 1775/5000
1/1 [=====] - 0s 0s/step - loss: 0.0315 - accuracy:
1.0000

Epoch 1776/5000
1/1 [=====] - 0s 0s/step - loss: 0.0315 - accuracy:
1.0000

Epoch 1777/5000
1/1 [=====] - 0s 997us/step - loss: 0.0314 - accuracy:
1.0000

Epoch 1778/5000
1/1 [=====] - 0s 997us/step - loss: 0.0314 - accuracy:
1.0000

Epoch 1779/5000
1/1 [=====] - 0s 0s/step - loss: 0.0313 - accuracy:
1.0000

Epoch 1780/5000
1/1 [=====] - 0s 997us/step - loss: 0.0313 - accuracy:
1.0000

Epoch 1781/5000
1/1 [=====] - 0s 0s/step - loss: 0.0313 - accuracy:
1.0000

Epoch 1782/5000
1/1 [=====] - 0s 0s/step - loss: 0.0312 - accuracy:
1.0000

Epoch 1783/5000
1/1 [=====] - 0s 997us/step - loss: 0.0312 - accuracy:
1.0000

Epoch 1784/5000
1/1 [=====] - 0s 997us/step - loss: 0.0311 - accuracy:
1.0000
Epoch 1785/5000
1/1 [=====] - 0s 997us/step - loss: 0.0311 - accuracy:
1.0000
Epoch 1786/5000
1/1 [=====] - 0s 0s/step - loss: 0.0310 - accuracy:
1.0000
Epoch 1787/5000
1/1 [=====] - 0s 0s/step - loss: 0.0310 - accuracy:
1.0000
Epoch 1788/5000
1/1 [=====] - 0s 999us/step - loss: 0.0310 - accuracy:
1.0000
Epoch 1789/5000
1/1 [=====] - 0s 998us/step - loss: 0.0309 - accuracy:
1.0000
Epoch 1790/5000
1/1 [=====] - 0s 0s/step - loss: 0.0309 - accuracy:
1.0000
Epoch 1791/5000
1/1 [=====] - 0s 998us/step - loss: 0.0308 - accuracy:
1.0000
Epoch 1792/5000
1/1 [=====] - 0s 0s/step - loss: 0.0308 - accuracy:
1.0000
Epoch 1793/5000
1/1 [=====] - 0s 996us/step - loss: 0.0308 - accuracy:
1.0000
Epoch 1794/5000
1/1 [=====] - 0s 0s/step - loss: 0.0307 - accuracy:
1.0000
Epoch 1795/5000
1/1 [=====] - 0s 997us/step - loss: 0.0307 - accuracy:
1.0000
Epoch 1796/5000
1/1 [=====] - 0s 0s/step - loss: 0.0306 - accuracy:
1.0000
Epoch 1797/5000
1/1 [=====] - 0s 0s/step - loss: 0.0306 - accuracy:
1.0000
Epoch 1798/5000
1/1 [=====] - 0s 0s/step - loss: 0.0306 - accuracy:
1.0000
Epoch 1799/5000
1/1 [=====] - 0s 998us/step - loss: 0.0305 - accuracy:
1.0000

Epoch 1800/5000
1/1 [=====] - 0s 997us/step - loss: 0.0305 - accuracy: 1.0000

Epoch 1801/5000
1/1 [=====] - 0s 0s/step - loss: 0.0304 - accuracy: 1.0000

Epoch 1802/5000
1/1 [=====] - 0s 0s/step - loss: 0.0304 - accuracy: 1.0000

Epoch 1803/5000
1/1 [=====] - 0s 998us/step - loss: 0.0304 - accuracy: 1.0000

Epoch 1804/5000
1/1 [=====] - 0s 0s/step - loss: 0.0303 - accuracy: 1.0000

Epoch 1805/5000
1/1 [=====] - 0s 998us/step - loss: 0.0303 - accuracy: 1.0000

Epoch 1806/5000
1/1 [=====] - 0s 0s/step - loss: 0.0302 - accuracy: 1.0000

Epoch 1807/5000
1/1 [=====] - 0s 997us/step - loss: 0.0302 - accuracy: 1.0000

Epoch 1808/5000
1/1 [=====] - 0s 998us/step - loss: 0.0302 - accuracy: 1.0000

Epoch 1809/5000
1/1 [=====] - 0s 0s/step - loss: 0.0301 - accuracy: 1.0000

Epoch 1810/5000
1/1 [=====] - 0s 0s/step - loss: 0.0301 - accuracy: 1.0000

Epoch 1811/5000
1/1 [=====] - 0s 0s/step - loss: 0.0300 - accuracy: 1.0000

Epoch 1812/5000
1/1 [=====] - 0s 997us/step - loss: 0.0300 - accuracy: 1.0000

Epoch 1813/5000
1/1 [=====] - 0s 0s/step - loss: 0.0300 - accuracy: 1.0000

Epoch 1814/5000
1/1 [=====] - 0s 997us/step - loss: 0.0299 - accuracy: 1.0000

Epoch 1815/5000
1/1 [=====] - 0s 997us/step - loss: 0.0299 - accuracy: 1.0000

Epoch 1816/5000
1/1 [=====] - 0s 0s/step - loss: 0.0298 - accuracy:
1.0000

Epoch 1817/5000
1/1 [=====] - 0s 0s/step - loss: 0.0298 - accuracy:
1.0000

Epoch 1818/5000
1/1 [=====] - 0s 997us/step - loss: 0.0298 - accuracy:
1.0000

Epoch 1819/5000
1/1 [=====] - 0s 998us/step - loss: 0.0297 - accuracy:
1.0000

Epoch 1820/5000
1/1 [=====] - 0s 0s/step - loss: 0.0297 - accuracy:
1.0000

Epoch 1821/5000
1/1 [=====] - 0s 997us/step - loss: 0.0296 - accuracy:
1.0000

Epoch 1822/5000
1/1 [=====] - 0s 998us/step - loss: 0.0296 - accuracy:
1.0000

Epoch 1823/5000
1/1 [=====] - 0s 998us/step - loss: 0.0296 - accuracy:
1.0000

Epoch 1824/5000
1/1 [=====] - 0s 0s/step - loss: 0.0295 - accuracy:
1.0000

Epoch 1825/5000
1/1 [=====] - 0s 0s/step - loss: 0.0295 - accuracy:
1.0000

Epoch 1826/5000
1/1 [=====] - 0s 0s/step - loss: 0.0294 - accuracy:
1.0000

Epoch 1827/5000
1/1 [=====] - 0s 997us/step - loss: 0.0294 - accuracy:
1.0000

Epoch 1828/5000
1/1 [=====] - 0s 0s/step - loss: 0.0294 - accuracy:
1.0000

Epoch 1829/5000
1/1 [=====] - 0s 0s/step - loss: 0.0293 - accuracy:
1.0000

Epoch 1830/5000
1/1 [=====] - 0s 0s/step - loss: 0.0293 - accuracy:
1.0000

Epoch 1831/5000
1/1 [=====] - 0s 998us/step - loss: 0.0293 - accuracy:
1.0000

Epoch 1832/5000
1/1 [=====] - 0s 0s/step - loss: 0.0292 - accuracy:
1.0000

Epoch 1833/5000
1/1 [=====] - 0s 997us/step - loss: 0.0292 - accuracy:
1.0000

Epoch 1834/5000
1/1 [=====] - 0s 0s/step - loss: 0.0291 - accuracy:
1.0000

Epoch 1835/5000
1/1 [=====] - 0s 0s/step - loss: 0.0291 - accuracy:
1.0000

Epoch 1836/5000
1/1 [=====] - 0s 0s/step - loss: 0.0291 - accuracy:
1.0000

Epoch 1837/5000
1/1 [=====] - 0s 997us/step - loss: 0.0290 - accuracy:
1.0000

Epoch 1838/5000
1/1 [=====] - 0s 998us/step - loss: 0.0290 - accuracy:
1.0000

Epoch 1839/5000
1/1 [=====] - 0s 998us/step - loss: 0.0290 - accuracy:
1.0000

Epoch 1840/5000
1/1 [=====] - 0s 0s/step - loss: 0.0289 - accuracy:
1.0000

Epoch 1841/5000
1/1 [=====] - 0s 998us/step - loss: 0.0289 - accuracy:
1.0000

Epoch 1842/5000
1/1 [=====] - 0s 998us/step - loss: 0.0288 - accuracy:
1.0000

Epoch 1843/5000
1/1 [=====] - 0s 0s/step - loss: 0.0288 - accuracy:
1.0000

Epoch 1844/5000
1/1 [=====] - 0s 0s/step - loss: 0.0288 - accuracy:
1.0000

Epoch 1845/5000
1/1 [=====] - 0s 0s/step - loss: 0.0287 - accuracy:
1.0000

Epoch 1846/5000
1/1 [=====] - 0s 996us/step - loss: 0.0287 - accuracy:
1.0000

Epoch 1847/5000
1/1 [=====] - 0s 0s/step - loss: 0.0287 - accuracy:
1.0000

Epoch 1848/5000
1/1 [=====] - 0s 0s/step - loss: 0.0286 - accuracy:
1.0000

Epoch 1849/5000
1/1 [=====] - 0s 0s/step - loss: 0.0286 - accuracy:
1.0000

Epoch 1850/5000
1/1 [=====] - 0s 998us/step - loss: 0.0285 - accuracy:
1.0000

Epoch 1851/5000
1/1 [=====] - 0s 0s/step - loss: 0.0285 - accuracy:
1.0000

Epoch 1852/5000
1/1 [=====] - 0s 0s/step - loss: 0.0285 - accuracy:
1.0000

Epoch 1853/5000
1/1 [=====] - 0s 0s/step - loss: 0.0284 - accuracy:
1.0000

Epoch 1854/5000
1/1 [=====] - 0s 0s/step - loss: 0.0284 - accuracy:
1.0000

Epoch 1855/5000
1/1 [=====] - 0s 0s/step - loss: 0.0284 - accuracy:
1.0000

Epoch 1856/5000
1/1 [=====] - 0s 0s/step - loss: 0.0283 - accuracy:
1.0000

Epoch 1857/5000
1/1 [=====] - 0s 0s/step - loss: 0.0283 - accuracy:
1.0000

Epoch 1858/5000
1/1 [=====] - 0s 997us/step - loss: 0.0282 - accuracy:
1.0000

Epoch 1859/5000
1/1 [=====] - 0s 0s/step - loss: 0.0282 - accuracy:
1.0000

Epoch 1860/5000
1/1 [=====] - 0s 997us/step - loss: 0.0282 - accuracy:
1.0000

Epoch 1861/5000
1/1 [=====] - 0s 0s/step - loss: 0.0281 - accuracy:
1.0000

Epoch 1862/5000
1/1 [=====] - 0s 0s/step - loss: 0.0281 - accuracy:
1.0000

Epoch 1863/5000
1/1 [=====] - 0s 0s/step - loss: 0.0281 - accuracy:
1.0000

Epoch 1864/5000
1/1 [=====] - 0s 0s/step - loss: 0.0280 - accuracy:
1.0000

Epoch 1865/5000
1/1 [=====] - 0s 0s/step - loss: 0.0280 - accuracy:
1.0000

Epoch 1866/5000
1/1 [=====] - 0s 997us/step - loss: 0.0280 - accuracy:
1.0000

Epoch 1867/5000
1/1 [=====] - 0s 998us/step - loss: 0.0279 - accuracy:
1.0000

Epoch 1868/5000
1/1 [=====] - 0s 0s/step - loss: 0.0279 - accuracy:
1.0000

Epoch 1869/5000
1/1 [=====] - 0s 998us/step - loss: 0.0278 - accuracy:
1.0000

Epoch 1870/5000
1/1 [=====] - 0s 998us/step - loss: 0.0278 - accuracy:
1.0000

Epoch 1871/5000
1/1 [=====] - 0s 0s/step - loss: 0.0278 - accuracy:
1.0000

Epoch 1872/5000
1/1 [=====] - 0s 997us/step - loss: 0.0277 - accuracy:
1.0000

Epoch 1873/5000
1/1 [=====] - 0s 0s/step - loss: 0.0277 - accuracy:
1.0000

Epoch 1874/5000
1/1 [=====] - 0s 0s/step - loss: 0.0277 - accuracy:
1.0000

Epoch 1875/5000
1/1 [=====] - 0s 0s/step - loss: 0.0276 - accuracy:
1.0000

Epoch 1876/5000
1/1 [=====] - 0s 998us/step - loss: 0.0276 - accuracy:
1.0000

Epoch 1877/5000
1/1 [=====] - 0s 998us/step - loss: 0.0276 - accuracy:
1.0000

Epoch 1878/5000
1/1 [=====] - 0s 0s/step - loss: 0.0275 - accuracy:
1.0000

Epoch 1879/5000
1/1 [=====] - 0s 0s/step - loss: 0.0275 - accuracy:
1.0000

Epoch 1880/5000
1/1 [=====] - 0s 997us/step - loss: 0.0275 - accuracy:
1.0000

Epoch 1881/5000
1/1 [=====] - 0s 0s/step - loss: 0.0274 - accuracy:
1.0000

Epoch 1882/5000
1/1 [=====] - 0s 997us/step - loss: 0.0274 - accuracy:
1.0000

Epoch 1883/5000
1/1 [=====] - 0s 997us/step - loss: 0.0273 - accuracy:
1.0000

Epoch 1884/5000
1/1 [=====] - 0s 0s/step - loss: 0.0273 - accuracy:
1.0000

Epoch 1885/5000
1/1 [=====] - 0s 0s/step - loss: 0.0273 - accuracy:
1.0000

Epoch 1886/5000
1/1 [=====] - 0s 997us/step - loss: 0.0272 - accuracy:
1.0000

Epoch 1887/5000
1/1 [=====] - 0s 997us/step - loss: 0.0272 - accuracy:
1.0000

Epoch 1888/5000
1/1 [=====] - 0s 998us/step - loss: 0.0272 - accuracy:
1.0000

Epoch 1889/5000
1/1 [=====] - 0s 0s/step - loss: 0.0271 - accuracy:
1.0000

Epoch 1890/5000
1/1 [=====] - 0s 0s/step - loss: 0.0271 - accuracy:
1.0000

Epoch 1891/5000
1/1 [=====] - 0s 0s/step - loss: 0.0271 - accuracy:
1.0000

Epoch 1892/5000
1/1 [=====] - 0s 998us/step - loss: 0.0270 - accuracy:
1.0000

Epoch 1893/5000
1/1 [=====] - 0s 0s/step - loss: 0.0270 - accuracy:
1.0000

Epoch 1894/5000
1/1 [=====] - 0s 0s/step - loss: 0.0270 - accuracy:
1.0000

Epoch 1895/5000
1/1 [=====] - 0s 998us/step - loss: 0.0269 - accuracy:
1.0000

Epoch 1896/5000
1/1 [=====] - 0s 998us/step - loss: 0.0269 - accuracy:
1.0000

Epoch 1897/5000
1/1 [=====] - 0s 0s/step - loss: 0.0269 - accuracy:
1.0000

Epoch 1898/5000
1/1 [=====] - 0s 998us/step - loss: 0.0268 - accuracy:
1.0000

Epoch 1899/5000
1/1 [=====] - 0s 998us/step - loss: 0.0268 - accuracy:
1.0000

Epoch 1900/5000
1/1 [=====] - 0s 0s/step - loss: 0.0268 - accuracy:
1.0000

Epoch 1901/5000
1/1 [=====] - 0s 0s/step - loss: 0.0267 - accuracy:
1.0000

Epoch 1902/5000
1/1 [=====] - 0s 997us/step - loss: 0.0267 - accuracy:
1.0000

Epoch 1903/5000
1/1 [=====] - 0s 0s/step - loss: 0.0267 - accuracy:
1.0000

Epoch 1904/5000
1/1 [=====] - 0s 999us/step - loss: 0.0266 - accuracy:
1.0000

Epoch 1905/5000
1/1 [=====] - 0s 0s/step - loss: 0.0266 - accuracy:
1.0000

Epoch 1906/5000
1/1 [=====] - 0s 0s/step - loss: 0.0266 - accuracy:
1.0000

Epoch 1907/5000
1/1 [=====] - 0s 997us/step - loss: 0.0265 - accuracy:
1.0000

Epoch 1908/5000
1/1 [=====] - 0s 0s/step - loss: 0.0265 - accuracy:
1.0000

Epoch 1909/5000
1/1 [=====] - 0s 997us/step - loss: 0.0265 - accuracy:
1.0000

Epoch 1910/5000
1/1 [=====] - 0s 0s/step - loss: 0.0264 - accuracy:
1.0000

Epoch 1911/5000
1/1 [=====] - 0s 998us/step - loss: 0.0264 - accuracy:
1.0000

Epoch 1912/5000
1/1 [=====] - 0s 997us/step - loss: 0.0264 - accuracy:
1.0000

Epoch 1913/5000
1/1 [=====] - 0s 0s/step - loss: 0.0263 - accuracy:
1.0000

Epoch 1914/5000
1/1 [=====] - 0s 997us/step - loss: 0.0263 - accuracy:
1.0000

Epoch 1915/5000
1/1 [=====] - 0s 0s/step - loss: 0.0263 - accuracy:
1.0000

Epoch 1916/5000
1/1 [=====] - 0s 0s/step - loss: 0.0262 - accuracy:
1.0000

Epoch 1917/5000
1/1 [=====] - 0s 0s/step - loss: 0.0262 - accuracy:
1.0000

Epoch 1918/5000
1/1 [=====] - 0s 0s/step - loss: 0.0262 - accuracy:
1.0000

Epoch 1919/5000
1/1 [=====] - 0s 0s/step - loss: 0.0261 - accuracy:
1.0000

Epoch 1920/5000
1/1 [=====] - 0s 997us/step - loss: 0.0261 - accuracy:
1.0000

Epoch 1921/5000
1/1 [=====] - 0s 998us/step - loss: 0.0261 - accuracy:
1.0000

Epoch 1922/5000
1/1 [=====] - 0s 0s/step - loss: 0.0260 - accuracy:
1.0000

Epoch 1923/5000
1/1 [=====] - 0s 997us/step - loss: 0.0260 - accuracy:
1.0000

Epoch 1924/5000
1/1 [=====] - 0s 997us/step - loss: 0.0260 - accuracy:
1.0000

Epoch 1925/5000
1/1 [=====] - 0s 997us/step - loss: 0.0259 - accuracy:
1.0000

Epoch 1926/5000
1/1 [=====] - 0s 0s/step - loss: 0.0259 - accuracy:
1.0000

Epoch 1927/5000
1/1 [=====] - 0s 0s/step - loss: 0.0259 - accuracy:
1.0000

Epoch 1928/5000
1/1 [=====] - 0s 0s/step - loss: 0.0258 - accuracy:
1.0000

Epoch 1929/5000
1/1 [=====] - 0s 997us/step - loss: 0.0258 - accuracy:
1.0000

Epoch 1930/5000
1/1 [=====] - 0s 998us/step - loss: 0.0258 - accuracy:
1.0000

Epoch 1931/5000
1/1 [=====] - 0s 997us/step - loss: 0.0257 - accuracy:
1.0000

Epoch 1932/5000
1/1 [=====] - 0s 0s/step - loss: 0.0257 - accuracy:
1.0000

Epoch 1933/5000
1/1 [=====] - 0s 0s/step - loss: 0.0257 - accuracy:
1.0000

Epoch 1934/5000
1/1 [=====] - 0s 0s/step - loss: 0.0256 - accuracy:
1.0000

Epoch 1935/5000
1/1 [=====] - 0s 998us/step - loss: 0.0256 - accuracy:
1.0000

Epoch 1936/5000
1/1 [=====] - 0s 0s/step - loss: 0.0256 - accuracy:
1.0000

Epoch 1937/5000
1/1 [=====] - 0s 0s/step - loss: 0.0255 - accuracy:
1.0000

Epoch 1938/5000
1/1 [=====] - 0s 0s/step - loss: 0.0255 - accuracy:
1.0000

Epoch 1939/5000
1/1 [=====] - 0s 0s/step - loss: 0.0255 - accuracy:
1.0000

Epoch 1940/5000
1/1 [=====] - 0s 997us/step - loss: 0.0254 - accuracy:
1.0000

Epoch 1941/5000
1/1 [=====] - 0s 997us/step - loss: 0.0254 - accuracy:
1.0000

Epoch 1942/5000
1/1 [=====] - 0s 997us/step - loss: 0.0254 - accuracy:
1.0000

Epoch 1943/5000
1/1 [=====] - 0s 0s/step - loss: 0.0253 - accuracy:
1.0000

Epoch 1944/5000
1/1 [=====] - 0s 997us/step - loss: 0.0253 - accuracy: 1.0000

Epoch 1945/5000
1/1 [=====] - 0s 998us/step - loss: 0.0253 - accuracy: 1.0000

Epoch 1946/5000
1/1 [=====] - 0s 998us/step - loss: 0.0252 - accuracy: 1.0000

Epoch 1947/5000
1/1 [=====] - 0s 0s/step - loss: 0.0252 - accuracy: 1.0000

Epoch 1948/5000
1/1 [=====] - 0s 0s/step - loss: 0.0252 - accuracy: 1.0000

Epoch 1949/5000
1/1 [=====] - 0s 0s/step - loss: 0.0252 - accuracy: 1.0000

Epoch 1950/5000
1/1 [=====] - 0s 0s/step - loss: 0.0251 - accuracy: 1.0000

Epoch 1951/5000
1/1 [=====] - 0s 998us/step - loss: 0.0251 - accuracy: 1.0000

Epoch 1952/5000
1/1 [=====] - 0s 0s/step - loss: 0.0251 - accuracy: 1.0000

Epoch 1953/5000
1/1 [=====] - 0s 998us/step - loss: 0.0250 - accuracy: 1.0000

Epoch 1954/5000
1/1 [=====] - 0s 997us/step - loss: 0.0250 - accuracy: 1.0000

Epoch 1955/5000
1/1 [=====] - 0s 997us/step - loss: 0.0250 - accuracy: 1.0000

Epoch 1956/5000
1/1 [=====] - 0s 0s/step - loss: 0.0249 - accuracy: 1.0000

Epoch 1957/5000
1/1 [=====] - 0s 0s/step - loss: 0.0249 - accuracy: 1.0000

Epoch 1958/5000
1/1 [=====] - 0s 0s/step - loss: 0.0249 - accuracy: 1.0000

Epoch 1959/5000
1/1 [=====] - 0s 0s/step - loss: 0.0248 - accuracy: 1.0000

Epoch 1960/5000
1/1 [=====] - 0s 0s/step - loss: 0.0248 - accuracy:
1.0000

Epoch 1961/5000
1/1 [=====] - 0s 0s/step - loss: 0.0248 - accuracy:
1.0000

Epoch 1962/5000
1/1 [=====] - 0s 998us/step - loss: 0.0247 - accuracy:
1.0000

Epoch 1963/5000
1/1 [=====] - 0s 997us/step - loss: 0.0247 - accuracy:
1.0000

Epoch 1964/5000
1/1 [=====] - 0s 0s/step - loss: 0.0247 - accuracy:
1.0000

Epoch 1965/5000
1/1 [=====] - 0s 995us/step - loss: 0.0247 - accuracy:
1.0000

Epoch 1966/5000
1/1 [=====] - 0s 0s/step - loss: 0.0246 - accuracy:
1.0000

Epoch 1967/5000
1/1 [=====] - 0s 0s/step - loss: 0.0246 - accuracy:
1.0000

Epoch 1968/5000
1/1 [=====] - 0s 0s/step - loss: 0.0246 - accuracy:
1.0000

Epoch 1969/5000
1/1 [=====] - 0s 0s/step - loss: 0.0245 - accuracy:
1.0000

Epoch 1970/5000
1/1 [=====] - 0s 998us/step - loss: 0.0245 - accuracy:
1.0000

Epoch 1971/5000
1/1 [=====] - 0s 997us/step - loss: 0.0245 - accuracy:
1.0000

Epoch 1972/5000
1/1 [=====] - 0s 0s/step - loss: 0.0244 - accuracy:
1.0000

Epoch 1973/5000
1/1 [=====] - 0s 0s/step - loss: 0.0244 - accuracy:
1.0000

Epoch 1974/5000
1/1 [=====] - 0s 0s/step - loss: 0.0244 - accuracy:
1.0000

Epoch 1975/5000
1/1 [=====] - 0s 0s/step - loss: 0.0244 - accuracy:
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Epoch 1976/5000
1/1 [=====] - 0s 998us/step - loss: 0.0243 - accuracy:
1.0000

Epoch 1977/5000
1/1 [=====] - 0s 0s/step - loss: 0.0243 - accuracy:
1.0000

Epoch 1978/5000
1/1 [=====] - 0s 998us/step - loss: 0.0243 - accuracy:
1.0000

Epoch 1979/5000
1/1 [=====] - 0s 997us/step - loss: 0.0242 - accuracy:
1.0000

Epoch 1980/5000
1/1 [=====] - 0s 998us/step - loss: 0.0242 - accuracy:
1.0000

Epoch 1981/5000
1/1 [=====] - 0s 997us/step - loss: 0.0242 - accuracy:
1.0000

Epoch 1982/5000
1/1 [=====] - 0s 0s/step - loss: 0.0241 - accuracy:
1.0000

Epoch 1983/5000
1/1 [=====] - 0s 998us/step - loss: 0.0241 - accuracy:
1.0000

Epoch 1984/5000
1/1 [=====] - 0s 0s/step - loss: 0.0241 - accuracy:
1.0000

Epoch 1985/5000
1/1 [=====] - 0s 997us/step - loss: 0.0241 - accuracy:
1.0000

Epoch 1986/5000
1/1 [=====] - 0s 998us/step - loss: 0.0240 - accuracy:
1.0000

Epoch 1987/5000
1/1 [=====] - 0s 0s/step - loss: 0.0240 - accuracy:
1.0000

Epoch 1988/5000
1/1 [=====] - 0s 0s/step - loss: 0.0240 - accuracy:
1.0000

Epoch 1989/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0239 - accuracy:
1.0000

Epoch 1990/5000
1/1 [=====] - 0s 0s/step - loss: 0.0239 - accuracy:
1.0000

Epoch 1991/5000
1/1 [=====] - 0s 997us/step - loss: 0.0239 - accuracy:
1.0000

Epoch 1992/5000
1/1 [=====] - 0s 999us/step - loss: 0.0238 - accuracy:
1.0000

Epoch 1993/5000
1/1 [=====] - 0s 0s/step - loss: 0.0238 - accuracy:
1.0000

Epoch 1994/5000
1/1 [=====] - 0s 0s/step - loss: 0.0238 - accuracy:
1.0000

Epoch 1995/5000
1/1 [=====] - 0s 997us/step - loss: 0.0238 - accuracy:
1.0000

Epoch 1996/5000
1/1 [=====] - 0s 0s/step - loss: 0.0237 - accuracy:
1.0000

Epoch 1997/5000
1/1 [=====] - 0s 0s/step - loss: 0.0237 - accuracy:
1.0000

Epoch 1998/5000
1/1 [=====] - 0s 0s/step - loss: 0.0237 - accuracy:
1.0000

Epoch 1999/5000
1/1 [=====] - 0s 997us/step - loss: 0.0236 - accuracy:
1.0000

Epoch 2000/5000
1/1 [=====] - 0s 998us/step - loss: 0.0236 - accuracy:
1.0000

Epoch 2001/5000
1/1 [=====] - 0s 0s/step - loss: 0.0236 - accuracy:
1.0000

Epoch 2002/5000
1/1 [=====] - 0s 997us/step - loss: 0.0236 - accuracy:
1.0000

Epoch 2003/5000
1/1 [=====] - 0s 0s/step - loss: 0.0235 - accuracy:
1.0000

Epoch 2004/5000
1/1 [=====] - 0s 998us/step - loss: 0.0235 - accuracy:
1.0000

Epoch 2005/5000
1/1 [=====] - 0s 0s/step - loss: 0.0235 - accuracy:
1.0000

Epoch 2006/5000
1/1 [=====] - 0s 0s/step - loss: 0.0234 - accuracy:
1.0000

Epoch 2007/5000
1/1 [=====] - 0s 0s/step - loss: 0.0234 - accuracy:
1.0000

Epoch 2008/5000
1/1 [=====] - 0s 0s/step - loss: 0.0234 - accuracy:
1.0000

Epoch 2009/5000
1/1 [=====] - 0s 997us/step - loss: 0.0234 - accuracy:
1.0000

Epoch 2010/5000
1/1 [=====] - 0s 997us/step - loss: 0.0233 - accuracy:
1.0000

Epoch 2011/5000
1/1 [=====] - 0s 0s/step - loss: 0.0233 - accuracy:
1.0000

Epoch 2012/5000
1/1 [=====] - 0s 0s/step - loss: 0.0233 - accuracy:
1.0000

Epoch 2013/5000
1/1 [=====] - 0s 0s/step - loss: 0.0232 - accuracy:
1.0000

Epoch 2014/5000
1/1 [=====] - 0s 997us/step - loss: 0.0232 - accuracy:
1.0000

Epoch 2015/5000
1/1 [=====] - 0s 0s/step - loss: 0.0232 - accuracy:
1.0000

Epoch 2016/5000
1/1 [=====] - 0s 999us/step - loss: 0.0232 - accuracy:
1.0000

Epoch 2017/5000
1/1 [=====] - 0s 997us/step - loss: 0.0231 - accuracy:
1.0000

Epoch 2018/5000
1/1 [=====] - 0s 997us/step - loss: 0.0231 - accuracy:
1.0000

Epoch 2019/5000
1/1 [=====] - 0s 998us/step - loss: 0.0231 - accuracy:
1.0000

Epoch 2020/5000
1/1 [=====] - 0s 997us/step - loss: 0.0230 - accuracy:
1.0000

Epoch 2021/5000
1/1 [=====] - 0s 998us/step - loss: 0.0230 - accuracy:
1.0000

Epoch 2022/5000
1/1 [=====] - 0s 0s/step - loss: 0.0230 - accuracy:
1.0000

Epoch 2023/5000
1/1 [=====] - 0s 996us/step - loss: 0.0230 - accuracy:
1.0000

Epoch 2024/5000
1/1 [=====] - 0s 0s/step - loss: 0.0229 - accuracy:
1.0000

Epoch 2025/5000
1/1 [=====] - 0s 0s/step - loss: 0.0229 - accuracy:
1.0000

Epoch 2026/5000
1/1 [=====] - 0s 998us/step - loss: 0.0229 - accuracy:
1.0000

Epoch 2027/5000
1/1 [=====] - 0s 998us/step - loss: 0.0228 - accuracy:
1.0000

Epoch 2028/5000
1/1 [=====] - 0s 0s/step - loss: 0.0228 - accuracy:
1.0000

Epoch 2029/5000
1/1 [=====] - 0s 996us/step - loss: 0.0228 - accuracy:
1.0000

Epoch 2030/5000
1/1 [=====] - 0s 0s/step - loss: 0.0228 - accuracy:
1.0000

Epoch 2031/5000
1/1 [=====] - 0s 0s/step - loss: 0.0227 - accuracy:
1.0000

Epoch 2032/5000
1/1 [=====] - 0s 0s/step - loss: 0.0227 - accuracy:
1.0000

Epoch 2033/5000
1/1 [=====] - 0s 0s/step - loss: 0.0227 - accuracy:
1.0000

Epoch 2034/5000
1/1 [=====] - 0s 0s/step - loss: 0.0227 - accuracy:
1.0000

Epoch 2035/5000
1/1 [=====] - 0s 0s/step - loss: 0.0226 - accuracy:
1.0000

Epoch 2036/5000
1/1 [=====] - 0s 0s/step - loss: 0.0226 - accuracy:
1.0000

Epoch 2037/5000
1/1 [=====] - 0s 997us/step - loss: 0.0226 - accuracy:
1.0000

Epoch 2038/5000
1/1 [=====] - 0s 997us/step - loss: 0.0225 - accuracy:
1.0000

Epoch 2039/5000
1/1 [=====] - 0s 0s/step - loss: 0.0225 - accuracy:
1.0000

Epoch 2040/5000
1/1 [=====] - 0s 0s/step - loss: 0.0225 - accuracy:
1.0000

Epoch 2041/5000
1/1 [=====] - 0s 0s/step - loss: 0.0225 - accuracy:
1.0000

Epoch 2042/5000
1/1 [=====] - 0s 998us/step - loss: 0.0224 - accuracy:
1.0000

Epoch 2043/5000
1/1 [=====] - 0s 998us/step - loss: 0.0224 - accuracy:
1.0000

Epoch 2044/5000
1/1 [=====] - 0s 0s/step - loss: 0.0224 - accuracy:
1.0000

Epoch 2045/5000
1/1 [=====] - 0s 997us/step - loss: 0.0224 - accuracy:
1.0000

Epoch 2046/5000
1/1 [=====] - 0s 0s/step - loss: 0.0223 - accuracy:
1.0000

Epoch 2047/5000
1/1 [=====] - 0s 0s/step - loss: 0.0223 - accuracy:
1.0000

Epoch 2048/5000
1/1 [=====] - 0s 0s/step - loss: 0.0223 - accuracy:
1.0000

Epoch 2049/5000
1/1 [=====] - 0s 0s/step - loss: 0.0222 - accuracy:
1.0000

Epoch 2050/5000
1/1 [=====] - 0s 996us/step - loss: 0.0222 - accuracy:
1.0000

Epoch 2051/5000
1/1 [=====] - 0s 0s/step - loss: 0.0222 - accuracy:
1.0000

Epoch 2052/5000
1/1 [=====] - 0s 997us/step - loss: 0.0222 - accuracy:
1.0000

Epoch 2053/5000
1/1 [=====] - 0s 0s/step - loss: 0.0221 - accuracy:
1.0000

Epoch 2054/5000
1/1 [=====] - 0s 997us/step - loss: 0.0221 - accuracy:
1.0000

Epoch 2055/5000
1/1 [=====] - 0s 997us/step - loss: 0.0221 - accuracy:
1.0000

Epoch 2056/5000
1/1 [=====] - 0s 0s/step - loss: 0.0221 - accuracy:
1.0000

Epoch 2057/5000
1/1 [=====] - 0s 997us/step - loss: 0.0220 - accuracy:
1.0000

Epoch 2058/5000
1/1 [=====] - 0s 0s/step - loss: 0.0220 - accuracy:
1.0000

Epoch 2059/5000
1/1 [=====] - 0s 0s/step - loss: 0.0220 - accuracy:
1.0000

Epoch 2060/5000
1/1 [=====] - 0s 0s/step - loss: 0.0220 - accuracy:
1.0000

Epoch 2061/5000
1/1 [=====] - 0s 0s/step - loss: 0.0219 - accuracy:
1.0000

Epoch 2062/5000
1/1 [=====] - 0s 998us/step - loss: 0.0219 - accuracy:
1.0000

Epoch 2063/5000
1/1 [=====] - 0s 998us/step - loss: 0.0219 - accuracy:
1.0000

Epoch 2064/5000
1/1 [=====] - 0s 998us/step - loss: 0.0218 - accuracy:
1.0000

Epoch 2065/5000
1/1 [=====] - 0s 998us/step - loss: 0.0218 - accuracy:
1.0000

Epoch 2066/5000
1/1 [=====] - 0s 999us/step - loss: 0.0218 - accuracy:
1.0000

Epoch 2067/5000
1/1 [=====] - 0s 0s/step - loss: 0.0218 - accuracy:
1.0000

Epoch 2068/5000
1/1 [=====] - 0s 0s/step - loss: 0.0217 - accuracy:
1.0000

Epoch 2069/5000
1/1 [=====] - 0s 998us/step - loss: 0.0217 - accuracy:
1.0000

Epoch 2070/5000
1/1 [=====] - 0s 997us/step - loss: 0.0217 - accuracy:
1.0000

Epoch 2071/5000
1/1 [=====] - 0s 998us/step - loss: 0.0217 - accuracy:
1.0000

Epoch 2072/5000
1/1 [=====] - 0s 998us/step - loss: 0.0216 - accuracy:
1.0000
Epoch 2073/5000
1/1 [=====] - 0s 0s/step - loss: 0.0216 - accuracy:
1.0000
Epoch 2074/5000
1/1 [=====] - 0s 997us/step - loss: 0.0216 - accuracy:
1.0000
Epoch 2075/5000
1/1 [=====] - 0s 0s/step - loss: 0.0216 - accuracy:
1.0000
Epoch 2076/5000
1/1 [=====] - 0s 0s/step - loss: 0.0215 - accuracy:
1.0000
Epoch 2077/5000
1/1 [=====] - 0s 0s/step - loss: 0.0215 - accuracy:
1.0000
Epoch 2078/5000
1/1 [=====] - 0s 998us/step - loss: 0.0215 - accuracy:
1.0000
Epoch 2079/5000
1/1 [=====] - 0s 0s/step - loss: 0.0215 - accuracy:
1.0000
Epoch 2080/5000
1/1 [=====] - 0s 0s/step - loss: 0.0214 - accuracy:
1.0000
Epoch 2081/5000
1/1 [=====] - 0s 0s/step - loss: 0.0214 - accuracy:
1.0000
Epoch 2082/5000
1/1 [=====] - 0s 998us/step - loss: 0.0214 - accuracy:
1.0000
Epoch 2083/5000
1/1 [=====] - 0s 997us/step - loss: 0.0214 - accuracy:
1.0000
Epoch 2084/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0213 - accuracy:
1.0000
Epoch 2085/5000
1/1 [=====] - 0s 0s/step - loss: 0.0213 - accuracy:
1.0000
Epoch 2086/5000
1/1 [=====] - 0s 0s/step - loss: 0.0213 - accuracy:
1.0000
Epoch 2087/5000
1/1 [=====] - 0s 0s/step - loss: 0.0213 - accuracy:
1.0000

Epoch 2088/5000
1/1 [=====] - 0s 998us/step - loss: 0.0212 - accuracy: 1.0000

Epoch 2089/5000
1/1 [=====] - 0s 997us/step - loss: 0.0212 - accuracy: 1.0000

Epoch 2090/5000
1/1 [=====] - 0s 997us/step - loss: 0.0212 - accuracy: 1.0000

Epoch 2091/5000
1/1 [=====] - 0s 997us/step - loss: 0.0212 - accuracy: 1.0000

Epoch 2092/5000
1/1 [=====] - 0s 0s/step - loss: 0.0211 - accuracy: 1.0000

Epoch 2093/5000
1/1 [=====] - 0s 0s/step - loss: 0.0211 - accuracy: 1.0000

Epoch 2094/5000
1/1 [=====] - 0s 0s/step - loss: 0.0211 - accuracy: 1.0000

Epoch 2095/5000
1/1 [=====] - 0s 0s/step - loss: 0.0211 - accuracy: 1.0000

Epoch 2096/5000
1/1 [=====] - 0s 0s/step - loss: 0.0210 - accuracy: 1.0000

Epoch 2097/5000
1/1 [=====] - 0s 0s/step - loss: 0.0210 - accuracy: 1.0000

Epoch 2098/5000
1/1 [=====] - 0s 0s/step - loss: 0.0210 - accuracy: 1.0000

Epoch 2099/5000
1/1 [=====] - 0s 0s/step - loss: 0.0210 - accuracy: 1.0000

Epoch 2100/5000
1/1 [=====] - 0s 0s/step - loss: 0.0209 - accuracy: 1.0000

Epoch 2101/5000
1/1 [=====] - 0s 0s/step - loss: 0.0209 - accuracy: 1.0000

Epoch 2102/5000
1/1 [=====] - 0s 0s/step - loss: 0.0209 - accuracy: 1.0000

Epoch 2103/5000
1/1 [=====] - 0s 0s/step - loss: 0.0209 - accuracy: 1.0000

Epoch 2104/5000
1/1 [=====] - 0s 997us/step - loss: 0.0208 - accuracy: 1.0000

Epoch 2105/5000
1/1 [=====] - 0s 997us/step - loss: 0.0208 - accuracy: 1.0000

Epoch 2106/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0208 - accuracy: 1.0000

Epoch 2107/5000
1/1 [=====] - 0s 995us/step - loss: 0.0208 - accuracy: 1.0000

Epoch 2108/5000
1/1 [=====] - 0s 0s/step - loss: 0.0207 - accuracy: 1.0000

Epoch 2109/5000
1/1 [=====] - 0s 0s/step - loss: 0.0207 - accuracy: 1.0000

Epoch 2110/5000
1/1 [=====] - 0s 997us/step - loss: 0.0207 - accuracy: 1.0000

Epoch 2111/5000
1/1 [=====] - 0s 997us/step - loss: 0.0207 - accuracy: 1.0000

Epoch 2112/5000
1/1 [=====] - 0s 0s/step - loss: 0.0206 - accuracy: 1.0000

Epoch 2113/5000
1/1 [=====] - 0s 0s/step - loss: 0.0206 - accuracy: 1.0000

Epoch 2114/5000
1/1 [=====] - 0s 6ms/step - loss: 0.0206 - accuracy: 1.0000

Epoch 2115/5000
1/1 [=====] - 0s 998us/step - loss: 0.0206 - accuracy: 1.0000

Epoch 2116/5000
1/1 [=====] - 0s 998us/step - loss: 0.0205 - accuracy: 1.0000

Epoch 2117/5000
1/1 [=====] - 0s 0s/step - loss: 0.0205 - accuracy: 1.0000

Epoch 2118/5000
1/1 [=====] - 0s 0s/step - loss: 0.0205 - accuracy: 1.0000

Epoch 2119/5000
1/1 [=====] - 0s 0s/step - loss: 0.0205 - accuracy: 1.0000

Epoch 2120/5000
1/1 [=====] - 0s 0s/step - loss: 0.0204 - accuracy:
1.0000
Epoch 2121/5000
1/1 [=====] - 0s 998us/step - loss: 0.0204 - accuracy:
1.0000
Epoch 2122/5000
1/1 [=====] - 0s 0s/step - loss: 0.0204 - accuracy:
1.0000
Epoch 2123/5000
1/1 [=====] - 0s 0s/step - loss: 0.0204 - accuracy:
1.0000
Epoch 2124/5000
1/1 [=====] - 0s 0s/step - loss: 0.0203 - accuracy:
1.0000
Epoch 2125/5000
1/1 [=====] - 0s 997us/step - loss: 0.0203 - accuracy:
1.0000
Epoch 2126/5000
1/1 [=====] - 0s 997us/step - loss: 0.0203 - accuracy:
1.0000
Epoch 2127/5000
1/1 [=====] - 0s 0s/step - loss: 0.0203 - accuracy:
1.0000
Epoch 2128/5000
1/1 [=====] - 0s 0s/step - loss: 0.0202 - accuracy:
1.0000
Epoch 2129/5000
1/1 [=====] - 0s 0s/step - loss: 0.0202 - accuracy:
1.0000
Epoch 2130/5000
1/1 [=====] - 0s 0s/step - loss: 0.0202 - accuracy:
1.0000
Epoch 2131/5000
1/1 [=====] - 0s 998us/step - loss: 0.0202 - accuracy:
1.0000
Epoch 2132/5000
1/1 [=====] - 0s 998us/step - loss: 0.0202 - accuracy:
1.0000
Epoch 2133/5000
1/1 [=====] - 0s 0s/step - loss: 0.0201 - accuracy:
1.0000
Epoch 2134/5000
1/1 [=====] - 0s 0s/step - loss: 0.0201 - accuracy:
1.0000
Epoch 2135/5000
1/1 [=====] - 0s 0s/step - loss: 0.0201 - accuracy:
1.0000

Epoch 2136/5000
1/1 [=====] - 0s 998us/step - loss: 0.0201 - accuracy:
1.0000

Epoch 2137/5000
1/1 [=====] - 0s 0s/step - loss: 0.0200 - accuracy:
1.0000

Epoch 2138/5000
1/1 [=====] - 0s 0s/step - loss: 0.0200 - accuracy:
1.0000

Epoch 2139/5000
1/1 [=====] - 0s 998us/step - loss: 0.0200 - accuracy:
1.0000

Epoch 2140/5000
1/1 [=====] - 0s 0s/step - loss: 0.0200 - accuracy:
1.0000

Epoch 2141/5000
1/1 [=====] - 0s 0s/step - loss: 0.0199 - accuracy:
1.0000

Epoch 2142/5000
1/1 [=====] - 0s 0s/step - loss: 0.0199 - accuracy:
1.0000

Epoch 2143/5000
1/1 [=====] - 0s 997us/step - loss: 0.0199 - accuracy:
1.0000

Epoch 2144/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0199 - accuracy:
1.0000

Epoch 2145/5000
1/1 [=====] - 0s 998us/step - loss: 0.0198 - accuracy:
1.0000

Epoch 2146/5000
1/1 [=====] - 0s 0s/step - loss: 0.0198 - accuracy:
1.0000

Epoch 2147/5000
1/1 [=====] - 0s 0s/step - loss: 0.0198 - accuracy:
1.0000

Epoch 2148/5000
1/1 [=====] - 0s 997us/step - loss: 0.0198 - accuracy:
1.0000

Epoch 2149/5000
1/1 [=====] - 0s 997us/step - loss: 0.0198 - accuracy:
1.0000

Epoch 2150/5000
1/1 [=====] - 0s 997us/step - loss: 0.0197 - accuracy:
1.0000

Epoch 2151/5000
1/1 [=====] - 0s 998us/step - loss: 0.0197 - accuracy:
1.0000

Epoch 2152/5000
1/1 [=====] - 0s 0s/step - loss: 0.0197 - accuracy:
1.0000

Epoch 2153/5000
1/1 [=====] - 0s 998us/step - loss: 0.0197 - accuracy:
1.0000

Epoch 2154/5000
1/1 [=====] - 0s 998us/step - loss: 0.0196 - accuracy:
1.0000

Epoch 2155/5000
1/1 [=====] - 0s 0s/step - loss: 0.0196 - accuracy:
1.0000

Epoch 2156/5000
1/1 [=====] - 0s 997us/step - loss: 0.0196 - accuracy:
1.0000

Epoch 2157/5000
1/1 [=====] - 0s 0s/step - loss: 0.0196 - accuracy:
1.0000

Epoch 2158/5000
1/1 [=====] - 0s 997us/step - loss: 0.0195 - accuracy:
1.0000

Epoch 2159/5000
1/1 [=====] - 0s 997us/step - loss: 0.0195 - accuracy:
1.0000

Epoch 2160/5000
1/1 [=====] - 0s 0s/step - loss: 0.0195 - accuracy:
1.0000

Epoch 2161/5000
1/1 [=====] - 0s 997us/step - loss: 0.0195 - accuracy:
1.0000

Epoch 2162/5000
1/1 [=====] - 0s 998us/step - loss: 0.0195 - accuracy:
1.0000

Epoch 2163/5000
1/1 [=====] - 0s 997us/step - loss: 0.0194 - accuracy:
1.0000

Epoch 2164/5000
1/1 [=====] - 0s 0s/step - loss: 0.0194 - accuracy:
1.0000

Epoch 2165/5000
1/1 [=====] - 0s 0s/step - loss: 0.0194 - accuracy:
1.0000

Epoch 2166/5000
1/1 [=====] - 0s 998us/step - loss: 0.0194 - accuracy:
1.0000

Epoch 2167/5000
1/1 [=====] - 0s 998us/step - loss: 0.0193 - accuracy:
1.0000

Epoch 2168/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0193 - accuracy:
1.0000

Epoch 2169/5000
1/1 [=====] - 0s 0s/step - loss: 0.0193 - accuracy:
1.0000

Epoch 2170/5000
1/1 [=====] - 0s 0s/step - loss: 0.0193 - accuracy:
1.0000

Epoch 2171/5000
1/1 [=====] - 0s 0s/step - loss: 0.0193 - accuracy:
1.0000

Epoch 2172/5000
1/1 [=====] - 0s 0s/step - loss: 0.0192 - accuracy:
1.0000

Epoch 2173/5000
1/1 [=====] - 0s 0s/step - loss: 0.0192 - accuracy:
1.0000

Epoch 2174/5000
1/1 [=====] - 0s 0s/step - loss: 0.0192 - accuracy:
1.0000

Epoch 2175/5000
1/1 [=====] - 0s 0s/step - loss: 0.0192 - accuracy:
1.0000

Epoch 2176/5000
1/1 [=====] - 0s 0s/step - loss: 0.0191 - accuracy:
1.0000

Epoch 2177/5000
1/1 [=====] - 0s 0s/step - loss: 0.0191 - accuracy:
1.0000

Epoch 2178/5000
1/1 [=====] - 0s 0s/step - loss: 0.0191 - accuracy:
1.0000

Epoch 2179/5000
1/1 [=====] - 0s 0s/step - loss: 0.0191 - accuracy:
1.0000

Epoch 2180/5000
1/1 [=====] - 0s 0s/step - loss: 0.0191 - accuracy:
1.0000

Epoch 2181/5000
1/1 [=====] - 0s 0s/step - loss: 0.0190 - accuracy:
1.0000

Epoch 2182/5000
1/1 [=====] - 0s 0s/step - loss: 0.0190 - accuracy:
1.0000

Epoch 2183/5000
1/1 [=====] - 0s 997us/step - loss: 0.0190 - accuracy:
1.0000

Epoch 2184/5000
1/1 [=====] - 0s 0s/step - loss: 0.0190 - accuracy:
1.0000

Epoch 2185/5000
1/1 [=====] - 0s 0s/step - loss: 0.0189 - accuracy:
1.0000

Epoch 2186/5000
1/1 [=====] - 0s 998us/step - loss: 0.0189 - accuracy:
1.0000

Epoch 2187/5000
1/1 [=====] - 0s 997us/step - loss: 0.0189 - accuracy:
1.0000

Epoch 2188/5000
1/1 [=====] - 0s 998us/step - loss: 0.0189 - accuracy:
1.0000

Epoch 2189/5000
1/1 [=====] - 0s 0s/step - loss: 0.0189 - accuracy:
1.0000

Epoch 2190/5000
1/1 [=====] - 0s 0s/step - loss: 0.0188 - accuracy:
1.0000

Epoch 2191/5000
1/1 [=====] - 0s 0s/step - loss: 0.0188 - accuracy:
1.0000

Epoch 2192/5000
1/1 [=====] - 0s 0s/step - loss: 0.0188 - accuracy:
1.0000

Epoch 2193/5000
1/1 [=====] - 0s 998us/step - loss: 0.0188 - accuracy:
1.0000

Epoch 2194/5000
1/1 [=====] - 0s 0s/step - loss: 0.0188 - accuracy:
1.0000

Epoch 2195/5000
1/1 [=====] - 0s 0s/step - loss: 0.0187 - accuracy:
1.0000

Epoch 2196/5000
1/1 [=====] - 0s 0s/step - loss: 0.0187 - accuracy:
1.0000

Epoch 2197/5000
1/1 [=====] - 0s 0s/step - loss: 0.0187 - accuracy:
1.0000

Epoch 2198/5000
1/1 [=====] - 0s 0s/step - loss: 0.0187 - accuracy:
1.0000

Epoch 2199/5000
1/1 [=====] - 0s 998us/step - loss: 0.0186 - accuracy:
1.0000

Epoch 2200/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0186 - accuracy:
1.0000

Epoch 2201/5000
1/1 [=====] - 0s 0s/step - loss: 0.0186 - accuracy:
1.0000

Epoch 2202/5000
1/1 [=====] - 0s 0s/step - loss: 0.0186 - accuracy:
1.0000

Epoch 2203/5000
1/1 [=====] - 0s 0s/step - loss: 0.0186 - accuracy:
1.0000

Epoch 2204/5000
1/1 [=====] - 0s 998us/step - loss: 0.0185 - accuracy:
1.0000

Epoch 2205/5000
1/1 [=====] - 0s 997us/step - loss: 0.0185 - accuracy:
1.0000

Epoch 2206/5000
1/1 [=====] - 0s 0s/step - loss: 0.0185 - accuracy:
1.0000

Epoch 2207/5000
1/1 [=====] - 0s 0s/step - loss: 0.0185 - accuracy:
1.0000

Epoch 2208/5000
1/1 [=====] - 0s 0s/step - loss: 0.0185 - accuracy:
1.0000

Epoch 2209/5000
1/1 [=====] - 0s 0s/step - loss: 0.0184 - accuracy:
1.0000

Epoch 2210/5000
1/1 [=====] - 0s 996us/step - loss: 0.0184 - accuracy:
1.0000

Epoch 2211/5000
1/1 [=====] - 0s 996us/step - loss: 0.0184 - accuracy:
1.0000

Epoch 2212/5000
1/1 [=====] - 0s 997us/step - loss: 0.0184 - accuracy:
1.0000

Epoch 2213/5000
1/1 [=====] - 0s 0s/step - loss: 0.0183 - accuracy:
1.0000

Epoch 2214/5000
1/1 [=====] - 0s 0s/step - loss: 0.0183 - accuracy:
1.0000

Epoch 2215/5000
1/1 [=====] - 0s 0s/step - loss: 0.0183 - accuracy:
1.0000

Epoch 2216/5000
1/1 [=====] - 0s 0s/step - loss: 0.0183 - accuracy:
1.0000

Epoch 2217/5000
1/1 [=====] - 0s 998us/step - loss: 0.0183 - accuracy:
1.0000

Epoch 2218/5000
1/1 [=====] - 0s 997us/step - loss: 0.0182 - accuracy:
1.0000

Epoch 2219/5000
1/1 [=====] - 0s 998us/step - loss: 0.0182 - accuracy:
1.0000

Epoch 2220/5000
1/1 [=====] - 0s 0s/step - loss: 0.0182 - accuracy:
1.0000

Epoch 2221/5000
1/1 [=====] - 0s 0s/step - loss: 0.0182 - accuracy:
1.0000

Epoch 2222/5000
1/1 [=====] - 0s 0s/step - loss: 0.0182 - accuracy:
1.0000

Epoch 2223/5000
1/1 [=====] - 0s 0s/step - loss: 0.0181 - accuracy:
1.0000

Epoch 2224/5000
1/1 [=====] - 0s 998us/step - loss: 0.0181 - accuracy:
1.0000

Epoch 2225/5000
1/1 [=====] - 0s 0s/step - loss: 0.0181 - accuracy:
1.0000

Epoch 2226/5000
1/1 [=====] - 0s 998us/step - loss: 0.0181 - accuracy:
1.0000

Epoch 2227/5000
1/1 [=====] - 0s 998us/step - loss: 0.0181 - accuracy:
1.0000

Epoch 2228/5000
1/1 [=====] - 0s 0s/step - loss: 0.0180 - accuracy:
1.0000

Epoch 2229/5000
1/1 [=====] - 0s 998us/step - loss: 0.0180 - accuracy:
1.0000

Epoch 2230/5000
1/1 [=====] - 0s 998us/step - loss: 0.0180 - accuracy:
1.0000

Epoch 2231/5000
1/1 [=====] - 0s 998us/step - loss: 0.0180 - accuracy:
1.0000

Epoch 2232/5000
1/1 [=====] - 0s 998us/step - loss: 0.0180 - accuracy:
1.0000

Epoch 2233/5000
1/1 [=====] - 0s 0s/step - loss: 0.0179 - accuracy:
1.0000

Epoch 2234/5000
1/1 [=====] - 0s 997us/step - loss: 0.0179 - accuracy:
1.0000

Epoch 2235/5000
1/1 [=====] - 0s 998us/step - loss: 0.0179 - accuracy:
1.0000

Epoch 2236/5000
1/1 [=====] - 0s 0s/step - loss: 0.0179 - accuracy:
1.0000

Epoch 2237/5000
1/1 [=====] - 0s 994us/step - loss: 0.0179 - accuracy:
1.0000

Epoch 2238/5000
1/1 [=====] - 0s 997us/step - loss: 0.0178 - accuracy:
1.0000

Epoch 2239/5000
1/1 [=====] - 0s 998us/step - loss: 0.0178 - accuracy:
1.0000

Epoch 2240/5000
1/1 [=====] - 0s 997us/step - loss: 0.0178 - accuracy:
1.0000

Epoch 2241/5000
1/1 [=====] - 0s 997us/step - loss: 0.0178 - accuracy:
1.0000

Epoch 2242/5000
1/1 [=====] - 0s 997us/step - loss: 0.0178 - accuracy:
1.0000

Epoch 2243/5000
1/1 [=====] - 0s 0s/step - loss: 0.0177 - accuracy:
1.0000

Epoch 2244/5000
1/1 [=====] - 0s 997us/step - loss: 0.0177 - accuracy:
1.0000

Epoch 2245/5000
1/1 [=====] - 0s 0s/step - loss: 0.0177 - accuracy:
1.0000

Epoch 2246/5000
1/1 [=====] - 0s 997us/step - loss: 0.0177 - accuracy:
1.0000

Epoch 2247/5000
1/1 [=====] - 0s 997us/step - loss: 0.0177 - accuracy:
1.0000

Epoch 2248/5000
1/1 [=====] - 0s 998us/step - loss: 0.0176 - accuracy:
1.0000

Epoch 2249/5000
1/1 [=====] - 0s 998us/step - loss: 0.0176 - accuracy:
1.0000

Epoch 2250/5000
1/1 [=====] - 0s 997us/step - loss: 0.0176 - accuracy:
1.0000

Epoch 2251/5000
1/1 [=====] - 0s 0s/step - loss: 0.0176 - accuracy:
1.0000

Epoch 2252/5000
1/1 [=====] - 0s 997us/step - loss: 0.0176 - accuracy:
1.0000

Epoch 2253/5000
1/1 [=====] - 0s 998us/step - loss: 0.0175 - accuracy:
1.0000

Epoch 2254/5000
1/1 [=====] - 0s 998us/step - loss: 0.0175 - accuracy:
1.0000

Epoch 2255/5000
1/1 [=====] - 0s 0s/step - loss: 0.0175 - accuracy:
1.0000

Epoch 2256/5000
1/1 [=====] - 0s 997us/step - loss: 0.0175 - accuracy:
1.0000

Epoch 2257/5000
1/1 [=====] - 0s 997us/step - loss: 0.0175 - accuracy:
1.0000

Epoch 2258/5000
1/1 [=====] - 0s 996us/step - loss: 0.0174 - accuracy:
1.0000

Epoch 2259/5000
1/1 [=====] - 0s 997us/step - loss: 0.0174 - accuracy:
1.0000

Epoch 2260/5000
1/1 [=====] - 0s 0s/step - loss: 0.0174 - accuracy:
1.0000

Epoch 2261/5000
1/1 [=====] - 0s 0s/step - loss: 0.0174 - accuracy:
1.0000

Epoch 2262/5000
1/1 [=====] - 0s 997us/step - loss: 0.0174 - accuracy:
1.0000

Epoch 2263/5000
1/1 [=====] - 0s 997us/step - loss: 0.0173 - accuracy:
1.0000

Epoch 2264/5000
1/1 [=====] - 0s 998us/step - loss: 0.0173 - accuracy:
1.0000

Epoch 2265/5000
1/1 [=====] - 0s 998us/step - loss: 0.0173 - accuracy:
1.0000

Epoch 2266/5000
1/1 [=====] - 0s 997us/step - loss: 0.0173 - accuracy:
1.0000

Epoch 2267/5000
1/1 [=====] - 0s 997us/step - loss: 0.0173 - accuracy:
1.0000

Epoch 2268/5000
1/1 [=====] - 0s 998us/step - loss: 0.0172 - accuracy:
1.0000

Epoch 2269/5000
1/1 [=====] - 0s 997us/step - loss: 0.0172 - accuracy:
1.0000

Epoch 2270/5000
1/1 [=====] - 0s 0s/step - loss: 0.0172 - accuracy:
1.0000

Epoch 2271/5000
1/1 [=====] - 0s 0s/step - loss: 0.0172 - accuracy:
1.0000

Epoch 2272/5000
1/1 [=====] - 0s 997us/step - loss: 0.0172 - accuracy:
1.0000

Epoch 2273/5000
1/1 [=====] - 0s 997us/step - loss: 0.0171 - accuracy:
1.0000

Epoch 2274/5000
1/1 [=====] - 0s 998us/step - loss: 0.0171 - accuracy:
1.0000

Epoch 2275/5000
1/1 [=====] - 0s 996us/step - loss: 0.0171 - accuracy:
1.0000

Epoch 2276/5000
1/1 [=====] - 0s 998us/step - loss: 0.0171 - accuracy:
1.0000

Epoch 2277/5000
1/1 [=====] - 0s 0s/step - loss: 0.0171 - accuracy:
1.0000

Epoch 2278/5000
1/1 [=====] - 0s 0s/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2279/5000
1/1 [=====] - 0s 0s/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2280/5000
1/1 [=====] - 0s 997us/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2281/5000
1/1 [=====] - 0s 998us/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2282/5000
1/1 [=====] - 0s 0s/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2283/5000
1/1 [=====] - 0s 0s/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2284/5000
1/1 [=====] - 0s 0s/step - loss: 0.0169 - accuracy:
1.0000

Epoch 2285/5000
1/1 [=====] - 0s 0s/step - loss: 0.0169 - accuracy:
1.0000

Epoch 2286/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0169 - accuracy:
1.0000

Epoch 2287/5000
1/1 [=====] - 0s 0s/step - loss: 0.0169 - accuracy:
1.0000

Epoch 2288/5000
1/1 [=====] - 0s 996us/step - loss: 0.0169 - accuracy:
1.0000

Epoch 2289/5000
1/1 [=====] - 0s 997us/step - loss: 0.0168 - accuracy:
1.0000

Epoch 2290/5000
1/1 [=====] - 0s 996us/step - loss: 0.0168 - accuracy:
1.0000

Epoch 2291/5000
1/1 [=====] - 0s 0s/step - loss: 0.0168 - accuracy:
1.0000

Epoch 2292/5000
1/1 [=====] - 0s 0s/step - loss: 0.0168 - accuracy:
1.0000

Epoch 2293/5000
1/1 [=====] - 0s 0s/step - loss: 0.0168 - accuracy:
1.0000

Epoch 2294/5000
1/1 [=====] - 0s 0s/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2295/5000
1/1 [=====] - 0s 998us/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2296/5000
1/1 [=====] - 0s 997us/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2297/5000
1/1 [=====] - 0s 998us/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2298/5000
1/1 [=====] - 0s 998us/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2299/5000
1/1 [=====] - 0s 997us/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2300/5000
1/1 [=====] - 0s 0s/step - loss: 0.0166 - accuracy:
1.0000

Epoch 2301/5000
1/1 [=====] - 0s 998us/step - loss: 0.0166 - accuracy:
1.0000

Epoch 2302/5000
1/1 [=====] - 0s 997us/step - loss: 0.0166 - accuracy:
1.0000

Epoch 2303/5000
1/1 [=====] - 0s 0s/step - loss: 0.0166 - accuracy:
1.0000

Epoch 2304/5000
1/1 [=====] - 0s 0s/step - loss: 0.0166 - accuracy:
1.0000

Epoch 2305/5000
1/1 [=====] - 0s 0s/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2306/5000
1/1 [=====] - 0s 997us/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2307/5000
1/1 [=====] - 0s 998us/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2308/5000
1/1 [=====] - 0s 0s/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2309/5000
1/1 [=====] - 0s 0s/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2310/5000
1/1 [=====] - 0s 997us/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2311/5000
1/1 [=====] - 0s 998us/step - loss: 0.0164 - accuracy:
1.0000

Epoch 2312/5000
1/1 [=====] - 0s 997us/step - loss: 0.0164 - accuracy:
1.0000

Epoch 2313/5000
1/1 [=====] - 0s 0s/step - loss: 0.0164 - accuracy:
1.0000

Epoch 2314/5000
1/1 [=====] - 0s 0s/step - loss: 0.0164 - accuracy:
1.0000

Epoch 2315/5000
1/1 [=====] - 0s 0s/step - loss: 0.0164 - accuracy:
1.0000

Epoch 2316/5000
1/1 [=====] - 0s 0s/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2317/5000
1/1 [=====] - 0s 0s/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2318/5000
1/1 [=====] - 0s 0s/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2319/5000
1/1 [=====] - 0s 0s/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2320/5000
1/1 [=====] - 0s 0s/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2321/5000
1/1 [=====] - 0s 0s/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2322/5000
1/1 [=====] - 0s 997us/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2323/5000
1/1 [=====] - 0s 998us/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2324/5000
1/1 [=====] - 0s 0s/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2325/5000
1/1 [=====] - 0s 0s/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2326/5000
1/1 [=====] - 0s 0s/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2327/5000
1/1 [=====] - 0s 0s/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2328/5000
1/1 [=====] - 0s 0s/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2329/5000
1/1 [=====] - 0s 998us/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2330/5000
1/1 [=====] - 0s 997us/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2331/5000
1/1 [=====] - 0s 0s/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2332/5000
1/1 [=====] - 0s 998us/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2333/5000
1/1 [=====] - 0s 0s/step - loss: 0.0160 - accuracy:
1.0000

Epoch 2334/5000
1/1 [=====] - 0s 997us/step - loss: 0.0160 - accuracy:
1.0000

Epoch 2335/5000
1/1 [=====] - 0s 0s/step - loss: 0.0160 - accuracy:
1.0000

Epoch 2336/5000
1/1 [=====] - 0s 998us/step - loss: 0.0160 - accuracy:
1.0000

Epoch 2337/5000
1/1 [=====] - 0s 998us/step - loss: 0.0160 - accuracy:
1.0000

Epoch 2338/5000
1/1 [=====] - 0s 0s/step - loss: 0.0160 - accuracy:
1.0000

Epoch 2339/5000
1/1 [=====] - 0s 998us/step - loss: 0.0159 - accuracy:
1.0000

Epoch 2340/5000
1/1 [=====] - 0s 0s/step - loss: 0.0159 - accuracy:
1.0000

Epoch 2341/5000
1/1 [=====] - 0s 997us/step - loss: 0.0159 - accuracy:
1.0000

Epoch 2342/5000
1/1 [=====] - 0s 0s/step - loss: 0.0159 - accuracy:
1.0000

Epoch 2343/5000
1/1 [=====] - 0s 0s/step - loss: 0.0159 - accuracy:
1.0000

Epoch 2344/5000
1/1 [=====] - 0s 0s/step - loss: 0.0158 - accuracy:
1.0000

Epoch 2345/5000
1/1 [=====] - 0s 998us/step - loss: 0.0158 - accuracy:
1.0000

Epoch 2346/5000
1/1 [=====] - 0s 0s/step - loss: 0.0158 - accuracy:
1.0000

Epoch 2347/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0158 - accuracy:
1.0000

Epoch 2348/5000
1/1 [=====] - 0s 0s/step - loss: 0.0158 - accuracy:
1.0000

Epoch 2349/5000
1/1 [=====] - 0s 998us/step - loss: 0.0158 - accuracy:
1.0000

Epoch 2350/5000
1/1 [=====] - 0s 0s/step - loss: 0.0157 - accuracy:
1.0000

Epoch 2351/5000
1/1 [=====] - 0s 0s/step - loss: 0.0157 - accuracy:
1.0000

Epoch 2352/5000
1/1 [=====] - 0s 0s/step - loss: 0.0157 - accuracy:
1.0000

Epoch 2353/5000
1/1 [=====] - 0s 0s/step - loss: 0.0157 - accuracy:
1.0000

Epoch 2354/5000
1/1 [=====] - 0s 997us/step - loss: 0.0157 - accuracy:
1.0000

Epoch 2355/5000
1/1 [=====] - 0s 0s/step - loss: 0.0157 - accuracy:
1.0000

Epoch 2356/5000
1/1 [=====] - 0s 0s/step - loss: 0.0156 - accuracy:
1.0000

Epoch 2357/5000
1/1 [=====] - 0s 0s/step - loss: 0.0156 - accuracy:
1.0000

Epoch 2358/5000
1/1 [=====] - 0s 0s/step - loss: 0.0156 - accuracy:
1.0000

Epoch 2359/5000
1/1 [=====] - 0s 998us/step - loss: 0.0156 - accuracy:
1.0000

Epoch 2360/5000
1/1 [=====] - 0s 0s/step - loss: 0.0156 - accuracy:
1.0000

Epoch 2361/5000
1/1 [=====] - 0s 997us/step - loss: 0.0156 - accuracy:
1.0000

Epoch 2362/5000
1/1 [=====] - 0s 998us/step - loss: 0.0155 - accuracy:
1.0000

Epoch 2363/5000
1/1 [=====] - 0s 997us/step - loss: 0.0155 - accuracy:
1.0000

Epoch 2364/5000
1/1 [=====] - 0s 998us/step - loss: 0.0155 - accuracy:
1.0000

Epoch 2365/5000
1/1 [=====] - 0s 998us/step - loss: 0.0155 - accuracy:
1.0000

Epoch 2366/5000
1/1 [=====] - 0s 0s/step - loss: 0.0155 - accuracy:
1.0000

Epoch 2367/5000
1/1 [=====] - 0s 999us/step - loss: 0.0155 - accuracy:
1.0000

Epoch 2368/5000
1/1 [=====] - 0s 998us/step - loss: 0.0154 - accuracy:
1.0000

Epoch 2369/5000
1/1 [=====] - 0s 998us/step - loss: 0.0154 - accuracy:
1.0000

Epoch 2370/5000
1/1 [=====] - 0s 998us/step - loss: 0.0154 - accuracy:
1.0000

Epoch 2371/5000
1/1 [=====] - 0s 0s/step - loss: 0.0154 - accuracy:
1.0000

Epoch 2372/5000
1/1 [=====] - 0s 995us/step - loss: 0.0154 - accuracy:
1.0000

Epoch 2373/5000
1/1 [=====] - 0s 0s/step - loss: 0.0154 - accuracy:
1.0000

Epoch 2374/5000
1/1 [=====] - 0s 998us/step - loss: 0.0153 - accuracy:
1.0000

Epoch 2375/5000
1/1 [=====] - 0s 0s/step - loss: 0.0153 - accuracy:
1.0000

Epoch 2376/5000
1/1 [=====] - 0s 997us/step - loss: 0.0153 - accuracy:
1.0000

Epoch 2377/5000
1/1 [=====] - 0s 0s/step - loss: 0.0153 - accuracy:
1.0000

Epoch 2378/5000
1/1 [=====] - 0s 996us/step - loss: 0.0153 - accuracy:
1.0000

Epoch 2379/5000
1/1 [=====] - 0s 997us/step - loss: 0.0153 - accuracy:
1.0000

Epoch 2380/5000
1/1 [=====] - 0s 0s/step - loss: 0.0152 - accuracy:
1.0000

Epoch 2381/5000
1/1 [=====] - 0s 997us/step - loss: 0.0152 - accuracy:
1.0000

Epoch 2382/5000
1/1 [=====] - 0s 0s/step - loss: 0.0152 - accuracy:
1.0000

Epoch 2383/5000
1/1 [=====] - 0s 0s/step - loss: 0.0152 - accuracy:
1.0000

Epoch 2384/5000
1/1 [=====] - 0s 0s/step - loss: 0.0152 - accuracy:
1.0000

Epoch 2385/5000
1/1 [=====] - 0s 998us/step - loss: 0.0152 - accuracy:
1.0000

Epoch 2386/5000
1/1 [=====] - 0s 997us/step - loss: 0.0151 - accuracy:
1.0000

Epoch 2387/5000
1/1 [=====] - 0s 998us/step - loss: 0.0151 - accuracy:
1.0000

Epoch 2388/5000
1/1 [=====] - 0s 0s/step - loss: 0.0151 - accuracy:
1.0000

Epoch 2389/5000
1/1 [=====] - 0s 0s/step - loss: 0.0151 - accuracy:
1.0000

Epoch 2390/5000
1/1 [=====] - 0s 999us/step - loss: 0.0151 - accuracy:
1.0000

Epoch 2391/5000
1/1 [=====] - 0s 0s/step - loss: 0.0151 - accuracy:
1.0000

Epoch 2392/5000
1/1 [=====] - 0s 0s/step - loss: 0.0150 - accuracy:
1.0000

Epoch 2393/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0150 - accuracy:
1.0000

Epoch 2394/5000
1/1 [=====] - 0s 0s/step - loss: 0.0150 - accuracy:
1.0000

Epoch 2395/5000
1/1 [=====] - 0s 0s/step - loss: 0.0150 - accuracy:
1.0000

Epoch 2396/5000
1/1 [=====] - 0s 0s/step - loss: 0.0150 - accuracy:
1.0000

Epoch 2397/5000
1/1 [=====] - 0s 998us/step - loss: 0.0150 - accuracy:
1.0000

Epoch 2398/5000
1/1 [=====] - 0s 998us/step - loss: 0.0149 - accuracy:
1.0000

Epoch 2399/5000
1/1 [=====] - 0s 0s/step - loss: 0.0149 - accuracy:
1.0000

Epoch 2400/5000
1/1 [=====] - 0s 0s/step - loss: 0.0149 - accuracy:
1.0000

Epoch 2401/5000
1/1 [=====] - 0s 0s/step - loss: 0.0149 - accuracy:
1.0000

Epoch 2402/5000
1/1 [=====] - 0s 0s/step - loss: 0.0149 - accuracy:
1.0000

Epoch 2403/5000
1/1 [=====] - 0s 996us/step - loss: 0.0149 - accuracy:
1.0000

Epoch 2404/5000
1/1 [=====] - 0s 998us/step - loss: 0.0148 - accuracy:
1.0000

Epoch 2405/5000
1/1 [=====] - 0s 997us/step - loss: 0.0148 - accuracy:
1.0000

Epoch 2406/5000
1/1 [=====] - 0s 0s/step - loss: 0.0148 - accuracy:
1.0000

Epoch 2407/5000
1/1 [=====] - 0s 0s/step - loss: 0.0148 - accuracy:
1.0000

Epoch 2408/5000
1/1 [=====] - 0s 997us/step - loss: 0.0148 - accuracy:
1.0000

Epoch 2409/5000
1/1 [=====] - 0s 998us/step - loss: 0.0148 - accuracy:
1.0000

Epoch 2410/5000
1/1 [=====] - 0s 0s/step - loss: 0.0148 - accuracy:
1.0000

Epoch 2411/5000
1/1 [=====] - 0s 0s/step - loss: 0.0147 - accuracy:
1.0000

Epoch 2412/5000
1/1 [=====] - 0s 997us/step - loss: 0.0147 - accuracy:
1.0000

Epoch 2413/5000
1/1 [=====] - 0s 998us/step - loss: 0.0147 - accuracy:
1.0000

Epoch 2414/5000
1/1 [=====] - 0s 996us/step - loss: 0.0147 - accuracy:
1.0000

Epoch 2415/5000
1/1 [=====] - 0s 0s/step - loss: 0.0147 - accuracy:
1.0000

Epoch 2416/5000
1/1 [=====] - 0s 997us/step - loss: 0.0147 - accuracy:
1.0000

Epoch 2417/5000
1/1 [=====] - 0s 997us/step - loss: 0.0146 - accuracy:
1.0000

Epoch 2418/5000
1/1 [=====] - 0s 0s/step - loss: 0.0146 - accuracy:
1.0000

Epoch 2419/5000
1/1 [=====] - 0s 997us/step - loss: 0.0146 - accuracy:
1.0000

Epoch 2420/5000
1/1 [=====] - 0s 998us/step - loss: 0.0146 - accuracy:
1.0000

Epoch 2421/5000
1/1 [=====] - 0s 996us/step - loss: 0.0146 - accuracy:
1.0000

Epoch 2422/5000
1/1 [=====] - 0s 997us/step - loss: 0.0146 - accuracy:
1.0000

Epoch 2423/5000
1/1 [=====] - 0s 997us/step - loss: 0.0145 - accuracy:
1.0000

Epoch 2424/5000
1/1 [=====] - 0s 997us/step - loss: 0.0145 - accuracy:
1.0000

Epoch 2425/5000
1/1 [=====] - 0s 0s/step - loss: 0.0145 - accuracy:
1.0000

Epoch 2426/5000
1/1 [=====] - 0s 0s/step - loss: 0.0145 - accuracy:
1.0000

Epoch 2427/5000
1/1 [=====] - 0s 0s/step - loss: 0.0145 - accuracy:
1.0000

Epoch 2428/5000
1/1 [=====] - 0s 998us/step - loss: 0.0145 - accuracy:
1.0000

Epoch 2429/5000
1/1 [=====] - 0s 998us/step - loss: 0.0145 - accuracy:
1.0000

Epoch 2430/5000
1/1 [=====] - 0s 0s/step - loss: 0.0144 - accuracy:
1.0000

Epoch 2431/5000
1/1 [=====] - 0s 998us/step - loss: 0.0144 - accuracy:
1.0000

Epoch 2432/5000
1/1 [=====] - 0s 997us/step - loss: 0.0144 - accuracy:
1.0000

Epoch 2433/5000
1/1 [=====] - 0s 0s/step - loss: 0.0144 - accuracy:
1.0000

Epoch 2434/5000
1/1 [=====] - 0s 0s/step - loss: 0.0144 - accuracy:
1.0000

Epoch 2435/5000
1/1 [=====] - 0s 0s/step - loss: 0.0144 - accuracy:
1.0000

Epoch 2436/5000
1/1 [=====] - 0s 996us/step - loss: 0.0143 - accuracy:
1.0000

Epoch 2437/5000
1/1 [=====] - 0s 0s/step - loss: 0.0143 - accuracy:
1.0000

Epoch 2438/5000
1/1 [=====] - 0s 999us/step - loss: 0.0143 - accuracy:
1.0000

Epoch 2439/5000
1/1 [=====] - 0s 0s/step - loss: 0.0143 - accuracy:
1.0000

Epoch 2440/5000
1/1 [=====] - 0s 0s/step - loss: 0.0143 - accuracy:
1.0000
Epoch 2441/5000
1/1 [=====] - 0s 0s/step - loss: 0.0143 - accuracy:
1.0000
Epoch 2442/5000
1/1 [=====] - 0s 0s/step - loss: 0.0143 - accuracy:
1.0000
Epoch 2443/5000
1/1 [=====] - 0s 997us/step - loss: 0.0142 - accuracy:
1.0000
Epoch 2444/5000
1/1 [=====] - 0s 0s/step - loss: 0.0142 - accuracy:
1.0000
Epoch 2445/5000
1/1 [=====] - 0s 0s/step - loss: 0.0142 - accuracy:
1.0000
Epoch 2446/5000
1/1 [=====] - 0s 997us/step - loss: 0.0142 - accuracy:
1.0000
Epoch 2447/5000
1/1 [=====] - 0s 998us/step - loss: 0.0142 - accuracy:
1.0000
Epoch 2448/5000
1/1 [=====] - 0s 998us/step - loss: 0.0142 - accuracy:
1.0000
Epoch 2449/5000
1/1 [=====] - 0s 998us/step - loss: 0.0142 - accuracy:
1.0000
Epoch 2450/5000
1/1 [=====] - 0s 0s/step - loss: 0.0141 - accuracy:
1.0000
Epoch 2451/5000
1/1 [=====] - 0s 998us/step - loss: 0.0141 - accuracy:
1.0000
Epoch 2452/5000
1/1 [=====] - 0s 998us/step - loss: 0.0141 - accuracy:
1.0000
Epoch 2453/5000
1/1 [=====] - 0s 0s/step - loss: 0.0141 - accuracy:
1.0000
Epoch 2454/5000
1/1 [=====] - 0s 998us/step - loss: 0.0141 - accuracy:
1.0000
Epoch 2455/5000
1/1 [=====] - 0s 0s/step - loss: 0.0141 - accuracy:
1.0000

Epoch 2456/5000
1/1 [=====] - 0s 0s/step - loss: 0.0140 - accuracy:
1.0000

Epoch 2457/5000
1/1 [=====] - 0s 0s/step - loss: 0.0140 - accuracy:
1.0000

Epoch 2458/5000
1/1 [=====] - 0s 998us/step - loss: 0.0140 - accuracy:
1.0000

Epoch 2459/5000
1/1 [=====] - 0s 998us/step - loss: 0.0140 - accuracy:
1.0000

Epoch 2460/5000
1/1 [=====] - 0s 999us/step - loss: 0.0140 - accuracy:
1.0000

Epoch 2461/5000
1/1 [=====] - 0s 0s/step - loss: 0.0140 - accuracy:
1.0000

Epoch 2462/5000
1/1 [=====] - 0s 0s/step - loss: 0.0140 - accuracy:
1.0000

Epoch 2463/5000
1/1 [=====] - 0s 996us/step - loss: 0.0139 - accuracy:
1.0000

Epoch 2464/5000
1/1 [=====] - 0s 0s/step - loss: 0.0139 - accuracy:
1.0000

Epoch 2465/5000
1/1 [=====] - 0s 996us/step - loss: 0.0139 - accuracy:
1.0000

Epoch 2466/5000
1/1 [=====] - 0s 0s/step - loss: 0.0139 - accuracy:
1.0000

Epoch 2467/5000
1/1 [=====] - 0s 0s/step - loss: 0.0139 - accuracy:
1.0000

Epoch 2468/5000
1/1 [=====] - 0s 0s/step - loss: 0.0139 - accuracy:
1.0000

Epoch 2469/5000
1/1 [=====] - 0s 997us/step - loss: 0.0139 - accuracy:
1.0000

Epoch 2470/5000
1/1 [=====] - 0s 997us/step - loss: 0.0138 - accuracy:
1.0000

Epoch 2471/5000
1/1 [=====] - 0s 998us/step - loss: 0.0138 - accuracy:
1.0000

Epoch 2472/5000
1/1 [=====] - 0s 0s/step - loss: 0.0138 - accuracy:
1.0000

Epoch 2473/5000
1/1 [=====] - 0s 997us/step - loss: 0.0138 - accuracy:
1.0000

Epoch 2474/5000
1/1 [=====] - 0s 0s/step - loss: 0.0138 - accuracy:
1.0000

Epoch 2475/5000
1/1 [=====] - 0s 975us/step - loss: 0.0138 - accuracy:
1.0000

Epoch 2476/5000
1/1 [=====] - 0s 999us/step - loss: 0.0138 - accuracy:
1.0000

Epoch 2477/5000
1/1 [=====] - 0s 997us/step - loss: 0.0137 - accuracy:
1.0000

Epoch 2478/5000
1/1 [=====] - 0s 0s/step - loss: 0.0137 - accuracy:
1.0000

Epoch 2479/5000
1/1 [=====] - 0s 997us/step - loss: 0.0137 - accuracy:
1.0000

Epoch 2480/5000
1/1 [=====] - 0s 0s/step - loss: 0.0137 - accuracy:
1.0000

Epoch 2481/5000
1/1 [=====] - 0s 0s/step - loss: 0.0137 - accuracy:
1.0000

Epoch 2482/5000
1/1 [=====] - 0s 0s/step - loss: 0.0137 - accuracy:
1.0000

Epoch 2483/5000
1/1 [=====] - 0s 0s/step - loss: 0.0137 - accuracy:
1.0000

Epoch 2484/5000
1/1 [=====] - 0s 998us/step - loss: 0.0136 - accuracy:
1.0000

Epoch 2485/5000
1/1 [=====] - 0s 0s/step - loss: 0.0136 - accuracy:
1.0000

Epoch 2486/5000
1/1 [=====] - 0s 998us/step - loss: 0.0136 - accuracy:
1.0000

Epoch 2487/5000
1/1 [=====] - 0s 998us/step - loss: 0.0136 - accuracy:
1.0000

Epoch 2488/5000
1/1 [=====] - 0s 0s/step - loss: 0.0136 - accuracy:
1.0000
Epoch 2489/5000
1/1 [=====] - 0s 997us/step - loss: 0.0136 - accuracy:
1.0000
Epoch 2490/5000
1/1 [=====] - 0s 997us/step - loss: 0.0136 - accuracy:
1.0000
Epoch 2491/5000
1/1 [=====] - 0s 998us/step - loss: 0.0135 - accuracy:
1.0000
Epoch 2492/5000
1/1 [=====] - 0s 999us/step - loss: 0.0135 - accuracy:
1.0000
Epoch 2493/5000
1/1 [=====] - 0s 0s/step - loss: 0.0135 - accuracy:
1.0000
Epoch 2494/5000
1/1 [=====] - 0s 998us/step - loss: 0.0135 - accuracy:
1.0000
Epoch 2495/5000
1/1 [=====] - 0s 998us/step - loss: 0.0135 - accuracy:
1.0000
Epoch 2496/5000
1/1 [=====] - 0s 998us/step - loss: 0.0135 - accuracy:
1.0000
Epoch 2497/5000
1/1 [=====] - 0s 0s/step - loss: 0.0135 - accuracy:
1.0000
Epoch 2498/5000
1/1 [=====] - 0s 0s/step - loss: 0.0134 - accuracy:
1.0000
Epoch 2499/5000
1/1 [=====] - 0s 0s/step - loss: 0.0134 - accuracy:
1.0000
Epoch 2500/5000
1/1 [=====] - 0s 0s/step - loss: 0.0134 - accuracy:
1.0000
Epoch 2501/5000
1/1 [=====] - 0s 0s/step - loss: 0.0134 - accuracy:
1.0000
Epoch 2502/5000
1/1 [=====] - 0s 0s/step - loss: 0.0134 - accuracy:
1.0000
Epoch 2503/5000
1/1 [=====] - 0s 998us/step - loss: 0.0134 - accuracy:
1.0000

Epoch 2504/5000
1/1 [=====] - 0s 0s/step - loss: 0.0134 - accuracy:
1.0000

Epoch 2505/5000
1/1 [=====] - 0s 997us/step - loss: 0.0133 - accuracy:
1.0000

Epoch 2506/5000
1/1 [=====] - 0s 998us/step - loss: 0.0133 - accuracy:
1.0000

Epoch 2507/5000
1/1 [=====] - 0s 0s/step - loss: 0.0133 - accuracy:
1.0000

Epoch 2508/5000
1/1 [=====] - 0s 0s/step - loss: 0.0133 - accuracy:
1.0000

Epoch 2509/5000
1/1 [=====] - 0s 0s/step - loss: 0.0133 - accuracy:
1.0000

Epoch 2510/5000
1/1 [=====] - 0s 0s/step - loss: 0.0133 - accuracy:
1.0000

Epoch 2511/5000
1/1 [=====] - 0s 997us/step - loss: 0.0133 - accuracy:
1.0000

Epoch 2512/5000
1/1 [=====] - 0s 0s/step - loss: 0.0132 - accuracy:
1.0000

Epoch 2513/5000
1/1 [=====] - 0s 998us/step - loss: 0.0132 - accuracy:
1.0000

Epoch 2514/5000
1/1 [=====] - 0s 998us/step - loss: 0.0132 - accuracy:
1.0000

Epoch 2515/5000
1/1 [=====] - 0s 995us/step - loss: 0.0132 - accuracy:
1.0000

Epoch 2516/5000
1/1 [=====] - 0s 997us/step - loss: 0.0132 - accuracy:
1.0000

Epoch 2517/5000
1/1 [=====] - 0s 996us/step - loss: 0.0132 - accuracy:
1.0000

Epoch 2518/5000
1/1 [=====] - 0s 0s/step - loss: 0.0132 - accuracy:
1.0000

Epoch 2519/5000
1/1 [=====] - 0s 998us/step - loss: 0.0131 - accuracy:
1.0000

Epoch 2520/5000
1/1 [=====] - 0s 0s/step - loss: 0.0131 - accuracy:
1.0000

Epoch 2521/5000
1/1 [=====] - 0s 997us/step - loss: 0.0131 - accuracy:
1.0000

Epoch 2522/5000
1/1 [=====] - 0s 998us/step - loss: 0.0131 - accuracy:
1.0000

Epoch 2523/5000
1/1 [=====] - 0s 0s/step - loss: 0.0131 - accuracy:
1.0000

Epoch 2524/5000
1/1 [=====] - 0s 997us/step - loss: 0.0131 - accuracy:
1.0000

Epoch 2525/5000
1/1 [=====] - 0s 996us/step - loss: 0.0131 - accuracy:
1.0000

Epoch 2526/5000
1/1 [=====] - 0s 0s/step - loss: 0.0131 - accuracy:
1.0000

Epoch 2527/5000
1/1 [=====] - 0s 997us/step - loss: 0.0130 - accuracy:
1.0000

Epoch 2528/5000
1/1 [=====] - 0s 0s/step - loss: 0.0130 - accuracy:
1.0000

Epoch 2529/5000
1/1 [=====] - 0s 0s/step - loss: 0.0130 - accuracy:
1.0000

Epoch 2530/5000
1/1 [=====] - 0s 998us/step - loss: 0.0130 - accuracy:
1.0000

Epoch 2531/5000
1/1 [=====] - 0s 0s/step - loss: 0.0130 - accuracy:
1.0000

Epoch 2532/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0130 - accuracy:
1.0000

Epoch 2533/5000
1/1 [=====] - 0s 999us/step - loss: 0.0130 - accuracy:
1.0000

Epoch 2534/5000
1/1 [=====] - 0s 997us/step - loss: 0.0129 - accuracy:
1.0000

Epoch 2535/5000
1/1 [=====] - 0s 993us/step - loss: 0.0129 - accuracy:
1.0000

Epoch 2536/5000
1/1 [=====] - 0s 997us/step - loss: 0.0129 - accuracy: 1.0000

Epoch 2537/5000
1/1 [=====] - 0s 997us/step - loss: 0.0129 - accuracy: 1.0000

Epoch 2538/5000
1/1 [=====] - 0s 997us/step - loss: 0.0129 - accuracy: 1.0000

Epoch 2539/5000
1/1 [=====] - 0s 0s/step - loss: 0.0129 - accuracy: 1.0000

Epoch 2540/5000
1/1 [=====] - 0s 999us/step - loss: 0.0129 - accuracy: 1.0000

Epoch 2541/5000
1/1 [=====] - 0s 997us/step - loss: 0.0129 - accuracy: 1.0000

Epoch 2542/5000
1/1 [=====] - 0s 0s/step - loss: 0.0128 - accuracy: 1.0000

Epoch 2543/5000
1/1 [=====] - 0s 0s/step - loss: 0.0128 - accuracy: 1.0000

Epoch 2544/5000
1/1 [=====] - 0s 997us/step - loss: 0.0128 - accuracy: 1.0000

Epoch 2545/5000
1/1 [=====] - 0s 998us/step - loss: 0.0128 - accuracy: 1.0000

Epoch 2546/5000
1/1 [=====] - 0s 996us/step - loss: 0.0128 - accuracy: 1.0000

Epoch 2547/5000
1/1 [=====] - 0s 997us/step - loss: 0.0128 - accuracy: 1.0000

Epoch 2548/5000
1/1 [=====] - 0s 994us/step - loss: 0.0128 - accuracy: 1.0000

Epoch 2549/5000
1/1 [=====] - 0s 0s/step - loss: 0.0127 - accuracy: 1.0000

Epoch 2550/5000
1/1 [=====] - 0s 0s/step - loss: 0.0127 - accuracy: 1.0000

Epoch 2551/5000
1/1 [=====] - 0s 998us/step - loss: 0.0127 - accuracy: 1.0000

Epoch 2552/5000
1/1 [=====] - 0s 0s/step - loss: 0.0127 - accuracy:
1.0000

Epoch 2553/5000
1/1 [=====] - 0s 0s/step - loss: 0.0127 - accuracy:
1.0000

Epoch 2554/5000
1/1 [=====] - 0s 0s/step - loss: 0.0127 - accuracy:
1.0000

Epoch 2555/5000
1/1 [=====] - 0s 998us/step - loss: 0.0127 - accuracy:
1.0000

Epoch 2556/5000
1/1 [=====] - 0s 0s/step - loss: 0.0127 - accuracy:
1.0000

Epoch 2557/5000
1/1 [=====] - 0s 997us/step - loss: 0.0126 - accuracy:
1.0000

Epoch 2558/5000
1/1 [=====] - 0s 995us/step - loss: 0.0126 - accuracy:
1.0000

Epoch 2559/5000
1/1 [=====] - 0s 998us/step - loss: 0.0126 - accuracy:
1.0000

Epoch 2560/5000
1/1 [=====] - 0s 998us/step - loss: 0.0126 - accuracy:
1.0000

Epoch 2561/5000
1/1 [=====] - 0s 0s/step - loss: 0.0126 - accuracy:
1.0000

Epoch 2562/5000
1/1 [=====] - 0s 998us/step - loss: 0.0126 - accuracy:
1.0000

Epoch 2563/5000
1/1 [=====] - 0s 998us/step - loss: 0.0126 - accuracy:
1.0000

Epoch 2564/5000
1/1 [=====] - 0s 0s/step - loss: 0.0125 - accuracy:
1.0000

Epoch 2565/5000
1/1 [=====] - 0s 997us/step - loss: 0.0125 - accuracy:
1.0000

Epoch 2566/5000
1/1 [=====] - 0s 997us/step - loss: 0.0125 - accuracy:
1.0000

Epoch 2567/5000
1/1 [=====] - 0s 0s/step - loss: 0.0125 - accuracy:
1.0000

Epoch 2568/5000
1/1 [=====] - 0s 997us/step - loss: 0.0125 - accuracy:
1.0000
Epoch 2569/5000
1/1 [=====] - 0s 997us/step - loss: 0.0125 - accuracy:
1.0000
Epoch 2570/5000
1/1 [=====] - 0s 997us/step - loss: 0.0125 - accuracy:
1.0000
Epoch 2571/5000
1/1 [=====] - 0s 0s/step - loss: 0.0125 - accuracy:
1.0000
Epoch 2572/5000
1/1 [=====] - 0s 998us/step - loss: 0.0124 - accuracy:
1.0000
Epoch 2573/5000
1/1 [=====] - 0s 0s/step - loss: 0.0124 - accuracy:
1.0000
Epoch 2574/5000
1/1 [=====] - 0s 0s/step - loss: 0.0124 - accuracy:
1.0000
Epoch 2575/5000
1/1 [=====] - 0s 997us/step - loss: 0.0124 - accuracy:
1.0000
Epoch 2576/5000
1/1 [=====] - 0s 0s/step - loss: 0.0124 - accuracy:
1.0000
Epoch 2577/5000
1/1 [=====] - 0s 996us/step - loss: 0.0124 - accuracy:
1.0000
Epoch 2578/5000
1/1 [=====] - 0s 0s/step - loss: 0.0124 - accuracy:
1.0000
Epoch 2579/5000
1/1 [=====] - 0s 997us/step - loss: 0.0124 - accuracy:
1.0000
Epoch 2580/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000
Epoch 2581/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000
Epoch 2582/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000
Epoch 2583/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000

Epoch 2584/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000

Epoch 2585/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000

Epoch 2586/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000

Epoch 2587/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000

Epoch 2588/5000
1/1 [=====] - 0s 0s/step - loss: 0.0122 - accuracy:
1.0000

Epoch 2589/5000
1/1 [=====] - 0s 0s/step - loss: 0.0122 - accuracy:
1.0000

Epoch 2590/5000
1/1 [=====] - 0s 997us/step - loss: 0.0122 - accuracy:
1.0000

Epoch 2591/5000
1/1 [=====] - 0s 0s/step - loss: 0.0122 - accuracy:
1.0000

Epoch 2592/5000
1/1 [=====] - 0s 997us/step - loss: 0.0122 - accuracy:
1.0000

Epoch 2593/5000
1/1 [=====] - 0s 999us/step - loss: 0.0122 - accuracy:
1.0000

Epoch 2594/5000
1/1 [=====] - 0s 0s/step - loss: 0.0122 - accuracy:
1.0000

Epoch 2595/5000
1/1 [=====] - 0s 998us/step - loss: 0.0122 - accuracy:
1.0000

Epoch 2596/5000
1/1 [=====] - 0s 0s/step - loss: 0.0121 - accuracy:
1.0000

Epoch 2597/5000
1/1 [=====] - 0s 998us/step - loss: 0.0121 - accuracy:
1.0000

Epoch 2598/5000
1/1 [=====] - 0s 0s/step - loss: 0.0121 - accuracy:
1.0000

Epoch 2599/5000
1/1 [=====] - 0s 995us/step - loss: 0.0121 - accuracy:
1.0000

Epoch 2600/5000
1/1 [=====] - 0s 0s/step - loss: 0.0121 - accuracy:
1.0000

Epoch 2601/5000
1/1 [=====] - 0s 0s/step - loss: 0.0121 - accuracy:
1.0000

Epoch 2602/5000
1/1 [=====] - 0s 997us/step - loss: 0.0121 - accuracy:
1.0000

Epoch 2603/5000
1/1 [=====] - 0s 0s/step - loss: 0.0121 - accuracy:
1.0000

Epoch 2604/5000
1/1 [=====] - 0s 0s/step - loss: 0.0120 - accuracy:
1.0000

Epoch 2605/5000
1/1 [=====] - 0s 0s/step - loss: 0.0120 - accuracy:
1.0000

Epoch 2606/5000
1/1 [=====] - 0s 0s/step - loss: 0.0120 - accuracy:
1.0000

Epoch 2607/5000
1/1 [=====] - 0s 0s/step - loss: 0.0120 - accuracy:
1.0000

Epoch 2608/5000
1/1 [=====] - 0s 0s/step - loss: 0.0120 - accuracy:
1.0000

Epoch 2609/5000
1/1 [=====] - 0s 997us/step - loss: 0.0120 - accuracy:
1.0000

Epoch 2610/5000
1/1 [=====] - 0s 996us/step - loss: 0.0120 - accuracy:
1.0000

Epoch 2611/5000
1/1 [=====] - 0s 0s/step - loss: 0.0120 - accuracy:
1.0000

Epoch 2612/5000
1/1 [=====] - 0s 998us/step - loss: 0.0119 - accuracy:
1.0000

Epoch 2613/5000
1/1 [=====] - 0s 0s/step - loss: 0.0119 - accuracy:
1.0000

Epoch 2614/5000
1/1 [=====] - 0s 998us/step - loss: 0.0119 - accuracy:
1.0000

Epoch 2615/5000
1/1 [=====] - 0s 997us/step - loss: 0.0119 - accuracy:
1.0000

Epoch 2616/5000
1/1 [=====] - 0s 997us/step - loss: 0.0119 - accuracy:
1.0000

Epoch 2617/5000
1/1 [=====] - 0s 0s/step - loss: 0.0119 - accuracy:
1.0000

Epoch 2618/5000
1/1 [=====] - 0s 997us/step - loss: 0.0119 - accuracy:
1.0000

Epoch 2619/5000
1/1 [=====] - 0s 998us/step - loss: 0.0119 - accuracy:
1.0000

Epoch 2620/5000
1/1 [=====] - 0s 997us/step - loss: 0.0119 - accuracy:
1.0000

Epoch 2621/5000
1/1 [=====] - 0s 998us/step - loss: 0.0118 - accuracy:
1.0000

Epoch 2622/5000
1/1 [=====] - 0s 0s/step - loss: 0.0118 - accuracy:
1.0000

Epoch 2623/5000
1/1 [=====] - 0s 0s/step - loss: 0.0118 - accuracy:
1.0000

Epoch 2624/5000
1/1 [=====] - 0s 0s/step - loss: 0.0118 - accuracy:
1.0000

Epoch 2625/5000
1/1 [=====] - 0s 997us/step - loss: 0.0118 - accuracy:
1.0000

Epoch 2626/5000
1/1 [=====] - 0s 0s/step - loss: 0.0118 - accuracy:
1.0000

Epoch 2627/5000
1/1 [=====] - 0s 0s/step - loss: 0.0118 - accuracy:
1.0000

Epoch 2628/5000
1/1 [=====] - 0s 997us/step - loss: 0.0118 - accuracy:
1.0000

Epoch 2629/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0117 - accuracy:
1.0000

Epoch 2630/5000
1/1 [=====] - 0s 999us/step - loss: 0.0117 - accuracy:
1.0000

Epoch 2631/5000
1/1 [=====] - 0s 0s/step - loss: 0.0117 - accuracy:
1.0000

Epoch 2632/5000
1/1 [=====] - 0s 998us/step - loss: 0.0117 - accuracy:
1.0000

Epoch 2633/5000
1/1 [=====] - 0s 0s/step - loss: 0.0117 - accuracy:
1.0000

Epoch 2634/5000
1/1 [=====] - 0s 996us/step - loss: 0.0117 - accuracy:
1.0000

Epoch 2635/5000
1/1 [=====] - 0s 998us/step - loss: 0.0117 - accuracy:
1.0000

Epoch 2636/5000
1/1 [=====] - 0s 996us/step - loss: 0.0117 - accuracy:
1.0000

Epoch 2637/5000
1/1 [=====] - 0s 997us/step - loss: 0.0117 - accuracy:
1.0000

Epoch 2638/5000
1/1 [=====] - 0s 998us/step - loss: 0.0116 - accuracy:
1.0000

Epoch 2639/5000
1/1 [=====] - 0s 0s/step - loss: 0.0116 - accuracy:
1.0000

Epoch 2640/5000
1/1 [=====] - 0s 0s/step - loss: 0.0116 - accuracy:
1.0000

Epoch 2641/5000
1/1 [=====] - 0s 998us/step - loss: 0.0116 - accuracy:
1.0000

Epoch 2642/5000
1/1 [=====] - 0s 0s/step - loss: 0.0116 - accuracy:
1.0000

Epoch 2643/5000
1/1 [=====] - 0s 995us/step - loss: 0.0116 - accuracy:
1.0000

Epoch 2644/5000
1/1 [=====] - 0s 997us/step - loss: 0.0116 - accuracy:
1.0000

Epoch 2645/5000
1/1 [=====] - 0s 998us/step - loss: 0.0116 - accuracy:
1.0000

Epoch 2646/5000
1/1 [=====] - 0s 998us/step - loss: 0.0115 - accuracy:
1.0000

Epoch 2647/5000
1/1 [=====] - 0s 0s/step - loss: 0.0115 - accuracy:
1.0000

Epoch 2648/5000
1/1 [=====] - 0s 998us/step - loss: 0.0115 - accuracy:
1.0000
Epoch 2649/5000
1/1 [=====] - 0s 998us/step - loss: 0.0115 - accuracy:
1.0000
Epoch 2650/5000
1/1 [=====] - 0s 999us/step - loss: 0.0115 - accuracy:
1.0000
Epoch 2651/5000
1/1 [=====] - 0s 0s/step - loss: 0.0115 - accuracy:
1.0000
Epoch 2652/5000
1/1 [=====] - 0s 0s/step - loss: 0.0115 - accuracy:
1.0000
Epoch 2653/5000
1/1 [=====] - 0s 996us/step - loss: 0.0115 - accuracy:
1.0000
Epoch 2654/5000
1/1 [=====] - 0s 997us/step - loss: 0.0115 - accuracy:
1.0000
Epoch 2655/5000
1/1 [=====] - 0s 998us/step - loss: 0.0114 - accuracy:
1.0000
Epoch 2656/5000
1/1 [=====] - 0s 0s/step - loss: 0.0114 - accuracy:
1.0000
Epoch 2657/5000
1/1 [=====] - 0s 0s/step - loss: 0.0114 - accuracy:
1.0000
Epoch 2658/5000
1/1 [=====] - 0s 997us/step - loss: 0.0114 - accuracy:
1.0000
Epoch 2659/5000
1/1 [=====] - 0s 998us/step - loss: 0.0114 - accuracy:
1.0000
Epoch 2660/5000
1/1 [=====] - 0s 0s/step - loss: 0.0114 - accuracy:
1.0000
Epoch 2661/5000
1/1 [=====] - 0s 998us/step - loss: 0.0114 - accuracy:
1.0000
Epoch 2662/5000
1/1 [=====] - 0s 997us/step - loss: 0.0114 - accuracy:
1.0000
Epoch 2663/5000
1/1 [=====] - 0s 996us/step - loss: 0.0114 - accuracy:
1.0000

Epoch 2664/5000
1/1 [=====] - 0s 998us/step - loss: 0.0113 - accuracy:
1.0000

Epoch 2665/5000
1/1 [=====] - 0s 0s/step - loss: 0.0113 - accuracy:
1.0000

Epoch 2666/5000
1/1 [=====] - 0s 0s/step - loss: 0.0113 - accuracy:
1.0000

Epoch 2667/5000
1/1 [=====] - 0s 998us/step - loss: 0.0113 - accuracy:
1.0000

Epoch 2668/5000
1/1 [=====] - 0s 0s/step - loss: 0.0113 - accuracy:
1.0000

Epoch 2669/5000
1/1 [=====] - 0s 0s/step - loss: 0.0113 - accuracy:
1.0000

Epoch 2670/5000
1/1 [=====] - 0s 998us/step - loss: 0.0113 - accuracy:
1.0000

Epoch 2671/5000
1/1 [=====] - 0s 998us/step - loss: 0.0113 - accuracy:
1.0000

Epoch 2672/5000
1/1 [=====] - 0s 0s/step - loss: 0.0112 - accuracy:
1.0000

Epoch 2673/5000
1/1 [=====] - 0s 997us/step - loss: 0.0112 - accuracy:
1.0000

Epoch 2674/5000
1/1 [=====] - 0s 0s/step - loss: 0.0112 - accuracy:
1.0000

Epoch 2675/5000
1/1 [=====] - 0s 0s/step - loss: 0.0112 - accuracy:
1.0000

Epoch 2676/5000
1/1 [=====] - 0s 0s/step - loss: 0.0112 - accuracy:
1.0000

Epoch 2677/5000
1/1 [=====] - 0s 997us/step - loss: 0.0112 - accuracy:
1.0000

Epoch 2678/5000
1/1 [=====] - 0s 997us/step - loss: 0.0112 - accuracy:
1.0000

Epoch 2679/5000
1/1 [=====] - 0s 999us/step - loss: 0.0112 - accuracy:
1.0000

Epoch 2680/5000
1/1 [=====] - 0s 996us/step - loss: 0.0112 - accuracy:
1.0000

Epoch 2681/5000
1/1 [=====] - 0s 997us/step - loss: 0.0111 - accuracy:
1.0000

Epoch 2682/5000
1/1 [=====] - 0s 0s/step - loss: 0.0111 - accuracy:
1.0000

Epoch 2683/5000
1/1 [=====] - 0s 0s/step - loss: 0.0111 - accuracy:
1.0000

Epoch 2684/5000
1/1 [=====] - 0s 997us/step - loss: 0.0111 - accuracy:
1.0000

Epoch 2685/5000
1/1 [=====] - 0s 0s/step - loss: 0.0111 - accuracy:
1.0000

Epoch 2686/5000
1/1 [=====] - 0s 998us/step - loss: 0.0111 - accuracy:
1.0000

Epoch 2687/5000
1/1 [=====] - 0s 998us/step - loss: 0.0111 - accuracy:
1.0000

Epoch 2688/5000
1/1 [=====] - 0s 996us/step - loss: 0.0111 - accuracy:
1.0000

Epoch 2689/5000
1/1 [=====] - 0s 998us/step - loss: 0.0111 - accuracy:
1.0000

Epoch 2690/5000
1/1 [=====] - 0s 0s/step - loss: 0.0110 - accuracy:
1.0000

Epoch 2691/5000
1/1 [=====] - 0s 997us/step - loss: 0.0110 - accuracy:
1.0000

Epoch 2692/5000
1/1 [=====] - 0s 997us/step - loss: 0.0110 - accuracy:
1.0000

Epoch 2693/5000
1/1 [=====] - 0s 998us/step - loss: 0.0110 - accuracy:
1.0000

Epoch 2694/5000
1/1 [=====] - 0s 0s/step - loss: 0.0110 - accuracy:
1.0000

Epoch 2695/5000
1/1 [=====] - 0s 0s/step - loss: 0.0110 - accuracy:
1.0000

Epoch 2696/5000
1/1 [=====] - 0s 0s/step - loss: 0.0110 - accuracy:
1.0000

Epoch 2697/5000
1/1 [=====] - 0s 0s/step - loss: 0.0110 - accuracy:
1.0000

Epoch 2698/5000
1/1 [=====] - 0s 997us/step - loss: 0.0110 - accuracy:
1.0000

Epoch 2699/5000
1/1 [=====] - 0s 997us/step - loss: 0.0110 - accuracy:
1.0000

Epoch 2700/5000
1/1 [=====] - 0s 997us/step - loss: 0.0109 - accuracy:
1.0000

Epoch 2701/5000
1/1 [=====] - 0s 997us/step - loss: 0.0109 - accuracy:
1.0000

Epoch 2702/5000
1/1 [=====] - 0s 998us/step - loss: 0.0109 - accuracy:
1.0000

Epoch 2703/5000
1/1 [=====] - 0s 0s/step - loss: 0.0109 - accuracy:
1.0000

Epoch 2704/5000
1/1 [=====] - 0s 0s/step - loss: 0.0109 - accuracy:
1.0000

Epoch 2705/5000
1/1 [=====] - 0s 0s/step - loss: 0.0109 - accuracy:
1.0000

Epoch 2706/5000
1/1 [=====] - 0s 996us/step - loss: 0.0109 - accuracy:
1.0000

Epoch 2707/5000
1/1 [=====] - 0s 998us/step - loss: 0.0109 - accuracy:
1.0000

Epoch 2708/5000
1/1 [=====] - 0s 0s/step - loss: 0.0109 - accuracy:
1.0000

Epoch 2709/5000
1/1 [=====] - 0s 0s/step - loss: 0.0108 - accuracy:
1.0000

Epoch 2710/5000
1/1 [=====] - 0s 997us/step - loss: 0.0108 - accuracy:
1.0000

Epoch 2711/5000
1/1 [=====] - 0s 998us/step - loss: 0.0108 - accuracy:
1.0000

Epoch 2712/5000
1/1 [=====] - 0s 0s/step - loss: 0.0108 - accuracy:
1.0000

Epoch 2713/5000
1/1 [=====] - 0s 0s/step - loss: 0.0108 - accuracy:
1.0000

Epoch 2714/5000
1/1 [=====] - 0s 0s/step - loss: 0.0108 - accuracy:
1.0000

Epoch 2715/5000
1/1 [=====] - 0s 998us/step - loss: 0.0108 - accuracy:
1.0000

Epoch 2716/5000
1/1 [=====] - 0s 0s/step - loss: 0.0108 - accuracy:
1.0000

Epoch 2717/5000
1/1 [=====] - 0s 998us/step - loss: 0.0108 - accuracy:
1.0000

Epoch 2718/5000
1/1 [=====] - 0s 997us/step - loss: 0.0107 - accuracy:
1.0000

Epoch 2719/5000
1/1 [=====] - 0s 998us/step - loss: 0.0107 - accuracy:
1.0000

Epoch 2720/5000
1/1 [=====] - 0s 998us/step - loss: 0.0107 - accuracy:
1.0000

Epoch 2721/5000
1/1 [=====] - 0s 0s/step - loss: 0.0107 - accuracy:
1.0000

Epoch 2722/5000
1/1 [=====] - 0s 0s/step - loss: 0.0107 - accuracy:
1.0000

Epoch 2723/5000
1/1 [=====] - 0s 0s/step - loss: 0.0107 - accuracy:
1.0000

Epoch 2724/5000
1/1 [=====] - 0s 0s/step - loss: 0.0107 - accuracy:
1.0000

Epoch 2725/5000
1/1 [=====] - 0s 0s/step - loss: 0.0107 - accuracy:
1.0000

Epoch 2726/5000
1/1 [=====] - 0s 998us/step - loss: 0.0107 - accuracy:
1.0000

Epoch 2727/5000
1/1 [=====] - 0s 0s/step - loss: 0.0107 - accuracy:
1.0000

Epoch 2728/5000
1/1 [=====] - 0s 998us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 2729/5000
1/1 [=====] - 0s 997us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 2730/5000
1/1 [=====] - 0s 998us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 2731/5000
1/1 [=====] - 0s 999us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 2732/5000
1/1 [=====] - 0s 997us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 2733/5000
1/1 [=====] - 0s 998us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 2734/5000
1/1 [=====] - 0s 996us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 2735/5000
1/1 [=====] - 0s 998us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 2736/5000
1/1 [=====] - 0s 997us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 2737/5000
1/1 [=====] - 0s 0s/step - loss: 0.0105 - accuracy:
1.0000

Epoch 2738/5000
1/1 [=====] - 0s 0s/step - loss: 0.0105 - accuracy:
1.0000

Epoch 2739/5000
1/1 [=====] - 0s 0s/step - loss: 0.0105 - accuracy:
1.0000

Epoch 2740/5000
1/1 [=====] - 0s 998us/step - loss: 0.0105 - accuracy:
1.0000

Epoch 2741/5000
1/1 [=====] - 0s 997us/step - loss: 0.0105 - accuracy:
1.0000

Epoch 2742/5000
1/1 [=====] - 0s 0s/step - loss: 0.0105 - accuracy:
1.0000

Epoch 2743/5000
1/1 [=====] - 0s 0s/step - loss: 0.0105 - accuracy:
1.0000

Epoch 2744/5000
1/1 [=====] - 0s 998us/step - loss: 0.0105 - accuracy:
1.0000

Epoch 2745/5000
1/1 [=====] - 0s 997us/step - loss: 0.0105 - accuracy:
1.0000

Epoch 2746/5000
1/1 [=====] - 0s 0s/step - loss: 0.0105 - accuracy:
1.0000

Epoch 2747/5000
1/1 [=====] - 0s 0s/step - loss: 0.0104 - accuracy:
1.0000

Epoch 2748/5000
1/1 [=====] - 0s 0s/step - loss: 0.0104 - accuracy:
1.0000

Epoch 2749/5000
1/1 [=====] - 0s 998us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 2750/5000
1/1 [=====] - 0s 997us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 2751/5000
1/1 [=====] - 0s 998us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 2752/5000
1/1 [=====] - 0s 0s/step - loss: 0.0104 - accuracy:
1.0000

Epoch 2753/5000
1/1 [=====] - 0s 0s/step - loss: 0.0104 - accuracy:
1.0000

Epoch 2754/5000
1/1 [=====] - 0s 997us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 2755/5000
1/1 [=====] - 0s 0s/step - loss: 0.0104 - accuracy:
1.0000

Epoch 2756/5000
1/1 [=====] - 0s 998us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 2757/5000
1/1 [=====] - 0s 998us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 2758/5000
1/1 [=====] - 0s 997us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 2759/5000
1/1 [=====] - 0s 0s/step - loss: 0.0103 - accuracy:
1.0000

Epoch 2760/5000
1/1 [=====] - 0s 998us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 2761/5000
1/1 [=====] - 0s 0s/step - loss: 0.0103 - accuracy:
1.0000

Epoch 2762/5000
1/1 [=====] - 0s 998us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 2763/5000
1/1 [=====] - 0s 997us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 2764/5000
1/1 [=====] - 0s 998us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 2765/5000
1/1 [=====] - 0s 0s/step - loss: 0.0103 - accuracy:
1.0000

Epoch 2766/5000
1/1 [=====] - 0s 0s/step - loss: 0.0103 - accuracy:
1.0000

Epoch 2767/5000
1/1 [=====] - 0s 998us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 2768/5000
1/1 [=====] - 0s 997us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 2769/5000
1/1 [=====] - 0s 997us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 2770/5000
1/1 [=====] - 0s 0s/step - loss: 0.0102 - accuracy:
1.0000

Epoch 2771/5000
1/1 [=====] - 0s 997us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 2772/5000
1/1 [=====] - 0s 997us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 2773/5000
1/1 [=====] - 0s 0s/step - loss: 0.0102 - accuracy:
1.0000

Epoch 2774/5000
1/1 [=====] - 0s 998us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 2775/5000
1/1 [=====] - 0s 998us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 2776/5000
1/1 [=====] - 0s 0s/step - loss: 0.0102 - accuracy:
1.0000

Epoch 2777/5000
1/1 [=====] - 0s 997us/step - loss: 0.0101 - accuracy:
1.0000

Epoch 2778/5000
1/1 [=====] - 0s 0s/step - loss: 0.0101 - accuracy:
1.0000

Epoch 2779/5000
1/1 [=====] - 0s 0s/step - loss: 0.0101 - accuracy:
1.0000

Epoch 2780/5000
1/1 [=====] - 0s 998us/step - loss: 0.0101 - accuracy:
1.0000

Epoch 2781/5000
1/1 [=====] - 0s 997us/step - loss: 0.0101 - accuracy:
1.0000

Epoch 2782/5000
1/1 [=====] - 0s 0s/step - loss: 0.0101 - accuracy:
1.0000

Epoch 2783/5000
1/1 [=====] - 0s 0s/step - loss: 0.0101 - accuracy:
1.0000

Epoch 2784/5000
1/1 [=====] - 0s 0s/step - loss: 0.0101 - accuracy:
1.0000

Epoch 2785/5000
1/1 [=====] - 0s 0s/step - loss: 0.0101 - accuracy:
1.0000

Epoch 2786/5000
1/1 [=====] - 0s 0s/step - loss: 0.0101 - accuracy:
1.0000

Epoch 2787/5000
1/1 [=====] - 0s 998us/step - loss: 0.0100 - accuracy:
1.0000

Epoch 2788/5000
1/1 [=====] - 0s 997us/step - loss: 0.0100 - accuracy:
1.0000

Epoch 2789/5000
1/1 [=====] - 0s 0s/step - loss: 0.0100 - accuracy:
1.0000

Epoch 2790/5000
1/1 [=====] - 0s 0s/step - loss: 0.0100 - accuracy:
1.0000

Epoch 2791/5000
1/1 [=====] - 0s 0s/step - loss: 0.0100 - accuracy:
1.0000

Epoch 2792/5000
1/1 [=====] - 0s 997us/step - loss: 0.0100 - accuracy:
1.0000

Epoch 2793/5000
1/1 [=====] - 0s 998us/step - loss: 0.0100 - accuracy:
1.0000

Epoch 2794/5000
1/1 [=====] - 0s 997us/step - loss: 0.0100 - accuracy:
1.0000

Epoch 2795/5000
1/1 [=====] - 0s 0s/step - loss: 0.0100 - accuracy:
1.0000

Epoch 2796/5000
1/1 [=====] - 0s 0s/step - loss: 0.0100 - accuracy:
1.0000

Epoch 2797/5000
1/1 [=====] - 0s 998us/step - loss: 0.0099 - accuracy:
1.0000

Epoch 2798/5000
1/1 [=====] - 0s 997us/step - loss: 0.0099 - accuracy:
1.0000

Epoch 2799/5000
1/1 [=====] - 0s 997us/step - loss: 0.0099 - accuracy:
1.0000

Epoch 2800/5000
1/1 [=====] - 0s 0s/step - loss: 0.0099 - accuracy:
1.0000

Epoch 2801/5000
1/1 [=====] - 0s 0s/step - loss: 0.0099 - accuracy:
1.0000

Epoch 2802/5000
1/1 [=====] - 0s 997us/step - loss: 0.0099 - accuracy:
1.0000

Epoch 2803/5000
1/1 [=====] - 0s 998us/step - loss: 0.0099 - accuracy:
1.0000

Epoch 2804/5000
1/1 [=====] - 0s 0s/step - loss: 0.0099 - accuracy:
1.0000

Epoch 2805/5000
1/1 [=====] - 0s 0s/step - loss: 0.0099 - accuracy:
1.0000

Epoch 2806/5000
1/1 [=====] - 0s 0s/step - loss: 0.0099 - accuracy:
1.0000

Epoch 2807/5000
1/1 [=====] - 0s 997us/step - loss: 0.0099 - accuracy:
1.0000

Epoch 2808/5000
1/1 [=====] - 0s 997us/step - loss: 0.0098 - accuracy:
1.0000
Epoch 2809/5000
1/1 [=====] - 0s 997us/step - loss: 0.0098 - accuracy:
1.0000
Epoch 2810/5000
1/1 [=====] - 0s 999us/step - loss: 0.0098 - accuracy:
1.0000
Epoch 2811/5000
1/1 [=====] - 0s 997us/step - loss: 0.0098 - accuracy:
1.0000
Epoch 2812/5000
1/1 [=====] - 0s 997us/step - loss: 0.0098 - accuracy:
1.0000
Epoch 2813/5000
1/1 [=====] - 0s 997us/step - loss: 0.0098 - accuracy:
1.0000
Epoch 2814/5000
1/1 [=====] - 0s 0s/step - loss: 0.0098 - accuracy:
1.0000
Epoch 2815/5000
1/1 [=====] - 0s 997us/step - loss: 0.0098 - accuracy:
1.0000
Epoch 2816/5000
1/1 [=====] - 0s 997us/step - loss: 0.0098 - accuracy:
1.0000
Epoch 2817/5000
1/1 [=====] - 0s 995us/step - loss: 0.0098 - accuracy:
1.0000
Epoch 2818/5000
1/1 [=====] - 0s 998us/step - loss: 0.0097 - accuracy:
1.0000
Epoch 2819/5000
1/1 [=====] - 0s 0s/step - loss: 0.0097 - accuracy:
1.0000
Epoch 2820/5000
1/1 [=====] - 0s 998us/step - loss: 0.0097 - accuracy:
1.0000
Epoch 2821/5000
1/1 [=====] - 0s 997us/step - loss: 0.0097 - accuracy:
1.0000
Epoch 2822/5000
1/1 [=====] - 0s 997us/step - loss: 0.0097 - accuracy:
1.0000
Epoch 2823/5000
1/1 [=====] - 0s 997us/step - loss: 0.0097 - accuracy:
1.0000

Epoch 2824/5000
1/1 [=====] - 0s 0s/step - loss: 0.0097 - accuracy:
1.0000
Epoch 2825/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0097 - accuracy:
1.0000
Epoch 2826/5000
1/1 [=====] - 0s 0s/step - loss: 0.0097 - accuracy:
1.0000
Epoch 2827/5000
1/1 [=====] - 0s 0s/step - loss: 0.0097 - accuracy:
1.0000
Epoch 2828/5000
1/1 [=====] - 0s 0s/step - loss: 0.0097 - accuracy:
1.0000
Epoch 2829/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 2830/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 2831/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 2832/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 2833/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 2834/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 2835/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 2836/5000
1/1 [=====] - 0s 996us/step - loss: 0.0096 - accuracy:
1.0000
Epoch 2837/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 2838/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 2839/5000
1/1 [=====] - 0s 998us/step - loss: 0.0096 - accuracy:
1.0000

Epoch 2840/5000
1/1 [=====] - 0s 997us/step - loss: 0.0095 - accuracy:
1.0000
Epoch 2841/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000
Epoch 2842/5000
1/1 [=====] - 0s 998us/step - loss: 0.0095 - accuracy:
1.0000
Epoch 2843/5000
1/1 [=====] - 0s 997us/step - loss: 0.0095 - accuracy:
1.0000
Epoch 2844/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000
Epoch 2845/5000
1/1 [=====] - 0s 997us/step - loss: 0.0095 - accuracy:
1.0000
Epoch 2846/5000
1/1 [=====] - 0s 997us/step - loss: 0.0095 - accuracy:
1.0000
Epoch 2847/5000
1/1 [=====] - 0s 994us/step - loss: 0.0095 - accuracy:
1.0000
Epoch 2848/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000
Epoch 2849/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000
Epoch 2850/5000
1/1 [=====] - 0s 998us/step - loss: 0.0095 - accuracy:
1.0000
Epoch 2851/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy:
1.0000
Epoch 2852/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy:
1.0000
Epoch 2853/5000
1/1 [=====] - 0s 999us/step - loss: 0.0094 - accuracy:
1.0000
Epoch 2854/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy:
1.0000
Epoch 2855/5000
1/1 [=====] - 0s 997us/step - loss: 0.0094 - accuracy:
1.0000

Epoch 2856/5000
1/1 [=====] - 0s 998us/step - loss: 0.0094 - accuracy:
1.0000

Epoch 2857/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy:
1.0000

Epoch 2858/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy:
1.0000

Epoch 2859/5000
1/1 [=====] - 0s 999us/step - loss: 0.0094 - accuracy:
1.0000

Epoch 2860/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy:
1.0000

Epoch 2861/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy:
1.0000

Epoch 2862/5000
1/1 [=====] - 0s 998us/step - loss: 0.0093 - accuracy:
1.0000

Epoch 2863/5000
1/1 [=====] - 0s 998us/step - loss: 0.0093 - accuracy:
1.0000

Epoch 2864/5000
1/1 [=====] - 0s 997us/step - loss: 0.0093 - accuracy:
1.0000

Epoch 2865/5000
1/1 [=====] - 0s 0s/step - loss: 0.0093 - accuracy:
1.0000

Epoch 2866/5000
1/1 [=====] - 0s 997us/step - loss: 0.0093 - accuracy:
1.0000

Epoch 2867/5000
1/1 [=====] - 0s 997us/step - loss: 0.0093 - accuracy:
1.0000

Epoch 2868/5000
1/1 [=====] - 0s 997us/step - loss: 0.0093 - accuracy:
1.0000

Epoch 2869/5000
1/1 [=====] - 0s 0s/step - loss: 0.0093 - accuracy:
1.0000

Epoch 2870/5000
1/1 [=====] - 0s 0s/step - loss: 0.0093 - accuracy:
1.0000

Epoch 2871/5000
1/1 [=====] - 0s 0s/step - loss: 0.0093 - accuracy:
1.0000

Epoch 2872/5000
1/1 [=====] - 0s 997us/step - loss: 0.0093 - accuracy:
1.0000
Epoch 2873/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2874/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2875/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2876/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2877/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2878/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2879/5000
1/1 [=====] - 0s 999us/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2880/5000
1/1 [=====] - 0s 998us/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2881/5000
1/1 [=====] - 0s 997us/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2882/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2883/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2884/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy:
1.0000
Epoch 2885/5000
1/1 [=====] - 0s 0s/step - loss: 0.0091 - accuracy:
1.0000
Epoch 2886/5000
1/1 [=====] - 0s 999us/step - loss: 0.0091 - accuracy:
1.0000
Epoch 2887/5000
1/1 [=====] - 0s 0s/step - loss: 0.0091 - accuracy:
1.0000

Epoch 2888/5000
1/1 [=====] - 0s 0s/step - loss: 0.0091 - accuracy: 1.0000

Epoch 2889/5000
1/1 [=====] - 0s 0s/step - loss: 0.0091 - accuracy: 1.0000

Epoch 2890/5000
1/1 [=====] - 0s 0s/step - loss: 0.0091 - accuracy: 1.0000

Epoch 2891/5000
1/1 [=====] - 0s 0s/step - loss: 0.0091 - accuracy: 1.0000

Epoch 2892/5000
1/1 [=====] - 0s 998us/step - loss: 0.0091 - accuracy: 1.0000

Epoch 2893/5000
1/1 [=====] - 0s 997us/step - loss: 0.0091 - accuracy: 1.0000

Epoch 2894/5000
1/1 [=====] - 0s 0s/step - loss: 0.0091 - accuracy: 1.0000

Epoch 2895/5000
1/1 [=====] - 0s 997us/step - loss: 0.0091 - accuracy: 1.0000

Epoch 2896/5000
1/1 [=====] - 0s 998us/step - loss: 0.0091 - accuracy: 1.0000

Epoch 2897/5000
1/1 [=====] - 0s 0s/step - loss: 0.0090 - accuracy: 1.0000

Epoch 2898/5000
1/1 [=====] - 0s 998us/step - loss: 0.0090 - accuracy: 1.0000

Epoch 2899/5000
1/1 [=====] - 0s 0s/step - loss: 0.0090 - accuracy: 1.0000

Epoch 2900/5000
1/1 [=====] - 0s 997us/step - loss: 0.0090 - accuracy: 1.0000

Epoch 2901/5000
1/1 [=====] - 0s 0s/step - loss: 0.0090 - accuracy: 1.0000

Epoch 2902/5000
1/1 [=====] - 0s 0s/step - loss: 0.0090 - accuracy: 1.0000

Epoch 2903/5000
1/1 [=====] - 0s 997us/step - loss: 0.0090 - accuracy: 1.0000

Epoch 2904/5000
1/1 [=====] - 0s 997us/step - loss: 0.0090 - accuracy:
1.0000

Epoch 2905/5000
1/1 [=====] - 0s 999us/step - loss: 0.0090 - accuracy:
1.0000

Epoch 2906/5000
1/1 [=====] - 0s 0s/step - loss: 0.0090 - accuracy:
1.0000

Epoch 2907/5000
1/1 [=====] - 0s 0s/step - loss: 0.0090 - accuracy:
1.0000

Epoch 2908/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2909/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2910/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2911/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2912/5000
1/1 [=====] - 0s 997us/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2913/5000
1/1 [=====] - 0s 997us/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2914/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2915/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2916/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2917/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2918/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2919/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 2920/5000
1/1 [=====] - 0s 0s/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2921/5000
1/1 [=====] - 0s 996us/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2922/5000
1/1 [=====] - 0s 0s/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2923/5000
1/1 [=====] - 0s 997us/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2924/5000
1/1 [=====] - 0s 0s/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2925/5000
1/1 [=====] - 0s 0s/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2926/5000
1/1 [=====] - 0s 0s/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2927/5000
1/1 [=====] - 0s 0s/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2928/5000
1/1 [=====] - 0s 998us/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2929/5000
1/1 [=====] - 0s 0s/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2930/5000
1/1 [=====] - 0s 997us/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2931/5000
1/1 [=====] - 0s 996us/step - loss: 0.0088 - accuracy:
1.0000

Epoch 2932/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy:
1.0000

Epoch 2933/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy:
1.0000

Epoch 2934/5000
1/1 [=====] - 0s 998us/step - loss: 0.0087 - accuracy:
1.0000

Epoch 2935/5000
1/1 [=====] - 0s 998us/step - loss: 0.0087 - accuracy:
1.0000

Epoch 2936/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy:
1.0000
Epoch 2937/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy:
1.0000
Epoch 2938/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy:
1.0000
Epoch 2939/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy:
1.0000
Epoch 2940/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy:
1.0000
Epoch 2941/5000
1/1 [=====] - 0s 997us/step - loss: 0.0087 - accuracy:
1.0000
Epoch 2942/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy:
1.0000
Epoch 2943/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy:
1.0000
Epoch 2944/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy:
1.0000
Epoch 2945/5000
1/1 [=====] - 0s 999us/step - loss: 0.0086 - accuracy:
1.0000
Epoch 2946/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy:
1.0000
Epoch 2947/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy:
1.0000
Epoch 2948/5000
1/1 [=====] - 0s 998us/step - loss: 0.0086 - accuracy:
1.0000
Epoch 2949/5000
1/1 [=====] - 0s 998us/step - loss: 0.0086 - accuracy:
1.0000
Epoch 2950/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy:
1.0000
Epoch 2951/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy:
1.0000

Epoch 2952/5000
1/1 [=====] - 0s 998us/step - loss: 0.0086 - accuracy: 1.0000
Epoch 2953/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy: 1.0000
Epoch 2954/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy: 1.0000
Epoch 2955/5000
1/1 [=====] - 0s 997us/step - loss: 0.0086 - accuracy: 1.0000
Epoch 2956/5000
1/1 [=====] - 0s 997us/step - loss: 0.0086 - accuracy: 1.0000
Epoch 2957/5000
1/1 [=====] - 0s 997us/step - loss: 0.0085 - accuracy: 1.0000
Epoch 2958/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy: 1.0000
Epoch 2959/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy: 1.0000
Epoch 2960/5000
1/1 [=====] - 0s 998us/step - loss: 0.0085 - accuracy: 1.0000
Epoch 2961/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy: 1.0000
Epoch 2962/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy: 1.0000
Epoch 2963/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy: 1.0000
Epoch 2964/5000
1/1 [=====] - 0s 997us/step - loss: 0.0085 - accuracy: 1.0000
Epoch 2965/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy: 1.0000
Epoch 2966/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy: 1.0000
Epoch 2967/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy: 1.0000

Epoch 2968/5000
1/1 [=====] - 0s 998us/step - loss: 0.0085 - accuracy:
1.0000

Epoch 2969/5000
1/1 [=====] - 0s 998us/step - loss: 0.0085 - accuracy:
1.0000

Epoch 2970/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2971/5000
1/1 [=====] - 0s 998us/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2972/5000
1/1 [=====] - 0s 997us/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2973/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2974/5000
1/1 [=====] - 0s 997us/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2975/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2976/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2977/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2978/5000
1/1 [=====] - 0s 998us/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2979/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2980/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2981/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2982/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000

Epoch 2983/5000
1/1 [=====] - 0s 998us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2984/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2985/5000
1/1 [=====] - 0s 998us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2986/5000
1/1 [=====] - 0s 998us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2987/5000
1/1 [=====] - 0s 998us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2988/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2989/5000
1/1 [=====] - 0s 998us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2990/5000
1/1 [=====] - 0s 998us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2991/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2992/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2993/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2994/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2995/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 2996/5000
1/1 [=====] - 0s 998us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 2997/5000
1/1 [=====] - 0s 998us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 2998/5000
1/1 [=====] - 0s 997us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 2999/5000
1/1 [=====] - 0s 998us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3000/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3001/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3002/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3003/5000
1/1 [=====] - 0s 998us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3004/5000
1/1 [=====] - 0s 998us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3005/5000
1/1 [=====] - 0s 998us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3006/5000
1/1 [=====] - 0s 997us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3007/5000
1/1 [=====] - 0s 997us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3008/5000
1/1 [=====] - 0s 998us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3009/5000
1/1 [=====] - 0s 997us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3010/5000
1/1 [=====] - 0s 996us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3011/5000
1/1 [=====] - 0s 997us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3012/5000
1/1 [=====] - 0s 0s/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3013/5000
1/1 [=====] - 0s 997us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3014/5000
1/1 [=====] - 0s 997us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3015/5000
1/1 [=====] - 0s 998us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3016/5000
1/1 [=====] - 0s 0s/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3017/5000
1/1 [=====] - 0s 0s/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3018/5000
1/1 [=====] - 0s 0s/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3019/5000
1/1 [=====] - 0s 997us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3020/5000
1/1 [=====] - 0s 0s/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3021/5000
1/1 [=====] - 0s 998us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3022/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3023/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3024/5000
1/1 [=====] - 0s 998us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3025/5000
1/1 [=====] - 0s 997us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3026/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3027/5000
1/1 [=====] - 0s 997us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3028/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3029/5000
1/1 [=====] - 0s 997us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3030/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3031/5000
1/1 [=====] - 0s 998us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3032/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3033/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3034/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3035/5000
1/1 [=====] - 0s 998us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3036/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3037/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3038/5000
1/1 [=====] - 0s 998us/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3039/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3040/5000
1/1 [=====] - 0s 986us/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3041/5000
1/1 [=====] - 0s 998us/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3042/5000
1/1 [=====] - 0s 998us/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3043/5000
1/1 [=====] - 0s 997us/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3044/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3045/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3046/5000
1/1 [=====] - 0s 998us/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3047/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3048/5000
1/1 [=====] - 0s 998us/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3049/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3050/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3051/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3052/5000
1/1 [=====] - 0s 997us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3053/5000
1/1 [=====] - 0s 998us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3054/5000
1/1 [=====] - 0s 998us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3055/5000
1/1 [=====] - 0s 999us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3056/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3057/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3058/5000
1/1 [=====] - 0s 997us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3059/5000
1/1 [=====] - 0s 996us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3060/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3061/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3062/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3063/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3064/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3065/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3066/5000
1/1 [=====] - 0s 997us/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3067/5000
1/1 [=====] - 0s 997us/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3068/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3069/5000
1/1 [=====] - 0s 997us/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3070/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3071/5000
1/1 [=====] - 0s 998us/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3072/5000
1/1 [=====] - 0s 997us/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3073/5000
1/1 [=====] - 0s 998us/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3074/5000
1/1 [=====] - 0s 997us/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3075/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3076/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3077/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3078/5000
1/1 [=====] - 0s 997us/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3079/5000
1/1 [=====] - 0s 998us/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3080/5000
1/1 [=====] - 0s 0s/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3081/5000
1/1 [=====] - 0s 0s/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3082/5000
1/1 [=====] - 0s 997us/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3083/5000
1/1 [=====] - 0s 998us/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3084/5000
1/1 [=====] - 0s 0s/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3085/5000
1/1 [=====] - 0s 997us/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3086/5000
1/1 [=====] - 0s 997us/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3087/5000
1/1 [=====] - 0s 998us/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3088/5000
1/1 [=====] - 0s 998us/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3089/5000
1/1 [=====] - 0s 0s/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3090/5000
1/1 [=====] - 0s 997us/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3091/5000
1/1 [=====] - 0s 997us/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3092/5000
1/1 [=====] - 0s 997us/step - loss: 0.0076 - accuracy:
1.0000

Epoch 3093/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3094/5000
1/1 [=====] - 0s 998us/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3095/5000
1/1 [=====] - 0s 998us/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3096/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3097/5000
1/1 [=====] - 0s 997us/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3098/5000
1/1 [=====] - 0s 998us/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3099/5000
1/1 [=====] - 0s 997us/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3100/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3101/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3102/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3103/5000
1/1 [=====] - 0s 998us/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3104/5000
1/1 [=====] - 0s 997us/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3105/5000
1/1 [=====] - 0s 997us/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3106/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3107/5000
1/1 [=====] - 0s 998us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3108/5000
1/1 [=====] - 0s 998us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3109/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3110/5000
1/1 [=====] - 0s 997us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3111/5000
1/1 [=====] - 0s 997us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3112/5000
1/1 [=====] - 0s 998us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3113/5000
1/1 [=====] - 0s 997us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3114/5000
1/1 [=====] - 0s 998us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3115/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3116/5000
1/1 [=====] - 0s 998us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3117/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3118/5000
1/1 [=====] - 0s 998us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3119/5000
1/1 [=====] - 0s 997us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3120/5000
1/1 [=====] - 0s 997us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3121/5000
1/1 [=====] - 0s 998us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3122/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3123/5000
1/1 [=====] - 0s 997us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3124/5000
1/1 [=====] - 0s 996us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3125/5000
1/1 [=====] - 0s 998us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3126/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3127/5000
1/1 [=====] - 0s 998us/step - loss: 0.0073 - accuracy:
1.0000

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Epoch 3128/5000
1/1 [=====] - 0s 997us/step - loss: 0.0073 - accuracy:
1.0000
Epoch 3129/5000
1/1 [=====] - 0s 996us/step - loss: 0.0073 - accuracy:
1.0000
Epoch 3130/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000
Epoch 3131/5000
1/1 [=====] - 0s 997us/step - loss: 0.0073 - accuracy:
1.0000
Epoch 3132/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000
Epoch 3133/5000
1/1 [=====] - 0s 998us/step - loss: 0.0073 - accuracy:
1.0000
Epoch 3134/5000
1/1 [=====] - 0s 999us/step - loss: 0.0073 - accuracy:
1.0000
Epoch 3135/5000
1/1 [=====] - 0s 997us/step - loss: 0.0073 - accuracy:
1.0000
Epoch 3136/5000
1/1 [=====] - 0s 998us/step - loss: 0.0073 - accuracy:
1.0000
Epoch 3137/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000
Epoch 3138/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy:
1.0000
Epoch 3139/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy:
1.0000
Epoch 3140/5000
1/1 [=====] - 0s 996us/step - loss: 0.0072 - accuracy:
1.0000
Epoch 3141/5000
1/1 [=====] - 0s 997us/step - loss: 0.0072 - accuracy:
1.0000
Epoch 3142/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy:
1.0000
Epoch 3143/5000
1/1 [=====] - 0s 997us/step - loss: 0.0072 - accuracy:
1.0000

```

Epoch 3144/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3145/5000
1/1 [=====] - 0s 997us/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3146/5000
1/1 [=====] - 0s 998us/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3147/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3148/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3149/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3150/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3151/5000
1/1 [=====] - 0s 996us/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3152/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3153/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3154/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3155/5000
1/1 [=====] - 0s 997us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3156/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3157/5000
1/1 [=====] - 0s 997us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3158/5000
1/1 [=====] - 0s 997us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3159/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3160/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3161/5000
1/1 [=====] - 0s 998us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3162/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3163/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3164/5000
1/1 [=====] - 0s 998us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3165/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3166/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3167/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3168/5000
1/1 [=====] - 0s 997us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3169/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3170/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3171/5000
1/1 [=====] - 0s 997us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3172/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3173/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3174/5000
1/1 [=====] - 0s 998us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3175/5000
1/1 [=====] - 0s 997us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3176/5000
1/1 [=====] - 0s 998us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3177/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3178/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3179/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3180/5000
1/1 [=====] - 0s 998us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3181/5000
1/1 [=====] - 0s 996us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3182/5000
1/1 [=====] - 0s 998us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3183/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3184/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3185/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3186/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3187/5000
1/1 [=====] - 0s 997us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3188/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3189/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3190/5000
1/1 [=====] - 0s 997us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3191/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3192/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3193/5000
1/1 [=====] - 0s 998us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3194/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3195/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3196/5000
1/1 [=====] - 0s 999us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3197/5000
1/1 [=====] - 0s 997us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3198/5000
1/1 [=====] - 0s 996us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3199/5000
1/1 [=====] - 0s 997us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3200/5000
1/1 [=====] - 0s 997us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3201/5000
1/1 [=====] - 0s 998us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3202/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3203/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3204/5000
1/1 [=====] - 0s 995us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3205/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3206/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3207/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3208/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3209/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3210/5000
1/1 [=====] - 0s 995us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3211/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3212/5000
1/1 [=====] - 0s 998us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3213/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3214/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3215/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3216/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3217/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3218/5000
1/1 [=====] - 0s 997us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3219/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3220/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3221/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3222/5000
1/1 [=====] - 0s 997us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3223/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3224/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3225/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3226/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3227/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3228/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3229/5000
1/1 [=====] - 0s 997us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3230/5000
1/1 [=====] - 0s 997us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3231/5000
1/1 [=====] - 0s 998us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3232/5000
1/1 [=====] - 0s 998us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3233/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3234/5000
1/1 [=====] - 0s 996us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3235/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3236/5000
1/1 [=====] - 0s 997us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3237/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3238/5000
1/1 [=====] - 0s 997us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3239/5000
1/1 [=====] - 0s 997us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3240/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3241/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3242/5000
1/1 [=====] - 0s 997us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3243/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3244/5000
1/1 [=====] - 0s 998us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3245/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3246/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3247/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3248/5000
1/1 [=====] - 0s 998us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3249/5000
1/1 [=====] - 0s 997us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3250/5000
1/1 [=====] - 0s 998us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3251/5000
1/1 [=====] - 0s 989us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3252/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3253/5000
1/1 [=====] - 0s 999us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3254/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3255/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3256/5000
1/1 [=====] - 0s 998us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3257/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3258/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3259/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3260/5000
1/1 [=====] - 0s 996us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3261/5000
1/1 [=====] - 0s 997us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3262/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3263/5000
1/1 [=====] - 0s 997us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3264/5000
1/1 [=====] - 0s 998us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3265/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3266/5000
1/1 [=====] - 0s 998us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3267/5000
1/1 [=====] - 0s 998us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3268/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3269/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 3270/5000
1/1 [=====] - 0s 998us/step - loss: 0.0064 - accuracy:
1.0000

Epoch 3271/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000

```

Epoch 3272/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3273/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3274/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3275/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3276/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3277/5000
1/1 [=====] - 0s 997us/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3278/5000
1/1 [=====] - 0s 997us/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3279/5000
1/1 [=====] - 0s 997us/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3280/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3281/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3282/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3283/5000
1/1 [=====] - 0s 997us/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3284/5000
1/1 [=====] - 0s 997us/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3285/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3286/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 3287/5000
1/1 [=====] - 0s 997us/step - loss: 0.0064 - accuracy:
1.0000

```


Epoch 3288/5000
1/1 [=====] - 0s 998us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3289/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3290/5000
1/1 [=====] - 0s 998us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3291/5000
1/1 [=====] - 0s 998us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3292/5000
1/1 [=====] - 0s 997us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3293/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3294/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3295/5000
1/1 [=====] - 0s 996us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3296/5000
1/1 [=====] - 0s 997us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3297/5000
1/1 [=====] - 0s 997us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3298/5000
1/1 [=====] - 0s 997us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3299/5000
1/1 [=====] - 0s 986us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3300/5000
1/1 [=====] - 0s 998us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3301/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3302/5000
1/1 [=====] - 0s 998us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3303/5000
1/1 [=====] - 0s 998us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3304/5000
1/1 [=====] - 0s 998us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3305/5000
1/1 [=====] - 0s 997us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 3306/5000
1/1 [=====] - 0s 998us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3307/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3308/5000
1/1 [=====] - 0s 997us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3309/5000
1/1 [=====] - 0s 998us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3310/5000
1/1 [=====] - 0s 998us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3311/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3312/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3313/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3314/5000
1/1 [=====] - 0s 998us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3315/5000
1/1 [=====] - 0s 997us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3316/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3317/5000
1/1 [=====] - 0s 997us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3318/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3319/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 3320/5000
1/1 [=====] - 0s 998us/step - loss: 0.0062 - accuracy: 1.0000

Epoch 3321/5000
1/1 [=====] - 0s 997us/step - loss: 0.0062 - accuracy: 1.0000

Epoch 3322/5000
1/1 [=====] - 0s 998us/step - loss: 0.0062 - accuracy: 1.0000

Epoch 3323/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy: 1.0000

Epoch 3324/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy: 1.0000

Epoch 3325/5000
1/1 [=====] - 0s 997us/step - loss: 0.0061 - accuracy: 1.0000

Epoch 3326/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy: 1.0000

Epoch 3327/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy: 1.0000

Epoch 3328/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy: 1.0000

Epoch 3329/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy: 1.0000

Epoch 3330/5000
1/1 [=====] - 0s 997us/step - loss: 0.0061 - accuracy: 1.0000

Epoch 3331/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy: 1.0000

Epoch 3332/5000
1/1 [=====] - 0s 996us/step - loss: 0.0061 - accuracy: 1.0000

Epoch 3333/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy: 1.0000

Epoch 3334/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy: 1.0000

Epoch 3335/5000
1/1 [=====] - 0s 995us/step - loss: 0.0061 - accuracy: 1.0000

Epoch 3336/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 3337/5000
1/1 [=====] - 0s 998us/step - loss: 0.0061 - accuracy:
1.0000

Epoch 3338/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 3339/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 3340/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 3341/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 3342/5000
1/1 [=====] - 0s 998us/step - loss: 0.0061 - accuracy:
1.0000

Epoch 3343/5000
1/1 [=====] - 0s 998us/step - loss: 0.0061 - accuracy:
1.0000

Epoch 3344/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000

Epoch 3345/5000
1/1 [=====] - 0s 995us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 3346/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 3347/5000
1/1 [=====] - 0s 998us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 3348/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000

Epoch 3349/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000

Epoch 3350/5000
1/1 [=====] - 0s 998us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 3351/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000

Epoch 3352/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000
Epoch 3353/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000
Epoch 3354/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000
Epoch 3355/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000
Epoch 3356/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000
Epoch 3357/5000
1/1 [=====] - 0s 998us/step - loss: 0.0060 - accuracy:
1.0000
Epoch 3358/5000
1/1 [=====] - 0s 998us/step - loss: 0.0060 - accuracy:
1.0000
Epoch 3359/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000
Epoch 3360/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000
Epoch 3361/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000
Epoch 3362/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000
Epoch 3363/5000
1/1 [=====] - 0s 997us/step - loss: 0.0059 - accuracy:
1.0000
Epoch 3364/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000
Epoch 3365/5000
1/1 [=====] - 0s 999us/step - loss: 0.0059 - accuracy:
1.0000
Epoch 3366/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000
Epoch 3367/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3368/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3369/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3370/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3371/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3372/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
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Epoch 3373/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
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Epoch 3374/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3375/5000
1/1 [=====] - 0s 998us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3376/5000
1/1 [=====] - 0s 997us/step - loss: 0.0059 - accuracy:
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Epoch 3377/5000
1/1 [=====] - 0s 998us/step - loss: 0.0059 - accuracy:
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Epoch 3378/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3379/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3380/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3381/5000
1/1 [=====] - 0s 996us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3382/5000
1/1 [=====] - 0s 997us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 3383/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3384/5000
1/1 [=====] - 0s 997us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3385/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3386/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3387/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3388/5000
1/1 [=====] - 0s 997us/step - loss: 0.0058 - accuracy:
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Epoch 3389/5000
1/1 [=====] - 0s 998us/step - loss: 0.0058 - accuracy:
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Epoch 3390/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 3391/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 3392/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 3393/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 3394/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 3395/5000
1/1 [=====] - 0s 995us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3396/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 3397/5000
1/1 [=====] - 0s 997us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3398/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3399/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3400/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3401/5000
1/1 [=====] - 0s 997us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3402/5000
1/1 [=====] - 0s 998us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 3403/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3404/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3405/5000
1/1 [=====] - 0s 998us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3406/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3407/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3408/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3409/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3410/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3411/5000
1/1 [=====] - 0s 998us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3412/5000
1/1 [=====] - 0s 998us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3413/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3414/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3415/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3416/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3417/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3418/5000
1/1 [=====] - 0s 998us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3419/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3420/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3421/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
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Epoch 3422/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3423/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 3424/5000
1/1 [=====] - 0s 998us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3425/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3426/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3427/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 3428/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3429/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3430/5000
1/1 [=====] - 0s 998us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3431/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3432/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3433/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3434/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3435/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3436/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3437/5000
1/1 [=====] - 0s 998us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3438/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3439/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3440/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3441/5000
1/1 [=====] - 0s 998us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3442/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3443/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3444/5000
1/1 [=====] - 0s 998us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 3445/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3446/5000
1/1 [=====] - 0s 998us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3447/5000
1/1 [=====] - 0s 998us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3448/5000
1/1 [=====] - 0s 998us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3449/5000
1/1 [=====] - 0s 997us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3450/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3451/5000
1/1 [=====] - 0s 997us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3452/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3453/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3454/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3455/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3456/5000
1/1 [=====] - 0s 998us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3457/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3458/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3459/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3460/5000
1/1 [=====] - 0s 996us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3461/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3462/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3463/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3464/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3465/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3466/5000
1/1 [=====] - 0s 998us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 3467/5000
1/1 [=====] - 0s 997us/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3468/5000
1/1 [=====] - 0s 999us/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3469/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3470/5000
1/1 [=====] - 0s 998us/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3471/5000
1/1 [=====] - 0s 999us/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3472/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3473/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3474/5000
1/1 [=====] - 0s 996us/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3475/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3476/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3477/5000
1/1 [=====] - 0s 996us/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3478/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3479/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3480/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3481/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3482/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3483/5000
1/1 [=====] - 0s 998us/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3484/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3485/5000
1/1 [=====] - 0s 998us/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3486/5000
1/1 [=====] - 0s 998us/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3487/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3488/5000
1/1 [=====] - 0s 997us/step - loss: 0.0054 - accuracy:
1.0000

Epoch 3489/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3490/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3491/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3492/5000
1/1 [=====] - 0s 998us/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3493/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3494/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3495/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3496/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3497/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3498/5000
1/1 [=====] - 0s 998us/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3499/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3500/5000
1/1 [=====] - 0s 998us/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3501/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3502/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3503/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3504/5000
1/1 [=====] - 0s 996us/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3505/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
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Epoch 3506/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
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Epoch 3507/5000
1/1 [=====] - 0s 996us/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3508/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3509/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3510/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
1.0000

Epoch 3511/5000
1/1 [=====] - 0s 998us/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3512/5000
1/1 [=====] - 0s 998us/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3513/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3514/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3515/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3516/5000
1/1 [=====] - 0s 998us/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3517/5000
1/1 [=====] - 0s 997us/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3518/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3519/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3520/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3521/5000
1/1 [=====] - 0s 996us/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3522/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3523/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3524/5000
1/1 [=====] - 0s 995us/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3525/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3526/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3527/5000
1/1 [=====] - 0s 996us/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3528/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3529/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3530/5000
1/1 [=====] - 0s 997us/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3531/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3532/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3533/5000
1/1 [=====] - 0s 996us/step - loss: 0.0052 - accuracy:
1.0000

Epoch 3534/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3535/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3536/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3537/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3538/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3539/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3540/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3541/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3542/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3543/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3544/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3545/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3546/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3547/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3548/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3549/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3550/5000
1/1 [=====] - 0s 999us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3551/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3552/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3553/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3554/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3555/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3556/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3557/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 3558/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3559/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3560/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3561/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3562/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3563/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3564/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3565/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3566/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3567/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3568/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3569/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3570/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3571/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3572/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3573/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3574/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3575/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 3576/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000
Epoch 3577/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
1.0000
Epoch 3578/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
1.0000
Epoch 3579/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
1.0000
Epoch 3580/5000
1/1 [=====] - 0s 996us/step - loss: 0.0050 - accuracy:
1.0000
Epoch 3581/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000
Epoch 3582/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy:
1.0000
Epoch 3583/5000
1/1 [=====] - 0s 998us/step - loss: 0.0049 - accuracy:
1.0000
Epoch 3584/5000
1/1 [=====] - 0s 998us/step - loss: 0.0049 - accuracy:
1.0000
Epoch 3585/5000
1/1 [=====] - 0s 998us/step - loss: 0.0049 - accuracy:
1.0000
Epoch 3586/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
1.0000
Epoch 3587/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
1.0000
Epoch 3588/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
1.0000
Epoch 3589/5000
1/1 [=====] - 0s 998us/step - loss: 0.0049 - accuracy:
1.0000
Epoch 3590/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
1.0000
Epoch 3591/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3592/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3593/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3594/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3595/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3596/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3597/5000
1/1 [=====] - 0s 999us/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3598/5000
1/1 [=====] - 0s 995us/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3599/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3600/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3601/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3602/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3603/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3604/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3605/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3606/5000
1/1 [=====] - 0s 998us/step - loss: 0.0049 - accuracy:
1.0000

Epoch 3607/5000
1/1 [=====] - 0s 998us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3608/5000
1/1 [=====] - 0s 997us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3609/5000
1/1 [=====] - 0s 988us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3610/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3611/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3612/5000
1/1 [=====] - 0s 998us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3613/5000
1/1 [=====] - 0s 996us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3614/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3615/5000
1/1 [=====] - 0s 998us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3616/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3617/5000
1/1 [=====] - 0s 998us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3618/5000
1/1 [=====] - 0s 997us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3619/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3620/5000
1/1 [=====] - 0s 997us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3621/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3622/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3623/5000
1/1 [=====] - 0s 998us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3624/5000
1/1 [=====] - 0s 998us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3625/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3626/5000
1/1 [=====] - 0s 997us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3627/5000
1/1 [=====] - 0s 999us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3628/5000
1/1 [=====] - 0s 997us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3629/5000
1/1 [=====] - 0s 998us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3630/5000
1/1 [=====] - 0s 999us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3631/5000
1/1 [=====] - 0s 997us/step - loss: 0.0048 - accuracy:
1.0000

Epoch 3632/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3633/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3634/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3635/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3636/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3637/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3638/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3639/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3640/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3641/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3642/5000
1/1 [=====] - 0s 999us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3643/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3644/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3645/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3646/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3647/5000
1/1 [=====] - 0s 996us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3648/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3649/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3650/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3651/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3652/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3653/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3654/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3655/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3656/5000
1/1 [=====] - 0s 999us/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3657/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000

Epoch 3658/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3659/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3660/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3661/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3662/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3663/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3664/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3665/5000
1/1 [=====] - 0s 997us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3666/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3667/5000
1/1 [=====] - 0s 997us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3668/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3669/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3670/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3671/5000
1/1 [=====] - 0s 997us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3672/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3673/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3674/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3675/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3676/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3677/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3678/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3679/5000
1/1 [=====] - 0s 995us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3680/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3681/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3682/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3683/5000
1/1 [=====] - 0s 997us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3684/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 3685/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3686/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3687/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3688/5000
1/1 [=====] - 0s 996us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3689/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3690/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3691/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3692/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3693/5000
1/1 [=====] - 0s 994us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3694/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3695/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3696/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3697/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3698/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3699/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3700/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3701/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3702/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 3703/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
1.0000

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Epoch 3704/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000
Epoch 3705/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000
Epoch 3706/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000
Epoch 3707/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000
Epoch 3708/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000
Epoch 3709/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
1.0000
Epoch 3710/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000
Epoch 3711/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
1.0000
Epoch 3712/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000
Epoch 3713/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000
Epoch 3714/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy:
1.0000
Epoch 3715/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy:
1.0000
Epoch 3716/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy:
1.0000
Epoch 3717/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000
Epoch 3718/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy:
1.0000
Epoch 3719/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy:
1.0000

```

Epoch 3720/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3721/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3722/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3723/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3724/5000
1/1 [=====] - 0s 939us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3725/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3726/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3727/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3728/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3729/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3730/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3731/5000
1/1 [=====] - 0s 999us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3732/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3733/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3734/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3735/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3736/5000
1/1 [=====] - 0s 999us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3737/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3738/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3739/5000
1/1 [=====] - 0s 996us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3740/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 3741/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3742/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3743/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3744/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3745/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3746/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3747/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3748/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3749/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3750/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3751/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3752/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3753/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3754/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3755/5000
1/1 [=====] - 0s 999us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3756/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3757/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3758/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3759/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3760/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3761/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3762/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3763/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3764/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3765/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3766/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3767/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3768/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3769/5000
1/1 [=====] - 0s 996us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 3770/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3771/5000
1/1 [=====] - 0s 997us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3772/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3773/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3774/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3775/5000
1/1 [=====] - 0s 997us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3776/5000
1/1 [=====] - 0s 998us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3777/5000
1/1 [=====] - 0s 995us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3778/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3779/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3780/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3781/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3782/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3783/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 3784/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3785/5000
1/1 [=====] - 0s 997us/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3786/5000
1/1 [=====] - 0s 997us/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3787/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3788/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3789/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3790/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3791/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3792/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3793/5000
1/1 [=====] - 0s 998us/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3794/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3795/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3796/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3797/5000
1/1 [=====] - 0s 998us/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3798/5000
1/1 [=====] - 0s 998us/step - loss: 0.0042 - accuracy:
1.0000
Epoch 3799/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000


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Epoch 3800/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3801/5000
1/1 [=====] - 0s 997us/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3802/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3803/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3804/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3805/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3806/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3807/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3808/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3809/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3810/5000
1/1 [=====] - 0s 995us/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3811/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3812/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3813/5000
1/1 [=====] - 0s 995us/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3814/5000
1/1 [=====] - 0s 998us/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3815/5000
1/1 [=====] - 0s 997us/step - loss: 0.0041 - accuracy:
1.0000

```

Epoch 3816/5000
1/1 [=====] - 0s 998us/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3817/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3818/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3819/5000
1/1 [=====] - 0s 998us/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3820/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3821/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3822/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3823/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3824/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3825/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3826/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3827/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3828/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3829/5000
1/1 [=====] - 0s 997us/step - loss: 0.0041 - accuracy:
1.0000
Epoch 3830/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000
Epoch 3831/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3832/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3833/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3834/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3835/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3836/5000
1/1 [=====] - 0s 999us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3837/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3838/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3839/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3840/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3841/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3842/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3843/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3844/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3845/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3846/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3847/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3848/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3849/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3850/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3851/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3852/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3853/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3854/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3855/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3856/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3857/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3858/5000
1/1 [=====] - 0s 996us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3859/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3860/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3861/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 3862/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3863/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3864/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3865/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3866/5000
1/1 [=====] - 0s 996us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3867/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3868/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3869/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3870/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3871/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3872/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3873/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3874/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3875/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3876/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3877/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3878/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3879/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3880/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3881/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3882/5000
1/1 [=====] - 0s 999us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3883/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3884/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3885/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3886/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3887/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3888/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3889/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3890/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3891/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3892/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3893/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 3894/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3895/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3896/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3897/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3898/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3899/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3900/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3901/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3902/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3903/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3904/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3905/5000
1/1 [=====] - 0s 988us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3906/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3907/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3908/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3909/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3910/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 3911/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000

```

Epoch 3912/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3913/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3914/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3915/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3916/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3917/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3918/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3919/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3920/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3921/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3922/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3923/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3924/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3925/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3926/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 3927/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000

```


Epoch 3928/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3929/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3930/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3931/5000
1/1 [=====] - 0s 988us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3932/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3933/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3934/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3935/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3936/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3937/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3938/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3939/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3940/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3941/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3942/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3943/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 3944/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3945/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3946/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3947/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3948/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3949/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3950/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3951/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3952/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3953/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3954/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3955/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3956/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3957/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3958/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3959/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3960/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3961/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3962/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000

Epoch 3963/5000
1/1 [=====] - 0s 996us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3964/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3965/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3966/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3967/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3968/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3969/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3970/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3971/5000
1/1 [=====] - 0s 999us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3972/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3973/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3974/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3975/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3976/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3977/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3978/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3979/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3980/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3981/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3982/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3983/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3984/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3985/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3986/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3987/5000
1/1 [=====] - 0s 996us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3988/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3989/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3990/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3991/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 3992/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy: 1.0000

Epoch 3993/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy: 1.0000

Epoch 3994/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy: 1.0000

Epoch 3995/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy: 1.0000

Epoch 3996/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy: 1.0000

Epoch 3997/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy: 1.0000

Epoch 3998/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy: 1.0000

Epoch 3999/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy: 1.0000

Epoch 4000/5000
1/1 [=====] - 0s 996us/step - loss: 0.0035 - accuracy: 1.0000

Epoch 4001/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy: 1.0000

Epoch 4002/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy: 1.0000

Epoch 4003/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy: 1.0000

Epoch 4004/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy: 1.0000

Epoch 4005/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy: 1.0000

Epoch 4006/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy: 1.0000

Epoch 4007/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy: 1.0000

Epoch 4008/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4009/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4010/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4011/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4012/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4013/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4014/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4015/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4016/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4017/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4018/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4019/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4020/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4021/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4022/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4023/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4024/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4025/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4026/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4027/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4028/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4029/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4030/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4031/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4032/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4033/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4034/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4035/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4036/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4037/5000
1/1 [=====] - 0s 998us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4038/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4039/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4040/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4041/5000
1/1 [=====] - 0s 996us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4042/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4043/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4044/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4045/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4046/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4047/5000
1/1 [=====] - 0s 996us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4048/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4049/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4050/5000
1/1 [=====] - 0s 998us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4051/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4052/5000
1/1 [=====] - 0s 998us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4053/5000
1/1 [=====] - 0s 998us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4054/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4055/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4056/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4057/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4058/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4059/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4060/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4061/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4062/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4063/5000
1/1 [=====] - 0s 998us/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4064/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4065/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4066/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4067/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4068/5000
1/1 [=====] - 0s 998us/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4069/5000
1/1 [=====] - 0s 996us/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4070/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000
Epoch 4071/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy: 1.0000

Epoch 4072/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4073/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4074/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4075/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4076/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4077/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4078/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4079/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4080/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4081/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4082/5000
1/1 [=====] - 0s 996us/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4083/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4084/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4085/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4086/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4087/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4088/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4089/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4090/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4091/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4092/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4093/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4094/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4095/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4096/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4097/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4098/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4099/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4100/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4101/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4102/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4103/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4104/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4105/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4106/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4107/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4108/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4109/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4110/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4111/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4112/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4113/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4114/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4115/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4116/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4117/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4118/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4119/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4120/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4121/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4122/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4123/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4124/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4125/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4126/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4127/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4128/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4129/5000
1/1 [=====] - 0s 995us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4130/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4131/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4132/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4133/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4134/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4135/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4136/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4137/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4138/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4139/5000
1/1 [=====] - 0s 996us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4140/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4141/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4142/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4143/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4144/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4145/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4146/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4147/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4148/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4149/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4150/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4151/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4152/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy: 1.0000

Epoch 4153/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy: 1.0000

Epoch 4154/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4155/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4156/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4157/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4158/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4159/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4160/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4161/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4162/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4163/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4164/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4165/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4166/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4167/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy: 1.0000

Epoch 4168/5000
1/1 [=====] - 0s 995us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4169/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4170/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4171/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4172/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
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Epoch 4173/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
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Epoch 4174/5000
1/1 [=====] - 0s 999us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4175/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4176/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4177/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4178/5000
1/1 [=====] - 0s 996us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4179/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4180/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4181/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4182/5000
1/1 [=====] - 0s 993us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4183/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
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Epoch 4184/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
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Epoch 4185/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy:
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Epoch 4186/5000
1/1 [=====] - 0s 996us/step - loss: 0.0031 - accuracy:
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Epoch 4187/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
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Epoch 4188/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
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Epoch 4189/5000
1/1 [=====] - 0s 996us/step - loss: 0.0031 - accuracy:
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Epoch 4190/5000
1/1 [=====] - 0s 996us/step - loss: 0.0031 - accuracy:
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Epoch 4191/5000
1/1 [=====] - 0s 996us/step - loss: 0.0031 - accuracy:
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Epoch 4192/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
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Epoch 4193/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
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Epoch 4194/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
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Epoch 4195/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy:
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Epoch 4196/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy:
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Epoch 4197/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4198/5000
1/1 [=====] - 0s 998us/step - loss: 0.0030 - accuracy:
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Epoch 4199/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4200/5000
1/1 [=====] - 0s 998us/step - loss: 0.0030 - accuracy:
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Epoch 4201/5000
1/1 [=====] - 0s 997us/step - loss: 0.0030 - accuracy:
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Epoch 4202/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4203/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4204/5000
1/1 [=====] - 0s 998us/step - loss: 0.0030 - accuracy:
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Epoch 4205/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4206/5000
1/1 [=====] - 0s 997us/step - loss: 0.0030 - accuracy:
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Epoch 4207/5000
1/1 [=====] - 0s 998us/step - loss: 0.0030 - accuracy:
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Epoch 4208/5000
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Epoch 4209/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4210/5000
1/1 [=====] - 0s 998us/step - loss: 0.0030 - accuracy:
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Epoch 4211/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4212/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4213/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4214/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4215/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4216/5000
1/1 [=====] - 0s 997us/step - loss: 0.0030 - accuracy:
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Epoch 4217/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4218/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4219/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4220/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4221/5000
1/1 [=====] - 0s 997us/step - loss: 0.0030 - accuracy:
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Epoch 4222/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4223/5000
1/1 [=====] - 0s 997us/step - loss: 0.0030 - accuracy:
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Epoch 4224/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4225/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4226/5000
1/1 [=====] - 0s 996us/step - loss: 0.0030 - accuracy:
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Epoch 4227/5000
1/1 [=====] - 0s 997us/step - loss: 0.0030 - accuracy:
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Epoch 4228/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4229/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4230/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
1.0000
Epoch 4231/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy:
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Epoch 4232/5000
1/1 [=====] - 0s 996us/step - loss: 0.0030 - accuracy: 1.0000

Epoch 4233/5000
1/1 [=====] - 0s 998us/step - loss: 0.0030 - accuracy: 1.0000

Epoch 4234/5000
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Epoch 4235/5000
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Epoch 4236/5000
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Epoch 4237/5000
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Epoch 4238/5000
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Epoch 4239/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy: 1.0000

Epoch 4240/5000
1/1 [=====] - 0s 0s/step - loss: 0.0030 - accuracy: 1.0000

Epoch 4241/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy: 1.0000

Epoch 4242/5000
1/1 [=====] - 0s 997us/step - loss: 0.0029 - accuracy: 1.0000

Epoch 4243/5000
1/1 [=====] - 0s 997us/step - loss: 0.0029 - accuracy: 1.0000

Epoch 4244/5000
1/1 [=====] - 0s 997us/step - loss: 0.0029 - accuracy: 1.0000

Epoch 4245/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy: 1.0000

Epoch 4246/5000
1/1 [=====] - 0s 998us/step - loss: 0.0029 - accuracy: 1.0000

Epoch 4247/5000
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Epoch 4248/5000
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Epoch 4249/5000
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Epoch 4250/5000
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Epoch 4251/5000
1/1 [=====] - 0s 994us/step - loss: 0.0029 - accuracy:
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Epoch 4252/5000
1/1 [=====] - 0s 998us/step - loss: 0.0029 - accuracy:
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Epoch 4253/5000
1/1 [=====] - 0s 997us/step - loss: 0.0029 - accuracy:
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Epoch 4254/5000
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Epoch 4255/5000
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Epoch 4256/5000
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Epoch 4257/5000
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Epoch 4258/5000
1/1 [=====] - 0s 997us/step - loss: 0.0029 - accuracy:
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Epoch 4259/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4260/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4261/5000
1/1 [=====] - 0s 998us/step - loss: 0.0029 - accuracy:
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Epoch 4262/5000
1/1 [=====] - 0s 997us/step - loss: 0.0029 - accuracy:
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Epoch 4263/5000
1/1 [=====] - 0s 996us/step - loss: 0.0029 - accuracy:
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Epoch 4264/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4265/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4266/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4267/5000
1/1 [=====] - 0s 999us/step - loss: 0.0029 - accuracy:
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Epoch 4268/5000
1/1 [=====] - 0s 997us/step - loss: 0.0029 - accuracy:
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Epoch 4269/5000
1/1 [=====] - 0s 998us/step - loss: 0.0029 - accuracy:
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Epoch 4270/5000
1/1 [=====] - 0s 997us/step - loss: 0.0029 - accuracy:
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Epoch 4271/5000
1/1 [=====] - 0s 996us/step - loss: 0.0029 - accuracy:
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Epoch 4272/5000
1/1 [=====] - 0s 998us/step - loss: 0.0029 - accuracy:
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Epoch 4273/5000
1/1 [=====] - 0s 997us/step - loss: 0.0029 - accuracy:
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Epoch 4274/5000
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Epoch 4275/5000
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Epoch 4276/5000
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Epoch 4277/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4278/5000
1/1 [=====] - 0s 997us/step - loss: 0.0029 - accuracy:
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Epoch 4279/5000
1/1 [=====] - 0s 997us/step - loss: 0.0029 - accuracy:
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Epoch 4280/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4281/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4282/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4283/5000
1/1 [=====] - 0s 998us/step - loss: 0.0029 - accuracy:
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Epoch 4284/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4285/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4286/5000
1/1 [=====] - 0s 0s/step - loss: 0.0029 - accuracy:
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Epoch 4287/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
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Epoch 4288/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
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Epoch 4289/5000
1/1 [=====] - 0s 998us/step - loss: 0.0028 - accuracy:
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Epoch 4290/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4291/5000
1/1 [=====] - 0s 998us/step - loss: 0.0028 - accuracy:
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Epoch 4292/5000
1/1 [=====] - 0s 998us/step - loss: 0.0028 - accuracy:
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Epoch 4293/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4294/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4295/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4296/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
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Epoch 4297/5000
1/1 [=====] - 0s 998us/step - loss: 0.0028 - accuracy:
1.0000
Epoch 4298/5000
1/1 [=====] - 0s 999us/step - loss: 0.0028 - accuracy:
1.0000
Epoch 4299/5000
1/1 [=====] - 0s 946us/step - loss: 0.0028 - accuracy:
1.0000
Epoch 4300/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
1.0000
Epoch 4301/5000
1/1 [=====] - 0s 998us/step - loss: 0.0028 - accuracy:
1.0000
Epoch 4302/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
1.0000
Epoch 4303/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4304/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
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Epoch 4305/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
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Epoch 4306/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
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Epoch 4307/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4308/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4309/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4310/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
1.0000
Epoch 4311/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4312/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4313/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4314/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
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Epoch 4315/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4316/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
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Epoch 4317/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
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Epoch 4318/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4319/5000
1/1 [=====] - 0s 998us/step - loss: 0.0028 - accuracy:
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Epoch 4320/5000
1/1 [=====] - 0s 998us/step - loss: 0.0028 - accuracy:
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Epoch 4321/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
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Epoch 4322/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4323/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4324/5000
1/1 [=====] - 0s 998us/step - loss: 0.0028 - accuracy:
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Epoch 4325/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4326/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4327/5000
1/1 [=====] - 0s 998us/step - loss: 0.0028 - accuracy:
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Epoch 4328/5000
1/1 [=====] - 0s 997us/step - loss: 0.0028 - accuracy:
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Epoch 4329/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4330/5000
1/1 [=====] - 0s 999us/step - loss: 0.0028 - accuracy:
1.0000

Epoch 4331/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
1.0000

Epoch 4332/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4333/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
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Epoch 4334/5000
1/1 [=====] - 0s 0s/step - loss: 0.0028 - accuracy:
1.0000

Epoch 4335/5000
1/1 [=====] - 0s 998us/step - loss: 0.0027 - accuracy:
1.0000

Epoch 4336/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4337/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4338/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4339/5000
1/1 [=====] - 0s 998us/step - loss: 0.0027 - accuracy:
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Epoch 4340/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
1.0000

Epoch 4341/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
1.0000

Epoch 4342/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4343/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
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Epoch 4344/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
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Epoch 4345/5000
1/1 [=====] - 0s 999us/step - loss: 0.0027 - accuracy:
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Epoch 4346/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
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Epoch 4347/5000
1/1 [=====] - 0s 998us/step - loss: 0.0027 - accuracy:
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Epoch 4348/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4349/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
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Epoch 4350/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4351/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4352/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4353/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4354/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4355/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
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Epoch 4356/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4357/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4358/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4359/5000
1/1 [=====] - 0s 996us/step - loss: 0.0027 - accuracy:
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Epoch 4360/5000
1/1 [=====] - 0s 998us/step - loss: 0.0027 - accuracy:
1.0000

Epoch 4361/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4362/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
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Epoch 4363/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
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Epoch 4364/5000
1/1 [=====] - 0s 998us/step - loss: 0.0027 - accuracy:
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Epoch 4365/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
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Epoch 4366/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
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Epoch 4367/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4368/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4369/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
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Epoch 4370/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy:
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Epoch 4371/5000
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Epoch 4372/5000
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Epoch 4373/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4374/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy:
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Epoch 4375/5000
1/1 [=====] - 0s 998us/step - loss: 0.0027 - accuracy:
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Epoch 4376/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy: 1.0000

Epoch 4377/5000
1/1 [=====] - 0s 997us/step - loss: 0.0027 - accuracy: 1.0000

Epoch 4378/5000
1/1 [=====] - 0s 998us/step - loss: 0.0027 - accuracy: 1.0000

Epoch 4379/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy: 1.0000

Epoch 4380/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy: 1.0000

Epoch 4381/5000
1/1 [=====] - 0s 996us/step - loss: 0.0027 - accuracy: 1.0000

Epoch 4382/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy: 1.0000

Epoch 4383/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy: 1.0000

Epoch 4384/5000
1/1 [=====] - 0s 0s/step - loss: 0.0027 - accuracy: 1.0000

Epoch 4385/5000
1/1 [=====] - 0s 998us/step - loss: 0.0027 - accuracy: 1.0000

Epoch 4386/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4387/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4388/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4389/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4390/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4391/5000
1/1 [=====] - 0s 997us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4392/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
1.0000

Epoch 4393/5000
1/1 [=====] - 0s 983us/step - loss: 0.0026 - accuracy:
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Epoch 4394/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4395/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4396/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4397/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4398/5000
1/1 [=====] - 0s 997us/step - loss: 0.0026 - accuracy:
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Epoch 4399/5000
1/1 [=====] - 0s 997us/step - loss: 0.0026 - accuracy:
1.0000

Epoch 4400/5000
1/1 [=====] - 0s 996us/step - loss: 0.0026 - accuracy:
1.0000

Epoch 4401/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy:
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Epoch 4402/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy:
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Epoch 4403/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy:
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Epoch 4404/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4405/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4406/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4407/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4408/5000
1/1 [=====] - 0s 997us/step - loss: 0.0026 - accuracy:
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Epoch 4409/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4410/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4411/5000
1/1 [=====] - 0s 996us/step - loss: 0.0026 - accuracy:
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Epoch 4412/5000
1/1 [=====] - 0s 997us/step - loss: 0.0026 - accuracy:
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Epoch 4413/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4414/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4415/5000
1/1 [=====] - 0s 997us/step - loss: 0.0026 - accuracy:
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Epoch 4416/5000
1/1 [=====] - 0s 997us/step - loss: 0.0026 - accuracy:
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Epoch 4417/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4418/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4419/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4420/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy:
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Epoch 4421/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy:
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Epoch 4422/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy:
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Epoch 4423/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy:
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Epoch 4424/5000
1/1 [=====] - 0s 968us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4425/5000
1/1 [=====] - 0s 997us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4426/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4427/5000
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Epoch 4428/5000
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Epoch 4429/5000
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Epoch 4430/5000
1/1 [=====] - 0s 997us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4431/5000
1/1 [=====] - 0s 999us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4432/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4433/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4434/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4435/5000
1/1 [=====] - 0s 998us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4436/5000
1/1 [=====] - 0s 997us/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4437/5000
1/1 [=====] - 0s 0s/step - loss: 0.0026 - accuracy: 1.0000

Epoch 4438/5000
1/1 [=====] - 0s 998us/step - loss: 0.0025 - accuracy: 1.0000

Epoch 4439/5000
1/1 [=====] - 0s 997us/step - loss: 0.0025 - accuracy: 1.0000

Epoch 4440/5000
1/1 [=====] - 0s 998us/step - loss: 0.0025 - accuracy:
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Epoch 4441/5000
1/1 [=====] - 0s 998us/step - loss: 0.0025 - accuracy:
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Epoch 4442/5000
1/1 [=====] - 0s 998us/step - loss: 0.0025 - accuracy:
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Epoch 4443/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4444/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4445/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4446/5000
1/1 [=====] - 0s 998us/step - loss: 0.0025 - accuracy:
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Epoch 4447/5000
1/1 [=====] - 0s 998us/step - loss: 0.0025 - accuracy:
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Epoch 4448/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4449/5000
1/1 [=====] - 0s 997us/step - loss: 0.0025 - accuracy:
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Epoch 4450/5000
1/1 [=====] - 0s 997us/step - loss: 0.0025 - accuracy:
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Epoch 4451/5000
1/1 [=====] - 0s 998us/step - loss: 0.0025 - accuracy:
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Epoch 4452/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4453/5000
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Epoch 4454/5000
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Epoch 4455/5000
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Epoch 4456/5000
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Epoch 4457/5000
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Epoch 4458/5000
1/1 [=====] - 0s 995us/step - loss: 0.0025 - accuracy:
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Epoch 4459/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4460/5000
1/1 [=====] - 0s 997us/step - loss: 0.0025 - accuracy:
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Epoch 4461/5000
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Epoch 4462/5000
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Epoch 4463/5000
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Epoch 4464/5000
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Epoch 4465/5000
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Epoch 4466/5000
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Epoch 4467/5000
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Epoch 4468/5000
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Epoch 4469/5000
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Epoch 4470/5000
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Epoch 4471/5000
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Epoch 4472/5000
1/1 [=====] - 0s 997us/step - loss: 0.0025 - accuracy:
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Epoch 4473/5000
1/1 [=====] - 0s 997us/step - loss: 0.0025 - accuracy:
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Epoch 4474/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4475/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4476/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4477/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4478/5000
1/1 [=====] - 0s 998us/step - loss: 0.0025 - accuracy:
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Epoch 4479/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4480/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4481/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4482/5000
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Epoch 4483/5000
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Epoch 4484/5000
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Epoch 4485/5000
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Epoch 4486/5000
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Epoch 4487/5000
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Epoch 4488/5000
1/1 [=====] - 0s 997us/step - loss: 0.0025 - accuracy:
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Epoch 4489/5000
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Epoch 4490/5000
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Epoch 4491/5000
1/1 [=====] - 0s 0s/step - loss: 0.0025 - accuracy:
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Epoch 4492/5000
1/1 [=====] - 0s 997us/step - loss: 0.0025 - accuracy:
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Epoch 4493/5000
1/1 [=====] - 0s 997us/step - loss: 0.0024 - accuracy:
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Epoch 4494/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4495/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4496/5000
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Epoch 4497/5000
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Epoch 4498/5000
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Epoch 4499/5000
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Epoch 4500/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4501/5000
1/1 [=====] - 0s 997us/step - loss: 0.0024 - accuracy:
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Epoch 4502/5000
1/1 [=====] - 0s 997us/step - loss: 0.0024 - accuracy:
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Epoch 4503/5000
1/1 [=====] - 0s 997us/step - loss: 0.0024 - accuracy:
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Epoch 4504/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4505/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4506/5000
1/1 [=====] - 0s 998us/step - loss: 0.0024 - accuracy:
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Epoch 4507/5000
1/1 [=====] - 0s 998us/step - loss: 0.0024 - accuracy:
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Epoch 4508/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4509/5000
1/1 [=====] - 0s 998us/step - loss: 0.0024 - accuracy:
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Epoch 4510/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4511/5000
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Epoch 4512/5000
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Epoch 4513/5000
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Epoch 4514/5000
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Epoch 4515/5000
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Epoch 4516/5000
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Epoch 4517/5000
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Epoch 4518/5000
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Epoch 4519/5000
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Epoch 4520/5000
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Epoch 4521/5000
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Epoch 4522/5000
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Epoch 4523/5000
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Epoch 4524/5000
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Epoch 4525/5000
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Epoch 4526/5000
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Epoch 4527/5000
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Epoch 4528/5000
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Epoch 4529/5000
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Epoch 4530/5000
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Epoch 4531/5000
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Epoch 4532/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4533/5000
1/1 [=====] - 0s 995us/step - loss: 0.0024 - accuracy:
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Epoch 4534/5000
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Epoch 4535/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4536/5000
1/1 [=====] - 0s 996us/step - loss: 0.0024 - accuracy:
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Epoch 4537/5000
1/1 [=====] - 0s 998us/step - loss: 0.0024 - accuracy:
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Epoch 4538/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4539/5000
1/1 [=====] - 0s 997us/step - loss: 0.0024 - accuracy:
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Epoch 4540/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4541/5000
1/1 [=====] - 0s 997us/step - loss: 0.0024 - accuracy:
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Epoch 4542/5000
1/1 [=====] - 0s 996us/step - loss: 0.0024 - accuracy:
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Epoch 4543/5000
1/1 [=====] - 0s 997us/step - loss: 0.0024 - accuracy:
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Epoch 4544/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4545/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4546/5000
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Epoch 4547/5000
1/1 [=====] - 0s 998us/step - loss: 0.0024 - accuracy:
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Epoch 4548/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4549/5000
1/1 [=====] - 0s 0s/step - loss: 0.0024 - accuracy:
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Epoch 4550/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy:
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Epoch 4551/5000
1/1 [=====] - 0s 998us/step - loss: 0.0023 - accuracy:
1.0000

Epoch 4552/5000
1/1 [=====] - 0s 998us/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4553/5000
1/1 [=====] - 0s 998us/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4554/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4555/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4556/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4557/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4558/5000
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Epoch 4559/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4560/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4561/5000
1/1 [=====] - 0s 998us/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4562/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4563/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4564/5000
1/1 [=====] - 0s 997us/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4565/5000
1/1 [=====] - 0s 998us/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4566/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4567/5000
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Epoch 4568/5000
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Epoch 4569/5000
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Epoch 4570/5000
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Epoch 4571/5000
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Epoch 4572/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy:
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Epoch 4573/5000
1/1 [=====] - 0s 997us/step - loss: 0.0023 - accuracy:
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Epoch 4574/5000
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Epoch 4575/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy:
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Epoch 4576/5000
1/1 [=====] - 0s 996us/step - loss: 0.0023 - accuracy:
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Epoch 4577/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy:
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Epoch 4578/5000
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Epoch 4579/5000
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Epoch 4580/5000
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Epoch 4581/5000
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Epoch 4582/5000
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Epoch 4583/5000
1/1 [=====] - 0s 998us/step - loss: 0.0023 - accuracy:
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Epoch 4584/5000
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Epoch 4585/5000
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Epoch 4586/5000
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Epoch 4587/5000
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Epoch 4588/5000
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Epoch 4589/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy:
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Epoch 4590/5000
1/1 [=====] - 0s 997us/step - loss: 0.0023 - accuracy:
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Epoch 4591/5000
1/1 [=====] - 0s 998us/step - loss: 0.0023 - accuracy:
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Epoch 4592/5000
1/1 [=====] - 0s 997us/step - loss: 0.0023 - accuracy:
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Epoch 4593/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy:
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Epoch 4594/5000
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Epoch 4595/5000
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Epoch 4596/5000
1/1 [=====] - 0s 996us/step - loss: 0.0023 - accuracy:
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Epoch 4597/5000
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Epoch 4598/5000
1/1 [=====] - 0s 998us/step - loss: 0.0023 - accuracy:
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Epoch 4599/5000
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Epoch 4600/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4601/5000
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Epoch 4602/5000
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Epoch 4603/5000
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Epoch 4604/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4605/5000
1/1 [=====] - 0s 998us/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4606/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4607/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4608/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4609/5000
1/1 [=====] - 0s 0s/step - loss: 0.0023 - accuracy: 1.0000

Epoch 4610/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4611/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4612/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4613/5000
1/1 [=====] - 0s 996us/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4614/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4615/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4616/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4617/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4618/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4619/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4620/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy:
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Epoch 4621/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy:
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Epoch 4622/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4623/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4624/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4625/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy:
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Epoch 4626/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4627/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4628/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4629/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4630/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4631/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy:
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Epoch 4632/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4633/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4634/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4635/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4636/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4637/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy:
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Epoch 4638/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy:
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Epoch 4639/5000
1/1 [=====] - 0s 996us/step - loss: 0.0022 - accuracy:
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Epoch 4640/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4641/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4642/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4643/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy:
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Epoch 4644/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4645/5000
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Epoch 4646/5000
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Epoch 4647/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4648/5000
1/1 [=====] - 0s 999us/step - loss: 0.0022 - accuracy:
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Epoch 4649/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4650/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4651/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy:
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Epoch 4652/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4653/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4654/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy:
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Epoch 4655/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4656/5000
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Epoch 4657/5000
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Epoch 4658/5000
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Epoch 4659/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4660/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4661/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy:
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Epoch 4662/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy:
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Epoch 4663/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy:
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Epoch 4664/5000
1/1 [=====] - 0s 999us/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4665/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4666/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4667/5000
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Epoch 4668/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4669/5000
1/1 [=====] - 0s 997us/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4670/5000
1/1 [=====] - 0s 0s/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4671/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4672/5000
1/1 [=====] - 0s 999us/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4673/5000
1/1 [=====] - 0s 998us/step - loss: 0.0022 - accuracy: 1.0000

Epoch 4674/5000
1/1 [=====] - 0s 0s/step - loss: 0.0021 - accuracy: 1.0000

Epoch 4675/5000
1/1 [=====] - 0s 998us/step - loss: 0.0021 - accuracy: 1.0000

Epoch 4676/5000
1/1 [=====] - 0s 997us/step - loss: 0.0021 - accuracy: 1.0000

Epoch 4677/5000
1/1 [=====] - 0s 0s/step - loss: 0.0021 - accuracy: 1.0000

Epoch 4678/5000
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Epoch 4679/5000
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Epoch 4680/5000
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Epoch 4681/5000
1/1 [=====] - 0s 997us/step - loss: 0.0021 - accuracy:
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Epoch 4682/5000
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Epoch 4683/5000
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Epoch 4684/5000
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Epoch 4685/5000
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Epoch 4686/5000
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Epoch 4687/5000
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Epoch 4688/5000
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Epoch 4689/5000
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Epoch 4690/5000
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Epoch 4691/5000
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Epoch 4692/5000
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Epoch 4693/5000
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Epoch 4694/5000
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Epoch 4695/5000
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Epoch 4696/5000
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Epoch 4697/5000
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Epoch 4698/5000
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Epoch 4699/5000
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Epoch 4700/5000
1/1 [=====] - 0s 0s/step - loss: 0.0021 - accuracy: 1.0000

Epoch 4701/5000
1/1 [=====] - 0s 0s/step - loss: 0.0021 - accuracy: 1.0000

Epoch 4702/5000
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Epoch 4703/5000
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Epoch 4704/5000
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Epoch 4705/5000
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Epoch 4706/5000
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Epoch 4707/5000
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Epoch 4708/5000
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Epoch 4709/5000
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Epoch 4710/5000
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Epoch 4711/5000
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Epoch 4712/5000
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Epoch 4713/5000
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Epoch 4714/5000
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Epoch 4715/5000
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Epoch 4716/5000
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Epoch 4717/5000
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Epoch 4718/5000
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Epoch 4719/5000
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Epoch 4720/5000
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Epoch 4721/5000
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Epoch 4722/5000
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Epoch 4723/5000
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Epoch 4724/5000
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Epoch 4725/5000
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Epoch 4726/5000
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Epoch 4727/5000
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Epoch 4728/5000
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Epoch 4729/5000
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Epoch 4730/5000
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Epoch 4731/5000
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Epoch 4732/5000
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Epoch 4733/5000
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Epoch 4734/5000
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Epoch 4735/5000
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Epoch 4736/5000
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Epoch 4737/5000
1/1 [=====] - 0s 998us/step - loss: 0.0021 - accuracy:
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Epoch 4738/5000
1/1 [=====] - 0s 997us/step - loss: 0.0021 - accuracy:
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Epoch 4739/5000
1/1 [=====] - 0s 998us/step - loss: 0.0021 - accuracy:
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Epoch 4740/5000
1/1 [=====] - 0s 996us/step - loss: 0.0021 - accuracy:
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Epoch 4741/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4742/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4743/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy:
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Epoch 4744/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4745/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4746/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4747/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4748/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4749/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4750/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4751/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4752/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4753/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4754/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4755/5000
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Epoch 4756/5000
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Epoch 4757/5000
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Epoch 4758/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4759/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy: 1.0000

Epoch 4760/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy:
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Epoch 4761/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4762/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4763/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy:
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Epoch 4764/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4765/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4766/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4767/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4768/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4769/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy:
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Epoch 4770/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy:
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Epoch 4771/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy:
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Epoch 4772/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4773/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4774/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy:
1.0000

Epoch 4775/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0020 - accuracy:
1.0000

Epoch 4776/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
1.0000

Epoch 4777/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4778/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4779/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4780/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4781/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy:
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Epoch 4782/5000
1/1 [=====] - 0s 996us/step - loss: 0.0020 - accuracy:
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Epoch 4783/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4784/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4785/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4786/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4787/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4788/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4789/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4790/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4791/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy:
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Epoch 4792/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4793/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4794/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4795/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4796/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4797/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy:
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Epoch 4798/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4799/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4800/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4801/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4802/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4803/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4804/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4805/5000
1/1 [=====] - 0s 998us/step - loss: 0.0020 - accuracy:
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Epoch 4806/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4807/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4808/5000
1/1 [=====] - 0s 997us/step - loss: 0.0020 - accuracy:
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Epoch 4809/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4810/5000
1/1 [=====] - 0s 0s/step - loss: 0.0020 - accuracy:
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Epoch 4811/5000
1/1 [=====] - 0s 0s/step - loss: 0.0019 - accuracy:
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Epoch 4812/5000
1/1 [=====] - 0s 997us/step - loss: 0.0019 - accuracy:
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Epoch 4813/5000
1/1 [=====] - 0s 998us/step - loss: 0.0019 - accuracy:
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Epoch 4814/5000
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Epoch 4815/5000
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Epoch 4816/5000
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Epoch 4817/5000
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Epoch 4818/5000
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Epoch 4819/5000
1/1 [=====] - 0s 997us/step - loss: 0.0019 - accuracy:
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Epoch 4820/5000
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Epoch 4821/5000
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Epoch 4822/5000
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Epoch 4823/5000
1/1 [=====] - 0s 0s/step - loss: 0.0019 - accuracy:
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Epoch 4824/5000
1/1 [=====] - 0s 0s/step - loss: 0.0019 - accuracy:
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Epoch 4825/5000
1/1 [=====] - 0s 0s/step - loss: 0.0019 - accuracy:
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Epoch 4826/5000
1/1 [=====] - 0s 0s/step - loss: 0.0019 - accuracy:
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Epoch 4827/5000
1/1 [=====] - 0s 998us/step - loss: 0.0019 - accuracy:
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Epoch 4828/5000
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Epoch 4829/5000
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Epoch 4830/5000
1/1 [=====] - 0s 996us/step - loss: 0.0019 - accuracy:
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Epoch 4831/5000
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Epoch 4832/5000
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Epoch 4833/5000
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Epoch 4834/5000
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Epoch 4835/5000
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Epoch 4836/5000
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Epoch 4837/5000
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Epoch 4839/5000
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Epoch 4840/5000
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Epoch 4841/5000
1/1 [=====] - 0s 0s/step - loss: 0.0019 - accuracy:
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Epoch 4842/5000
1/1 [=====] - 0s 998us/step - loss: 0.0019 - accuracy:
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Epoch 4843/5000
1/1 [=====] - 0s 997us/step - loss: 0.0019 - accuracy:
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Epoch 4844/5000
1/1 [=====] - 0s 998us/step - loss: 0.0019 - accuracy:
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Epoch 4845/5000
1/1 [=====] - 0s 998us/step - loss: 0.0019 - accuracy:
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Epoch 4846/5000
1/1 [=====] - 0s 997us/step - loss: 0.0019 - accuracy:
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Epoch 4847/5000
1/1 [=====] - 0s 997us/step - loss: 0.0019 - accuracy:
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Epoch 4848/5000
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Epoch 4849/5000
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Epoch 4850/5000
1/1 [=====] - 0s 997us/step - loss: 0.0019 - accuracy:
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Epoch 4851/5000
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Epoch 4852/5000
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Epoch 4853/5000
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Epoch 4855/5000
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Epoch 4858/5000
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Epoch 4859/5000
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Epoch 4860/5000
1/1 [=====] - 0s 997us/step - loss: 0.0019 - accuracy:
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Epoch 4861/5000
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Epoch 4862/5000
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Epoch 4863/5000
1/1 [=====] - 0s 0s/step - loss: 0.0019 - accuracy:
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Epoch 4864/5000
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Epoch 4865/5000
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Epoch 4866/5000
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Epoch 4867/5000
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Epoch 4868/5000
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Epoch 4869/5000
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Epoch 4870/5000
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Epoch 4871/5000
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Epoch 4872/5000
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Epoch 4873/5000
1/1 [=====] - 0s 0s/step - loss: 0.0019 - accuracy:
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Epoch 4874/5000
1/1 [=====] - 0s 997us/step - loss: 0.0019 - accuracy:
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Epoch 4875/5000
1/1 [=====] - 0s 0s/step - loss: 0.0019 - accuracy:
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Epoch 4876/5000
1/1 [=====] - 0s 998us/step - loss: 0.0019 - accuracy:
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Epoch 4877/5000
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Epoch 4878/5000
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Epoch 4879/5000
1/1 [=====] - 0s 998us/step - loss: 0.0019 - accuracy:
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Epoch 4880/5000
1/1 [=====] - 0s 0s/step - loss: 0.0019 - accuracy:
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Epoch 4881/5000
1/1 [=====] - 0s 998us/step - loss: 0.0019 - accuracy:
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Epoch 4882/5000
1/1 [=====] - 0s 998us/step - loss: 0.0019 - accuracy:
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Epoch 4883/5000
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Epoch 4884/5000
1/1 [=====] - 0s 997us/step - loss: 0.0019 - accuracy:
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Epoch 4885/5000
1/1 [=====] - 0s 998us/step - loss: 0.0019 - accuracy:
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Epoch 4886/5000
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Epoch 4887/5000
1/1 [=====] - 0s 0s/step - loss: 0.0018 - accuracy:
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Epoch 4888/5000
1/1 [=====] - 0s 998us/step - loss: 0.0018 - accuracy:
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Epoch 4889/5000
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Epoch 4890/5000
1/1 [=====] - 0s 998us/step - loss: 0.0018 - accuracy:
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Epoch 4891/5000
1/1 [=====] - 0s 999us/step - loss: 0.0018 - accuracy:
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Epoch 4892/5000
1/1 [=====] - 0s 998us/step - loss: 0.0018 - accuracy:
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Epoch 4893/5000
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Epoch 4894/5000
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Epoch 4895/5000
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Epoch 4896/5000
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Epoch 4897/5000
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Epoch 4898/5000
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Epoch 4899/5000
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Epoch 4900/5000
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Epoch 4901/5000
1/1 [=====] - 0s 997us/step - loss: 0.0018 - accuracy:
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Epoch 4902/5000
1/1 [=====] - 0s 0s/step - loss: 0.0018 - accuracy:
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Epoch 4903/5000
1/1 [=====] - 0s 0s/step - loss: 0.0018 - accuracy:
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Epoch 4904/5000
1/1 [=====] - 0s 997us/step - loss: 0.0018 - accuracy:
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Epoch 4905/5000
1/1 [=====] - 0s 997us/step - loss: 0.0018 - accuracy:
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Epoch 4906/5000
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Epoch 4907/5000
1/1 [=====] - 0s 997us/step - loss: 0.0018 - accuracy:
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Epoch 4908/5000
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Epoch 4909/5000
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Epoch 4910/5000
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Epoch 4911/5000
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Epoch 4912/5000
1/1 [=====] - 0s 997us/step - loss: 0.0018 - accuracy:
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Epoch 4913/5000
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Epoch 4914/5000
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Epoch 4915/5000
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Epoch 4916/5000
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Epoch 4917/5000
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Epoch 4918/5000
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Epoch 4919/5000
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Epoch 4920/5000
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Epoch 4921/5000
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Epoch 4922/5000
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Epoch 4923/5000
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Epoch 4924/5000
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Epoch 4925/5000
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Epoch 4926/5000
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Epoch 4927/5000
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Epoch 4930/5000
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Epoch 4931/5000
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Epoch 4932/5000
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Epoch 4933/5000
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Epoch 4934/5000
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Epoch 4935/5000
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Epoch 4936/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0018 - accuracy:
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Epoch 4937/5000
1/1 [=====] - 0s 0s/step - loss: 0.0018 - accuracy:
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Epoch 4938/5000
1/1 [=====] - 0s 997us/step - loss: 0.0018 - accuracy:
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Epoch 4939/5000
1/1 [=====] - 0s 998us/step - loss: 0.0018 - accuracy:
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Epoch 4940/5000
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Epoch 4941/5000
1/1 [=====] - 0s 0s/step - loss: 0.0018 - accuracy:
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Epoch 4942/5000
1/1 [=====] - 0s 998us/step - loss: 0.0018 - accuracy:
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Epoch 4943/5000
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Epoch 4944/5000
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Epoch 4945/5000
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Epoch 4946/5000
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Epoch 4947/5000
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Epoch 4948/5000
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Epoch 4949/5000
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Epoch 4950/5000
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Epoch 4951/5000
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Epoch 4952/5000
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Epoch 4953/5000
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Epoch 4954/5000
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Epoch 4955/5000
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Epoch 4956/5000
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Epoch 4957/5000
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Epoch 4958/5000
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Epoch 4959/5000
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Epoch 4960/5000
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Epoch 4961/5000
1/1 [=====] - 0s 999us/step - loss: 0.0018 - accuracy:
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Epoch 4962/5000
1/1 [=====] - 0s 997us/step - loss: 0.0018 - accuracy:
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Epoch 4963/5000
1/1 [=====] - 0s 0s/step - loss: 0.0018 - accuracy:
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Epoch 4964/5000
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Epoch 4965/5000
1/1 [=====] - 0s 997us/step - loss: 0.0018 - accuracy:
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Epoch 4966/5000
1/1 [=====] - 0s 998us/step - loss: 0.0017 - accuracy:
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Epoch 4967/5000
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Epoch 4968/5000
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Epoch 4969/5000
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Epoch 4970/5000
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Epoch 4971/5000
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Epoch 4972/5000
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Epoch 4973/5000
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Epoch 4974/5000
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Epoch 4975/5000
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Epoch 4976/5000
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Epoch 4977/5000
1/1 [=====] - 0s 997us/step - loss: 0.0017 - accuracy:
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Epoch 4978/5000
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Epoch 4979/5000
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Epoch 4980/5000
1/1 [=====] - 0s 994us/step - loss: 0.0017 - accuracy:
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Epoch 4981/5000
1/1 [=====] - 0s 0s/step - loss: 0.0017 - accuracy:
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Epoch 4982/5000
1/1 [=====] - 0s 0s/step - loss: 0.0017 - accuracy:
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Epoch 4983/5000
1/1 [=====] - 0s 996us/step - loss: 0.0017 - accuracy:
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Epoch 4984/5000
1/1 [=====] - 0s 998us/step - loss: 0.0017 - accuracy:
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Epoch 4985/5000
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Epoch 4986/5000
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Epoch 4987/5000
1/1 [=====] - 0s 998us/step - loss: 0.0017 - accuracy:
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Epoch 4988/5000
1/1 [=====] - 0s 998us/step - loss: 0.0017 - accuracy:
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Epoch 4989/5000
1/1 [=====] - 0s 997us/step - loss: 0.0017 - accuracy:
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Epoch 4990/5000
1/1 [=====] - 0s 0s/step - loss: 0.0017 - accuracy:
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Epoch 4991/5000
1/1 [=====] - 0s 998us/step - loss: 0.0017 - accuracy:
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Epoch 4992/5000
1/1 [=====] - 0s 0s/step - loss: 0.0017 - accuracy:
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Epoch 4993/5000
1/1 [=====] - 0s 997us/step - loss: 0.0017 - accuracy:
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Epoch 4994/5000
1/1 [=====] - 0s 998us/step - loss: 0.0017 - accuracy:
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Epoch 4995/5000
1/1 [=====] - 0s 0s/step - loss: 0.0017 - accuracy:
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Epoch 4996/5000
1/1 [=====] - 0s 0s/step - loss: 0.0017 - accuracy:
1.0000

Epoch 4997/5000
1/1 [=====] - 0s 998us/step - loss: 0.0017 - accuracy:
1.0000

Epoch 4998/5000
1/1 [=====] - 0s 997us/step - loss: 0.0017 - accuracy:
1.0000

Epoch 4999/5000
1/1 [=====] - 0s 0s/step - loss: 0.0017 - accuracy:
1.0000

```
Epoch 5000/5000
1/1 [=====] - 0s 997us/step - loss: 0.0017 - accuracy:
1.0000
```

[19]: <tensorflow.python.keras.callbacks.History at 0x15d1e7da400>

```
[20]: # Test the output of the trained neural networks based NAND gate
y_predict = model_Ampersand.predict(x_train)
print(y_predict)
```

```
[[0.9999521 ]
 [0.9975865 ]
 [0.9980847 ]
 [0.00244385]]
```

1.3.3 Operator \$

```
[21]: # The input and output, i.e. truth table, of a NAND gate
x_train = np.array([[0,0],[1,0],[0,1],[1,1]], "uint8")
y_train = np.array([[0],[0],[0],[1]], "uint8")

# Create neural networks model
model_Dollar = Sequential()
# Add layers to the model
model_Dollar.add(Dense(5, activation='relu', input_dim=2))      # first hidden_
↳ layer
#model_Ampersand.add(Dense(3, activation='relu'))                # second_
↳ hidden layer
model_Dollar.add(Dense(1, activation='sigmoid'))                # output layer

# Compile the neural networks model
model_Dollar.compile(optimizer='adam', loss='binary_crossentropy',
↳ metrics=['accuracy'])
# Train the neural networks model
model_Dollar.fit(x_train, y_train, epochs=5000)
```

```
Epoch 1/5000
1/1 [=====] - 0s 16ms/step - loss: 0.8102 - accuracy:
0.5000
Epoch 2/5000
1/1 [=====] - 0s 0s/step - loss: 0.8092 - accuracy:
0.5000
Epoch 3/5000
1/1 [=====] - 0s 0s/step - loss: 0.8082 - accuracy:
0.5000
Epoch 4/5000
1/1 [=====] - 0s 0s/step - loss: 0.8072 - accuracy:
0.5000
```

Epoch 5/5000
1/1 [=====] - 0s 0s/step - loss: 0.8062 - accuracy:
0.5000

Epoch 6/5000
1/1 [=====] - 0s 0s/step - loss: 0.8052 - accuracy:
0.5000

Epoch 7/5000
1/1 [=====] - 0s 998us/step - loss: 0.8042 - accuracy:
0.5000

Epoch 8/5000
1/1 [=====] - 0s 997us/step - loss: 0.8032 - accuracy:
0.5000

Epoch 9/5000
1/1 [=====] - 0s 0s/step - loss: 0.8022 - accuracy:
0.5000

Epoch 10/5000
1/1 [=====] - 0s 997us/step - loss: 0.8012 - accuracy:
0.5000

Epoch 11/5000
1/1 [=====] - 0s 0s/step - loss: 0.8002 - accuracy:
0.5000

Epoch 12/5000
1/1 [=====] - 0s 0s/step - loss: 0.7993 - accuracy:
0.5000

Epoch 13/5000
1/1 [=====] - 0s 0s/step - loss: 0.7983 - accuracy:
0.5000

Epoch 14/5000
1/1 [=====] - 0s 997us/step - loss: 0.7973 - accuracy:
0.5000

Epoch 15/5000
1/1 [=====] - 0s 0s/step - loss: 0.7964 - accuracy:
0.5000

Epoch 16/5000
1/1 [=====] - 0s 996us/step - loss: 0.7954 - accuracy:
0.5000

Epoch 17/5000
1/1 [=====] - 0s 997us/step - loss: 0.7945 - accuracy:
0.5000

Epoch 18/5000
1/1 [=====] - 0s 998us/step - loss: 0.7935 - accuracy:
0.5000

Epoch 19/5000
1/1 [=====] - 0s 0s/step - loss: 0.7926 - accuracy:
0.5000

Epoch 20/5000
1/1 [=====] - 0s 997us/step - loss: 0.7916 - accuracy:
0.5000

Epoch 21/5000
1/1 [=====] - 0s 997us/step - loss: 0.7907 - accuracy:
0.5000

Epoch 22/5000
1/1 [=====] - 0s 996us/step - loss: 0.7898 - accuracy:
0.5000

Epoch 23/5000
1/1 [=====] - 0s 997us/step - loss: 0.7888 - accuracy:
0.5000

Epoch 24/5000
1/1 [=====] - 0s 998us/step - loss: 0.7879 - accuracy:
0.5000

Epoch 25/5000
1/1 [=====] - 0s 996us/step - loss: 0.7870 - accuracy:
0.5000

Epoch 26/5000
1/1 [=====] - 0s 0s/step - loss: 0.7861 - accuracy:
0.5000

Epoch 27/5000
1/1 [=====] - 0s 0s/step - loss: 0.7852 - accuracy:
0.5000

Epoch 28/5000
1/1 [=====] - 0s 0s/step - loss: 0.7843 - accuracy:
0.5000

Epoch 29/5000
1/1 [=====] - 0s 998us/step - loss: 0.7834 - accuracy:
0.5000

Epoch 30/5000
1/1 [=====] - 0s 0s/step - loss: 0.7825 - accuracy:
0.5000

Epoch 31/5000
1/1 [=====] - 0s 998us/step - loss: 0.7816 - accuracy:
0.5000

Epoch 32/5000
1/1 [=====] - 0s 0s/step - loss: 0.7807 - accuracy:
0.5000

Epoch 33/5000
1/1 [=====] - 0s 0s/step - loss: 0.7798 - accuracy:
0.5000

Epoch 34/5000
1/1 [=====] - 0s 0s/step - loss: 0.7790 - accuracy:
0.5000

Epoch 35/5000
1/1 [=====] - 0s 0s/step - loss: 0.7781 - accuracy:
0.5000

Epoch 36/5000
1/1 [=====] - 0s 0s/step - loss: 0.7772 - accuracy:
0.5000

Epoch 37/5000
1/1 [=====] - 0s 0s/step - loss: 0.7764 - accuracy:
0.5000

Epoch 38/5000
1/1 [=====] - 0s 0s/step - loss: 0.7755 - accuracy:
0.2500

Epoch 39/5000
1/1 [=====] - 0s 0s/step - loss: 0.7746 - accuracy:
0.2500

Epoch 40/5000
1/1 [=====] - 0s 998us/step - loss: 0.7738 - accuracy:
0.2500

Epoch 41/5000
1/1 [=====] - 0s 998us/step - loss: 0.7729 - accuracy:
0.2500

Epoch 42/5000
1/1 [=====] - 0s 0s/step - loss: 0.7721 - accuracy:
0.2500

Epoch 43/5000
1/1 [=====] - 0s 0s/step - loss: 0.7713 - accuracy:
0.2500

Epoch 44/5000
1/1 [=====] - 0s 997us/step - loss: 0.7704 - accuracy:
0.2500

Epoch 45/5000
1/1 [=====] - 0s 0s/step - loss: 0.7696 - accuracy:
0.2500

Epoch 46/5000
1/1 [=====] - 0s 0s/step - loss: 0.7688 - accuracy:
0.2500

Epoch 47/5000
1/1 [=====] - 0s 997us/step - loss: 0.7680 - accuracy:
0.2500

Epoch 48/5000
1/1 [=====] - 0s 997us/step - loss: 0.7671 - accuracy:
0.2500

Epoch 49/5000
1/1 [=====] - 0s 998us/step - loss: 0.7663 - accuracy:
0.2500

Epoch 50/5000
1/1 [=====] - 0s 996us/step - loss: 0.7655 - accuracy:
0.2500

Epoch 51/5000
1/1 [=====] - 0s 0s/step - loss: 0.7647 - accuracy:
0.2500

Epoch 52/5000
1/1 [=====] - 0s 0s/step - loss: 0.7639 - accuracy:
0.2500

Epoch 53/5000
1/1 [=====] - 0s 997us/step - loss: 0.7631 - accuracy:
0.2500

Epoch 54/5000
1/1 [=====] - 0s 998us/step - loss: 0.7623 - accuracy:
0.2500

Epoch 55/5000
1/1 [=====] - 0s 997us/step - loss: 0.7615 - accuracy:
0.2500

Epoch 56/5000
1/1 [=====] - 0s 997us/step - loss: 0.7607 - accuracy:
0.2500

Epoch 57/5000
1/1 [=====] - 0s 997us/step - loss: 0.7600 - accuracy:
0.2500

Epoch 58/5000
1/1 [=====] - 0s 997us/step - loss: 0.7592 - accuracy:
0.2500

Epoch 59/5000
1/1 [=====] - 0s 0s/step - loss: 0.7584 - accuracy:
0.2500

Epoch 60/5000
1/1 [=====] - 0s 0s/step - loss: 0.7576 - accuracy:
0.2500

Epoch 61/5000
1/1 [=====] - 0s 0s/step - loss: 0.7569 - accuracy:
0.2500

Epoch 62/5000
1/1 [=====] - 0s 0s/step - loss: 0.7561 - accuracy:
0.2500

Epoch 63/5000
1/1 [=====] - 0s 997us/step - loss: 0.7553 - accuracy:
0.2500

Epoch 64/5000
1/1 [=====] - 0s 998us/step - loss: 0.7546 - accuracy:
0.2500

Epoch 65/5000
1/1 [=====] - 0s 5ms/step - loss: 0.7538 - accuracy:
0.2500

Epoch 66/5000
1/1 [=====] - 0s 997us/step - loss: 0.7531 - accuracy:
0.2500

Epoch 67/5000
1/1 [=====] - 0s 0s/step - loss: 0.7523 - accuracy:
0.2500

Epoch 68/5000
1/1 [=====] - 0s 969us/step - loss: 0.7516 - accuracy:
0.2500

Epoch 69/5000
1/1 [=====] - 0s 0s/step - loss: 0.7509 - accuracy:
0.2500
Epoch 70/5000
1/1 [=====] - 0s 0s/step - loss: 0.7501 - accuracy:
0.2500
Epoch 71/5000
1/1 [=====] - 0s 998us/step - loss: 0.7494 - accuracy:
0.2500
Epoch 72/5000
1/1 [=====] - 0s 0s/step - loss: 0.7486 - accuracy:
0.2500
Epoch 73/5000
1/1 [=====] - 0s 0s/step - loss: 0.7479 - accuracy:
0.2500
Epoch 74/5000
1/1 [=====] - 0s 0s/step - loss: 0.7472 - accuracy:
0.2500
Epoch 75/5000
1/1 [=====] - 0s 997us/step - loss: 0.7465 - accuracy:
0.2500
Epoch 76/5000
1/1 [=====] - 0s 0s/step - loss: 0.7457 - accuracy:
0.2500
Epoch 77/5000
1/1 [=====] - 0s 0s/step - loss: 0.7450 - accuracy:
0.2500
Epoch 78/5000
1/1 [=====] - 0s 0s/step - loss: 0.7443 - accuracy:
0.2500
Epoch 79/5000
1/1 [=====] - 0s 998us/step - loss: 0.7436 - accuracy:
0.2500
Epoch 80/5000
1/1 [=====] - 0s 996us/step - loss: 0.7429 - accuracy:
0.2500
Epoch 81/5000
1/1 [=====] - 0s 998us/step - loss: 0.7422 - accuracy:
0.2500
Epoch 82/5000
1/1 [=====] - 0s 0s/step - loss: 0.7415 - accuracy:
0.2500
Epoch 83/5000
1/1 [=====] - 0s 997us/step - loss: 0.7408 - accuracy:
0.2500
Epoch 84/5000
1/1 [=====] - 0s 998us/step - loss: 0.7401 - accuracy:
0.2500

Epoch 85/5000
1/1 [=====] - 0s 0s/step - loss: 0.7394 - accuracy:
0.2500

Epoch 86/5000
1/1 [=====] - 0s 0s/step - loss: 0.7387 - accuracy:
0.2500

Epoch 87/5000
1/1 [=====] - 0s 0s/step - loss: 0.7380 - accuracy:
0.2500

Epoch 88/5000
1/1 [=====] - 0s 0s/step - loss: 0.7373 - accuracy:
0.2500

Epoch 89/5000
1/1 [=====] - 0s 0s/step - loss: 0.7366 - accuracy:
0.2500

Epoch 90/5000
1/1 [=====] - 0s 0s/step - loss: 0.7359 - accuracy:
0.2500

Epoch 91/5000
1/1 [=====] - 0s 0s/step - loss: 0.7352 - accuracy:
0.2500

Epoch 92/5000
1/1 [=====] - 0s 0s/step - loss: 0.7345 - accuracy:
0.2500

Epoch 93/5000
1/1 [=====] - 0s 0s/step - loss: 0.7339 - accuracy:
0.2500

Epoch 94/5000
1/1 [=====] - 0s 997us/step - loss: 0.7332 - accuracy:
0.2500

Epoch 95/5000
1/1 [=====] - 0s 0s/step - loss: 0.7325 - accuracy:
0.2500

Epoch 96/5000
1/1 [=====] - 0s 0s/step - loss: 0.7318 - accuracy:
0.2500

Epoch 97/5000
1/1 [=====] - 0s 998us/step - loss: 0.7311 - accuracy:
0.5000

Epoch 98/5000
1/1 [=====] - 0s 998us/step - loss: 0.7305 - accuracy:
0.5000

Epoch 99/5000
1/1 [=====] - 0s 0s/step - loss: 0.7298 - accuracy:
0.5000

Epoch 100/5000
1/1 [=====] - 0s 998us/step - loss: 0.7291 - accuracy:
0.5000

Epoch 101/5000
1/1 [=====] - 0s 998us/step - loss: 0.7285 - accuracy:
0.5000

Epoch 102/5000
1/1 [=====] - 0s 0s/step - loss: 0.7278 - accuracy:
0.5000

Epoch 103/5000
1/1 [=====] - 0s 0s/step - loss: 0.7271 - accuracy:
0.5000

Epoch 104/5000
1/1 [=====] - 0s 0s/step - loss: 0.7265 - accuracy:
0.5000

Epoch 105/5000
1/1 [=====] - 0s 998us/step - loss: 0.7258 - accuracy:
0.5000

Epoch 106/5000
1/1 [=====] - 0s 998us/step - loss: 0.7251 - accuracy:
0.5000

Epoch 107/5000
1/1 [=====] - 0s 0s/step - loss: 0.7245 - accuracy:
0.5000

Epoch 108/5000
1/1 [=====] - 0s 997us/step - loss: 0.7238 - accuracy:
0.5000

Epoch 109/5000
1/1 [=====] - 0s 0s/step - loss: 0.7232 - accuracy:
0.5000

Epoch 110/5000
1/1 [=====] - 0s 997us/step - loss: 0.7225 - accuracy:
0.5000

Epoch 111/5000
1/1 [=====] - 0s 997us/step - loss: 0.7218 - accuracy:
0.5000

Epoch 112/5000
1/1 [=====] - 0s 0s/step - loss: 0.7212 - accuracy:
0.5000

Epoch 113/5000
1/1 [=====] - 0s 0s/step - loss: 0.7205 - accuracy:
0.5000

Epoch 114/5000
1/1 [=====] - 0s 0s/step - loss: 0.7199 - accuracy:
0.5000

Epoch 115/5000
1/1 [=====] - 0s 0s/step - loss: 0.7192 - accuracy:
0.5000

Epoch 116/5000
1/1 [=====] - 0s 0s/step - loss: 0.7186 - accuracy:
0.5000

Epoch 117/5000
1/1 [=====] - 0s 0s/step - loss: 0.7179 - accuracy:
0.5000
Epoch 118/5000
1/1 [=====] - 0s 0s/step - loss: 0.7173 - accuracy:
0.5000
Epoch 119/5000
1/1 [=====] - 0s 999us/step - loss: 0.7166 - accuracy:
0.5000
Epoch 120/5000
1/1 [=====] - 0s 0s/step - loss: 0.7160 - accuracy:
0.5000
Epoch 121/5000
1/1 [=====] - 0s 998us/step - loss: 0.7153 - accuracy:
0.5000
Epoch 122/5000
1/1 [=====] - 0s 0s/step - loss: 0.7147 - accuracy:
0.5000
Epoch 123/5000
1/1 [=====] - 0s 0s/step - loss: 0.7140 - accuracy:
0.5000
Epoch 124/5000
1/1 [=====] - 0s 0s/step - loss: 0.7134 - accuracy:
0.5000
Epoch 125/5000
1/1 [=====] - 0s 0s/step - loss: 0.7127 - accuracy:
0.5000
Epoch 126/5000
1/1 [=====] - 0s 0s/step - loss: 0.7121 - accuracy:
0.5000
Epoch 127/5000
1/1 [=====] - 0s 0s/step - loss: 0.7114 - accuracy:
0.5000
Epoch 128/5000
1/1 [=====] - 0s 0s/step - loss: 0.7108 - accuracy:
0.5000
Epoch 129/5000
1/1 [=====] - 0s 998us/step - loss: 0.7102 - accuracy:
0.5000
Epoch 130/5000
1/1 [=====] - 0s 997us/step - loss: 0.7095 - accuracy:
0.5000
Epoch 131/5000
1/1 [=====] - 0s 997us/step - loss: 0.7089 - accuracy:
0.5000
Epoch 132/5000
1/1 [=====] - 0s 998us/step - loss: 0.7082 - accuracy:
0.5000

Epoch 133/5000
1/1 [=====] - 0s 0s/step - loss: 0.7076 - accuracy:
0.5000

Epoch 134/5000
1/1 [=====] - 0s 997us/step - loss: 0.7070 - accuracy:
0.5000

Epoch 135/5000
1/1 [=====] - 0s 997us/step - loss: 0.7063 - accuracy:
0.5000

Epoch 136/5000
1/1 [=====] - 0s 997us/step - loss: 0.7057 - accuracy:
0.5000

Epoch 137/5000
1/1 [=====] - 0s 0s/step - loss: 0.7050 - accuracy:
0.5000

Epoch 138/5000
1/1 [=====] - 0s 0s/step - loss: 0.7044 - accuracy:
0.5000

Epoch 139/5000
1/1 [=====] - 0s 0s/step - loss: 0.7037 - accuracy:
0.5000

Epoch 140/5000
1/1 [=====] - 0s 0s/step - loss: 0.7031 - accuracy:
0.5000

Epoch 141/5000
1/1 [=====] - 0s 998us/step - loss: 0.7025 - accuracy:
0.5000

Epoch 142/5000
1/1 [=====] - 0s 0s/step - loss: 0.7018 - accuracy:
0.5000

Epoch 143/5000
1/1 [=====] - 0s 998us/step - loss: 0.7012 - accuracy:
0.5000

Epoch 144/5000
1/1 [=====] - 0s 0s/step - loss: 0.7006 - accuracy:
0.5000

Epoch 145/5000
1/1 [=====] - 0s 0s/step - loss: 0.6999 - accuracy:
0.5000

Epoch 146/5000
1/1 [=====] - 0s 998us/step - loss: 0.6993 - accuracy:
0.5000

Epoch 147/5000
1/1 [=====] - 0s 998us/step - loss: 0.6986 - accuracy:
0.5000

Epoch 148/5000
1/1 [=====] - 0s 0s/step - loss: 0.6980 - accuracy:
0.5000

Epoch 149/5000
1/1 [=====] - 0s 0s/step - loss: 0.6974 - accuracy:
0.5000

Epoch 150/5000
1/1 [=====] - 0s 0s/step - loss: 0.6967 - accuracy:
0.5000

Epoch 151/5000
1/1 [=====] - 0s 0s/step - loss: 0.6961 - accuracy:
0.5000

Epoch 152/5000
1/1 [=====] - 0s 0s/step - loss: 0.6954 - accuracy:
0.5000

Epoch 153/5000
1/1 [=====] - 0s 0s/step - loss: 0.6948 - accuracy:
0.5000

Epoch 154/5000
1/1 [=====] - 0s 999us/step - loss: 0.6942 - accuracy:
0.5000

Epoch 155/5000
1/1 [=====] - 0s 997us/step - loss: 0.6935 - accuracy:
0.5000

Epoch 156/5000
1/1 [=====] - 0s 998us/step - loss: 0.6929 - accuracy:
0.5000

Epoch 157/5000
1/1 [=====] - 0s 998us/step - loss: 0.6923 - accuracy:
0.5000

Epoch 158/5000
1/1 [=====] - 0s 997us/step - loss: 0.6916 - accuracy:
0.5000

Epoch 159/5000
1/1 [=====] - 0s 997us/step - loss: 0.6910 - accuracy:
0.5000

Epoch 160/5000
1/1 [=====] - 0s 997us/step - loss: 0.6903 - accuracy:
0.5000

Epoch 161/5000
1/1 [=====] - 0s 997us/step - loss: 0.6897 - accuracy:
0.5000

Epoch 162/5000
1/1 [=====] - 0s 998us/step - loss: 0.6891 - accuracy:
0.5000

Epoch 163/5000
1/1 [=====] - 0s 0s/step - loss: 0.6884 - accuracy:
0.5000

Epoch 164/5000
1/1 [=====] - 0s 998us/step - loss: 0.6878 - accuracy:
0.5000

Epoch 165/5000
1/1 [=====] - 0s 997us/step - loss: 0.6871 - accuracy: 0.5000

Epoch 166/5000
1/1 [=====] - 0s 997us/step - loss: 0.6865 - accuracy: 0.5000

Epoch 167/5000
1/1 [=====] - 0s 997us/step - loss: 0.6859 - accuracy: 0.5000

Epoch 168/5000
1/1 [=====] - 0s 997us/step - loss: 0.6852 - accuracy: 0.5000

Epoch 169/5000
1/1 [=====] - 0s 998us/step - loss: 0.6846 - accuracy: 0.5000

Epoch 170/5000
1/1 [=====] - 0s 997us/step - loss: 0.6839 - accuracy: 0.5000

Epoch 171/5000
1/1 [=====] - 0s 0s/step - loss: 0.6833 - accuracy: 0.5000

Epoch 172/5000
1/1 [=====] - 0s 997us/step - loss: 0.6827 - accuracy: 0.5000

Epoch 173/5000
1/1 [=====] - 0s 997us/step - loss: 0.6820 - accuracy: 0.5000

Epoch 174/5000
1/1 [=====] - 0s 998us/step - loss: 0.6814 - accuracy: 0.5000

Epoch 175/5000
1/1 [=====] - 0s 0s/step - loss: 0.6807 - accuracy: 0.5000

Epoch 176/5000
1/1 [=====] - 0s 0s/step - loss: 0.6801 - accuracy: 0.5000

Epoch 177/5000
1/1 [=====] - 0s 998us/step - loss: 0.6794 - accuracy: 0.5000

Epoch 178/5000
1/1 [=====] - 0s 0s/step - loss: 0.6788 - accuracy: 0.5000

Epoch 179/5000
1/1 [=====] - 0s 0s/step - loss: 0.6782 - accuracy: 0.5000

Epoch 180/5000
1/1 [=====] - 0s 0s/step - loss: 0.6775 - accuracy: 0.5000

Epoch 181/5000
1/1 [=====] - 0s 997us/step - loss: 0.6769 - accuracy:
0.5000

Epoch 182/5000
1/1 [=====] - 0s 0s/step - loss: 0.6762 - accuracy:
0.5000

Epoch 183/5000
1/1 [=====] - 0s 999us/step - loss: 0.6756 - accuracy:
0.5000

Epoch 184/5000
1/1 [=====] - 0s 0s/step - loss: 0.6749 - accuracy:
0.5000

Epoch 185/5000
1/1 [=====] - 0s 0s/step - loss: 0.6743 - accuracy:
0.5000

Epoch 186/5000
1/1 [=====] - 0s 998us/step - loss: 0.6736 - accuracy:
0.5000

Epoch 187/5000
1/1 [=====] - 0s 997us/step - loss: 0.6730 - accuracy:
0.5000

Epoch 188/5000
1/1 [=====] - 0s 0s/step - loss: 0.6724 - accuracy:
0.5000

Epoch 189/5000
1/1 [=====] - 0s 997us/step - loss: 0.6717 - accuracy:
0.5000

Epoch 190/5000
1/1 [=====] - 0s 998us/step - loss: 0.6711 - accuracy:
0.5000

Epoch 191/5000
1/1 [=====] - 0s 0s/step - loss: 0.6704 - accuracy:
0.5000

Epoch 192/5000
1/1 [=====] - 0s 998us/step - loss: 0.6698 - accuracy:
0.5000

Epoch 193/5000
1/1 [=====] - 0s 0s/step - loss: 0.6691 - accuracy:
0.5000

Epoch 194/5000
1/1 [=====] - 0s 0s/step - loss: 0.6685 - accuracy:
0.5000

Epoch 195/5000
1/1 [=====] - 0s 0s/step - loss: 0.6678 - accuracy:
0.5000

Epoch 196/5000
1/1 [=====] - 0s 998us/step - loss: 0.6671 - accuracy:
0.5000

Epoch 197/5000
1/1 [=====] - 0s 997us/step - loss: 0.6665 - accuracy:
0.5000
Epoch 198/5000
1/1 [=====] - 0s 997us/step - loss: 0.6658 - accuracy:
0.5000
Epoch 199/5000
1/1 [=====] - 0s 0s/step - loss: 0.6652 - accuracy:
0.5000
Epoch 200/5000
1/1 [=====] - 0s 0s/step - loss: 0.6647 - accuracy:
0.5000
Epoch 201/5000
1/1 [=====] - 0s 0s/step - loss: 0.6642 - accuracy:
0.5000
Epoch 202/5000
1/1 [=====] - 0s 0s/step - loss: 0.6637 - accuracy:
0.5000
Epoch 203/5000
1/1 [=====] - 0s 0s/step - loss: 0.6631 - accuracy:
0.5000
Epoch 204/5000
1/1 [=====] - 0s 997us/step - loss: 0.6626 - accuracy:
0.5000
Epoch 205/5000
1/1 [=====] - 0s 997us/step - loss: 0.6621 - accuracy:
0.5000
Epoch 206/5000
1/1 [=====] - 0s 998us/step - loss: 0.6615 - accuracy:
0.5000
Epoch 207/5000
1/1 [=====] - 0s 0s/step - loss: 0.6610 - accuracy:
0.5000
Epoch 208/5000
1/1 [=====] - 0s 998us/step - loss: 0.6605 - accuracy:
0.5000
Epoch 209/5000
1/1 [=====] - 0s 997us/step - loss: 0.6599 - accuracy:
0.5000
Epoch 210/5000
1/1 [=====] - 0s 996us/step - loss: 0.6594 - accuracy:
0.5000
Epoch 211/5000
1/1 [=====] - 0s 0s/step - loss: 0.6589 - accuracy:
0.5000
Epoch 212/5000
1/1 [=====] - 0s 0s/step - loss: 0.6583 - accuracy:
0.5000

Epoch 213/5000
1/1 [=====] - 0s 998us/step - loss: 0.6578 - accuracy: 0.5000

Epoch 214/5000
1/1 [=====] - 0s 998us/step - loss: 0.6572 - accuracy: 0.5000

Epoch 215/5000
1/1 [=====] - 0s 998us/step - loss: 0.6567 - accuracy: 0.5000

Epoch 216/5000
1/1 [=====] - 0s 997us/step - loss: 0.6561 - accuracy: 0.5000

Epoch 217/5000
1/1 [=====] - 0s 997us/step - loss: 0.6556 - accuracy: 0.5000

Epoch 218/5000
1/1 [=====] - 0s 0s/step - loss: 0.6551 - accuracy: 0.5000

Epoch 219/5000
1/1 [=====] - 0s 0s/step - loss: 0.6545 - accuracy: 0.5000

Epoch 220/5000
1/1 [=====] - 0s 997us/step - loss: 0.6540 - accuracy: 0.7500

Epoch 221/5000
1/1 [=====] - 0s 998us/step - loss: 0.6534 - accuracy: 0.7500

Epoch 222/5000
1/1 [=====] - 0s 998us/step - loss: 0.6529 - accuracy: 0.7500

Epoch 223/5000
1/1 [=====] - 0s 997us/step - loss: 0.6523 - accuracy: 0.7500

Epoch 224/5000
1/1 [=====] - 0s 0s/step - loss: 0.6518 - accuracy: 0.7500

Epoch 225/5000
1/1 [=====] - 0s 996us/step - loss: 0.6512 - accuracy: 0.7500

Epoch 226/5000
1/1 [=====] - 0s 0s/step - loss: 0.6506 - accuracy: 0.7500

Epoch 227/5000
1/1 [=====] - 0s 0s/step - loss: 0.6501 - accuracy: 0.7500

Epoch 228/5000
1/1 [=====] - 0s 999us/step - loss: 0.6495 - accuracy: 0.7500

Epoch 229/5000
1/1 [=====] - 0s 997us/step - loss: 0.6490 - accuracy:
0.7500

Epoch 230/5000
1/1 [=====] - 0s 0s/step - loss: 0.6484 - accuracy:
0.7500

Epoch 231/5000
1/1 [=====] - 0s 0s/step - loss: 0.6479 - accuracy:
0.7500

Epoch 232/5000
1/1 [=====] - 0s 997us/step - loss: 0.6473 - accuracy:
0.7500

Epoch 233/5000
1/1 [=====] - 0s 998us/step - loss: 0.6468 - accuracy:
0.7500

Epoch 234/5000
1/1 [=====] - 0s 997us/step - loss: 0.6462 - accuracy:
0.7500

Epoch 235/5000
1/1 [=====] - 0s 998us/step - loss: 0.6456 - accuracy:
0.7500

Epoch 236/5000
1/1 [=====] - 0s 997us/step - loss: 0.6451 - accuracy:
0.7500

Epoch 237/5000
1/1 [=====] - 0s 998us/step - loss: 0.6445 - accuracy:
0.7500

Epoch 238/5000
1/1 [=====] - 0s 0s/step - loss: 0.6439 - accuracy:
0.7500

Epoch 239/5000
1/1 [=====] - 0s 0s/step - loss: 0.6434 - accuracy:
0.7500

Epoch 240/5000
1/1 [=====] - 0s 0s/step - loss: 0.6428 - accuracy:
0.7500

Epoch 241/5000
1/1 [=====] - 0s 996us/step - loss: 0.6422 - accuracy:
0.7500

Epoch 242/5000
1/1 [=====] - 0s 998us/step - loss: 0.6417 - accuracy:
0.7500

Epoch 243/5000
1/1 [=====] - 0s 996us/step - loss: 0.6411 - accuracy:
0.7500

Epoch 244/5000
1/1 [=====] - 0s 997us/step - loss: 0.6405 - accuracy:
0.7500

Epoch 245/5000
1/1 [=====] - 0s 0s/step - loss: 0.6399 - accuracy:
0.7500

Epoch 246/5000
1/1 [=====] - 0s 0s/step - loss: 0.6394 - accuracy:
0.7500

Epoch 247/5000
1/1 [=====] - 0s 997us/step - loss: 0.6388 - accuracy:
0.7500

Epoch 248/5000
1/1 [=====] - 0s 997us/step - loss: 0.6382 - accuracy:
0.7500

Epoch 249/5000
1/1 [=====] - 0s 997us/step - loss: 0.6376 - accuracy:
0.7500

Epoch 250/5000
1/1 [=====] - 0s 0s/step - loss: 0.6371 - accuracy:
0.7500

Epoch 251/5000
1/1 [=====] - 0s 0s/step - loss: 0.6365 - accuracy:
0.7500

Epoch 252/5000
1/1 [=====] - 0s 0s/step - loss: 0.6359 - accuracy:
0.7500

Epoch 253/5000
1/1 [=====] - 0s 997us/step - loss: 0.6353 - accuracy:
0.7500

Epoch 254/5000
1/1 [=====] - 0s 997us/step - loss: 0.6347 - accuracy:
0.7500

Epoch 255/5000
1/1 [=====] - 0s 0s/step - loss: 0.6341 - accuracy:
0.7500

Epoch 256/5000
1/1 [=====] - 0s 0s/step - loss: 0.6336 - accuracy:
0.7500

Epoch 257/5000
1/1 [=====] - 0s 0s/step - loss: 0.6330 - accuracy:
0.7500

Epoch 258/5000
1/1 [=====] - 0s 0s/step - loss: 0.6324 - accuracy:
0.7500

Epoch 259/5000
1/1 [=====] - 0s 0s/step - loss: 0.6318 - accuracy:
0.7500

Epoch 260/5000
1/1 [=====] - 0s 0s/step - loss: 0.6312 - accuracy:
0.7500

Epoch 261/5000
1/1 [=====] - 0s 0s/step - loss: 0.6306 - accuracy:
0.7500

Epoch 262/5000
1/1 [=====] - 0s 0s/step - loss: 0.6300 - accuracy:
0.7500

Epoch 263/5000
1/1 [=====] - 0s 997us/step - loss: 0.6294 - accuracy:
0.7500

Epoch 264/5000
1/1 [=====] - 0s 0s/step - loss: 0.6289 - accuracy:
0.7500

Epoch 265/5000
1/1 [=====] - 0s 999us/step - loss: 0.6283 - accuracy:
0.7500

Epoch 266/5000
1/1 [=====] - 0s 0s/step - loss: 0.6277 - accuracy:
0.7500

Epoch 267/5000
1/1 [=====] - 0s 997us/step - loss: 0.6271 - accuracy:
0.7500

Epoch 268/5000
1/1 [=====] - 0s 1ms/step - loss: 0.6265 - accuracy:
0.7500

Epoch 269/5000
1/1 [=====] - 0s 0s/step - loss: 0.6259 - accuracy:
0.7500

Epoch 270/5000
1/1 [=====] - 0s 998us/step - loss: 0.6253 - accuracy:
0.7500

Epoch 271/5000
1/1 [=====] - 0s 998us/step - loss: 0.6247 - accuracy:
0.7500

Epoch 272/5000
1/1 [=====] - 0s 0s/step - loss: 0.6241 - accuracy:
0.7500

Epoch 273/5000
1/1 [=====] - 0s 0s/step - loss: 0.6235 - accuracy:
0.7500

Epoch 274/5000
1/1 [=====] - 0s 0s/step - loss: 0.6229 - accuracy:
0.7500

Epoch 275/5000
1/1 [=====] - 0s 997us/step - loss: 0.6223 - accuracy:
0.7500

Epoch 276/5000
1/1 [=====] - 0s 0s/step - loss: 0.6217 - accuracy:
0.7500

Epoch 277/5000
1/1 [=====] - 0s 0s/step - loss: 0.6211 - accuracy:
0.7500

Epoch 278/5000
1/1 [=====] - 0s 998us/step - loss: 0.6205 - accuracy:
0.7500

Epoch 279/5000
1/1 [=====] - 0s 997us/step - loss: 0.6198 - accuracy:
0.7500

Epoch 280/5000
1/1 [=====] - 0s 998us/step - loss: 0.6192 - accuracy:
0.7500

Epoch 281/5000
1/1 [=====] - 0s 0s/step - loss: 0.6186 - accuracy:
0.7500

Epoch 282/5000
1/1 [=====] - 0s 997us/step - loss: 0.6180 - accuracy:
0.7500

Epoch 283/5000
1/1 [=====] - 0s 0s/step - loss: 0.6174 - accuracy:
0.7500

Epoch 284/5000
1/1 [=====] - 0s 0s/step - loss: 0.6168 - accuracy:
0.7500

Epoch 285/5000
1/1 [=====] - 0s 0s/step - loss: 0.6162 - accuracy:
0.7500

Epoch 286/5000
1/1 [=====] - 0s 999us/step - loss: 0.6156 - accuracy:
0.7500

Epoch 287/5000
1/1 [=====] - 0s 0s/step - loss: 0.6150 - accuracy:
0.7500

Epoch 288/5000
1/1 [=====] - 0s 0s/step - loss: 0.6143 - accuracy:
0.7500

Epoch 289/5000
1/1 [=====] - 0s 0s/step - loss: 0.6137 - accuracy:
0.7500

Epoch 290/5000
1/1 [=====] - 0s 998us/step - loss: 0.6131 - accuracy:
0.7500

Epoch 291/5000
1/1 [=====] - 0s 998us/step - loss: 0.6125 - accuracy:
0.7500

Epoch 292/5000
1/1 [=====] - 0s 0s/step - loss: 0.6119 - accuracy:
0.7500

Epoch 293/5000
1/1 [=====] - 0s 0s/step - loss: 0.6113 - accuracy:
0.7500

Epoch 294/5000
1/1 [=====] - 0s 0s/step - loss: 0.6106 - accuracy:
0.7500

Epoch 295/5000
1/1 [=====] - 0s 0s/step - loss: 0.6100 - accuracy:
0.7500

Epoch 296/5000
1/1 [=====] - 0s 998us/step - loss: 0.6094 - accuracy:
0.7500

Epoch 297/5000
1/1 [=====] - 0s 998us/step - loss: 0.6088 - accuracy:
0.7500

Epoch 298/5000
1/1 [=====] - 0s 997us/step - loss: 0.6081 - accuracy:
0.7500

Epoch 299/5000
1/1 [=====] - 0s 997us/step - loss: 0.6075 - accuracy:
0.7500

Epoch 300/5000
1/1 [=====] - 0s 998us/step - loss: 0.6069 - accuracy:
0.7500

Epoch 301/5000
1/1 [=====] - 0s 997us/step - loss: 0.6063 - accuracy:
0.7500

Epoch 302/5000
1/1 [=====] - 0s 998us/step - loss: 0.6056 - accuracy:
0.7500

Epoch 303/5000
1/1 [=====] - 0s 0s/step - loss: 0.6050 - accuracy:
0.7500

Epoch 304/5000
1/1 [=====] - 0s 998us/step - loss: 0.6044 - accuracy:
0.7500

Epoch 305/5000
1/1 [=====] - 0s 998us/step - loss: 0.6038 - accuracy:
0.7500

Epoch 306/5000
1/1 [=====] - 0s 0s/step - loss: 0.6031 - accuracy:
0.7500

Epoch 307/5000
1/1 [=====] - 0s 0s/step - loss: 0.6025 - accuracy:
0.7500

Epoch 308/5000
1/1 [=====] - 0s 0s/step - loss: 0.6019 - accuracy:
0.7500

Epoch 309/5000
1/1 [=====] - 0s 0s/step - loss: 0.6012 - accuracy:
0.7500

Epoch 310/5000
1/1 [=====] - 0s 0s/step - loss: 0.6006 - accuracy:
0.7500

Epoch 311/5000
1/1 [=====] - 0s 0s/step - loss: 0.6000 - accuracy:
0.7500

Epoch 312/5000
1/1 [=====] - 0s 998us/step - loss: 0.5993 - accuracy:
0.7500

Epoch 313/5000
1/1 [=====] - 0s 997us/step - loss: 0.5987 - accuracy:
0.7500

Epoch 314/5000
1/1 [=====] - 0s 0s/step - loss: 0.5980 - accuracy:
0.7500

Epoch 315/5000
1/1 [=====] - 0s 0s/step - loss: 0.5974 - accuracy:
0.7500

Epoch 316/5000
1/1 [=====] - 0s 998us/step - loss: 0.5968 - accuracy:
0.7500

Epoch 317/5000
1/1 [=====] - 0s 0s/step - loss: 0.5961 - accuracy:
0.7500

Epoch 318/5000
1/1 [=====] - 0s 0s/step - loss: 0.5955 - accuracy:
0.7500

Epoch 319/5000
1/1 [=====] - 0s 0s/step - loss: 0.5948 - accuracy:
0.7500

Epoch 320/5000
1/1 [=====] - 0s 997us/step - loss: 0.5942 - accuracy:
0.7500

Epoch 321/5000
1/1 [=====] - 0s 0s/step - loss: 0.5936 - accuracy:
0.7500

Epoch 322/5000
1/1 [=====] - 0s 997us/step - loss: 0.5929 - accuracy:
0.7500

Epoch 323/5000
1/1 [=====] - 0s 998us/step - loss: 0.5923 - accuracy:
0.7500

Epoch 324/5000
1/1 [=====] - 0s 0s/step - loss: 0.5916 - accuracy:
0.7500

Epoch 325/5000
1/1 [=====] - 0s 997us/step - loss: 0.5910 - accuracy:
0.7500

Epoch 326/5000
1/1 [=====] - 0s 998us/step - loss: 0.5904 - accuracy:
0.7500

Epoch 327/5000
1/1 [=====] - 0s 998us/step - loss: 0.5897 - accuracy:
0.7500

Epoch 328/5000
1/1 [=====] - 0s 997us/step - loss: 0.5891 - accuracy:
0.7500

Epoch 329/5000
1/1 [=====] - 0s 0s/step - loss: 0.5884 - accuracy:
0.7500

Epoch 330/5000
1/1 [=====] - 0s 997us/step - loss: 0.5878 - accuracy:
0.7500

Epoch 331/5000
1/1 [=====] - 0s 0s/step - loss: 0.5871 - accuracy:
0.7500

Epoch 332/5000
1/1 [=====] - 0s 997us/step - loss: 0.5865 - accuracy:
0.7500

Epoch 333/5000
1/1 [=====] - 0s 997us/step - loss: 0.5858 - accuracy:
0.7500

Epoch 334/5000
1/1 [=====] - 0s 0s/step - loss: 0.5852 - accuracy:
0.7500

Epoch 335/5000
1/1 [=====] - 0s 0s/step - loss: 0.5845 - accuracy:
0.7500

Epoch 336/5000
1/1 [=====] - 0s 0s/step - loss: 0.5839 - accuracy:
0.7500

Epoch 337/5000
1/1 [=====] - 0s 0s/step - loss: 0.5832 - accuracy:
0.7500

Epoch 338/5000
1/1 [=====] - 0s 0s/step - loss: 0.5826 - accuracy:
0.7500

Epoch 339/5000
1/1 [=====] - 0s 0s/step - loss: 0.5819 - accuracy:
0.7500

Epoch 340/5000
1/1 [=====] - 0s 997us/step - loss: 0.5813 - accuracy:
0.7500

Epoch 341/5000
1/1 [=====] - 0s 0s/step - loss: 0.5806 - accuracy:
0.7500

Epoch 342/5000
1/1 [=====] - 0s 998us/step - loss: 0.5800 - accuracy:
0.7500

Epoch 343/5000
1/1 [=====] - 0s 997us/step - loss: 0.5793 - accuracy:
0.7500

Epoch 344/5000
1/1 [=====] - 0s 0s/step - loss: 0.5787 - accuracy:
0.7500

Epoch 345/5000
1/1 [=====] - 0s 997us/step - loss: 0.5780 - accuracy:
0.7500

Epoch 346/5000
1/1 [=====] - 0s 997us/step - loss: 0.5774 - accuracy:
0.7500

Epoch 347/5000
1/1 [=====] - 0s 0s/step - loss: 0.5767 - accuracy:
0.7500

Epoch 348/5000
1/1 [=====] - 0s 0s/step - loss: 0.5761 - accuracy:
0.7500

Epoch 349/5000
1/1 [=====] - 0s 998us/step - loss: 0.5754 - accuracy:
0.7500

Epoch 350/5000
1/1 [=====] - 0s 0s/step - loss: 0.5747 - accuracy:
0.7500

Epoch 351/5000
1/1 [=====] - 0s 0s/step - loss: 0.5741 - accuracy:
0.7500

Epoch 352/5000
1/1 [=====] - 0s 997us/step - loss: 0.5734 - accuracy:
0.7500

Epoch 353/5000
1/1 [=====] - 0s 0s/step - loss: 0.5728 - accuracy:
0.7500

Epoch 354/5000
1/1 [=====] - 0s 997us/step - loss: 0.5721 - accuracy:
0.7500

Epoch 355/5000
1/1 [=====] - 0s 997us/step - loss: 0.5714 - accuracy:
0.7500

Epoch 356/5000
1/1 [=====] - 0s 0s/step - loss: 0.5708 - accuracy:
0.7500

Epoch 357/5000
1/1 [=====] - 0s 998us/step - loss: 0.5701 - accuracy:
1.0000

Epoch 358/5000
1/1 [=====] - 0s 0s/step - loss: 0.5694 - accuracy:
1.0000

Epoch 359/5000
1/1 [=====] - 0s 998us/step - loss: 0.5688 - accuracy:
1.0000

Epoch 360/5000
1/1 [=====] - 0s 997us/step - loss: 0.5681 - accuracy:
1.0000

Epoch 361/5000
1/1 [=====] - 0s 997us/step - loss: 0.5674 - accuracy:
1.0000

Epoch 362/5000
1/1 [=====] - 0s 997us/step - loss: 0.5668 - accuracy:
1.0000

Epoch 363/5000
1/1 [=====] - 0s 997us/step - loss: 0.5661 - accuracy:
1.0000

Epoch 364/5000
1/1 [=====] - 0s 0s/step - loss: 0.5655 - accuracy:
1.0000

Epoch 365/5000
1/1 [=====] - 0s 0s/step - loss: 0.5648 - accuracy:
1.0000

Epoch 366/5000
1/1 [=====] - 0s 0s/step - loss: 0.5641 - accuracy:
1.0000

Epoch 367/5000
1/1 [=====] - 0s 0s/step - loss: 0.5635 - accuracy:
1.0000

Epoch 368/5000
1/1 [=====] - 0s 998us/step - loss: 0.5628 - accuracy:
1.0000

Epoch 369/5000
1/1 [=====] - 0s 0s/step - loss: 0.5621 - accuracy:
1.0000

Epoch 370/5000
1/1 [=====] - 0s 0s/step - loss: 0.5614 - accuracy:
1.0000

Epoch 371/5000
1/1 [=====] - 0s 998us/step - loss: 0.5608 - accuracy:
1.0000

Epoch 372/5000
1/1 [=====] - 0s 0s/step - loss: 0.5601 - accuracy:
1.0000

Epoch 373/5000
1/1 [=====] - 0s 0s/step - loss: 0.5594 - accuracy:
1.0000

Epoch 374/5000
1/1 [=====] - 0s 997us/step - loss: 0.5588 - accuracy:
1.0000

Epoch 375/5000
1/1 [=====] - 0s 997us/step - loss: 0.5581 - accuracy:
1.0000

Epoch 376/5000
1/1 [=====] - 0s 0s/step - loss: 0.5574 - accuracy:
1.0000

Epoch 377/5000
1/1 [=====] - 0s 996us/step - loss: 0.5568 - accuracy:
1.0000

Epoch 378/5000
1/1 [=====] - 0s 0s/step - loss: 0.5561 - accuracy:
1.0000

Epoch 379/5000
1/1 [=====] - 0s 0s/step - loss: 0.5554 - accuracy:
1.0000

Epoch 380/5000
1/1 [=====] - 0s 0s/step - loss: 0.5547 - accuracy:
1.0000

Epoch 381/5000
1/1 [=====] - 0s 997us/step - loss: 0.5541 - accuracy:
1.0000

Epoch 382/5000
1/1 [=====] - 0s 0s/step - loss: 0.5534 - accuracy:
1.0000

Epoch 383/5000
1/1 [=====] - 0s 998us/step - loss: 0.5527 - accuracy:
1.0000

Epoch 384/5000
1/1 [=====] - 0s 0s/step - loss: 0.5520 - accuracy:
1.0000

Epoch 385/5000
1/1 [=====] - 0s 0s/step - loss: 0.5514 - accuracy:
1.0000

Epoch 386/5000
1/1 [=====] - 0s 0s/step - loss: 0.5507 - accuracy:
1.0000

Epoch 387/5000
1/1 [=====] - 0s 998us/step - loss: 0.5500 - accuracy:
1.0000

Epoch 388/5000
1/1 [=====] - 0s 998us/step - loss: 0.5493 - accuracy:
1.0000

Epoch 389/5000
1/1 [=====] - 0s 998us/step - loss: 0.5487 - accuracy:
1.0000

Epoch 390/5000
1/1 [=====] - 0s 0s/step - loss: 0.5480 - accuracy:
1.0000

Epoch 391/5000
1/1 [=====] - 0s 0s/step - loss: 0.5473 - accuracy:
1.0000

Epoch 392/5000
1/1 [=====] - 0s 0s/step - loss: 0.5466 - accuracy:
1.0000

Epoch 393/5000
1/1 [=====] - 0s 998us/step - loss: 0.5460 - accuracy:
1.0000

Epoch 394/5000
1/1 [=====] - 0s 997us/step - loss: 0.5453 - accuracy:
1.0000

Epoch 395/5000
1/1 [=====] - 0s 0s/step - loss: 0.5446 - accuracy:
1.0000

Epoch 396/5000
1/1 [=====] - 0s 997us/step - loss: 0.5439 - accuracy:
1.0000

Epoch 397/5000
1/1 [=====] - 0s 0s/step - loss: 0.5432 - accuracy:
1.0000

Epoch 398/5000
1/1 [=====] - 0s 0s/step - loss: 0.5426 - accuracy:
1.0000

Epoch 399/5000
1/1 [=====] - 0s 0s/step - loss: 0.5419 - accuracy:
1.0000

Epoch 400/5000
1/1 [=====] - 0s 0s/step - loss: 0.5412 - accuracy:
1.0000

Epoch 401/5000
1/1 [=====] - 0s 997us/step - loss: 0.5405 - accuracy:
1.0000

Epoch 402/5000
1/1 [=====] - 0s 0s/step - loss: 0.5398 - accuracy:
1.0000

Epoch 403/5000
1/1 [=====] - 0s 997us/step - loss: 0.5392 - accuracy:
1.0000

Epoch 404/5000
1/1 [=====] - 0s 0s/step - loss: 0.5385 - accuracy:
1.0000

Epoch 405/5000
1/1 [=====] - 0s 0s/step - loss: 0.5378 - accuracy:
1.0000

Epoch 406/5000
1/1 [=====] - 0s 998us/step - loss: 0.5371 - accuracy:
1.0000

Epoch 407/5000
1/1 [=====] - 0s 997us/step - loss: 0.5364 - accuracy:
1.0000

Epoch 408/5000
1/1 [=====] - 0s 998us/step - loss: 0.5358 - accuracy:
1.0000

Epoch 409/5000
1/1 [=====] - 0s 0s/step - loss: 0.5351 - accuracy:
1.0000

Epoch 410/5000
1/1 [=====] - 0s 0s/step - loss: 0.5344 - accuracy:
1.0000

Epoch 411/5000
1/1 [=====] - 0s 0s/step - loss: 0.5337 - accuracy:
1.0000

Epoch 412/5000
1/1 [=====] - 0s 0s/step - loss: 0.5330 - accuracy:
1.0000

Epoch 413/5000
1/1 [=====] - 0s 0s/step - loss: 0.5323 - accuracy:
1.0000

Epoch 414/5000
1/1 [=====] - 0s 996us/step - loss: 0.5317 - accuracy:
1.0000

Epoch 415/5000
1/1 [=====] - 0s 997us/step - loss: 0.5310 - accuracy:
1.0000

Epoch 416/5000
1/1 [=====] - 0s 0s/step - loss: 0.5303 - accuracy:
1.0000

Epoch 417/5000
1/1 [=====] - 0s 998us/step - loss: 0.5296 - accuracy:
1.0000

Epoch 418/5000
1/1 [=====] - 0s 0s/step - loss: 0.5289 - accuracy:
1.0000

Epoch 419/5000
1/1 [=====] - 0s 0s/step - loss: 0.5283 - accuracy:
1.0000

Epoch 420/5000
1/1 [=====] - 0s 0s/step - loss: 0.5276 - accuracy:
1.0000

Epoch 421/5000
1/1 [=====] - 0s 998us/step - loss: 0.5269 - accuracy:
1.0000

Epoch 422/5000
1/1 [=====] - 0s 998us/step - loss: 0.5262 - accuracy:
1.0000

Epoch 423/5000
1/1 [=====] - 0s 996us/step - loss: 0.5255 - accuracy:
1.0000

Epoch 424/5000
1/1 [=====] - 0s 998us/step - loss: 0.5248 - accuracy:
1.0000

Epoch 425/5000
1/1 [=====] - 0s 0s/step - loss: 0.5241 - accuracy:
1.0000

Epoch 426/5000
1/1 [=====] - 0s 997us/step - loss: 0.5235 - accuracy:
1.0000

Epoch 427/5000
1/1 [=====] - 0s 0s/step - loss: 0.5228 - accuracy:
1.0000

Epoch 428/5000
1/1 [=====] - 0s 0s/step - loss: 0.5221 - accuracy:
1.0000

Epoch 429/5000
1/1 [=====] - 0s 0s/step - loss: 0.5214 - accuracy:
1.0000

Epoch 430/5000
1/1 [=====] - 0s 998us/step - loss: 0.5207 - accuracy:
1.0000

Epoch 431/5000
1/1 [=====] - 0s 0s/step - loss: 0.5200 - accuracy:
1.0000

Epoch 432/5000
1/1 [=====] - 0s 995us/step - loss: 0.5194 - accuracy:
1.0000

Epoch 433/5000
1/1 [=====] - 0s 997us/step - loss: 0.5187 - accuracy:
1.0000

Epoch 434/5000
1/1 [=====] - 0s 998us/step - loss: 0.5180 - accuracy:
1.0000

Epoch 435/5000
1/1 [=====] - 0s 998us/step - loss: 0.5173 - accuracy:
1.0000

Epoch 436/5000
1/1 [=====] - 0s 998us/step - loss: 0.5166 - accuracy:
1.0000

Epoch 437/5000
1/1 [=====] - 0s 0s/step - loss: 0.5159 - accuracy:
1.0000
Epoch 438/5000
1/1 [=====] - 0s 998us/step - loss: 0.5152 - accuracy:
1.0000
Epoch 439/5000
1/1 [=====] - 0s 0s/step - loss: 0.5146 - accuracy:
1.0000
Epoch 440/5000
1/1 [=====] - 0s 0s/step - loss: 0.5139 - accuracy:
1.0000
Epoch 441/5000
1/1 [=====] - 0s 0s/step - loss: 0.5132 - accuracy:
1.0000
Epoch 442/5000
1/1 [=====] - 0s 0s/step - loss: 0.5125 - accuracy:
1.0000
Epoch 443/5000
1/1 [=====] - 0s 0s/step - loss: 0.5118 - accuracy:
1.0000
Epoch 444/5000
1/1 [=====] - 0s 998us/step - loss: 0.5111 - accuracy:
1.0000
Epoch 445/5000
1/1 [=====] - 0s 998us/step - loss: 0.5104 - accuracy:
1.0000
Epoch 446/5000
1/1 [=====] - 0s 998us/step - loss: 0.5098 - accuracy:
1.0000
Epoch 447/5000
1/1 [=====] - 0s 997us/step - loss: 0.5091 - accuracy:
1.0000
Epoch 448/5000
1/1 [=====] - 0s 997us/step - loss: 0.5084 - accuracy:
1.0000
Epoch 449/5000
1/1 [=====] - 0s 998us/step - loss: 0.5077 - accuracy:
1.0000
Epoch 450/5000
1/1 [=====] - 0s 996us/step - loss: 0.5070 - accuracy:
1.0000
Epoch 451/5000
1/1 [=====] - 0s 0s/step - loss: 0.5063 - accuracy:
1.0000
Epoch 452/5000
1/1 [=====] - 0s 0s/step - loss: 0.5056 - accuracy:
1.0000

Epoch 453/5000
1/1 [=====] - 0s 0s/step - loss: 0.5050 - accuracy:
1.0000

Epoch 454/5000
1/1 [=====] - 0s 0s/step - loss: 0.5043 - accuracy:
1.0000

Epoch 455/5000
1/1 [=====] - 0s 997us/step - loss: 0.5036 - accuracy:
1.0000

Epoch 456/5000
1/1 [=====] - 0s 0s/step - loss: 0.5029 - accuracy:
1.0000

Epoch 457/5000
1/1 [=====] - 0s 0s/step - loss: 0.5022 - accuracy:
1.0000

Epoch 458/5000
1/1 [=====] - 0s 0s/step - loss: 0.5015 - accuracy:
1.0000

Epoch 459/5000
1/1 [=====] - 0s 0s/step - loss: 0.5009 - accuracy:
1.0000

Epoch 460/5000
1/1 [=====] - 0s 0s/step - loss: 0.5002 - accuracy:
1.0000

Epoch 461/5000
1/1 [=====] - 0s 0s/step - loss: 0.4995 - accuracy:
1.0000

Epoch 462/5000
1/1 [=====] - 0s 998us/step - loss: 0.4988 - accuracy:
1.0000

Epoch 463/5000
1/1 [=====] - 0s 997us/step - loss: 0.4981 - accuracy:
1.0000

Epoch 464/5000
1/1 [=====] - 0s 0s/step - loss: 0.4974 - accuracy:
1.0000

Epoch 465/5000
1/1 [=====] - 0s 0s/step - loss: 0.4967 - accuracy:
1.0000

Epoch 466/5000
1/1 [=====] - 0s 0s/step - loss: 0.4960 - accuracy:
1.0000

Epoch 467/5000
1/1 [=====] - 0s 0s/step - loss: 0.4954 - accuracy:
1.0000

Epoch 468/5000
1/1 [=====] - 0s 0s/step - loss: 0.4947 - accuracy:
1.0000

Epoch 469/5000
1/1 [=====] - 0s 998us/step - loss: 0.4940 - accuracy:
1.0000
Epoch 470/5000
1/1 [=====] - 0s 0s/step - loss: 0.4933 - accuracy:
1.0000
Epoch 471/5000
1/1 [=====] - 0s 0s/step - loss: 0.4926 - accuracy:
1.0000
Epoch 472/5000
1/1 [=====] - 0s 998us/step - loss: 0.4919 - accuracy:
1.0000
Epoch 473/5000
1/1 [=====] - 0s 997us/step - loss: 0.4913 - accuracy:
1.0000
Epoch 474/5000
1/1 [=====] - 0s 997us/step - loss: 0.4906 - accuracy:
1.0000
Epoch 475/5000
1/1 [=====] - 0s 0s/step - loss: 0.4899 - accuracy:
1.0000
Epoch 476/5000
1/1 [=====] - 0s 0s/step - loss: 0.4892 - accuracy:
1.0000
Epoch 477/5000
1/1 [=====] - 0s 0s/step - loss: 0.4885 - accuracy:
1.0000
Epoch 478/5000
1/1 [=====] - 0s 0s/step - loss: 0.4879 - accuracy:
1.0000
Epoch 479/5000
1/1 [=====] - 0s 0s/step - loss: 0.4872 - accuracy:
1.0000
Epoch 480/5000
1/1 [=====] - 0s 0s/step - loss: 0.4865 - accuracy:
1.0000
Epoch 481/5000
1/1 [=====] - 0s 996us/step - loss: 0.4858 - accuracy:
1.0000
Epoch 482/5000
1/1 [=====] - 0s 0s/step - loss: 0.4851 - accuracy:
1.0000
Epoch 483/5000
1/1 [=====] - 0s 0s/step - loss: 0.4844 - accuracy:
1.0000
Epoch 484/5000
1/1 [=====] - 0s 0s/step - loss: 0.4838 - accuracy:
1.0000

Epoch 485/5000
1/1 [=====] - 0s 998us/step - loss: 0.4831 - accuracy:
1.0000
Epoch 486/5000
1/1 [=====] - 0s 0s/step - loss: 0.4824 - accuracy:
1.0000
Epoch 487/5000
1/1 [=====] - 0s 996us/step - loss: 0.4817 - accuracy:
1.0000
Epoch 488/5000
1/1 [=====] - 0s 0s/step - loss: 0.4810 - accuracy:
1.0000
Epoch 489/5000
1/1 [=====] - 0s 995us/step - loss: 0.4803 - accuracy:
1.0000
Epoch 490/5000
1/1 [=====] - 0s 0s/step - loss: 0.4797 - accuracy:
1.0000
Epoch 491/5000
1/1 [=====] - 0s 0s/step - loss: 0.4790 - accuracy:
1.0000
Epoch 492/5000
1/1 [=====] - 0s 997us/step - loss: 0.4783 - accuracy:
1.0000
Epoch 493/5000
1/1 [=====] - 0s 997us/step - loss: 0.4776 - accuracy:
1.0000
Epoch 494/5000
1/1 [=====] - 0s 997us/step - loss: 0.4770 - accuracy:
1.0000
Epoch 495/5000
1/1 [=====] - 0s 997us/step - loss: 0.4763 - accuracy:
1.0000
Epoch 496/5000
1/1 [=====] - 0s 0s/step - loss: 0.4756 - accuracy:
1.0000
Epoch 497/5000
1/1 [=====] - 0s 0s/step - loss: 0.4749 - accuracy:
1.0000
Epoch 498/5000
1/1 [=====] - 0s 998us/step - loss: 0.4742 - accuracy:
1.0000
Epoch 499/5000
1/1 [=====] - 0s 0s/step - loss: 0.4736 - accuracy:
1.0000
Epoch 500/5000
1/1 [=====] - 0s 0s/step - loss: 0.4729 - accuracy:
1.0000

Epoch 501/5000
1/1 [=====] - 0s 0s/step - loss: 0.4722 - accuracy:
1.0000

Epoch 502/5000
1/1 [=====] - 0s 998us/step - loss: 0.4715 - accuracy:
1.0000

Epoch 503/5000
1/1 [=====] - 0s 998us/step - loss: 0.4708 - accuracy:
1.0000

Epoch 504/5000
1/1 [=====] - 0s 998us/step - loss: 0.4702 - accuracy:
1.0000

Epoch 505/5000
1/1 [=====] - 0s 999us/step - loss: 0.4695 - accuracy:
1.0000

Epoch 506/5000
1/1 [=====] - 0s 0s/step - loss: 0.4688 - accuracy:
1.0000

Epoch 507/5000
1/1 [=====] - 0s 0s/step - loss: 0.4681 - accuracy:
1.0000

Epoch 508/5000
1/1 [=====] - 0s 997us/step - loss: 0.4675 - accuracy:
1.0000

Epoch 509/5000
1/1 [=====] - 0s 0s/step - loss: 0.4668 - accuracy:
1.0000

Epoch 510/5000
1/1 [=====] - 0s 0s/step - loss: 0.4661 - accuracy:
1.0000

Epoch 511/5000
1/1 [=====] - 0s 998us/step - loss: 0.4654 - accuracy:
1.0000

Epoch 512/5000
1/1 [=====] - 0s 997us/step - loss: 0.4648 - accuracy:
1.0000

Epoch 513/5000
1/1 [=====] - 0s 0s/step - loss: 0.4641 - accuracy:
1.0000

Epoch 514/5000
1/1 [=====] - 0s 0s/step - loss: 0.4634 - accuracy:
1.0000

Epoch 515/5000
1/1 [=====] - 0s 0s/step - loss: 0.4628 - accuracy:
1.0000

Epoch 516/5000
1/1 [=====] - 0s 0s/step - loss: 0.4621 - accuracy:
1.0000

Epoch 517/5000
1/1 [=====] - 0s 0s/step - loss: 0.4614 - accuracy:
1.0000

Epoch 518/5000
1/1 [=====] - 0s 0s/step - loss: 0.4607 - accuracy:
1.0000

Epoch 519/5000
1/1 [=====] - 0s 0s/step - loss: 0.4601 - accuracy:
1.0000

Epoch 520/5000
1/1 [=====] - 0s 997us/step - loss: 0.4594 - accuracy:
1.0000

Epoch 521/5000
1/1 [=====] - 0s 997us/step - loss: 0.4587 - accuracy:
1.0000

Epoch 522/5000
1/1 [=====] - 0s 997us/step - loss: 0.4580 - accuracy:
1.0000

Epoch 523/5000
1/1 [=====] - 0s 997us/step - loss: 0.4574 - accuracy:
1.0000

Epoch 524/5000
1/1 [=====] - 0s 998us/step - loss: 0.4567 - accuracy:
1.0000

Epoch 525/5000
1/1 [=====] - 0s 0s/step - loss: 0.4560 - accuracy:
1.0000

Epoch 526/5000
1/1 [=====] - 0s 0s/step - loss: 0.4554 - accuracy:
1.0000

Epoch 527/5000
1/1 [=====] - 0s 997us/step - loss: 0.4547 - accuracy:
1.0000

Epoch 528/5000
1/1 [=====] - 0s 0s/step - loss: 0.4540 - accuracy:
1.0000

Epoch 529/5000
1/1 [=====] - 0s 0s/step - loss: 0.4534 - accuracy:
1.0000

Epoch 530/5000
1/1 [=====] - 0s 0s/step - loss: 0.4527 - accuracy:
1.0000

Epoch 531/5000
1/1 [=====] - 0s 0s/step - loss: 0.4520 - accuracy:
1.0000

Epoch 532/5000
1/1 [=====] - 0s 998us/step - loss: 0.4514 - accuracy:
1.0000

Epoch 533/5000
1/1 [=====] - 0s 0s/step - loss: 0.4507 - accuracy:
1.0000

Epoch 534/5000
1/1 [=====] - 0s 0s/step - loss: 0.4500 - accuracy:
1.0000

Epoch 535/5000
1/1 [=====] - 0s 998us/step - loss: 0.4494 - accuracy:
1.0000

Epoch 536/5000
1/1 [=====] - 0s 0s/step - loss: 0.4487 - accuracy:
1.0000

Epoch 537/5000
1/1 [=====] - 0s 0s/step - loss: 0.4480 - accuracy:
1.0000

Epoch 538/5000
1/1 [=====] - 0s 996us/step - loss: 0.4474 - accuracy:
1.0000

Epoch 539/5000
1/1 [=====] - 0s 0s/step - loss: 0.4467 - accuracy:
1.0000

Epoch 540/5000
1/1 [=====] - 0s 0s/step - loss: 0.4460 - accuracy:
1.0000

Epoch 541/5000
1/1 [=====] - 0s 996us/step - loss: 0.4454 - accuracy:
1.0000

Epoch 542/5000
1/1 [=====] - 0s 0s/step - loss: 0.4447 - accuracy:
1.0000

Epoch 543/5000
1/1 [=====] - 0s 0s/step - loss: 0.4441 - accuracy:
1.0000

Epoch 544/5000
1/1 [=====] - 0s 0s/step - loss: 0.4434 - accuracy:
1.0000

Epoch 545/5000
1/1 [=====] - 0s 0s/step - loss: 0.4427 - accuracy:
1.0000

Epoch 546/5000
1/1 [=====] - 0s 0s/step - loss: 0.4421 - accuracy:
1.0000

Epoch 547/5000
1/1 [=====] - 0s 0s/step - loss: 0.4414 - accuracy:
1.0000

Epoch 548/5000
1/1 [=====] - 0s 0s/step - loss: 0.4407 - accuracy:
1.0000

Epoch 549/5000
1/1 [=====] - 0s 0s/step - loss: 0.4401 - accuracy:
1.0000

Epoch 550/5000
1/1 [=====] - 0s 997us/step - loss: 0.4394 - accuracy:
1.0000

Epoch 551/5000
1/1 [=====] - 0s 991us/step - loss: 0.4388 - accuracy:
1.0000

Epoch 552/5000
1/1 [=====] - 0s 997us/step - loss: 0.4381 - accuracy:
1.0000

Epoch 553/5000
1/1 [=====] - 0s 997us/step - loss: 0.4374 - accuracy:
1.0000

Epoch 554/5000
1/1 [=====] - 0s 0s/step - loss: 0.4368 - accuracy:
1.0000

Epoch 555/5000
1/1 [=====] - 0s 998us/step - loss: 0.4361 - accuracy:
1.0000

Epoch 556/5000
1/1 [=====] - 0s 997us/step - loss: 0.4355 - accuracy:
1.0000

Epoch 557/5000
1/1 [=====] - 0s 0s/step - loss: 0.4348 - accuracy:
1.0000

Epoch 558/5000
1/1 [=====] - 0s 0s/step - loss: 0.4342 - accuracy:
1.0000

Epoch 559/5000
1/1 [=====] - 0s 0s/step - loss: 0.4335 - accuracy:
1.0000

Epoch 560/5000
1/1 [=====] - 0s 0s/step - loss: 0.4329 - accuracy:
1.0000

Epoch 561/5000
1/1 [=====] - 0s 0s/step - loss: 0.4322 - accuracy:
1.0000

Epoch 562/5000
1/1 [=====] - 0s 0s/step - loss: 0.4315 - accuracy:
1.0000

Epoch 563/5000
1/1 [=====] - 0s 0s/step - loss: 0.4309 - accuracy:
1.0000

Epoch 564/5000
1/1 [=====] - 0s 998us/step - loss: 0.4302 - accuracy:
1.0000

Epoch 565/5000
1/1 [=====] - 0s 0s/step - loss: 0.4296 - accuracy:
1.0000

Epoch 566/5000
1/1 [=====] - 0s 997us/step - loss: 0.4289 - accuracy:
1.0000

Epoch 567/5000
1/1 [=====] - 0s 996us/step - loss: 0.4283 - accuracy:
1.0000

Epoch 568/5000
1/1 [=====] - 0s 0s/step - loss: 0.4276 - accuracy:
1.0000

Epoch 569/5000
1/1 [=====] - 0s 998us/step - loss: 0.4270 - accuracy:
1.0000

Epoch 570/5000
1/1 [=====] - 0s 995us/step - loss: 0.4263 - accuracy:
1.0000

Epoch 571/5000
1/1 [=====] - 0s 997us/step - loss: 0.4257 - accuracy:
1.0000

Epoch 572/5000
1/1 [=====] - 0s 998us/step - loss: 0.4250 - accuracy:
1.0000

Epoch 573/5000
1/1 [=====] - 0s 0s/step - loss: 0.4244 - accuracy:
1.0000

Epoch 574/5000
1/1 [=====] - 0s 0s/step - loss: 0.4237 - accuracy:
1.0000

Epoch 575/5000
1/1 [=====] - 0s 0s/step - loss: 0.4231 - accuracy:
1.0000

Epoch 576/5000
1/1 [=====] - 0s 0s/step - loss: 0.4224 - accuracy:
1.0000

Epoch 577/5000
1/1 [=====] - 0s 0s/step - loss: 0.4218 - accuracy:
1.0000

Epoch 578/5000
1/1 [=====] - 0s 0s/step - loss: 0.4212 - accuracy:
1.0000

Epoch 579/5000
1/1 [=====] - 0s 0s/step - loss: 0.4205 - accuracy:
1.0000

Epoch 580/5000
1/1 [=====] - 0s 998us/step - loss: 0.4199 - accuracy:
1.0000

Epoch 581/5000
1/1 [=====] - 0s 997us/step - loss: 0.4192 - accuracy:
1.0000

Epoch 582/5000
1/1 [=====] - 0s 0s/step - loss: 0.4186 - accuracy:
1.0000

Epoch 583/5000
1/1 [=====] - 0s 996us/step - loss: 0.4179 - accuracy:
1.0000

Epoch 584/5000
1/1 [=====] - 0s 998us/step - loss: 0.4173 - accuracy:
1.0000

Epoch 585/5000
1/1 [=====] - 0s 998us/step - loss: 0.4167 - accuracy:
1.0000

Epoch 586/5000
1/1 [=====] - 0s 0s/step - loss: 0.4160 - accuracy:
1.0000

Epoch 587/5000
1/1 [=====] - 0s 997us/step - loss: 0.4154 - accuracy:
1.0000

Epoch 588/5000
1/1 [=====] - 0s 997us/step - loss: 0.4147 - accuracy:
1.0000

Epoch 589/5000
1/1 [=====] - 0s 997us/step - loss: 0.4141 - accuracy:
1.0000

Epoch 590/5000
1/1 [=====] - 0s 0s/step - loss: 0.4135 - accuracy:
1.0000

Epoch 591/5000
1/1 [=====] - 0s 0s/step - loss: 0.4128 - accuracy:
1.0000

Epoch 592/5000
1/1 [=====] - 0s 998us/step - loss: 0.4122 - accuracy:
1.0000

Epoch 593/5000
1/1 [=====] - 0s 0s/step - loss: 0.4116 - accuracy:
1.0000

Epoch 594/5000
1/1 [=====] - 0s 0s/step - loss: 0.4109 - accuracy:
1.0000

Epoch 595/5000
1/1 [=====] - 0s 997us/step - loss: 0.4103 - accuracy:
1.0000

Epoch 596/5000
1/1 [=====] - 0s 998us/step - loss: 0.4096 - accuracy:
1.0000

Epoch 597/5000
1/1 [=====] - 0s 997us/step - loss: 0.4090 - accuracy:
1.0000

Epoch 598/5000
1/1 [=====] - 0s 998us/step - loss: 0.4084 - accuracy:
1.0000

Epoch 599/5000
1/1 [=====] - 0s 998us/step - loss: 0.4077 - accuracy:
1.0000

Epoch 600/5000
1/1 [=====] - 0s 0s/step - loss: 0.4071 - accuracy:
1.0000

Epoch 601/5000
1/1 [=====] - 0s 998us/step - loss: 0.4065 - accuracy:
1.0000

Epoch 602/5000
1/1 [=====] - 0s 998us/step - loss: 0.4058 - accuracy:
1.0000

Epoch 603/5000
1/1 [=====] - 0s 998us/step - loss: 0.4052 - accuracy:
1.0000

Epoch 604/5000
1/1 [=====] - 0s 0s/step - loss: 0.4046 - accuracy:
1.0000

Epoch 605/5000
1/1 [=====] - 0s 0s/step - loss: 0.4040 - accuracy:
1.0000

Epoch 606/5000
1/1 [=====] - 0s 998us/step - loss: 0.4033 - accuracy:
1.0000

Epoch 607/5000
1/1 [=====] - 0s 0s/step - loss: 0.4027 - accuracy:
1.0000

Epoch 608/5000
1/1 [=====] - 0s 998us/step - loss: 0.4021 - accuracy:
1.0000

Epoch 609/5000
1/1 [=====] - 0s 998us/step - loss: 0.4015 - accuracy:
1.0000

Epoch 610/5000
1/1 [=====] - 0s 0s/step - loss: 0.4008 - accuracy:
1.0000

Epoch 611/5000
1/1 [=====] - 0s 0s/step - loss: 0.4002 - accuracy:
1.0000

Epoch 612/5000
1/1 [=====] - 0s 0s/step - loss: 0.3996 - accuracy:
1.0000

Epoch 613/5000
1/1 [=====] - 0s 0s/step - loss: 0.3989 - accuracy:
1.0000

Epoch 614/5000
1/1 [=====] - 0s 0s/step - loss: 0.3983 - accuracy:
1.0000

Epoch 615/5000
1/1 [=====] - 0s 998us/step - loss: 0.3977 - accuracy:
1.0000

Epoch 616/5000
1/1 [=====] - 0s 997us/step - loss: 0.3971 - accuracy:
1.0000

Epoch 617/5000
1/1 [=====] - 0s 998us/step - loss: 0.3965 - accuracy:
1.0000

Epoch 618/5000
1/1 [=====] - 0s 0s/step - loss: 0.3958 - accuracy:
1.0000

Epoch 619/5000
1/1 [=====] - 0s 998us/step - loss: 0.3952 - accuracy:
1.0000

Epoch 620/5000
1/1 [=====] - 0s 998us/step - loss: 0.3946 - accuracy:
1.0000

Epoch 621/5000
1/1 [=====] - 0s 997us/step - loss: 0.3940 - accuracy:
1.0000

Epoch 622/5000
1/1 [=====] - 0s 997us/step - loss: 0.3934 - accuracy:
1.0000

Epoch 623/5000
1/1 [=====] - 0s 0s/step - loss: 0.3927 - accuracy:
1.0000

Epoch 624/5000
1/1 [=====] - 0s 997us/step - loss: 0.3921 - accuracy:
1.0000

Epoch 625/5000
1/1 [=====] - 0s 0s/step - loss: 0.3915 - accuracy:
1.0000

Epoch 626/5000
1/1 [=====] - 0s 0s/step - loss: 0.3909 - accuracy:
1.0000

Epoch 627/5000
1/1 [=====] - 0s 0s/step - loss: 0.3903 - accuracy:
1.0000

Epoch 628/5000
1/1 [=====] - 0s 994us/step - loss: 0.3897 - accuracy:
1.0000

Epoch 629/5000
1/1 [=====] - 0s 998us/step - loss: 0.3890 - accuracy:
1.0000

Epoch 630/5000
1/1 [=====] - 0s 997us/step - loss: 0.3884 - accuracy:
1.0000

Epoch 631/5000
1/1 [=====] - 0s 0s/step - loss: 0.3878 - accuracy:
1.0000

Epoch 632/5000
1/1 [=====] - 0s 0s/step - loss: 0.3872 - accuracy:
1.0000

Epoch 633/5000
1/1 [=====] - 0s 0s/step - loss: 0.3866 - accuracy:
1.0000

Epoch 634/5000
1/1 [=====] - 0s 0s/step - loss: 0.3860 - accuracy:
1.0000

Epoch 635/5000
1/1 [=====] - 0s 0s/step - loss: 0.3854 - accuracy:
1.0000

Epoch 636/5000
1/1 [=====] - 0s 0s/step - loss: 0.3847 - accuracy:
1.0000

Epoch 637/5000
1/1 [=====] - 0s 0s/step - loss: 0.3841 - accuracy:
1.0000

Epoch 638/5000
1/1 [=====] - 0s 0s/step - loss: 0.3835 - accuracy:
1.0000

Epoch 639/5000
1/1 [=====] - 0s 0s/step - loss: 0.3829 - accuracy:
1.0000

Epoch 640/5000
1/1 [=====] - 0s 0s/step - loss: 0.3823 - accuracy:
1.0000

Epoch 641/5000
1/1 [=====] - 0s 997us/step - loss: 0.3817 - accuracy:
1.0000

Epoch 642/5000
1/1 [=====] - 0s 997us/step - loss: 0.3811 - accuracy:
1.0000

Epoch 643/5000
1/1 [=====] - 0s 0s/step - loss: 0.3805 - accuracy:
1.0000

Epoch 644/5000
1/1 [=====] - 0s 997us/step - loss: 0.3799 - accuracy:
1.0000

Epoch 645/5000
1/1 [=====] - 0s 998us/step - loss: 0.3793 - accuracy:
1.0000

Epoch 646/5000
1/1 [=====] - 0s 0s/step - loss: 0.3787 - accuracy:
1.0000

Epoch 647/5000
1/1 [=====] - 0s 0s/step - loss: 0.3781 - accuracy:
1.0000

Epoch 648/5000
1/1 [=====] - 0s 0s/step - loss: 0.3775 - accuracy:
1.0000

Epoch 649/5000
1/1 [=====] - 0s 997us/step - loss: 0.3769 - accuracy:
1.0000

Epoch 650/5000
1/1 [=====] - 0s 997us/step - loss: 0.3763 - accuracy:
1.0000

Epoch 651/5000
1/1 [=====] - 0s 997us/step - loss: 0.3757 - accuracy:
1.0000

Epoch 652/5000
1/1 [=====] - 0s 998us/step - loss: 0.3751 - accuracy:
1.0000

Epoch 653/5000
1/1 [=====] - 0s 0s/step - loss: 0.3745 - accuracy:
1.0000

Epoch 654/5000
1/1 [=====] - 0s 0s/step - loss: 0.3739 - accuracy:
1.0000

Epoch 655/5000
1/1 [=====] - 0s 0s/step - loss: 0.3733 - accuracy:
1.0000

Epoch 656/5000
1/1 [=====] - 0s 997us/step - loss: 0.3727 - accuracy:
1.0000

Epoch 657/5000
1/1 [=====] - 0s 997us/step - loss: 0.3721 - accuracy:
1.0000

Epoch 658/5000
1/1 [=====] - 0s 998us/step - loss: 0.3715 - accuracy:
1.0000

Epoch 659/5000
1/1 [=====] - 0s 997us/step - loss: 0.3709 - accuracy:
1.0000

Epoch 660/5000
1/1 [=====] - 0s 998us/step - loss: 0.3703 - accuracy:
1.0000

Epoch 661/5000
1/1 [=====] - 0s 997us/step - loss: 0.3697 - accuracy:
1.0000

Epoch 662/5000
1/1 [=====] - 0s 0s/step - loss: 0.3691 - accuracy:
1.0000

Epoch 663/5000
1/1 [=====] - 0s 0s/step - loss: 0.3685 - accuracy:
1.0000

Epoch 664/5000
1/1 [=====] - 0s 0s/step - loss: 0.3680 - accuracy:
1.0000

Epoch 665/5000
1/1 [=====] - 0s 0s/step - loss: 0.3674 - accuracy:
1.0000

Epoch 666/5000
1/1 [=====] - 0s 998us/step - loss: 0.3668 - accuracy:
1.0000

Epoch 667/5000
1/1 [=====] - 0s 999us/step - loss: 0.3662 - accuracy:
1.0000

Epoch 668/5000
1/1 [=====] - 0s 0s/step - loss: 0.3656 - accuracy:
1.0000

Epoch 669/5000
1/1 [=====] - 0s 0s/step - loss: 0.3650 - accuracy:
1.0000

Epoch 670/5000
1/1 [=====] - 0s 999us/step - loss: 0.3644 - accuracy:
1.0000

Epoch 671/5000
1/1 [=====] - 0s 997us/step - loss: 0.3638 - accuracy:
1.0000

Epoch 672/5000
1/1 [=====] - 0s 997us/step - loss: 0.3633 - accuracy:
1.0000

Epoch 673/5000
1/1 [=====] - 0s 998us/step - loss: 0.3627 - accuracy:
1.0000

Epoch 674/5000
1/1 [=====] - 0s 0s/step - loss: 0.3621 - accuracy:
1.0000

Epoch 675/5000
1/1 [=====] - 0s 997us/step - loss: 0.3615 - accuracy:
1.0000

Epoch 676/5000
1/1 [=====] - 0s 999us/step - loss: 0.3609 - accuracy:
1.0000

Epoch 677/5000
1/1 [=====] - 0s 0s/step - loss: 0.3603 - accuracy:
1.0000

Epoch 678/5000
1/1 [=====] - 0s 0s/step - loss: 0.3598 - accuracy:
1.0000

Epoch 679/5000
1/1 [=====] - 0s 0s/step - loss: 0.3592 - accuracy:
1.0000

Epoch 680/5000
1/1 [=====] - 0s 996us/step - loss: 0.3586 - accuracy:
1.0000

Epoch 681/5000
1/1 [=====] - 0s 0s/step - loss: 0.3580 - accuracy:
1.0000

Epoch 682/5000
1/1 [=====] - 0s 996us/step - loss: 0.3575 - accuracy:
1.0000

Epoch 683/5000
1/1 [=====] - 0s 998us/step - loss: 0.3569 - accuracy:
1.0000

Epoch 684/5000
1/1 [=====] - 0s 997us/step - loss: 0.3563 - accuracy:
1.0000

Epoch 685/5000
1/1 [=====] - 0s 998us/step - loss: 0.3557 - accuracy:
1.0000

Epoch 686/5000
1/1 [=====] - 0s 996us/step - loss: 0.3551 - accuracy:
1.0000

Epoch 687/5000
1/1 [=====] - 0s 997us/step - loss: 0.3546 - accuracy:
1.0000

Epoch 688/5000
1/1 [=====] - 0s 997us/step - loss: 0.3540 - accuracy:
1.0000

Epoch 689/5000
1/1 [=====] - 0s 0s/step - loss: 0.3534 - accuracy:
1.0000

Epoch 690/5000
1/1 [=====] - 0s 1ms/step - loss: 0.3529 - accuracy:
1.0000

Epoch 691/5000
1/1 [=====] - 0s 0s/step - loss: 0.3523 - accuracy:
1.0000

Epoch 692/5000
1/1 [=====] - 0s 997us/step - loss: 0.3517 - accuracy:
1.0000

Epoch 693/5000
1/1 [=====] - 0s 998us/step - loss: 0.3511 - accuracy:
1.0000

Epoch 694/5000
1/1 [=====] - 0s 998us/step - loss: 0.3506 - accuracy:
1.0000

Epoch 695/5000
1/1 [=====] - 0s 998us/step - loss: 0.3500 - accuracy:
1.0000

Epoch 696/5000
1/1 [=====] - 0s 999us/step - loss: 0.3494 - accuracy:
1.0000

Epoch 697/5000
1/1 [=====] - 0s 0s/step - loss: 0.3489 - accuracy:
1.0000

Epoch 698/5000
1/1 [=====] - 0s 0s/step - loss: 0.3483 - accuracy:
1.0000

Epoch 699/5000
1/1 [=====] - 0s 0s/step - loss: 0.3477 - accuracy:
1.0000

Epoch 700/5000
1/1 [=====] - 0s 0s/step - loss: 0.3472 - accuracy:
1.0000

Epoch 701/5000
1/1 [=====] - 0s 0s/step - loss: 0.3466 - accuracy:
1.0000

Epoch 702/5000
1/1 [=====] - 0s 0s/step - loss: 0.3460 - accuracy:
1.0000

Epoch 703/5000
1/1 [=====] - 0s 0s/step - loss: 0.3455 - accuracy:
1.0000

Epoch 704/5000
1/1 [=====] - 0s 0s/step - loss: 0.3449 - accuracy:
1.0000

Epoch 705/5000
1/1 [=====] - 0s 997us/step - loss: 0.3443 - accuracy:
1.0000

Epoch 706/5000
1/1 [=====] - 0s 998us/step - loss: 0.3438 - accuracy:
1.0000

Epoch 707/5000
1/1 [=====] - 0s 0s/step - loss: 0.3432 - accuracy:
1.0000

Epoch 708/5000
1/1 [=====] - 0s 996us/step - loss: 0.3427 - accuracy:
1.0000

Epoch 709/5000
1/1 [=====] - 0s 998us/step - loss: 0.3421 - accuracy:
1.0000

Epoch 710/5000
1/1 [=====] - 0s 997us/step - loss: 0.3416 - accuracy:
1.0000

Epoch 711/5000
1/1 [=====] - 0s 0s/step - loss: 0.3410 - accuracy:
1.0000

Epoch 712/5000
1/1 [=====] - 0s 0s/step - loss: 0.3404 - accuracy:
1.0000

Epoch 713/5000
1/1 [=====] - 0s 0s/step - loss: 0.3399 - accuracy:
1.0000

Epoch 714/5000
1/1 [=====] - 0s 996us/step - loss: 0.3393 - accuracy:
1.0000

Epoch 715/5000
1/1 [=====] - 0s 998us/step - loss: 0.3388 - accuracy:
1.0000

Epoch 716/5000
1/1 [=====] - 0s 997us/step - loss: 0.3382 - accuracy:
1.0000

Epoch 717/5000
1/1 [=====] - 0s 998us/step - loss: 0.3377 - accuracy:
1.0000

Epoch 718/5000
1/1 [=====] - 0s 0s/step - loss: 0.3371 - accuracy:
1.0000

Epoch 719/5000
1/1 [=====] - 0s 0s/step - loss: 0.3366 - accuracy:
1.0000

Epoch 720/5000
1/1 [=====] - 0s 0s/step - loss: 0.3360 - accuracy:
1.0000

Epoch 721/5000
1/1 [=====] - 0s 0s/step - loss: 0.3355 - accuracy:
1.0000

Epoch 722/5000
1/1 [=====] - 0s 0s/step - loss: 0.3349 - accuracy:
1.0000

Epoch 723/5000
1/1 [=====] - 0s 996us/step - loss: 0.3344 - accuracy:
1.0000

Epoch 724/5000
1/1 [=====] - 0s 997us/step - loss: 0.3338 - accuracy:
1.0000

Epoch 725/5000
1/1 [=====] - 0s 0s/step - loss: 0.3333 - accuracy:
1.0000

Epoch 726/5000
1/1 [=====] - 0s 997us/step - loss: 0.3328 - accuracy:
1.0000

Epoch 727/5000
1/1 [=====] - 0s 996us/step - loss: 0.3322 - accuracy:
1.0000

Epoch 728/5000
1/1 [=====] - 0s 998us/step - loss: 0.3316 - accuracy:
1.0000

Epoch 729/5000
1/1 [=====] - 0s 998us/step - loss: 0.3311 - accuracy:
1.0000

Epoch 730/5000
1/1 [=====] - 0s 997us/step - loss: 0.3306 - accuracy:
1.0000

Epoch 731/5000
1/1 [=====] - 0s 997us/step - loss: 0.3300 - accuracy:
1.0000

Epoch 732/5000
1/1 [=====] - 0s 997us/step - loss: 0.3295 - accuracy:
1.0000

Epoch 733/5000
1/1 [=====] - 0s 998us/step - loss: 0.3290 - accuracy:
1.0000

Epoch 734/5000
1/1 [=====] - 0s 998us/step - loss: 0.3284 - accuracy:
1.0000

Epoch 735/5000
1/1 [=====] - 0s 998us/step - loss: 0.3279 - accuracy:
1.0000

Epoch 736/5000
1/1 [=====] - 0s 995us/step - loss: 0.3273 - accuracy:
1.0000

Epoch 737/5000
1/1 [=====] - 0s 998us/step - loss: 0.3268 - accuracy:
1.0000

Epoch 738/5000
1/1 [=====] - 0s 998us/step - loss: 0.3263 - accuracy:
1.0000

Epoch 739/5000
1/1 [=====] - 0s 0s/step - loss: 0.3257 - accuracy:
1.0000

Epoch 740/5000
1/1 [=====] - 0s 0s/step - loss: 0.3252 - accuracy:
1.0000

Epoch 741/5000
1/1 [=====] - 0s 0s/step - loss: 0.3247 - accuracy:
1.0000

Epoch 742/5000
1/1 [=====] - 0s 0s/step - loss: 0.3241 - accuracy:
1.0000

Epoch 743/5000
1/1 [=====] - 0s 0s/step - loss: 0.3236 - accuracy:
1.0000

Epoch 744/5000
1/1 [=====] - 0s 0s/step - loss: 0.3231 - accuracy:
1.0000

Epoch 745/5000
1/1 [=====] - 0s 0s/step - loss: 0.3225 - accuracy:
1.0000

Epoch 746/5000
1/1 [=====] - 0s 0s/step - loss: 0.3220 - accuracy:
1.0000

Epoch 747/5000
1/1 [=====] - 0s 0s/step - loss: 0.3215 - accuracy:
1.0000

Epoch 748/5000
1/1 [=====] - 0s 997us/step - loss: 0.3209 - accuracy:
1.0000

Epoch 749/5000
1/1 [=====] - 0s 998us/step - loss: 0.3204 - accuracy:
1.0000

Epoch 750/5000
1/1 [=====] - 0s 0s/step - loss: 0.3199 - accuracy:
1.0000

Epoch 751/5000
1/1 [=====] - 0s 0s/step - loss: 0.3194 - accuracy:
1.0000

Epoch 752/5000
1/1 [=====] - 0s 0s/step - loss: 0.3188 - accuracy:
1.0000

Epoch 753/5000
1/1 [=====] - 0s 998us/step - loss: 0.3183 - accuracy:
1.0000

Epoch 754/5000
1/1 [=====] - 0s 996us/step - loss: 0.3178 - accuracy:
1.0000

Epoch 755/5000
1/1 [=====] - 0s 0s/step - loss: 0.3173 - accuracy:
1.0000

Epoch 756/5000
1/1 [=====] - 0s 997us/step - loss: 0.3167 - accuracy:
1.0000

Epoch 757/5000
1/1 [=====] - 0s 0s/step - loss: 0.3162 - accuracy:
1.0000

Epoch 758/5000
1/1 [=====] - 0s 0s/step - loss: 0.3157 - accuracy:
1.0000

Epoch 759/5000
1/1 [=====] - 0s 998us/step - loss: 0.3152 - accuracy:
1.0000

Epoch 760/5000
1/1 [=====] - 0s 0s/step - loss: 0.3147 - accuracy:
1.0000

Epoch 761/5000
1/1 [=====] - 0s 997us/step - loss: 0.3141 - accuracy:
1.0000

Epoch 762/5000
1/1 [=====] - 0s 0s/step - loss: 0.3136 - accuracy:
1.0000

Epoch 763/5000
1/1 [=====] - 0s 0s/step - loss: 0.3131 - accuracy:
1.0000

Epoch 764/5000
1/1 [=====] - 0s 0s/step - loss: 0.3126 - accuracy:
1.0000

Epoch 765/5000
1/1 [=====] - 0s 998us/step - loss: 0.3120 - accuracy:
1.0000

Epoch 766/5000
1/1 [=====] - 0s 0s/step - loss: 0.3115 - accuracy:
1.0000

Epoch 767/5000
1/1 [=====] - 0s 0s/step - loss: 0.3110 - accuracy:
1.0000

Epoch 768/5000
1/1 [=====] - 0s 998us/step - loss: 0.3105 - accuracy:
1.0000

Epoch 769/5000
1/1 [=====] - 0s 997us/step - loss: 0.3100 - accuracy:
1.0000

Epoch 770/5000
1/1 [=====] - 0s 997us/step - loss: 0.3095 - accuracy:
1.0000

Epoch 771/5000
1/1 [=====] - 0s 0s/step - loss: 0.3090 - accuracy:
1.0000

Epoch 772/5000
1/1 [=====] - 0s 997us/step - loss: 0.3085 - accuracy:
1.0000

Epoch 773/5000
1/1 [=====] - 0s 997us/step - loss: 0.3080 - accuracy:
1.0000

Epoch 774/5000
1/1 [=====] - 0s 997us/step - loss: 0.3074 - accuracy:
1.0000

Epoch 775/5000
1/1 [=====] - 0s 999us/step - loss: 0.3069 - accuracy:
1.0000

Epoch 776/5000
1/1 [=====] - 0s 0s/step - loss: 0.3064 - accuracy:
1.0000

Epoch 777/5000
1/1 [=====] - 0s 0s/step - loss: 0.3059 - accuracy:
1.0000

Epoch 778/5000
1/1 [=====] - 0s 0s/step - loss: 0.3054 - accuracy:
1.0000

Epoch 779/5000
1/1 [=====] - 0s 997us/step - loss: 0.3049 - accuracy:
1.0000

Epoch 780/5000
1/1 [=====] - 0s 0s/step - loss: 0.3044 - accuracy:
1.0000

Epoch 781/5000
1/1 [=====] - 0s 0s/step - loss: 0.3039 - accuracy:
1.0000

Epoch 782/5000
1/1 [=====] - 0s 0s/step - loss: 0.3034 - accuracy:
1.0000

Epoch 783/5000
1/1 [=====] - 0s 0s/step - loss: 0.3029 - accuracy:
1.0000

Epoch 784/5000
1/1 [=====] - 0s 1ms/step - loss: 0.3024 - accuracy:
1.0000

Epoch 785/5000
1/1 [=====] - 0s 997us/step - loss: 0.3019 - accuracy:
1.0000

Epoch 786/5000
1/1 [=====] - 0s 998us/step - loss: 0.3014 - accuracy:
1.0000

Epoch 787/5000
1/1 [=====] - 0s 998us/step - loss: 0.3009 - accuracy:
1.0000

Epoch 788/5000
1/1 [=====] - 0s 998us/step - loss: 0.3004 - accuracy:
1.0000

Epoch 789/5000
1/1 [=====] - 0s 998us/step - loss: 0.2999 - accuracy:
1.0000

Epoch 790/5000
1/1 [=====] - 0s 0s/step - loss: 0.2994 - accuracy:
1.0000

Epoch 791/5000
1/1 [=====] - 0s 0s/step - loss: 0.2989 - accuracy:
1.0000

Epoch 792/5000
1/1 [=====] - 0s 998us/step - loss: 0.2984 - accuracy:
1.0000

Epoch 793/5000
1/1 [=====] - 0s 0s/step - loss: 0.2979 - accuracy:
1.0000

Epoch 794/5000
1/1 [=====] - 0s 0s/step - loss: 0.2974 - accuracy:
1.0000

Epoch 795/5000
1/1 [=====] - 0s 998us/step - loss: 0.2969 - accuracy:
1.0000

Epoch 796/5000
1/1 [=====] - 0s 0s/step - loss: 0.2964 - accuracy:
1.0000

Epoch 797/5000
1/1 [=====] - 0s 0s/step - loss: 0.2959 - accuracy:
1.0000

Epoch 798/5000
1/1 [=====] - 0s 998us/step - loss: 0.2955 - accuracy:
1.0000

Epoch 799/5000
1/1 [=====] - 0s 0s/step - loss: 0.2950 - accuracy:
1.0000

Epoch 800/5000
1/1 [=====] - 0s 997us/step - loss: 0.2945 - accuracy:
1.0000

Epoch 801/5000
1/1 [=====] - 0s 0s/step - loss: 0.2940 - accuracy:
1.0000

Epoch 802/5000
1/1 [=====] - 0s 0s/step - loss: 0.2935 - accuracy:
1.0000

Epoch 803/5000
1/1 [=====] - 0s 998us/step - loss: 0.2930 - accuracy:
1.0000

Epoch 804/5000
1/1 [=====] - 0s 0s/step - loss: 0.2925 - accuracy:
1.0000

Epoch 805/5000
1/1 [=====] - 0s 997us/step - loss: 0.2920 - accuracy:
1.0000

Epoch 806/5000
1/1 [=====] - 0s 996us/step - loss: 0.2915 - accuracy:
1.0000

Epoch 807/5000
1/1 [=====] - 0s 998us/step - loss: 0.2911 - accuracy:
1.0000

Epoch 808/5000
1/1 [=====] - 0s 997us/step - loss: 0.2906 - accuracy:
1.0000

Epoch 809/5000
1/1 [=====] - 0s 0s/step - loss: 0.2901 - accuracy:
1.0000

Epoch 810/5000
1/1 [=====] - 0s 997us/step - loss: 0.2896 - accuracy:
1.0000

Epoch 811/5000
1/1 [=====] - 0s 997us/step - loss: 0.2891 - accuracy:
1.0000

Epoch 812/5000
1/1 [=====] - 0s 0s/step - loss: 0.2886 - accuracy:
1.0000

Epoch 813/5000
1/1 [=====] - 0s 0s/step - loss: 0.2882 - accuracy:
1.0000

Epoch 814/5000
1/1 [=====] - 0s 0s/step - loss: 0.2877 - accuracy:
1.0000

Epoch 815/5000
1/1 [=====] - 0s 998us/step - loss: 0.2872 - accuracy:
1.0000

Epoch 816/5000
1/1 [=====] - 0s 0s/step - loss: 0.2867 - accuracy:
1.0000

Epoch 817/5000
1/1 [=====] - 0s 0s/step - loss: 0.2862 - accuracy:
1.0000

Epoch 818/5000
1/1 [=====] - 0s 0s/step - loss: 0.2858 - accuracy:
1.0000

Epoch 819/5000
1/1 [=====] - 0s 0s/step - loss: 0.2853 - accuracy:
1.0000

Epoch 820/5000
1/1 [=====] - 0s 996us/step - loss: 0.2849 - accuracy:
1.0000

Epoch 821/5000
1/1 [=====] - 0s 0s/step - loss: 0.2844 - accuracy:
1.0000

Epoch 822/5000
1/1 [=====] - 0s 0s/step - loss: 0.2839 - accuracy:
1.0000

Epoch 823/5000
1/1 [=====] - 0s 0s/step - loss: 0.2834 - accuracy:
1.0000

Epoch 824/5000
1/1 [=====] - 0s 996us/step - loss: 0.2829 - accuracy:
1.0000

Epoch 825/5000
1/1 [=====] - 0s 998us/step - loss: 0.2825 - accuracy:
1.0000

Epoch 826/5000
1/1 [=====] - 0s 0s/step - loss: 0.2820 - accuracy:
1.0000

Epoch 827/5000
1/1 [=====] - 0s 0s/step - loss: 0.2815 - accuracy:
1.0000

Epoch 828/5000
1/1 [=====] - 0s 995us/step - loss: 0.2811 - accuracy:
1.0000

Epoch 829/5000
1/1 [=====] - 0s 998us/step - loss: 0.2806 - accuracy:
1.0000

Epoch 830/5000
1/1 [=====] - 0s 996us/step - loss: 0.2801 - accuracy:
1.0000

Epoch 831/5000
1/1 [=====] - 0s 997us/step - loss: 0.2797 - accuracy:
1.0000

Epoch 832/5000
1/1 [=====] - 0s 998us/step - loss: 0.2792 - accuracy:
1.0000

Epoch 833/5000
1/1 [=====] - 0s 998us/step - loss: 0.2787 - accuracy:
1.0000

Epoch 834/5000
1/1 [=====] - 0s 0s/step - loss: 0.2783 - accuracy:
1.0000

Epoch 835/5000
1/1 [=====] - 0s 0s/step - loss: 0.2778 - accuracy:
1.0000

Epoch 836/5000
1/1 [=====] - 0s 997us/step - loss: 0.2773 - accuracy:
1.0000

Epoch 837/5000
1/1 [=====] - 0s 0s/step - loss: 0.2769 - accuracy:
1.0000

Epoch 838/5000
1/1 [=====] - 0s 0s/step - loss: 0.2764 - accuracy:
1.0000

Epoch 839/5000
1/1 [=====] - 0s 0s/step - loss: 0.2759 - accuracy:
1.0000

Epoch 840/5000
1/1 [=====] - 0s 0s/step - loss: 0.2755 - accuracy:
1.0000

Epoch 841/5000
1/1 [=====] - 0s 0s/step - loss: 0.2750 - accuracy:
1.0000

Epoch 842/5000
1/1 [=====] - 0s 0s/step - loss: 0.2746 - accuracy:
1.0000

Epoch 843/5000
1/1 [=====] - 0s 997us/step - loss: 0.2741 - accuracy:
1.0000

Epoch 844/5000
1/1 [=====] - 0s 998us/step - loss: 0.2737 - accuracy:
1.0000

Epoch 845/5000
1/1 [=====] - 0s 997us/step - loss: 0.2732 - accuracy:
1.0000

Epoch 846/5000
1/1 [=====] - 0s 998us/step - loss: 0.2727 - accuracy:
1.0000

Epoch 847/5000
1/1 [=====] - 0s 998us/step - loss: 0.2723 - accuracy:
1.0000

Epoch 848/5000
1/1 [=====] - 0s 0s/step - loss: 0.2718 - accuracy:
1.0000

Epoch 849/5000
1/1 [=====] - 0s 0s/step - loss: 0.2714 - accuracy:
1.0000

Epoch 850/5000
1/1 [=====] - 0s 997us/step - loss: 0.2709 - accuracy:
1.0000

Epoch 851/5000
1/1 [=====] - 0s 998us/step - loss: 0.2705 - accuracy:
1.0000

Epoch 852/5000
1/1 [=====] - 0s 0s/step - loss: 0.2700 - accuracy:
1.0000

Epoch 853/5000
1/1 [=====] - 0s 998us/step - loss: 0.2696 - accuracy:
1.0000

Epoch 854/5000
1/1 [=====] - 0s 0s/step - loss: 0.2691 - accuracy:
1.0000

Epoch 855/5000
1/1 [=====] - 0s 996us/step - loss: 0.2687 - accuracy:
1.0000

Epoch 856/5000
1/1 [=====] - 0s 0s/step - loss: 0.2682 - accuracy:
1.0000

Epoch 857/5000
1/1 [=====] - 0s 996us/step - loss: 0.2678 - accuracy:
1.0000

Epoch 858/5000
1/1 [=====] - 0s 997us/step - loss: 0.2673 - accuracy:
1.0000

Epoch 859/5000
1/1 [=====] - 0s 998us/step - loss: 0.2669 - accuracy:
1.0000

Epoch 860/5000
1/1 [=====] - 0s 0s/step - loss: 0.2664 - accuracy:
1.0000

Epoch 861/5000
1/1 [=====] - 0s 997us/step - loss: 0.2660 - accuracy:
1.0000

Epoch 862/5000
1/1 [=====] - 0s 0s/step - loss: 0.2656 - accuracy:
1.0000

Epoch 863/5000
1/1 [=====] - 0s 0s/step - loss: 0.2651 - accuracy:
1.0000

Epoch 864/5000
1/1 [=====] - 0s 997us/step - loss: 0.2647 - accuracy:
1.0000

Epoch 865/5000
1/1 [=====] - 0s 997us/step - loss: 0.2642 - accuracy:
1.0000

Epoch 866/5000
1/1 [=====] - 0s 0s/step - loss: 0.2638 - accuracy:
1.0000

Epoch 867/5000
1/1 [=====] - 0s 0s/step - loss: 0.2633 - accuracy:
1.0000

Epoch 868/5000
1/1 [=====] - 0s 998us/step - loss: 0.2629 - accuracy:
1.0000

Epoch 869/5000
1/1 [=====] - 0s 0s/step - loss: 0.2625 - accuracy:
1.0000

Epoch 870/5000
1/1 [=====] - 0s 998us/step - loss: 0.2620 - accuracy:
1.0000

Epoch 871/5000
1/1 [=====] - 0s 997us/step - loss: 0.2616 - accuracy:
1.0000

Epoch 872/5000
1/1 [=====] - 0s 0s/step - loss: 0.2611 - accuracy:
1.0000

Epoch 873/5000
1/1 [=====] - 0s 997us/step - loss: 0.2607 - accuracy:
1.0000

Epoch 874/5000
1/1 [=====] - 0s 998us/step - loss: 0.2603 - accuracy:
1.0000

Epoch 875/5000
1/1 [=====] - 0s 997us/step - loss: 0.2598 - accuracy:
1.0000

Epoch 876/5000
1/1 [=====] - 0s 0s/step - loss: 0.2594 - accuracy:
1.0000

Epoch 877/5000
1/1 [=====] - 0s 998us/step - loss: 0.2590 - accuracy:
1.0000

Epoch 878/5000
1/1 [=====] - 0s 0s/step - loss: 0.2585 - accuracy:
1.0000

Epoch 879/5000
1/1 [=====] - 0s 0s/step - loss: 0.2581 - accuracy:
1.0000

Epoch 880/5000
1/1 [=====] - 0s 998us/step - loss: 0.2577 - accuracy:
1.0000

Epoch 881/5000
1/1 [=====] - 0s 998us/step - loss: 0.2573 - accuracy:
1.0000

Epoch 882/5000
1/1 [=====] - 0s 997us/step - loss: 0.2568 - accuracy:
1.0000

Epoch 883/5000
1/1 [=====] - 0s 0s/step - loss: 0.2564 - accuracy:
1.0000

Epoch 884/5000
1/1 [=====] - 0s 0s/step - loss: 0.2560 - accuracy:
1.0000

Epoch 885/5000
1/1 [=====] - 0s 998us/step - loss: 0.2555 - accuracy:
1.0000

Epoch 886/5000
1/1 [=====] - 0s 0s/step - loss: 0.2551 - accuracy:
1.0000

Epoch 887/5000
1/1 [=====] - 0s 0s/step - loss: 0.2547 - accuracy:
1.0000

Epoch 888/5000
1/1 [=====] - 0s 998us/step - loss: 0.2543 - accuracy:
1.0000

Epoch 889/5000
1/1 [=====] - 0s 997us/step - loss: 0.2538 - accuracy:
1.0000

Epoch 890/5000
1/1 [=====] - 0s 0s/step - loss: 0.2534 - accuracy:
1.0000

Epoch 891/5000
1/1 [=====] - 0s 0s/step - loss: 0.2530 - accuracy:
1.0000

Epoch 892/5000
1/1 [=====] - 0s 0s/step - loss: 0.2526 - accuracy:
1.0000

Epoch 893/5000
1/1 [=====] - 0s 998us/step - loss: 0.2521 - accuracy:
1.0000

Epoch 894/5000
1/1 [=====] - 0s 0s/step - loss: 0.2517 - accuracy:
1.0000

Epoch 895/5000
1/1 [=====] - 0s 0s/step - loss: 0.2513 - accuracy:
1.0000

Epoch 896/5000
1/1 [=====] - 0s 998us/step - loss: 0.2509 - accuracy:
1.0000

Epoch 897/5000
1/1 [=====] - 0s 0s/step - loss: 0.2505 - accuracy:
1.0000

Epoch 898/5000
1/1 [=====] - 0s 0s/step - loss: 0.2500 - accuracy:
1.0000

Epoch 899/5000
1/1 [=====] - 0s 998us/step - loss: 0.2496 - accuracy:
1.0000

Epoch 900/5000
1/1 [=====] - 0s 0s/step - loss: 0.2492 - accuracy:
1.0000

Epoch 901/5000
1/1 [=====] - 0s 0s/step - loss: 0.2488 - accuracy:
1.0000

Epoch 902/5000
1/1 [=====] - 0s 998us/step - loss: 0.2484 - accuracy:
1.0000

Epoch 903/5000
1/1 [=====] - 0s 1ms/step - loss: 0.2480 - accuracy:
1.0000

Epoch 904/5000
1/1 [=====] - 0s 997us/step - loss: 0.2475 - accuracy:
1.0000

Epoch 905/5000
1/1 [=====] - 0s 997us/step - loss: 0.2471 - accuracy:
1.0000

Epoch 906/5000
1/1 [=====] - 0s 998us/step - loss: 0.2467 - accuracy:
1.0000

Epoch 907/5000
1/1 [=====] - 0s 0s/step - loss: 0.2463 - accuracy:
1.0000

Epoch 908/5000
1/1 [=====] - 0s 998us/step - loss: 0.2459 - accuracy:
1.0000

Epoch 909/5000
1/1 [=====] - 0s 997us/step - loss: 0.2455 - accuracy:
1.0000

Epoch 910/5000
1/1 [=====] - 0s 995us/step - loss: 0.2451 - accuracy:
1.0000

Epoch 911/5000
1/1 [=====] - 0s 0s/step - loss: 0.2447 - accuracy:
1.0000

Epoch 912/5000
1/1 [=====] - 0s 0s/step - loss: 0.2443 - accuracy:
1.0000

Epoch 913/5000
1/1 [=====] - 0s 0s/step - loss: 0.2439 - accuracy:
1.0000

Epoch 914/5000
1/1 [=====] - 0s 1ms/step - loss: 0.2435 - accuracy:
1.0000

Epoch 915/5000
1/1 [=====] - 0s 0s/step - loss: 0.2430 - accuracy:
1.0000

Epoch 916/5000
1/1 [=====] - 0s 997us/step - loss: 0.2426 - accuracy:
1.0000

Epoch 917/5000
1/1 [=====] - 0s 998us/step - loss: 0.2422 - accuracy:
1.0000

Epoch 918/5000
1/1 [=====] - 0s 997us/step - loss: 0.2418 - accuracy:
1.0000

Epoch 919/5000
1/1 [=====] - 0s 0s/step - loss: 0.2414 - accuracy:
1.0000

Epoch 920/5000
1/1 [=====] - 0s 0s/step - loss: 0.2410 - accuracy:
1.0000

Epoch 921/5000
1/1 [=====] - 0s 997us/step - loss: 0.2406 - accuracy:
1.0000

Epoch 922/5000
1/1 [=====] - 0s 997us/step - loss: 0.2402 - accuracy:
1.0000

Epoch 923/5000
1/1 [=====] - 0s 0s/step - loss: 0.2398 - accuracy:
1.0000

Epoch 924/5000
1/1 [=====] - 0s 0s/step - loss: 0.2394 - accuracy:
1.0000

Epoch 925/5000
1/1 [=====] - 0s 998us/step - loss: 0.2390 - accuracy:
1.0000

Epoch 926/5000
1/1 [=====] - 0s 998us/step - loss: 0.2386 - accuracy:
1.0000

Epoch 927/5000
1/1 [=====] - 0s 998us/step - loss: 0.2382 - accuracy:
1.0000

Epoch 928/5000
1/1 [=====] - 0s 0s/step - loss: 0.2378 - accuracy:
1.0000

Epoch 929/5000
1/1 [=====] - 0s 0s/step - loss: 0.2374 - accuracy:
1.0000

Epoch 930/5000
1/1 [=====] - 0s 0s/step - loss: 0.2370 - accuracy:
1.0000

Epoch 931/5000
1/1 [=====] - 0s 997us/step - loss: 0.2366 - accuracy:
1.0000

Epoch 932/5000
1/1 [=====] - 0s 0s/step - loss: 0.2362 - accuracy:
1.0000

Epoch 933/5000
1/1 [=====] - 0s 0s/step - loss: 0.2358 - accuracy:
1.0000

Epoch 934/5000
1/1 [=====] - 0s 997us/step - loss: 0.2354 - accuracy:
1.0000

Epoch 935/5000
1/1 [=====] - 0s 998us/step - loss: 0.2351 - accuracy:
1.0000

Epoch 936/5000
1/1 [=====] - 0s 997us/step - loss: 0.2347 - accuracy:
1.0000

Epoch 937/5000
1/1 [=====] - 0s 0s/step - loss: 0.2343 - accuracy:
1.0000

Epoch 938/5000
1/1 [=====] - 0s 0s/step - loss: 0.2339 - accuracy:
1.0000

Epoch 939/5000
1/1 [=====] - 0s 0s/step - loss: 0.2335 - accuracy:
1.0000

Epoch 940/5000
1/1 [=====] - 0s 997us/step - loss: 0.2331 - accuracy:
1.0000

Epoch 941/5000
1/1 [=====] - 0s 0s/step - loss: 0.2327 - accuracy:
1.0000

Epoch 942/5000
1/1 [=====] - 0s 998us/step - loss: 0.2323 - accuracy:
1.0000

Epoch 943/5000
1/1 [=====] - 0s 998us/step - loss: 0.2319 - accuracy:
1.0000

Epoch 944/5000
1/1 [=====] - 0s 0s/step - loss: 0.2316 - accuracy:
1.0000

Epoch 945/5000
1/1 [=====] - 0s 0s/step - loss: 0.2312 - accuracy:
1.0000

Epoch 946/5000
1/1 [=====] - 0s 998us/step - loss: 0.2308 - accuracy:
1.0000

Epoch 947/5000
1/1 [=====] - 0s 1000us/step - loss: 0.2304 - accuracy:
1.0000

Epoch 948/5000
1/1 [=====] - 0s 997us/step - loss: 0.2300 - accuracy:
1.0000

Epoch 949/5000
1/1 [=====] - 0s 0s/step - loss: 0.2296 - accuracy:
1.0000

Epoch 950/5000
1/1 [=====] - 0s 0s/step - loss: 0.2292 - accuracy:
1.0000

Epoch 951/5000
1/1 [=====] - 0s 0s/step - loss: 0.2289 - accuracy:
1.0000

Epoch 952/5000
1/1 [=====] - 0s 997us/step - loss: 0.2285 - accuracy:
1.0000

Epoch 953/5000
1/1 [=====] - 0s 0s/step - loss: 0.2281 - accuracy:
1.0000

Epoch 954/5000
1/1 [=====] - 0s 0s/step - loss: 0.2277 - accuracy:
1.0000

Epoch 955/5000
1/1 [=====] - 0s 0s/step - loss: 0.2273 - accuracy:
1.0000

Epoch 956/5000
1/1 [=====] - 0s 0s/step - loss: 0.2270 - accuracy:
1.0000

Epoch 957/5000
1/1 [=====] - 0s 0s/step - loss: 0.2266 - accuracy:
1.0000

Epoch 958/5000
1/1 [=====] - 0s 0s/step - loss: 0.2262 - accuracy:
1.0000

Epoch 959/5000
1/1 [=====] - 0s 0s/step - loss: 0.2258 - accuracy:
1.0000

Epoch 960/5000
1/1 [=====] - 0s 0s/step - loss: 0.2254 - accuracy:
1.0000

Epoch 961/5000
1/1 [=====] - 0s 0s/step - loss: 0.2251 - accuracy:
1.0000

Epoch 962/5000
1/1 [=====] - 0s 0s/step - loss: 0.2247 - accuracy:
1.0000

Epoch 963/5000
1/1 [=====] - 0s 0s/step - loss: 0.2243 - accuracy:
1.0000

Epoch 964/5000
1/1 [=====] - 0s 0s/step - loss: 0.2239 - accuracy:
1.0000

Epoch 965/5000
1/1 [=====] - 0s 998us/step - loss: 0.2236 - accuracy: 1.0000
Epoch 966/5000
1/1 [=====] - 0s 0s/step - loss: 0.2232 - accuracy: 1.0000
Epoch 967/5000
1/1 [=====] - 0s 998us/step - loss: 0.2228 - accuracy: 1.0000
Epoch 968/5000
1/1 [=====] - 0s 999us/step - loss: 0.2225 - accuracy: 1.0000
Epoch 969/5000
1/1 [=====] - 0s 0s/step - loss: 0.2221 - accuracy: 1.0000
Epoch 970/5000
1/1 [=====] - 0s 998us/step - loss: 0.2217 - accuracy: 1.0000
Epoch 971/5000
1/1 [=====] - 0s 0s/step - loss: 0.2214 - accuracy: 1.0000
Epoch 972/5000
1/1 [=====] - 0s 0s/step - loss: 0.2210 - accuracy: 1.0000
Epoch 973/5000
1/1 [=====] - 0s 0s/step - loss: 0.2206 - accuracy: 1.0000
Epoch 974/5000
1/1 [=====] - ETA: 0s - loss: 0.2202 - accuracy: 1.00 - 0s 0s/step - loss: 0.2202 - accuracy: 1.0000
Epoch 975/5000
1/1 [=====] - 0s 998us/step - loss: 0.2199 - accuracy: 1.0000
Epoch 976/5000
1/1 [=====] - 0s 998us/step - loss: 0.2195 - accuracy: 1.0000
Epoch 977/5000
1/1 [=====] - 0s 0s/step - loss: 0.2192 - accuracy: 1.0000
Epoch 978/5000
1/1 [=====] - 0s 997us/step - loss: 0.2188 - accuracy: 1.0000
Epoch 979/5000
1/1 [=====] - 0s 999us/step - loss: 0.2184 - accuracy: 1.0000
Epoch 980/5000
1/1 [=====] - 0s 998us/step - loss: 0.2181 - accuracy: 1.0000

Epoch 981/5000
1/1 [=====] - 0s 0s/step - loss: 0.2177 - accuracy:
1.0000

Epoch 982/5000
1/1 [=====] - 0s 0s/step - loss: 0.2173 - accuracy:
1.0000

Epoch 983/5000
1/1 [=====] - 0s 0s/step - loss: 0.2170 - accuracy:
1.0000

Epoch 984/5000
1/1 [=====] - 0s 997us/step - loss: 0.2166 - accuracy:
1.0000

Epoch 985/5000
1/1 [=====] - 0s 0s/step - loss: 0.2163 - accuracy:
1.0000

Epoch 986/5000
1/1 [=====] - 0s 0s/step - loss: 0.2159 - accuracy:
1.0000

Epoch 987/5000
1/1 [=====] - 0s 997us/step - loss: 0.2155 - accuracy:
1.0000

Epoch 988/5000
1/1 [=====] - 0s 998us/step - loss: 0.2152 - accuracy:
1.0000

Epoch 989/5000
1/1 [=====] - 0s 999us/step - loss: 0.2148 - accuracy:
1.0000

Epoch 990/5000
1/1 [=====] - 0s 997us/step - loss: 0.2145 - accuracy:
1.0000

Epoch 991/5000
1/1 [=====] - 0s 0s/step - loss: 0.2141 - accuracy:
1.0000

Epoch 992/5000
1/1 [=====] - 0s 998us/step - loss: 0.2137 - accuracy:
1.0000

Epoch 993/5000
1/1 [=====] - 0s 998us/step - loss: 0.2134 - accuracy:
1.0000

Epoch 994/5000
1/1 [=====] - 0s 0s/step - loss: 0.2130 - accuracy:
1.0000

Epoch 995/5000
1/1 [=====] - 0s 0s/step - loss: 0.2127 - accuracy:
1.0000

Epoch 996/5000
1/1 [=====] - 0s 997us/step - loss: 0.2123 - accuracy:
1.0000

Epoch 997/5000
1/1 [=====] - 0s 997us/step - loss: 0.2120 - accuracy:
1.0000

Epoch 998/5000
1/1 [=====] - 0s 0s/step - loss: 0.2116 - accuracy:
1.0000

Epoch 999/5000
1/1 [=====] - 0s 997us/step - loss: 0.2113 - accuracy:
1.0000

Epoch 1000/5000
1/1 [=====] - 0s 0s/step - loss: 0.2109 - accuracy:
1.0000

Epoch 1001/5000
1/1 [=====] - 0s 997us/step - loss: 0.2106 - accuracy:
1.0000

Epoch 1002/5000
1/1 [=====] - 0s 0s/step - loss: 0.2102 - accuracy:
1.0000

Epoch 1003/5000
1/1 [=====] - 0s 0s/step - loss: 0.2099 - accuracy:
1.0000

Epoch 1004/5000
1/1 [=====] - 0s 996us/step - loss: 0.2095 - accuracy:
1.0000

Epoch 1005/5000
1/1 [=====] - 0s 0s/step - loss: 0.2092 - accuracy:
1.0000

Epoch 1006/5000
1/1 [=====] - 0s 1000us/step - loss: 0.2088 - accuracy:
1.0000

Epoch 1007/5000
1/1 [=====] - 0s 998us/step - loss: 0.2085 - accuracy:
1.0000

Epoch 1008/5000
1/1 [=====] - 0s 998us/step - loss: 0.2081 - accuracy:
1.0000

Epoch 1009/5000
1/1 [=====] - 0s 0s/step - loss: 0.2078 - accuracy:
1.0000

Epoch 1010/5000
1/1 [=====] - 0s 0s/step - loss: 0.2075 - accuracy:
1.0000

Epoch 1011/5000
1/1 [=====] - 0s 998us/step - loss: 0.2071 - accuracy:
1.0000

Epoch 1012/5000
1/1 [=====] - 0s 996us/step - loss: 0.2068 - accuracy:
1.0000

Epoch 1013/5000
1/1 [=====] - 0s 997us/step - loss: 0.2064 - accuracy:
1.0000

Epoch 1014/5000
1/1 [=====] - 0s 997us/step - loss: 0.2061 - accuracy:
1.0000

Epoch 1015/5000
1/1 [=====] - 0s 0s/step - loss: 0.2057 - accuracy:
1.0000

Epoch 1016/5000
1/1 [=====] - 0s 0s/step - loss: 0.2054 - accuracy:
1.0000

Epoch 1017/5000
1/1 [=====] - 0s 997us/step - loss: 0.2051 - accuracy:
1.0000

Epoch 1018/5000
1/1 [=====] - 0s 0s/step - loss: 0.2047 - accuracy:
1.0000

Epoch 1019/5000
1/1 [=====] - 0s 998us/step - loss: 0.2044 - accuracy:
1.0000

Epoch 1020/5000
1/1 [=====] - 0s 998us/step - loss: 0.2041 - accuracy:
1.0000

Epoch 1021/5000
1/1 [=====] - 0s 998us/step - loss: 0.2037 - accuracy:
1.0000

Epoch 1022/5000
1/1 [=====] - 0s 0s/step - loss: 0.2034 - accuracy:
1.0000

Epoch 1023/5000
1/1 [=====] - 0s 997us/step - loss: 0.2030 - accuracy:
1.0000

Epoch 1024/5000
1/1 [=====] - 0s 998us/step - loss: 0.2027 - accuracy:
1.0000

Epoch 1025/5000
1/1 [=====] - 0s 0s/step - loss: 0.2024 - accuracy:
1.0000

Epoch 1026/5000
1/1 [=====] - 0s 998us/step - loss: 0.2020 - accuracy:
1.0000

Epoch 1027/5000
1/1 [=====] - 0s 998us/step - loss: 0.2017 - accuracy:
1.0000

Epoch 1028/5000
1/1 [=====] - 0s 0s/step - loss: 0.2013 - accuracy:
1.0000

Epoch 1029/5000
1/1 [=====] - 0s 997us/step - loss: 0.2010 - accuracy:
1.0000

Epoch 1030/5000
1/1 [=====] - 0s 997us/step - loss: 0.2007 - accuracy:
1.0000

Epoch 1031/5000
1/1 [=====] - 0s 997us/step - loss: 0.2004 - accuracy:
1.0000

Epoch 1032/5000
1/1 [=====] - 0s 0s/step - loss: 0.2000 - accuracy:
1.0000

Epoch 1033/5000
1/1 [=====] - 0s 999us/step - loss: 0.1997 - accuracy:
1.0000

Epoch 1034/5000
1/1 [=====] - 0s 998us/step - loss: 0.1994 - accuracy:
1.0000

Epoch 1035/5000
1/1 [=====] - 0s 998us/step - loss: 0.1990 - accuracy:
1.0000

Epoch 1036/5000
1/1 [=====] - 0s 998us/step - loss: 0.1987 - accuracy:
1.0000

Epoch 1037/5000
1/1 [=====] - 0s 0s/step - loss: 0.1984 - accuracy:
1.0000

Epoch 1038/5000
1/1 [=====] - 0s 998us/step - loss: 0.1980 - accuracy:
1.0000

Epoch 1039/5000
1/1 [=====] - 0s 998us/step - loss: 0.1977 - accuracy:
1.0000

Epoch 1040/5000
1/1 [=====] - 0s 996us/step - loss: 0.1974 - accuracy:
1.0000

Epoch 1041/5000
1/1 [=====] - 0s 0s/step - loss: 0.1971 - accuracy:
1.0000

Epoch 1042/5000
1/1 [=====] - 0s 0s/step - loss: 0.1967 - accuracy:
1.0000

Epoch 1043/5000
1/1 [=====] - 0s 998us/step - loss: 0.1964 - accuracy:
1.0000

Epoch 1044/5000
1/1 [=====] - 0s 0s/step - loss: 0.1961 - accuracy:
1.0000

Epoch 1045/5000
1/1 [=====] - 0s 0s/step - loss: 0.1958 - accuracy:
1.0000

Epoch 1046/5000
1/1 [=====] - 0s 997us/step - loss: 0.1954 - accuracy:
1.0000

Epoch 1047/5000
1/1 [=====] - 0s 0s/step - loss: 0.1951 - accuracy:
1.0000

Epoch 1048/5000
1/1 [=====] - 0s 0s/step - loss: 0.1948 - accuracy:
1.0000

Epoch 1049/5000
1/1 [=====] - 0s 0s/step - loss: 0.1945 - accuracy:
1.0000

Epoch 1050/5000
1/1 [=====] - 0s 0s/step - loss: 0.1942 - accuracy:
1.0000

Epoch 1051/5000
1/1 [=====] - 0s 998us/step - loss: 0.1938 - accuracy:
1.0000

Epoch 1052/5000
1/1 [=====] - 0s 0s/step - loss: 0.1935 - accuracy:
1.0000

Epoch 1053/5000
1/1 [=====] - 0s 998us/step - loss: 0.1932 - accuracy:
1.0000

Epoch 1054/5000
1/1 [=====] - 0s 0s/step - loss: 0.1929 - accuracy:
1.0000

Epoch 1055/5000
1/1 [=====] - 0s 997us/step - loss: 0.1926 - accuracy:
1.0000

Epoch 1056/5000
1/1 [=====] - 0s 997us/step - loss: 0.1922 - accuracy:
1.0000

Epoch 1057/5000
1/1 [=====] - 0s 0s/step - loss: 0.1919 - accuracy:
1.0000

Epoch 1058/5000
1/1 [=====] - 0s 998us/step - loss: 0.1916 - accuracy:
1.0000

Epoch 1059/5000
1/1 [=====] - 0s 0s/step - loss: 0.1913 - accuracy:
1.0000

Epoch 1060/5000
1/1 [=====] - 0s 0s/step - loss: 0.1910 - accuracy:
1.0000

Epoch 1061/5000
1/1 [=====] - 0s 997us/step - loss: 0.1907 - accuracy:
1.0000

Epoch 1062/5000
1/1 [=====] - 0s 0s/step - loss: 0.1903 - accuracy:
1.0000

Epoch 1063/5000
1/1 [=====] - 0s 0s/step - loss: 0.1900 - accuracy:
1.0000

Epoch 1064/5000
1/1 [=====] - 0s 0s/step - loss: 0.1897 - accuracy:
1.0000

Epoch 1065/5000
1/1 [=====] - 0s 998us/step - loss: 0.1894 - accuracy:
1.0000

Epoch 1066/5000
1/1 [=====] - 0s 997us/step - loss: 0.1891 - accuracy:
1.0000

Epoch 1067/5000
1/1 [=====] - 0s 0s/step - loss: 0.1888 - accuracy:
1.0000

Epoch 1068/5000
1/1 [=====] - 0s 997us/step - loss: 0.1885 - accuracy:
1.0000

Epoch 1069/5000
1/1 [=====] - 0s 997us/step - loss: 0.1882 - accuracy:
1.0000

Epoch 1070/5000
1/1 [=====] - 0s 0s/step - loss: 0.1879 - accuracy:
1.0000

Epoch 1071/5000
1/1 [=====] - 0s 0s/step - loss: 0.1876 - accuracy:
1.0000

Epoch 1072/5000
1/1 [=====] - 0s 997us/step - loss: 0.1872 - accuracy:
1.0000

Epoch 1073/5000
1/1 [=====] - 0s 998us/step - loss: 0.1869 - accuracy:
1.0000

Epoch 1074/5000
1/1 [=====] - 0s 998us/step - loss: 0.1866 - accuracy:
1.0000

Epoch 1075/5000
1/1 [=====] - 0s 0s/step - loss: 0.1863 - accuracy:
1.0000

Epoch 1076/5000
1/1 [=====] - 0s 999us/step - loss: 0.1860 - accuracy:
1.0000

Epoch 1077/5000
1/1 [=====] - 0s 0s/step - loss: 0.1857 - accuracy:
1.0000

Epoch 1078/5000
1/1 [=====] - 0s 997us/step - loss: 0.1854 - accuracy:
1.0000

Epoch 1079/5000
1/1 [=====] - 0s 998us/step - loss: 0.1851 - accuracy:
1.0000

Epoch 1080/5000
1/1 [=====] - 0s 0s/step - loss: 0.1848 - accuracy:
1.0000

Epoch 1081/5000
1/1 [=====] - 0s 0s/step - loss: 0.1845 - accuracy:
1.0000

Epoch 1082/5000
1/1 [=====] - 0s 0s/step - loss: 0.1842 - accuracy:
1.0000

Epoch 1083/5000
1/1 [=====] - 0s 0s/step - loss: 0.1839 - accuracy:
1.0000

Epoch 1084/5000
1/1 [=====] - 0s 998us/step - loss: 0.1836 - accuracy:
1.0000

Epoch 1085/5000
1/1 [=====] - 0s 998us/step - loss: 0.1833 - accuracy:
1.0000

Epoch 1086/5000
1/1 [=====] - 0s 0s/step - loss: 0.1830 - accuracy:
1.0000

Epoch 1087/5000
1/1 [=====] - 0s 998us/step - loss: 0.1827 - accuracy:
1.0000

Epoch 1088/5000
1/1 [=====] - 0s 996us/step - loss: 0.1824 - accuracy:
1.0000

Epoch 1089/5000
1/1 [=====] - 0s 0s/step - loss: 0.1821 - accuracy:
1.0000

Epoch 1090/5000
1/1 [=====] - 0s 0s/step - loss: 0.1818 - accuracy:
1.0000

Epoch 1091/5000
1/1 [=====] - 0s 0s/step - loss: 0.1815 - accuracy:
1.0000

Epoch 1092/5000
1/1 [=====] - 0s 998us/step - loss: 0.1812 - accuracy:
1.0000

Epoch 1093/5000
1/1 [=====] - 0s 0s/step - loss: 0.1809 - accuracy:
1.0000

Epoch 1094/5000
1/1 [=====] - 0s 0s/step - loss: 0.1806 - accuracy:
1.0000

Epoch 1095/5000
1/1 [=====] - 0s 997us/step - loss: 0.1803 - accuracy:
1.0000

Epoch 1096/5000
1/1 [=====] - 0s 997us/step - loss: 0.1800 - accuracy:
1.0000

Epoch 1097/5000
1/1 [=====] - 0s 997us/step - loss: 0.1797 - accuracy:
1.0000

Epoch 1098/5000
1/1 [=====] - 0s 997us/step - loss: 0.1794 - accuracy:
1.0000

Epoch 1099/5000
1/1 [=====] - 0s 998us/step - loss: 0.1791 - accuracy:
1.0000

Epoch 1100/5000
1/1 [=====] - 0s 997us/step - loss: 0.1788 - accuracy:
1.0000

Epoch 1101/5000
1/1 [=====] - 0s 997us/step - loss: 0.1785 - accuracy:
1.0000

Epoch 1102/5000
1/1 [=====] - 0s 998us/step - loss: 0.1782 - accuracy:
1.0000

Epoch 1103/5000
1/1 [=====] - 0s 0s/step - loss: 0.1780 - accuracy:
1.0000

Epoch 1104/5000
1/1 [=====] - 0s 0s/step - loss: 0.1777 - accuracy:
1.0000

Epoch 1105/5000
1/1 [=====] - 0s 0s/step - loss: 0.1774 - accuracy:
1.0000

Epoch 1106/5000
1/1 [=====] - 0s 997us/step - loss: 0.1771 - accuracy:
1.0000

Epoch 1107/5000
1/1 [=====] - 0s 998us/step - loss: 0.1768 - accuracy:
1.0000

Epoch 1108/5000
1/1 [=====] - 0s 998us/step - loss: 0.1765 - accuracy:
1.0000

Epoch 1109/5000
1/1 [=====] - 0s 0s/step - loss: 0.1762 - accuracy:
1.0000

Epoch 1110/5000
1/1 [=====] - 0s 0s/step - loss: 0.1759 - accuracy:
1.0000

Epoch 1111/5000
1/1 [=====] - 0s 0s/step - loss: 0.1756 - accuracy:
1.0000

Epoch 1112/5000
1/1 [=====] - 0s 0s/step - loss: 0.1753 - accuracy:
1.0000

Epoch 1113/5000
1/1 [=====] - 0s 0s/step - loss: 0.1750 - accuracy:
1.0000

Epoch 1114/5000
1/1 [=====] - 0s 0s/step - loss: 0.1748 - accuracy:
1.0000

Epoch 1115/5000
1/1 [=====] - 0s 998us/step - loss: 0.1745 - accuracy:
1.0000

Epoch 1116/5000
1/1 [=====] - 0s 0s/step - loss: 0.1742 - accuracy:
1.0000

Epoch 1117/5000
1/1 [=====] - 0s 996us/step - loss: 0.1739 - accuracy:
1.0000

Epoch 1118/5000
1/1 [=====] - 0s 998us/step - loss: 0.1736 - accuracy:
1.0000

Epoch 1119/5000
1/1 [=====] - 0s 0s/step - loss: 0.1733 - accuracy:
1.0000

Epoch 1120/5000
1/1 [=====] - 0s 997us/step - loss: 0.1731 - accuracy:
1.0000

Epoch 1121/5000
1/1 [=====] - 0s 0s/step - loss: 0.1728 - accuracy:
1.0000

Epoch 1122/5000
1/1 [=====] - 0s 997us/step - loss: 0.1725 - accuracy:
1.0000

Epoch 1123/5000
1/1 [=====] - 0s 0s/step - loss: 0.1722 - accuracy:
1.0000

Epoch 1124/5000
1/1 [=====] - 0s 0s/step - loss: 0.1719 - accuracy:
1.0000

Epoch 1125/5000
1/1 [=====] - 0s 997us/step - loss: 0.1717 - accuracy: 1.0000

Epoch 1126/5000
1/1 [=====] - 0s 998us/step - loss: 0.1714 - accuracy: 1.0000

Epoch 1127/5000
1/1 [=====] - 0s 997us/step - loss: 0.1711 - accuracy: 1.0000

Epoch 1128/5000
1/1 [=====] - 0s 0s/step - loss: 0.1708 - accuracy: 1.0000

Epoch 1129/5000
1/1 [=====] - 0s 997us/step - loss: 0.1705 - accuracy: 1.0000

Epoch 1130/5000
1/1 [=====] - 0s 998us/step - loss: 0.1703 - accuracy: 1.0000

Epoch 1131/5000
1/1 [=====] - 0s 998us/step - loss: 0.1700 - accuracy: 1.0000

Epoch 1132/5000
1/1 [=====] - 0s 998us/step - loss: 0.1697 - accuracy: 1.0000

Epoch 1133/5000
1/1 [=====] - 0s 997us/step - loss: 0.1694 - accuracy: 1.0000

Epoch 1134/5000
1/1 [=====] - 0s 997us/step - loss: 0.1691 - accuracy: 1.0000

Epoch 1135/5000
1/1 [=====] - 0s 998us/step - loss: 0.1689 - accuracy: 1.0000

Epoch 1136/5000
1/1 [=====] - 0s 1ms/step - loss: 0.1686 - accuracy: 1.0000

Epoch 1137/5000
1/1 [=====] - 0s 997us/step - loss: 0.1683 - accuracy: 1.0000

Epoch 1138/5000
1/1 [=====] - 0s 0s/step - loss: 0.1681 - accuracy: 1.0000

Epoch 1139/5000
1/1 [=====] - 0s 997us/step - loss: 0.1678 - accuracy: 1.0000

Epoch 1140/5000
1/1 [=====] - 0s 0s/step - loss: 0.1675 - accuracy: 1.0000

Epoch 1141/5000
1/1 [=====] - 0s 0s/step - loss: 0.1672 - accuracy:
1.0000

Epoch 1142/5000
1/1 [=====] - 0s 0s/step - loss: 0.1670 - accuracy:
1.0000

Epoch 1143/5000
1/1 [=====] - 0s 0s/step - loss: 0.1667 - accuracy:
1.0000

Epoch 1144/5000
1/1 [=====] - 0s 998us/step - loss: 0.1664 - accuracy:
1.0000

Epoch 1145/5000
1/1 [=====] - 0s 0s/step - loss: 0.1662 - accuracy:
1.0000

Epoch 1146/5000
1/1 [=====] - 0s 0s/step - loss: 0.1659 - accuracy:
1.0000

Epoch 1147/5000
1/1 [=====] - 0s 0s/step - loss: 0.1656 - accuracy:
1.0000

Epoch 1148/5000
1/1 [=====] - 0s 0s/step - loss: 0.1653 - accuracy:
1.0000

Epoch 1149/5000
1/1 [=====] - 0s 998us/step - loss: 0.1651 - accuracy:
1.0000

Epoch 1150/5000
1/1 [=====] - 0s 997us/step - loss: 0.1648 - accuracy:
1.0000

Epoch 1151/5000
1/1 [=====] - 0s 0s/step - loss: 0.1645 - accuracy:
1.0000

Epoch 1152/5000
1/1 [=====] - 0s 0s/step - loss: 0.1643 - accuracy:
1.0000

Epoch 1153/5000
1/1 [=====] - 0s 0s/step - loss: 0.1640 - accuracy:
1.0000

Epoch 1154/5000
1/1 [=====] - 0s 0s/step - loss: 0.1637 - accuracy:
1.0000

Epoch 1155/5000
1/1 [=====] - 0s 999us/step - loss: 0.1635 - accuracy:
1.0000

Epoch 1156/5000
1/1 [=====] - 0s 0s/step - loss: 0.1632 - accuracy:
1.0000

Epoch 1157/5000
1/1 [=====] - 0s 0s/step - loss: 0.1629 - accuracy:
1.0000

Epoch 1158/5000
1/1 [=====] - 0s 0s/step - loss: 0.1627 - accuracy:
1.0000

Epoch 1159/5000
1/1 [=====] - 0s 997us/step - loss: 0.1624 - accuracy:
1.0000

Epoch 1160/5000
1/1 [=====] - 0s 997us/step - loss: 0.1621 - accuracy:
1.0000

Epoch 1161/5000
1/1 [=====] - 0s 0s/step - loss: 0.1619 - accuracy:
1.0000

Epoch 1162/5000
1/1 [=====] - 0s 997us/step - loss: 0.1616 - accuracy:
1.0000

Epoch 1163/5000
1/1 [=====] - 0s 998us/step - loss: 0.1614 - accuracy:
1.0000

Epoch 1164/5000
1/1 [=====] - 0s 0s/step - loss: 0.1611 - accuracy:
1.0000

Epoch 1165/5000
1/1 [=====] - 0s 0s/step - loss: 0.1608 - accuracy:
1.0000

Epoch 1166/5000
1/1 [=====] - 0s 0s/step - loss: 0.1606 - accuracy:
1.0000

Epoch 1167/5000
1/1 [=====] - 0s 0s/step - loss: 0.1603 - accuracy:
1.0000

Epoch 1168/5000
1/1 [=====] - 0s 998us/step - loss: 0.1601 - accuracy:
1.0000

Epoch 1169/5000
1/1 [=====] - 0s 996us/step - loss: 0.1598 - accuracy:
1.0000

Epoch 1170/5000
1/1 [=====] - 0s 997us/step - loss: 0.1595 - accuracy:
1.0000

Epoch 1171/5000
1/1 [=====] - 0s 998us/step - loss: 0.1593 - accuracy:
1.0000

Epoch 1172/5000
1/1 [=====] - 0s 998us/step - loss: 0.1590 - accuracy:
1.0000

Epoch 1173/5000
1/1 [=====] - 0s 0s/step - loss: 0.1588 - accuracy:
1.0000

Epoch 1174/5000
1/1 [=====] - 0s 998us/step - loss: 0.1585 - accuracy:
1.0000

Epoch 1175/5000
1/1 [=====] - 0s 998us/step - loss: 0.1583 - accuracy:
1.0000

Epoch 1176/5000
1/1 [=====] - 0s 997us/step - loss: 0.1580 - accuracy:
1.0000

Epoch 1177/5000
1/1 [=====] - 0s 996us/step - loss: 0.1578 - accuracy:
1.0000

Epoch 1178/5000
1/1 [=====] - 0s 0s/step - loss: 0.1575 - accuracy:
1.0000

Epoch 1179/5000
1/1 [=====] - 0s 0s/step - loss: 0.1572 - accuracy:
1.0000

Epoch 1180/5000
1/1 [=====] - 0s 0s/step - loss: 0.1570 - accuracy:
1.0000

Epoch 1181/5000
1/1 [=====] - 0s 997us/step - loss: 0.1567 - accuracy:
1.0000

Epoch 1182/5000
1/1 [=====] - 0s 998us/step - loss: 0.1565 - accuracy:
1.0000

Epoch 1183/5000
1/1 [=====] - 0s 0s/step - loss: 0.1562 - accuracy:
1.0000

Epoch 1184/5000
1/1 [=====] - 0s 0s/step - loss: 0.1560 - accuracy:
1.0000

Epoch 1185/5000
1/1 [=====] - 0s 0s/step - loss: 0.1557 - accuracy:
1.0000

Epoch 1186/5000
1/1 [=====] - 0s 997us/step - loss: 0.1555 - accuracy:
1.0000

Epoch 1187/5000
1/1 [=====] - 0s 998us/step - loss: 0.1552 - accuracy:
1.0000

Epoch 1188/5000
1/1 [=====] - 0s 997us/step - loss: 0.1550 - accuracy:
1.0000

Epoch 1189/5000
1/1 [=====] - 0s 998us/step - loss: 0.1547 - accuracy: 1.0000

Epoch 1190/5000
1/1 [=====] - 0s 0s/step - loss: 0.1545 - accuracy: 1.0000

Epoch 1191/5000
1/1 [=====] - 0s 0s/step - loss: 0.1542 - accuracy: 1.0000

Epoch 1192/5000
1/1 [=====] - 0s 0s/step - loss: 0.1540 - accuracy: 1.0000

Epoch 1193/5000
1/1 [=====] - 0s 998us/step - loss: 0.1537 - accuracy: 1.0000

Epoch 1194/5000
1/1 [=====] - 0s 0s/step - loss: 0.1535 - accuracy: 1.0000

Epoch 1195/5000
1/1 [=====] - 0s 997us/step - loss: 0.1532 - accuracy: 1.0000

Epoch 1196/5000
1/1 [=====] - 0s 0s/step - loss: 0.1530 - accuracy: 1.0000

Epoch 1197/5000
1/1 [=====] - 0s 997us/step - loss: 0.1527 - accuracy: 1.0000

Epoch 1198/5000
1/1 [=====] - 0s 0s/step - loss: 0.1525 - accuracy: 1.0000

Epoch 1199/5000
1/1 [=====] - 0s 998us/step - loss: 0.1523 - accuracy: 1.0000

Epoch 1200/5000
1/1 [=====] - 0s 998us/step - loss: 0.1520 - accuracy: 1.0000

Epoch 1201/5000
1/1 [=====] - 0s 998us/step - loss: 0.1518 - accuracy: 1.0000

Epoch 1202/5000
1/1 [=====] - 0s 0s/step - loss: 0.1515 - accuracy: 1.0000

Epoch 1203/5000
1/1 [=====] - 0s 0s/step - loss: 0.1513 - accuracy: 1.0000

Epoch 1204/5000
1/1 [=====] - 0s 0s/step - loss: 0.1510 - accuracy: 1.0000

Epoch 1205/5000
1/1 [=====] - 0s 0s/step - loss: 0.1508 - accuracy:
1.0000

Epoch 1206/5000
1/1 [=====] - 0s 998us/step - loss: 0.1506 - accuracy:
1.0000

Epoch 1207/5000
1/1 [=====] - 0s 0s/step - loss: 0.1503 - accuracy:
1.0000

Epoch 1208/5000
1/1 [=====] - 0s 0s/step - loss: 0.1501 - accuracy:
1.0000

Epoch 1209/5000
1/1 [=====] - 0s 0s/step - loss: 0.1498 - accuracy:
1.0000

Epoch 1210/5000
1/1 [=====] - 0s 0s/step - loss: 0.1496 - accuracy:
1.0000

Epoch 1211/5000
1/1 [=====] - 0s 0s/step - loss: 0.1494 - accuracy:
1.0000

Epoch 1212/5000
1/1 [=====] - 0s 996us/step - loss: 0.1491 - accuracy:
1.0000

Epoch 1213/5000
1/1 [=====] - 0s 997us/step - loss: 0.1489 - accuracy:
1.0000

Epoch 1214/5000
1/1 [=====] - 0s 998us/step - loss: 0.1486 - accuracy:
1.0000

Epoch 1215/5000
1/1 [=====] - 0s 999us/step - loss: 0.1484 - accuracy:
1.0000

Epoch 1216/5000
1/1 [=====] - 0s 0s/step - loss: 0.1482 - accuracy:
1.0000

Epoch 1217/5000
1/1 [=====] - 0s 990us/step - loss: 0.1479 - accuracy:
1.0000

Epoch 1218/5000
1/1 [=====] - 0s 0s/step - loss: 0.1477 - accuracy:
1.0000

Epoch 1219/5000
1/1 [=====] - 0s 0s/step - loss: 0.1475 - accuracy:
1.0000

Epoch 1220/5000
1/1 [=====] - 0s 0s/step - loss: 0.1472 - accuracy:
1.0000

Epoch 1221/5000
1/1 [=====] - 0s 0s/step - loss: 0.1470 - accuracy:
1.0000

Epoch 1222/5000
1/1 [=====] - 0s 0s/step - loss: 0.1468 - accuracy:
1.0000

Epoch 1223/5000
1/1 [=====] - 0s 998us/step - loss: 0.1465 - accuracy:
1.0000

Epoch 1224/5000
1/1 [=====] - 0s 998us/step - loss: 0.1463 - accuracy:
1.0000

Epoch 1225/5000
1/1 [=====] - 0s 0s/step - loss: 0.1461 - accuracy:
1.0000

Epoch 1226/5000
1/1 [=====] - 0s 0s/step - loss: 0.1458 - accuracy:
1.0000

Epoch 1227/5000
1/1 [=====] - 0s 0s/step - loss: 0.1456 - accuracy:
1.0000

Epoch 1228/5000
1/1 [=====] - 0s 997us/step - loss: 0.1454 - accuracy:
1.0000

Epoch 1229/5000
1/1 [=====] - 0s 998us/step - loss: 0.1451 - accuracy:
1.0000

Epoch 1230/5000
1/1 [=====] - 0s 0s/step - loss: 0.1449 - accuracy:
1.0000

Epoch 1231/5000
1/1 [=====] - 0s 0s/step - loss: 0.1447 - accuracy:
1.0000

Epoch 1232/5000
1/1 [=====] - 0s 0s/step - loss: 0.1444 - accuracy:
1.0000

Epoch 1233/5000
1/1 [=====] - 0s 997us/step - loss: 0.1442 - accuracy:
1.0000

Epoch 1234/5000
1/1 [=====] - 0s 0s/step - loss: 0.1440 - accuracy:
1.0000

Epoch 1235/5000
1/1 [=====] - 0s 0s/step - loss: 0.1438 - accuracy:
1.0000

Epoch 1236/5000
1/1 [=====] - 0s 997us/step - loss: 0.1435 - accuracy:
1.0000

Epoch 1237/5000
1/1 [=====] - 0s 0s/step - loss: 0.1433 - accuracy:
1.0000

Epoch 1238/5000
1/1 [=====] - 0s 0s/step - loss: 0.1431 - accuracy:
1.0000

Epoch 1239/5000
1/1 [=====] - 0s 5ms/step - loss: 0.1428 - accuracy:
1.0000

Epoch 1240/5000
1/1 [=====] - 0s 0s/step - loss: 0.1426 - accuracy:
1.0000

Epoch 1241/5000
1/1 [=====] - 0s 997us/step - loss: 0.1424 - accuracy:
1.0000

Epoch 1242/5000
1/1 [=====] - 0s 996us/step - loss: 0.1422 - accuracy:
1.0000

Epoch 1243/5000
1/1 [=====] - 0s 997us/step - loss: 0.1419 - accuracy:
1.0000

Epoch 1244/5000
1/1 [=====] - 0s 0s/step - loss: 0.1417 - accuracy:
1.0000

Epoch 1245/5000
1/1 [=====] - 0s 0s/step - loss: 0.1415 - accuracy:
1.0000

Epoch 1246/5000
1/1 [=====] - 0s 0s/step - loss: 0.1413 - accuracy:
1.0000

Epoch 1247/5000
1/1 [=====] - 0s 996us/step - loss: 0.1410 - accuracy:
1.0000

Epoch 1248/5000
1/1 [=====] - 0s 998us/step - loss: 0.1408 - accuracy:
1.0000

Epoch 1249/5000
1/1 [=====] - 0s 997us/step - loss: 0.1406 - accuracy:
1.0000

Epoch 1250/5000
1/1 [=====] - 0s 998us/step - loss: 0.1404 - accuracy:
1.0000

Epoch 1251/5000
1/1 [=====] - 0s 997us/step - loss: 0.1401 - accuracy:
1.0000

Epoch 1252/5000
1/1 [=====] - 0s 998us/step - loss: 0.1399 - accuracy:
1.0000

Epoch 1253/5000
1/1 [=====] - 0s 0s/step - loss: 0.1397 - accuracy:
1.0000

Epoch 1254/5000
1/1 [=====] - 0s 998us/step - loss: 0.1395 - accuracy:
1.0000

Epoch 1255/5000
1/1 [=====] - 0s 997us/step - loss: 0.1393 - accuracy:
1.0000

Epoch 1256/5000
1/1 [=====] - 0s 997us/step - loss: 0.1390 - accuracy:
1.0000

Epoch 1257/5000
1/1 [=====] - 0s 0s/step - loss: 0.1388 - accuracy:
1.0000

Epoch 1258/5000
1/1 [=====] - 0s 0s/step - loss: 0.1386 - accuracy:
1.0000

Epoch 1259/5000
1/1 [=====] - 0s 0s/step - loss: 0.1384 - accuracy:
1.0000

Epoch 1260/5000
1/1 [=====] - 0s 996us/step - loss: 0.1382 - accuracy:
1.0000

Epoch 1261/5000
1/1 [=====] - 0s 0s/step - loss: 0.1379 - accuracy:
1.0000

Epoch 1262/5000
1/1 [=====] - 0s 0s/step - loss: 0.1377 - accuracy:
1.0000

Epoch 1263/5000
1/1 [=====] - 0s 0s/step - loss: 0.1375 - accuracy:
1.0000

Epoch 1264/5000
1/1 [=====] - 0s 0s/step - loss: 0.1373 - accuracy:
1.0000

Epoch 1265/5000
1/1 [=====] - 0s 0s/step - loss: 0.1371 - accuracy:
1.0000

Epoch 1266/5000
1/1 [=====] - 0s 0s/step - loss: 0.1369 - accuracy:
1.0000

Epoch 1267/5000
1/1 [=====] - 0s 0s/step - loss: 0.1366 - accuracy:
1.0000

Epoch 1268/5000
1/1 [=====] - 0s 0s/step - loss: 0.1364 - accuracy:
1.0000

Epoch 1269/5000
1/1 [=====] - 0s 998us/step - loss: 0.1362 - accuracy: 1.0000

Epoch 1270/5000
1/1 [=====] - 0s 996us/step - loss: 0.1360 - accuracy: 1.0000

Epoch 1271/5000
1/1 [=====] - 0s 997us/step - loss: 0.1358 - accuracy: 1.0000

Epoch 1272/5000
1/1 [=====] - 0s 0s/step - loss: 0.1356 - accuracy: 1.0000

Epoch 1273/5000
1/1 [=====] - 0s 998us/step - loss: 0.1354 - accuracy: 1.0000

Epoch 1274/5000
1/1 [=====] - 0s 998us/step - loss: 0.1351 - accuracy: 1.0000

Epoch 1275/5000
1/1 [=====] - 0s 0s/step - loss: 0.1349 - accuracy: 1.0000

Epoch 1276/5000
1/1 [=====] - 0s 0s/step - loss: 0.1347 - accuracy: 1.0000

Epoch 1277/5000
1/1 [=====] - 0s 0s/step - loss: 0.1345 - accuracy: 1.0000

Epoch 1278/5000
1/1 [=====] - 0s 0s/step - loss: 0.1343 - accuracy: 1.0000

Epoch 1279/5000
1/1 [=====] - 0s 0s/step - loss: 0.1341 - accuracy: 1.0000

Epoch 1280/5000
1/1 [=====] - 0s 0s/step - loss: 0.1339 - accuracy: 1.0000

Epoch 1281/5000
1/1 [=====] - 0s 997us/step - loss: 0.1337 - accuracy: 1.0000

Epoch 1282/5000
1/1 [=====] - 0s 0s/step - loss: 0.1335 - accuracy: 1.0000

Epoch 1283/5000
1/1 [=====] - 0s 0s/step - loss: 0.1333 - accuracy: 1.0000

Epoch 1284/5000
1/1 [=====] - 0s 0s/step - loss: 0.1330 - accuracy: 1.0000

Epoch 1285/5000
1/1 [=====] - 0s 0s/step - loss: 0.1328 - accuracy:
1.0000

Epoch 1286/5000
1/1 [=====] - 0s 0s/step - loss: 0.1326 - accuracy:
1.0000

Epoch 1287/5000
1/1 [=====] - 0s 0s/step - loss: 0.1324 - accuracy:
1.0000

Epoch 1288/5000
1/1 [=====] - 0s 0s/step - loss: 0.1322 - accuracy:
1.0000

Epoch 1289/5000
1/1 [=====] - 0s 998us/step - loss: 0.1320 - accuracy:
1.0000

Epoch 1290/5000
1/1 [=====] - 0s 998us/step - loss: 0.1318 - accuracy:
1.0000

Epoch 1291/5000
1/1 [=====] - 0s 998us/step - loss: 0.1316 - accuracy:
1.0000

Epoch 1292/5000
1/1 [=====] - 0s 0s/step - loss: 0.1314 - accuracy:
1.0000

Epoch 1293/5000
1/1 [=====] - 0s 1ms/step - loss: 0.1312 - accuracy:
1.0000

Epoch 1294/5000
1/1 [=====] - 0s 0s/step - loss: 0.1310 - accuracy:
1.0000

Epoch 1295/5000
1/1 [=====] - 0s 997us/step - loss: 0.1308 - accuracy:
1.0000

Epoch 1296/5000
1/1 [=====] - 0s 998us/step - loss: 0.1306 - accuracy:
1.0000

Epoch 1297/5000
1/1 [=====] - 0s 0s/step - loss: 0.1303 - accuracy:
1.0000

Epoch 1298/5000
1/1 [=====] - 0s 0s/step - loss: 0.1301 - accuracy:
1.0000

Epoch 1299/5000
1/1 [=====] - 0s 0s/step - loss: 0.1299 - accuracy:
1.0000

Epoch 1300/5000
1/1 [=====] - 0s 0s/step - loss: 0.1297 - accuracy:
1.0000

Epoch 1301/5000
1/1 [=====] - 0s 0s/step - loss: 0.1295 - accuracy:
1.0000

Epoch 1302/5000
1/1 [=====] - 0s 998us/step - loss: 0.1293 - accuracy:
1.0000

Epoch 1303/5000
1/1 [=====] - 0s 0s/step - loss: 0.1291 - accuracy:
1.0000

Epoch 1304/5000
1/1 [=====] - 0s 997us/step - loss: 0.1289 - accuracy:
1.0000

Epoch 1305/5000
1/1 [=====] - 0s 998us/step - loss: 0.1287 - accuracy:
1.0000

Epoch 1306/5000
1/1 [=====] - 0s 0s/step - loss: 0.1285 - accuracy:
1.0000

Epoch 1307/5000
1/1 [=====] - 0s 0s/step - loss: 0.1283 - accuracy:
1.0000

Epoch 1308/5000
1/1 [=====] - 0s 0s/step - loss: 0.1281 - accuracy:
1.0000

Epoch 1309/5000
1/1 [=====] - 0s 997us/step - loss: 0.1279 - accuracy:
1.0000

Epoch 1310/5000
1/1 [=====] - 0s 998us/step - loss: 0.1277 - accuracy:
1.0000

Epoch 1311/5000
1/1 [=====] - 0s 997us/step - loss: 0.1275 - accuracy:
1.0000

Epoch 1312/5000
1/1 [=====] - 0s 998us/step - loss: 0.1273 - accuracy:
1.0000

Epoch 1313/5000
1/1 [=====] - 0s 0s/step - loss: 0.1271 - accuracy:
1.0000

Epoch 1314/5000
1/1 [=====] - 0s 0s/step - loss: 0.1269 - accuracy:
1.0000

Epoch 1315/5000
1/1 [=====] - 0s 0s/step - loss: 0.1267 - accuracy:
1.0000

Epoch 1316/5000
1/1 [=====] - 0s 996us/step - loss: 0.1265 - accuracy:
1.0000

Epoch 1317/5000
1/1 [=====] - 0s 0s/step - loss: 0.1263 - accuracy:
1.0000
Epoch 1318/5000
1/1 [=====] - 0s 0s/step - loss: 0.1261 - accuracy:
1.0000
Epoch 1319/5000
1/1 [=====] - 0s 998us/step - loss: 0.1259 - accuracy:
1.0000
Epoch 1320/5000
1/1 [=====] - 0s 0s/step - loss: 0.1257 - accuracy:
1.0000
Epoch 1321/5000
1/1 [=====] - 0s 0s/step - loss: 0.1256 - accuracy:
1.0000
Epoch 1322/5000
1/1 [=====] - 0s 998us/step - loss: 0.1254 - accuracy:
1.0000
Epoch 1323/5000
1/1 [=====] - 0s 0s/step - loss: 0.1252 - accuracy:
1.0000
Epoch 1324/5000
1/1 [=====] - 0s 998us/step - loss: 0.1250 - accuracy:
1.0000
Epoch 1325/5000
1/1 [=====] - 0s 0s/step - loss: 0.1248 - accuracy:
1.0000
Epoch 1326/5000
1/1 [=====] - 0s 997us/step - loss: 0.1246 - accuracy:
1.0000
Epoch 1327/5000
1/1 [=====] - 0s 0s/step - loss: 0.1244 - accuracy:
1.0000
Epoch 1328/5000
1/1 [=====] - 0s 0s/step - loss: 0.1242 - accuracy:
1.0000
Epoch 1329/5000
1/1 [=====] - 0s 998us/step - loss: 0.1240 - accuracy:
1.0000
Epoch 1330/5000
1/1 [=====] - 0s 997us/step - loss: 0.1238 - accuracy:
1.0000
Epoch 1331/5000
1/1 [=====] - 0s 998us/step - loss: 0.1236 - accuracy:
1.0000
Epoch 1332/5000
1/1 [=====] - 0s 998us/step - loss: 0.1234 - accuracy:
1.0000

Epoch 1333/5000
1/1 [=====] - 0s 997us/step - loss: 0.1232 - accuracy: 1.0000

Epoch 1334/5000
1/1 [=====] - 0s 997us/step - loss: 0.1230 - accuracy: 1.0000

Epoch 1335/5000
1/1 [=====] - 0s 0s/step - loss: 0.1229 - accuracy: 1.0000

Epoch 1336/5000
1/1 [=====] - 0s 0s/step - loss: 0.1227 - accuracy: 1.0000

Epoch 1337/5000
1/1 [=====] - 0s 0s/step - loss: 0.1225 - accuracy: 1.0000

Epoch 1338/5000
1/1 [=====] - 0s 998us/step - loss: 0.1223 - accuracy: 1.0000

Epoch 1339/5000
1/1 [=====] - 0s 0s/step - loss: 0.1221 - accuracy: 1.0000

Epoch 1340/5000
1/1 [=====] - 0s 0s/step - loss: 0.1219 - accuracy: 1.0000

Epoch 1341/5000
1/1 [=====] - 0s 0s/step - loss: 0.1217 - accuracy: 1.0000

Epoch 1342/5000
1/1 [=====] - 0s 0s/step - loss: 0.1215 - accuracy: 1.0000

Epoch 1343/5000
1/1 [=====] - 0s 0s/step - loss: 0.1213 - accuracy: 1.0000

Epoch 1344/5000
1/1 [=====] - 0s 997us/step - loss: 0.1212 - accuracy: 1.0000

Epoch 1345/5000
1/1 [=====] - 0s 998us/step - loss: 0.1210 - accuracy: 1.0000

Epoch 1346/5000
1/1 [=====] - 0s 997us/step - loss: 0.1208 - accuracy: 1.0000

Epoch 1347/5000
1/1 [=====] - 0s 0s/step - loss: 0.1206 - accuracy: 1.0000

Epoch 1348/5000
1/1 [=====] - 0s 0s/step - loss: 0.1204 - accuracy: 1.0000

Epoch 1349/5000
1/1 [=====] - 0s 0s/step - loss: 0.1202 - accuracy:
1.0000

Epoch 1350/5000
1/1 [=====] - 0s 998us/step - loss: 0.1200 - accuracy:
1.0000

Epoch 1351/5000
1/1 [=====] - 0s 0s/step - loss: 0.1199 - accuracy:
1.0000

Epoch 1352/5000
1/1 [=====] - 0s 0s/step - loss: 0.1197 - accuracy:
1.0000

Epoch 1353/5000
1/1 [=====] - 0s 0s/step - loss: 0.1195 - accuracy:
1.0000

Epoch 1354/5000
1/1 [=====] - 0s 997us/step - loss: 0.1193 - accuracy:
1.0000

Epoch 1355/5000
1/1 [=====] - 0s 0s/step - loss: 0.1191 - accuracy:
1.0000

Epoch 1356/5000
1/1 [=====] - 0s 0s/step - loss: 0.1189 - accuracy:
1.0000

Epoch 1357/5000
1/1 [=====] - 0s 998us/step - loss: 0.1187 - accuracy:
1.0000

Epoch 1358/5000
1/1 [=====] - 0s 997us/step - loss: 0.1186 - accuracy:
1.0000

Epoch 1359/5000
1/1 [=====] - 0s 0s/step - loss: 0.1184 - accuracy:
1.0000

Epoch 1360/5000
1/1 [=====] - 0s 0s/step - loss: 0.1182 - accuracy:
1.0000

Epoch 1361/5000
1/1 [=====] - 0s 998us/step - loss: 0.1180 - accuracy:
1.0000

Epoch 1362/5000
1/1 [=====] - 0s 0s/step - loss: 0.1178 - accuracy:
1.0000

Epoch 1363/5000
1/1 [=====] - 0s 998us/step - loss: 0.1176 - accuracy:
1.0000

Epoch 1364/5000
1/1 [=====] - 0s 997us/step - loss: 0.1175 - accuracy:
1.0000

Epoch 1365/5000
1/1 [=====] - 0s 0s/step - loss: 0.1173 - accuracy:
1.0000

Epoch 1366/5000
1/1 [=====] - 0s 0s/step - loss: 0.1171 - accuracy:
1.0000

Epoch 1367/5000
1/1 [=====] - 0s 0s/step - loss: 0.1169 - accuracy:
1.0000

Epoch 1368/5000
1/1 [=====] - 0s 998us/step - loss: 0.1167 - accuracy:
1.0000

Epoch 1369/5000
1/1 [=====] - 0s 0s/step - loss: 0.1166 - accuracy:
1.0000

Epoch 1370/5000
1/1 [=====] - 0s 0s/step - loss: 0.1164 - accuracy:
1.0000

Epoch 1371/5000
1/1 [=====] - 0s 997us/step - loss: 0.1162 - accuracy:
1.0000

Epoch 1372/5000
1/1 [=====] - 0s 0s/step - loss: 0.1160 - accuracy:
1.0000

Epoch 1373/5000
1/1 [=====] - 0s 0s/step - loss: 0.1159 - accuracy:
1.0000

Epoch 1374/5000
1/1 [=====] - 0s 0s/step - loss: 0.1157 - accuracy:
1.0000

Epoch 1375/5000
1/1 [=====] - 0s 0s/step - loss: 0.1155 - accuracy:
1.0000

Epoch 1376/5000
1/1 [=====] - 0s 997us/step - loss: 0.1153 - accuracy:
1.0000

Epoch 1377/5000
1/1 [=====] - 0s 998us/step - loss: 0.1151 - accuracy:
1.0000

Epoch 1378/5000
1/1 [=====] - 0s 998us/step - loss: 0.1150 - accuracy:
1.0000

Epoch 1379/5000
1/1 [=====] - 0s 0s/step - loss: 0.1148 - accuracy:
1.0000

Epoch 1380/5000
1/1 [=====] - 0s 997us/step - loss: 0.1146 - accuracy:
1.0000

Epoch 1381/5000
1/1 [=====] - 0s 997us/step - loss: 0.1144 - accuracy:
1.0000
Epoch 1382/5000
1/1 [=====] - 0s 0s/step - loss: 0.1143 - accuracy:
1.0000
Epoch 1383/5000
1/1 [=====] - 0s 998us/step - loss: 0.1141 - accuracy:
1.0000
Epoch 1384/5000
1/1 [=====] - 0s 0s/step - loss: 0.1139 - accuracy:
1.0000
Epoch 1385/5000
1/1 [=====] - 0s 997us/step - loss: 0.1137 - accuracy:
1.0000
Epoch 1386/5000
1/1 [=====] - 0s 0s/step - loss: 0.1136 - accuracy:
1.0000
Epoch 1387/5000
1/1 [=====] - 0s 0s/step - loss: 0.1134 - accuracy:
1.0000
Epoch 1388/5000
1/1 [=====] - 0s 0s/step - loss: 0.1132 - accuracy:
1.0000
Epoch 1389/5000
1/1 [=====] - 0s 997us/step - loss: 0.1130 - accuracy:
1.0000
Epoch 1390/5000
1/1 [=====] - 0s 0s/step - loss: 0.1129 - accuracy:
1.0000
Epoch 1391/5000
1/1 [=====] - 0s 998us/step - loss: 0.1127 - accuracy:
1.0000
Epoch 1392/5000
1/1 [=====] - 0s 997us/step - loss: 0.1125 - accuracy:
1.0000
Epoch 1393/5000
1/1 [=====] - 0s 997us/step - loss: 0.1124 - accuracy:
1.0000
Epoch 1394/5000
1/1 [=====] - 0s 997us/step - loss: 0.1122 - accuracy:
1.0000
Epoch 1395/5000
1/1 [=====] - 0s 0s/step - loss: 0.1120 - accuracy:
1.0000
Epoch 1396/5000
1/1 [=====] - 0s 997us/step - loss: 0.1119 - accuracy:
1.0000

Epoch 1397/5000
1/1 [=====] - 0s 0s/step - loss: 0.1117 - accuracy:
1.0000

Epoch 1398/5000
1/1 [=====] - 0s 0s/step - loss: 0.1115 - accuracy:
1.0000

Epoch 1399/5000
1/1 [=====] - 0s 998us/step - loss: 0.1113 - accuracy:
1.0000

Epoch 1400/5000
1/1 [=====] - 0s 997us/step - loss: 0.1112 - accuracy:
1.0000

Epoch 1401/5000
1/1 [=====] - 0s 0s/step - loss: 0.1110 - accuracy:
1.0000

Epoch 1402/5000
1/1 [=====] - 0s 0s/step - loss: 0.1108 - accuracy:
1.0000

Epoch 1403/5000
1/1 [=====] - 0s 997us/step - loss: 0.1107 - accuracy:
1.0000

Epoch 1404/5000
1/1 [=====] - 0s 998us/step - loss: 0.1105 - accuracy:
1.0000

Epoch 1405/5000
1/1 [=====] - 0s 0s/step - loss: 0.1103 - accuracy:
1.0000

Epoch 1406/5000
1/1 [=====] - 0s 0s/step - loss: 0.1102 - accuracy:
1.0000

Epoch 1407/5000
1/1 [=====] - 0s 0s/step - loss: 0.1100 - accuracy:
1.0000

Epoch 1408/5000
1/1 [=====] - 0s 0s/step - loss: 0.1098 - accuracy:
1.0000

Epoch 1409/5000
1/1 [=====] - 0s 997us/step - loss: 0.1097 - accuracy:
1.0000

Epoch 1410/5000
1/1 [=====] - 0s 997us/step - loss: 0.1095 - accuracy:
1.0000

Epoch 1411/5000
1/1 [=====] - 0s 998us/step - loss: 0.1093 - accuracy:
1.0000

Epoch 1412/5000
1/1 [=====] - 0s 997us/step - loss: 0.1092 - accuracy:
1.0000

Epoch 1413/5000
1/1 [=====] - 0s 0s/step - loss: 0.1090 - accuracy:
1.0000

Epoch 1414/5000
1/1 [=====] - 0s 0s/step - loss: 0.1088 - accuracy:
1.0000

Epoch 1415/5000
1/1 [=====] - 0s 998us/step - loss: 0.1087 - accuracy:
1.0000

Epoch 1416/5000
1/1 [=====] - 0s 997us/step - loss: 0.1085 - accuracy:
1.0000

Epoch 1417/5000
1/1 [=====] - 0s 0s/step - loss: 0.1083 - accuracy:
1.0000

Epoch 1418/5000
1/1 [=====] - 0s 0s/step - loss: 0.1082 - accuracy:
1.0000

Epoch 1419/5000
1/1 [=====] - 0s 0s/step - loss: 0.1080 - accuracy:
1.0000

Epoch 1420/5000
1/1 [=====] - 0s 0s/step - loss: 0.1078 - accuracy:
1.0000

Epoch 1421/5000
1/1 [=====] - 0s 997us/step - loss: 0.1077 - accuracy:
1.0000

Epoch 1422/5000
1/1 [=====] - 0s 997us/step - loss: 0.1075 - accuracy:
1.0000

Epoch 1423/5000
1/1 [=====] - 0s 0s/step - loss: 0.1074 - accuracy:
1.0000

Epoch 1424/5000
1/1 [=====] - 0s 0s/step - loss: 0.1072 - accuracy:
1.0000

Epoch 1425/5000
1/1 [=====] - 0s 0s/step - loss: 0.1070 - accuracy:
1.0000

Epoch 1426/5000
1/1 [=====] - 0s 0s/step - loss: 0.1069 - accuracy:
1.0000

Epoch 1427/5000
1/1 [=====] - 0s 997us/step - loss: 0.1067 - accuracy:
1.0000

Epoch 1428/5000
1/1 [=====] - 0s 996us/step - loss: 0.1065 - accuracy:
1.0000

Epoch 1429/5000
1/1 [=====] - 0s 998us/step - loss: 0.1064 - accuracy:
1.0000

Epoch 1430/5000
1/1 [=====] - 0s 0s/step - loss: 0.1062 - accuracy:
1.0000

Epoch 1431/5000
1/1 [=====] - 0s 997us/step - loss: 0.1061 - accuracy:
1.0000

Epoch 1432/5000
1/1 [=====] - 0s 0s/step - loss: 0.1059 - accuracy:
1.0000

Epoch 1433/5000
1/1 [=====] - 0s 0s/step - loss: 0.1057 - accuracy:
1.0000

Epoch 1434/5000
1/1 [=====] - 0s 998us/step - loss: 0.1056 - accuracy:
1.0000

Epoch 1435/5000
1/1 [=====] - 0s 0s/step - loss: 0.1054 - accuracy:
1.0000

Epoch 1436/5000
1/1 [=====] - 0s 997us/step - loss: 0.1053 - accuracy:
1.0000

Epoch 1437/5000
1/1 [=====] - 0s 0s/step - loss: 0.1051 - accuracy:
1.0000

Epoch 1438/5000
1/1 [=====] - 0s 0s/step - loss: 0.1050 - accuracy:
1.0000

Epoch 1439/5000
1/1 [=====] - 0s 0s/step - loss: 0.1048 - accuracy:
1.0000

Epoch 1440/5000
1/1 [=====] - 0s 0s/step - loss: 0.1046 - accuracy:
1.0000

Epoch 1441/5000
1/1 [=====] - 0s 0s/step - loss: 0.1045 - accuracy:
1.0000

Epoch 1442/5000
1/1 [=====] - 0s 0s/step - loss: 0.1043 - accuracy:
1.0000

Epoch 1443/5000
1/1 [=====] - 0s 0s/step - loss: 0.1042 - accuracy:
1.0000

Epoch 1444/5000
1/1 [=====] - 0s 998us/step - loss: 0.1040 - accuracy:
1.0000

Epoch 1445/5000
1/1 [=====] - 0s 0s/step - loss: 0.1038 - accuracy:
1.0000

Epoch 1446/5000
1/1 [=====] - 0s 0s/step - loss: 0.1037 - accuracy:
1.0000

Epoch 1447/5000
1/1 [=====] - 0s 0s/step - loss: 0.1035 - accuracy:
1.0000

Epoch 1448/5000
1/1 [=====] - 0s 0s/step - loss: 0.1034 - accuracy:
1.0000

Epoch 1449/5000
1/1 [=====] - 0s 0s/step - loss: 0.1032 - accuracy:
1.0000

Epoch 1450/5000
1/1 [=====] - 0s 0s/step - loss: 0.1031 - accuracy:
1.0000

Epoch 1451/5000
1/1 [=====] - 0s 0s/step - loss: 0.1029 - accuracy:
1.0000

Epoch 1452/5000
1/1 [=====] - 0s 0s/step - loss: 0.1028 - accuracy:
1.0000

Epoch 1453/5000
1/1 [=====] - 0s 0s/step - loss: 0.1026 - accuracy:
1.0000

Epoch 1454/5000
1/1 [=====] - 0s 997us/step - loss: 0.1025 - accuracy:
1.0000

Epoch 1455/5000
1/1 [=====] - 0s 997us/step - loss: 0.1023 - accuracy:
1.0000

Epoch 1456/5000
1/1 [=====] - 0s 997us/step - loss: 0.1022 - accuracy:
1.0000

Epoch 1457/5000
1/1 [=====] - 0s 997us/step - loss: 0.1020 - accuracy:
1.0000

Epoch 1458/5000
1/1 [=====] - 0s 997us/step - loss: 0.1018 - accuracy:
1.0000

Epoch 1459/5000
1/1 [=====] - 0s 998us/step - loss: 0.1017 - accuracy:
1.0000

Epoch 1460/5000
1/1 [=====] - 0s 0s/step - loss: 0.1015 - accuracy:
1.0000

Epoch 1461/5000
1/1 [=====] - 0s 0s/step - loss: 0.1014 - accuracy:
1.0000

Epoch 1462/5000
1/1 [=====] - 0s 0s/step - loss: 0.1012 - accuracy:
1.0000

Epoch 1463/5000
1/1 [=====] - 0s 1000us/step - loss: 0.1011 - accuracy:
1.0000

Epoch 1464/5000
1/1 [=====] - 0s 0s/step - loss: 0.1009 - accuracy:
1.0000

Epoch 1465/5000
1/1 [=====] - 0s 997us/step - loss: 0.1008 - accuracy:
1.0000

Epoch 1466/5000
1/1 [=====] - 0s 998us/step - loss: 0.1006 - accuracy:
1.0000

Epoch 1467/5000
1/1 [=====] - 0s 997us/step - loss: 0.1005 - accuracy:
1.0000

Epoch 1468/5000
1/1 [=====] - 0s 997us/step - loss: 0.1003 - accuracy:
1.0000

Epoch 1469/5000
1/1 [=====] - 0s 0s/step - loss: 0.1002 - accuracy:
1.0000

Epoch 1470/5000
1/1 [=====] - 0s 998us/step - loss: 0.1000 - accuracy:
1.0000

Epoch 1471/5000
1/1 [=====] - 0s 998us/step - loss: 0.0999 - accuracy:
1.0000

Epoch 1472/5000
1/1 [=====] - 0s 997us/step - loss: 0.0997 - accuracy:
1.0000

Epoch 1473/5000
1/1 [=====] - 0s 0s/step - loss: 0.0996 - accuracy:
1.0000

Epoch 1474/5000
1/1 [=====] - 0s 0s/step - loss: 0.0994 - accuracy:
1.0000

Epoch 1475/5000
1/1 [=====] - 0s 997us/step - loss: 0.0993 - accuracy:
1.0000

Epoch 1476/5000
1/1 [=====] - 0s 998us/step - loss: 0.0991 - accuracy:
1.0000

Epoch 1477/5000
1/1 [=====] - 0s 0s/step - loss: 0.0990 - accuracy:
1.0000

Epoch 1478/5000
1/1 [=====] - 0s 998us/step - loss: 0.0988 - accuracy:
1.0000

Epoch 1479/5000
1/1 [=====] - 0s 0s/step - loss: 0.0987 - accuracy:
1.0000

Epoch 1480/5000
1/1 [=====] - 0s 0s/step - loss: 0.0985 - accuracy:
1.0000

Epoch 1481/5000
1/1 [=====] - 0s 998us/step - loss: 0.0984 - accuracy:
1.0000

Epoch 1482/5000
1/1 [=====] - 0s 0s/step - loss: 0.0983 - accuracy:
1.0000

Epoch 1483/5000
1/1 [=====] - 0s 0s/step - loss: 0.0981 - accuracy:
1.0000

Epoch 1484/5000
1/1 [=====] - 0s 997us/step - loss: 0.0980 - accuracy:
1.0000

Epoch 1485/5000
1/1 [=====] - 0s 0s/step - loss: 0.0978 - accuracy:
1.0000

Epoch 1486/5000
1/1 [=====] - 0s 997us/step - loss: 0.0977 - accuracy:
1.0000

Epoch 1487/5000
1/1 [=====] - 0s 0s/step - loss: 0.0975 - accuracy:
1.0000

Epoch 1488/5000
1/1 [=====] - 0s 0s/step - loss: 0.0974 - accuracy:
1.0000

Epoch 1489/5000
1/1 [=====] - 0s 0s/step - loss: 0.0972 - accuracy:
1.0000

Epoch 1490/5000
1/1 [=====] - 0s 0s/step - loss: 0.0971 - accuracy:
1.0000

Epoch 1491/5000
1/1 [=====] - 0s 0s/step - loss: 0.0970 - accuracy:
1.0000

Epoch 1492/5000
1/1 [=====] - 0s 997us/step - loss: 0.0968 - accuracy:
1.0000

Epoch 1493/5000
1/1 [=====] - 0s 0s/step - loss: 0.0967 - accuracy:
1.0000

Epoch 1494/5000
1/1 [=====] - 0s 0s/step - loss: 0.0965 - accuracy:
1.0000

Epoch 1495/5000
1/1 [=====] - 0s 0s/step - loss: 0.0964 - accuracy:
1.0000

Epoch 1496/5000
1/1 [=====] - 0s 0s/step - loss: 0.0962 - accuracy:
1.0000

Epoch 1497/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0961 - accuracy:
1.0000

Epoch 1498/5000
1/1 [=====] - 0s 0s/step - loss: 0.0959 - accuracy:
1.0000

Epoch 1499/5000
1/1 [=====] - 0s 998us/step - loss: 0.0958 - accuracy:
1.0000

Epoch 1500/5000
1/1 [=====] - 0s 0s/step - loss: 0.0957 - accuracy:
1.0000

Epoch 1501/5000
1/1 [=====] - 0s 997us/step - loss: 0.0955 - accuracy:
1.0000

Epoch 1502/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0954 - accuracy:
1.0000

Epoch 1503/5000
1/1 [=====] - 0s 997us/step - loss: 0.0952 - accuracy:
1.0000

Epoch 1504/5000
1/1 [=====] - 0s 998us/step - loss: 0.0951 - accuracy:
1.0000

Epoch 1505/5000
1/1 [=====] - 0s 0s/step - loss: 0.0950 - accuracy:
1.0000

Epoch 1506/5000
1/1 [=====] - 0s 997us/step - loss: 0.0948 - accuracy:
1.0000

Epoch 1507/5000
1/1 [=====] - 0s 997us/step - loss: 0.0947 - accuracy:
1.0000

Epoch 1508/5000
1/1 [=====] - 0s 998us/step - loss: 0.0945 - accuracy:
1.0000

Epoch 1509/5000
1/1 [=====] - 0s 997us/step - loss: 0.0944 - accuracy:
1.0000

Epoch 1510/5000
1/1 [=====] - 0s 997us/step - loss: 0.0943 - accuracy:
1.0000

Epoch 1511/5000
1/1 [=====] - 0s 997us/step - loss: 0.0941 - accuracy:
1.0000

Epoch 1512/5000
1/1 [=====] - 0s 996us/step - loss: 0.0940 - accuracy:
1.0000

Epoch 1513/5000
1/1 [=====] - 0s 998us/step - loss: 0.0939 - accuracy:
1.0000

Epoch 1514/5000
1/1 [=====] - 0s 997us/step - loss: 0.0937 - accuracy:
1.0000

Epoch 1515/5000
1/1 [=====] - 0s 998us/step - loss: 0.0936 - accuracy:
1.0000

Epoch 1516/5000
1/1 [=====] - 0s 0s/step - loss: 0.0934 - accuracy:
1.0000

Epoch 1517/5000
1/1 [=====] - 0s 998us/step - loss: 0.0933 - accuracy:
1.0000

Epoch 1518/5000
1/1 [=====] - 0s 0s/step - loss: 0.0932 - accuracy:
1.0000

Epoch 1519/5000
1/1 [=====] - 0s 998us/step - loss: 0.0930 - accuracy:
1.0000

Epoch 1520/5000
1/1 [=====] - 0s 998us/step - loss: 0.0929 - accuracy:
1.0000

Epoch 1521/5000
1/1 [=====] - 0s 997us/step - loss: 0.0928 - accuracy:
1.0000

Epoch 1522/5000
1/1 [=====] - 0s 0s/step - loss: 0.0926 - accuracy:
1.0000

Epoch 1523/5000
1/1 [=====] - 0s 0s/step - loss: 0.0925 - accuracy:
1.0000

Epoch 1524/5000
1/1 [=====] - 0s 0s/step - loss: 0.0923 - accuracy:
1.0000

Epoch 1525/5000
1/1 [=====] - 0s 0s/step - loss: 0.0922 - accuracy:
1.0000

Epoch 1526/5000
1/1 [=====] - 0s 0s/step - loss: 0.0921 - accuracy:
1.0000

Epoch 1527/5000
1/1 [=====] - 0s 0s/step - loss: 0.0919 - accuracy:
1.0000

Epoch 1528/5000
1/1 [=====] - 0s 0s/step - loss: 0.0918 - accuracy:
1.0000

Epoch 1529/5000
1/1 [=====] - 0s 998us/step - loss: 0.0917 - accuracy:
1.0000

Epoch 1530/5000
1/1 [=====] - 0s 997us/step - loss: 0.0915 - accuracy:
1.0000

Epoch 1531/5000
1/1 [=====] - 0s 997us/step - loss: 0.0914 - accuracy:
1.0000

Epoch 1532/5000
1/1 [=====] - 0s 997us/step - loss: 0.0913 - accuracy:
1.0000

Epoch 1533/5000
1/1 [=====] - 0s 0s/step - loss: 0.0911 - accuracy:
1.0000

Epoch 1534/5000
1/1 [=====] - 0s 998us/step - loss: 0.0910 - accuracy:
1.0000

Epoch 1535/5000
1/1 [=====] - 0s 998us/step - loss: 0.0909 - accuracy:
1.0000

Epoch 1536/5000
1/1 [=====] - 0s 0s/step - loss: 0.0907 - accuracy:
1.0000

Epoch 1537/5000
1/1 [=====] - 0s 997us/step - loss: 0.0906 - accuracy:
1.0000

Epoch 1538/5000
1/1 [=====] - 0s 0s/step - loss: 0.0905 - accuracy:
1.0000

Epoch 1539/5000
1/1 [=====] - 0s 997us/step - loss: 0.0903 - accuracy:
1.0000

Epoch 1540/5000
1/1 [=====] - 0s 997us/step - loss: 0.0902 - accuracy:
1.0000

Epoch 1541/5000
1/1 [=====] - 0s 997us/step - loss: 0.0901 - accuracy:
1.0000

Epoch 1542/5000
1/1 [=====] - 0s 0s/step - loss: 0.0899 - accuracy:
1.0000

Epoch 1543/5000
1/1 [=====] - 0s 998us/step - loss: 0.0898 - accuracy:
1.0000

Epoch 1544/5000
1/1 [=====] - 0s 0s/step - loss: 0.0897 - accuracy:
1.0000

Epoch 1545/5000
1/1 [=====] - 0s 997us/step - loss: 0.0895 - accuracy:
1.0000

Epoch 1546/5000
1/1 [=====] - 0s 998us/step - loss: 0.0894 - accuracy:
1.0000

Epoch 1547/5000
1/1 [=====] - 0s 0s/step - loss: 0.0893 - accuracy:
1.0000

Epoch 1548/5000
1/1 [=====] - 0s 0s/step - loss: 0.0892 - accuracy:
1.0000

Epoch 1549/5000
1/1 [=====] - 0s 0s/step - loss: 0.0890 - accuracy:
1.0000

Epoch 1550/5000
1/1 [=====] - 0s 998us/step - loss: 0.0889 - accuracy:
1.0000

Epoch 1551/5000
1/1 [=====] - 0s 999us/step - loss: 0.0888 - accuracy:
1.0000

Epoch 1552/5000
1/1 [=====] - 0s 997us/step - loss: 0.0886 - accuracy:
1.0000

Epoch 1553/5000
1/1 [=====] - 0s 998us/step - loss: 0.0885 - accuracy:
1.0000

Epoch 1554/5000
1/1 [=====] - 0s 0s/step - loss: 0.0884 - accuracy:
1.0000

Epoch 1555/5000
1/1 [=====] - 0s 998us/step - loss: 0.0882 - accuracy:
1.0000

Epoch 1556/5000
1/1 [=====] - 0s 0s/step - loss: 0.0881 - accuracy:
1.0000

Epoch 1557/5000
1/1 [=====] - 0s 999us/step - loss: 0.0880 - accuracy:
1.0000
Epoch 1558/5000
1/1 [=====] - 0s 997us/step - loss: 0.0879 - accuracy:
1.0000
Epoch 1559/5000
1/1 [=====] - 0s 0s/step - loss: 0.0877 - accuracy:
1.0000
Epoch 1560/5000
1/1 [=====] - 0s 0s/step - loss: 0.0876 - accuracy:
1.0000
Epoch 1561/5000
1/1 [=====] - 0s 998us/step - loss: 0.0875 - accuracy:
1.0000
Epoch 1562/5000
1/1 [=====] - 0s 0s/step - loss: 0.0874 - accuracy:
1.0000
Epoch 1563/5000
1/1 [=====] - 0s 0s/step - loss: 0.0872 - accuracy:
1.0000
Epoch 1564/5000
1/1 [=====] - 0s 0s/step - loss: 0.0871 - accuracy:
1.0000
Epoch 1565/5000
1/1 [=====] - 0s 997us/step - loss: 0.0870 - accuracy:
1.0000
Epoch 1566/5000
1/1 [=====] - 0s 997us/step - loss: 0.0868 - accuracy:
1.0000
Epoch 1567/5000
1/1 [=====] - 0s 0s/step - loss: 0.0867 - accuracy:
1.0000
Epoch 1568/5000
1/1 [=====] - 0s 997us/step - loss: 0.0866 - accuracy:
1.0000
Epoch 1569/5000
1/1 [=====] - 0s 998us/step - loss: 0.0865 - accuracy:
1.0000
Epoch 1570/5000
1/1 [=====] - 0s 0s/step - loss: 0.0863 - accuracy:
1.0000
Epoch 1571/5000
1/1 [=====] - 0s 997us/step - loss: 0.0862 - accuracy:
1.0000
Epoch 1572/5000
1/1 [=====] - 0s 0s/step - loss: 0.0861 - accuracy:
1.0000

Epoch 1573/5000
1/1 [=====] - 0s 997us/step - loss: 0.0860 - accuracy:
1.0000

Epoch 1574/5000
1/1 [=====] - 0s 0s/step - loss: 0.0858 - accuracy:
1.0000

Epoch 1575/5000
1/1 [=====] - 0s 0s/step - loss: 0.0857 - accuracy:
1.0000

Epoch 1576/5000
1/1 [=====] - 0s 0s/step - loss: 0.0856 - accuracy:
1.0000

Epoch 1577/5000
1/1 [=====] - 0s 0s/step - loss: 0.0855 - accuracy:
1.0000

Epoch 1578/5000
1/1 [=====] - 0s 0s/step - loss: 0.0853 - accuracy:
1.0000

Epoch 1579/5000
1/1 [=====] - 0s 0s/step - loss: 0.0852 - accuracy:
1.0000

Epoch 1580/5000
1/1 [=====] - 0s 0s/step - loss: 0.0851 - accuracy:
1.0000

Epoch 1581/5000
1/1 [=====] - 0s 997us/step - loss: 0.0850 - accuracy:
1.0000

Epoch 1582/5000
1/1 [=====] - 0s 998us/step - loss: 0.0849 - accuracy:
1.0000

Epoch 1583/5000
1/1 [=====] - 0s 997us/step - loss: 0.0847 - accuracy:
1.0000

Epoch 1584/5000
1/1 [=====] - 0s 0s/step - loss: 0.0846 - accuracy:
1.0000

Epoch 1585/5000
1/1 [=====] - 0s 0s/step - loss: 0.0845 - accuracy:
1.0000

Epoch 1586/5000
1/1 [=====] - 0s 0s/step - loss: 0.0844 - accuracy:
1.0000

Epoch 1587/5000
1/1 [=====] - 0s 0s/step - loss: 0.0842 - accuracy:
1.0000

Epoch 1588/5000
1/1 [=====] - 0s 0s/step - loss: 0.0841 - accuracy:
1.0000

Epoch 1589/5000
1/1 [=====] - 0s 0s/step - loss: 0.0840 - accuracy:
1.0000

Epoch 1590/5000
1/1 [=====] - 0s 998us/step - loss: 0.0839 - accuracy:
1.0000

Epoch 1591/5000
1/1 [=====] - 0s 998us/step - loss: 0.0838 - accuracy:
1.0000

Epoch 1592/5000
1/1 [=====] - 0s 997us/step - loss: 0.0836 - accuracy:
1.0000

Epoch 1593/5000
1/1 [=====] - 0s 998us/step - loss: 0.0835 - accuracy:
1.0000

Epoch 1594/5000
1/1 [=====] - 0s 997us/step - loss: 0.0834 - accuracy:
1.0000

Epoch 1595/5000
1/1 [=====] - 0s 998us/step - loss: 0.0833 - accuracy:
1.0000

Epoch 1596/5000
1/1 [=====] - 0s 0s/step - loss: 0.0832 - accuracy:
1.0000

Epoch 1597/5000
1/1 [=====] - 0s 995us/step - loss: 0.0830 - accuracy:
1.0000

Epoch 1598/5000
1/1 [=====] - 0s 997us/step - loss: 0.0829 - accuracy:
1.0000

Epoch 1599/5000
1/1 [=====] - 0s 997us/step - loss: 0.0828 - accuracy:
1.0000

Epoch 1600/5000
1/1 [=====] - 0s 0s/step - loss: 0.0827 - accuracy:
1.0000

Epoch 1601/5000
1/1 [=====] - 0s 0s/step - loss: 0.0826 - accuracy:
1.0000

Epoch 1602/5000
1/1 [=====] - 0s 997us/step - loss: 0.0825 - accuracy:
1.0000

Epoch 1603/5000
1/1 [=====] - 0s 0s/step - loss: 0.0823 - accuracy:
1.0000

Epoch 1604/5000
1/1 [=====] - 0s 998us/step - loss: 0.0822 - accuracy:
1.0000

Epoch 1605/5000
1/1 [=====] - 0s 998us/step - loss: 0.0821 - accuracy:
1.0000

Epoch 1606/5000
1/1 [=====] - 0s 0s/step - loss: 0.0820 - accuracy:
1.0000

Epoch 1607/5000
1/1 [=====] - 0s 0s/step - loss: 0.0819 - accuracy:
1.0000

Epoch 1608/5000
1/1 [=====] - 0s 0s/step - loss: 0.0817 - accuracy:
1.0000

Epoch 1609/5000
1/1 [=====] - 0s 0s/step - loss: 0.0816 - accuracy:
1.0000

Epoch 1610/5000
1/1 [=====] - 0s 0s/step - loss: 0.0815 - accuracy:
1.0000

Epoch 1611/5000
1/1 [=====] - 0s 998us/step - loss: 0.0814 - accuracy:
1.0000

Epoch 1612/5000
1/1 [=====] - 0s 997us/step - loss: 0.0813 - accuracy:
1.0000

Epoch 1613/5000
1/1 [=====] - 0s 998us/step - loss: 0.0812 - accuracy:
1.0000

Epoch 1614/5000
1/1 [=====] - 0s 997us/step - loss: 0.0811 - accuracy:
1.0000

Epoch 1615/5000
1/1 [=====] - 0s 997us/step - loss: 0.0809 - accuracy:
1.0000

Epoch 1616/5000
1/1 [=====] - 0s 998us/step - loss: 0.0808 - accuracy:
1.0000

Epoch 1617/5000
1/1 [=====] - 0s 998us/step - loss: 0.0807 - accuracy:
1.0000

Epoch 1618/5000
1/1 [=====] - 0s 997us/step - loss: 0.0806 - accuracy:
1.0000

Epoch 1619/5000
1/1 [=====] - 0s 997us/step - loss: 0.0805 - accuracy:
1.0000

Epoch 1620/5000
1/1 [=====] - 0s 997us/step - loss: 0.0804 - accuracy:
1.0000

Epoch 1621/5000
1/1 [=====] - 0s 997us/step - loss: 0.0802 - accuracy:
1.0000

Epoch 1622/5000
1/1 [=====] - 0s 0s/step - loss: 0.0801 - accuracy:
1.0000

Epoch 1623/5000
1/1 [=====] - 0s 997us/step - loss: 0.0800 - accuracy:
1.0000

Epoch 1624/5000
1/1 [=====] - 0s 998us/step - loss: 0.0799 - accuracy:
1.0000

Epoch 1625/5000
1/1 [=====] - 0s 997us/step - loss: 0.0798 - accuracy:
1.0000

Epoch 1626/5000
1/1 [=====] - 0s 0s/step - loss: 0.0797 - accuracy:
1.0000

Epoch 1627/5000
1/1 [=====] - 0s 0s/step - loss: 0.0796 - accuracy:
1.0000

Epoch 1628/5000
1/1 [=====] - 0s 997us/step - loss: 0.0794 - accuracy:
1.0000

Epoch 1629/5000
1/1 [=====] - 0s 997us/step - loss: 0.0793 - accuracy:
1.0000

Epoch 1630/5000
1/1 [=====] - 0s 0s/step - loss: 0.0792 - accuracy:
1.0000

Epoch 1631/5000
1/1 [=====] - 0s 0s/step - loss: 0.0791 - accuracy:
1.0000

Epoch 1632/5000
1/1 [=====] - 0s 997us/step - loss: 0.0790 - accuracy:
1.0000

Epoch 1633/5000
1/1 [=====] - 0s 997us/step - loss: 0.0789 - accuracy:
1.0000

Epoch 1634/5000
1/1 [=====] - 0s 0s/step - loss: 0.0788 - accuracy:
1.0000

Epoch 1635/5000
1/1 [=====] - 0s 0s/step - loss: 0.0787 - accuracy:
1.0000

Epoch 1636/5000
1/1 [=====] - 0s 997us/step - loss: 0.0785 - accuracy:
1.0000

Epoch 1637/5000
1/1 [=====] - 0s 997us/step - loss: 0.0784 - accuracy:
1.0000

Epoch 1638/5000
1/1 [=====] - 0s 0s/step - loss: 0.0783 - accuracy:
1.0000

Epoch 1639/5000
1/1 [=====] - 0s 0s/step - loss: 0.0782 - accuracy:
1.0000

Epoch 1640/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0781 - accuracy:
1.0000

Epoch 1641/5000
1/1 [=====] - 0s 0s/step - loss: 0.0780 - accuracy:
1.0000

Epoch 1642/5000
1/1 [=====] - 0s 998us/step - loss: 0.0779 - accuracy:
1.0000

Epoch 1643/5000
1/1 [=====] - 0s 0s/step - loss: 0.0778 - accuracy:
1.0000

Epoch 1644/5000
1/1 [=====] - 0s 998us/step - loss: 0.0777 - accuracy:
1.0000

Epoch 1645/5000
1/1 [=====] - 0s 998us/step - loss: 0.0775 - accuracy:
1.0000

Epoch 1646/5000
1/1 [=====] - 0s 0s/step - loss: 0.0774 - accuracy:
1.0000

Epoch 1647/5000
1/1 [=====] - 0s 0s/step - loss: 0.0773 - accuracy:
1.0000

Epoch 1648/5000
1/1 [=====] - 0s 0s/step - loss: 0.0772 - accuracy:
1.0000

Epoch 1649/5000
1/1 [=====] - 0s 0s/step - loss: 0.0771 - accuracy:
1.0000

Epoch 1650/5000
1/1 [=====] - 0s 997us/step - loss: 0.0770 - accuracy:
1.0000

Epoch 1651/5000
1/1 [=====] - 0s 998us/step - loss: 0.0769 - accuracy:
1.0000

Epoch 1652/5000
1/1 [=====] - 0s 998us/step - loss: 0.0768 - accuracy:
1.0000

Epoch 1653/5000
1/1 [=====] - 0s 0s/step - loss: 0.0767 - accuracy:
1.0000

Epoch 1654/5000
1/1 [=====] - 0s 0s/step - loss: 0.0766 - accuracy:
1.0000

Epoch 1655/5000
1/1 [=====] - 0s 0s/step - loss: 0.0765 - accuracy:
1.0000

Epoch 1656/5000
1/1 [=====] - 0s 998us/step - loss: 0.0764 - accuracy:
1.0000

Epoch 1657/5000
1/1 [=====] - 0s 0s/step - loss: 0.0762 - accuracy:
1.0000

Epoch 1658/5000
1/1 [=====] - 0s 0s/step - loss: 0.0761 - accuracy:
1.0000

Epoch 1659/5000
1/1 [=====] - 0s 996us/step - loss: 0.0760 - accuracy:
1.0000

Epoch 1660/5000
1/1 [=====] - 0s 998us/step - loss: 0.0759 - accuracy:
1.0000

Epoch 1661/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0758 - accuracy:
1.0000

Epoch 1662/5000
1/1 [=====] - 0s 0s/step - loss: 0.0757 - accuracy:
1.0000

Epoch 1663/5000
1/1 [=====] - 0s 998us/step - loss: 0.0756 - accuracy:
1.0000

Epoch 1664/5000
1/1 [=====] - 0s 997us/step - loss: 0.0755 - accuracy:
1.0000

Epoch 1665/5000
1/1 [=====] - 0s 0s/step - loss: 0.0754 - accuracy:
1.0000

Epoch 1666/5000
1/1 [=====] - 0s 0s/step - loss: 0.0753 - accuracy:
1.0000

Epoch 1667/5000
1/1 [=====] - 0s 0s/step - loss: 0.0752 - accuracy:
1.0000

Epoch 1668/5000
1/1 [=====] - 0s 997us/step - loss: 0.0751 - accuracy:
1.0000

Epoch 1669/5000
1/1 [=====] - 0s 0s/step - loss: 0.0750 - accuracy:
1.0000

Epoch 1670/5000
1/1 [=====] - 0s 998us/step - loss: 0.0749 - accuracy:
1.0000

Epoch 1671/5000
1/1 [=====] - 0s 0s/step - loss: 0.0748 - accuracy:
1.0000

Epoch 1672/5000
1/1 [=====] - 0s 0s/step - loss: 0.0747 - accuracy:
1.0000

Epoch 1673/5000
1/1 [=====] - 0s 997us/step - loss: 0.0746 - accuracy:
1.0000

Epoch 1674/5000
1/1 [=====] - 0s 0s/step - loss: 0.0744 - accuracy:
1.0000

Epoch 1675/5000
1/1 [=====] - 0s 0s/step - loss: 0.0743 - accuracy:
1.0000

Epoch 1676/5000
1/1 [=====] - 0s 0s/step - loss: 0.0742 - accuracy:
1.0000

Epoch 1677/5000
1/1 [=====] - 0s 998us/step - loss: 0.0741 - accuracy:
1.0000

Epoch 1678/5000
1/1 [=====] - 0s 997us/step - loss: 0.0740 - accuracy:
1.0000

Epoch 1679/5000
1/1 [=====] - 0s 0s/step - loss: 0.0739 - accuracy:
1.0000

Epoch 1680/5000
1/1 [=====] - 0s 0s/step - loss: 0.0738 - accuracy:
1.0000

Epoch 1681/5000
1/1 [=====] - 0s 0s/step - loss: 0.0737 - accuracy:
1.0000

Epoch 1682/5000
1/1 [=====] - 0s 0s/step - loss: 0.0736 - accuracy:
1.0000

Epoch 1683/5000
1/1 [=====] - 0s 0s/step - loss: 0.0735 - accuracy:
1.0000

Epoch 1684/5000
1/1 [=====] - 0s 998us/step - loss: 0.0734 - accuracy:
1.0000

Epoch 1685/5000
1/1 [=====] - 0s 997us/step - loss: 0.0733 - accuracy:
1.0000

Epoch 1686/5000
1/1 [=====] - 0s 0s/step - loss: 0.0732 - accuracy:
1.0000

Epoch 1687/5000
1/1 [=====] - 0s 997us/step - loss: 0.0731 - accuracy:
1.0000

Epoch 1688/5000
1/1 [=====] - 0s 997us/step - loss: 0.0730 - accuracy:
1.0000

Epoch 1689/5000
1/1 [=====] - 0s 998us/step - loss: 0.0729 - accuracy:
1.0000

Epoch 1690/5000
1/1 [=====] - 0s 0s/step - loss: 0.0728 - accuracy:
1.0000

Epoch 1691/5000
1/1 [=====] - 0s 0s/step - loss: 0.0727 - accuracy:
1.0000

Epoch 1692/5000
1/1 [=====] - 0s 0s/step - loss: 0.0726 - accuracy:
1.0000

Epoch 1693/5000
1/1 [=====] - 0s 997us/step - loss: 0.0725 - accuracy:
1.0000

Epoch 1694/5000
1/1 [=====] - 0s 998us/step - loss: 0.0724 - accuracy:
1.0000

Epoch 1695/5000
1/1 [=====] - 0s 997us/step - loss: 0.0723 - accuracy:
1.0000

Epoch 1696/5000
1/1 [=====] - 0s 998us/step - loss: 0.0722 - accuracy:
1.0000

Epoch 1697/5000
1/1 [=====] - 0s 0s/step - loss: 0.0721 - accuracy:
1.0000

Epoch 1698/5000
1/1 [=====] - 0s 997us/step - loss: 0.0720 - accuracy:
1.0000

Epoch 1699/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0719 - accuracy:
1.0000

Epoch 1700/5000
1/1 [=====] - 0s 0s/step - loss: 0.0718 - accuracy:
1.0000

Epoch 1701/5000
1/1 [=====] - 0s 0s/step - loss: 0.0717 - accuracy:
1.0000

Epoch 1702/5000
1/1 [=====] - 0s 0s/step - loss: 0.0716 - accuracy:
1.0000

Epoch 1703/5000
1/1 [=====] - 0s 998us/step - loss: 0.0715 - accuracy:
1.0000

Epoch 1704/5000
1/1 [=====] - 0s 998us/step - loss: 0.0714 - accuracy:
1.0000

Epoch 1705/5000
1/1 [=====] - 0s 0s/step - loss: 0.0713 - accuracy:
1.0000

Epoch 1706/5000
1/1 [=====] - 0s 997us/step - loss: 0.0712 - accuracy:
1.0000

Epoch 1707/5000
1/1 [=====] - 0s 998us/step - loss: 0.0711 - accuracy:
1.0000

Epoch 1708/5000
1/1 [=====] - 0s 998us/step - loss: 0.0710 - accuracy:
1.0000

Epoch 1709/5000
1/1 [=====] - 0s 0s/step - loss: 0.0709 - accuracy:
1.0000

Epoch 1710/5000
1/1 [=====] - 0s 0s/step - loss: 0.0708 - accuracy:
1.0000

Epoch 1711/5000
1/1 [=====] - 0s 0s/step - loss: 0.0707 - accuracy:
1.0000

Epoch 1712/5000
1/1 [=====] - 0s 997us/step - loss: 0.0706 - accuracy:
1.0000

Epoch 1713/5000
1/1 [=====] - 0s 0s/step - loss: 0.0705 - accuracy:
1.0000

Epoch 1714/5000
1/1 [=====] - 0s 0s/step - loss: 0.0704 - accuracy:
1.0000

Epoch 1715/5000
1/1 [=====] - 0s 998us/step - loss: 0.0703 - accuracy:
1.0000

Epoch 1716/5000
1/1 [=====] - 0s 997us/step - loss: 0.0702 - accuracy:
1.0000

Epoch 1717/5000
1/1 [=====] - 0s 997us/step - loss: 0.0701 - accuracy:
1.0000

Epoch 1718/5000
1/1 [=====] - 0s 998us/step - loss: 0.0700 - accuracy:
1.0000

Epoch 1719/5000
1/1 [=====] - 0s 0s/step - loss: 0.0699 - accuracy:
1.0000

Epoch 1720/5000
1/1 [=====] - 0s 0s/step - loss: 0.0698 - accuracy:
1.0000

Epoch 1721/5000
1/1 [=====] - 0s 0s/step - loss: 0.0697 - accuracy:
1.0000

Epoch 1722/5000
1/1 [=====] - 0s 998us/step - loss: 0.0696 - accuracy:
1.0000

Epoch 1723/5000
1/1 [=====] - 0s 997us/step - loss: 0.0695 - accuracy:
1.0000

Epoch 1724/5000
1/1 [=====] - 0s 997us/step - loss: 0.0694 - accuracy:
1.0000

Epoch 1725/5000
1/1 [=====] - 0s 0s/step - loss: 0.0694 - accuracy:
1.0000

Epoch 1726/5000
1/1 [=====] - 0s 997us/step - loss: 0.0693 - accuracy:
1.0000

Epoch 1727/5000
1/1 [=====] - 0s 998us/step - loss: 0.0692 - accuracy:
1.0000

Epoch 1728/5000
1/1 [=====] - 0s 0s/step - loss: 0.0691 - accuracy:
1.0000

Epoch 1729/5000
1/1 [=====] - 0s 0s/step - loss: 0.0690 - accuracy:
1.0000

Epoch 1730/5000
1/1 [=====] - 0s 998us/step - loss: 0.0689 - accuracy:
1.0000

Epoch 1731/5000
1/1 [=====] - 0s 996us/step - loss: 0.0688 - accuracy:
1.0000

Epoch 1732/5000
1/1 [=====] - 0s 997us/step - loss: 0.0687 - accuracy:
1.0000

Epoch 1733/5000
1/1 [=====] - 0s 0s/step - loss: 0.0686 - accuracy:
1.0000

Epoch 1734/5000
1/1 [=====] - 0s 0s/step - loss: 0.0685 - accuracy:
1.0000

Epoch 1735/5000
1/1 [=====] - 0s 997us/step - loss: 0.0684 - accuracy:
1.0000

Epoch 1736/5000
1/1 [=====] - 0s 0s/step - loss: 0.0683 - accuracy:
1.0000

Epoch 1737/5000
1/1 [=====] - 0s 0s/step - loss: 0.0682 - accuracy:
1.0000

Epoch 1738/5000
1/1 [=====] - 0s 0s/step - loss: 0.0681 - accuracy:
1.0000

Epoch 1739/5000
1/1 [=====] - 0s 0s/step - loss: 0.0680 - accuracy:
1.0000

Epoch 1740/5000
1/1 [=====] - 0s 997us/step - loss: 0.0679 - accuracy:
1.0000

Epoch 1741/5000
1/1 [=====] - 0s 998us/step - loss: 0.0678 - accuracy:
1.0000

Epoch 1742/5000
1/1 [=====] - 0s 998us/step - loss: 0.0677 - accuracy:
1.0000

Epoch 1743/5000
1/1 [=====] - 0s 998us/step - loss: 0.0676 - accuracy:
1.0000

Epoch 1744/5000
1/1 [=====] - 0s 997us/step - loss: 0.0676 - accuracy:
1.0000

Epoch 1745/5000
1/1 [=====] - 0s 997us/step - loss: 0.0675 - accuracy:
1.0000

Epoch 1746/5000
1/1 [=====] - 0s 996us/step - loss: 0.0674 - accuracy:
1.0000

Epoch 1747/5000
1/1 [=====] - 0s 997us/step - loss: 0.0673 - accuracy:
1.0000

Epoch 1748/5000
1/1 [=====] - 0s 998us/step - loss: 0.0672 - accuracy:
1.0000

Epoch 1749/5000
1/1 [=====] - 0s 996us/step - loss: 0.0671 - accuracy:
1.0000

Epoch 1750/5000
1/1 [=====] - 0s 998us/step - loss: 0.0670 - accuracy:
1.0000

Epoch 1751/5000
1/1 [=====] - 0s 0s/step - loss: 0.0669 - accuracy:
1.0000

Epoch 1752/5000
1/1 [=====] - 0s 996us/step - loss: 0.0668 - accuracy:
1.0000

Epoch 1753/5000
1/1 [=====] - 0s 998us/step - loss: 0.0667 - accuracy:
1.0000

Epoch 1754/5000
1/1 [=====] - 0s 997us/step - loss: 0.0666 - accuracy:
1.0000

Epoch 1755/5000
1/1 [=====] - 0s 998us/step - loss: 0.0665 - accuracy:
1.0000

Epoch 1756/5000
1/1 [=====] - 0s 998us/step - loss: 0.0665 - accuracy:
1.0000

Epoch 1757/5000
1/1 [=====] - 0s 997us/step - loss: 0.0664 - accuracy:
1.0000

Epoch 1758/5000
1/1 [=====] - 0s 0s/step - loss: 0.0663 - accuracy:
1.0000

Epoch 1759/5000
1/1 [=====] - 0s 0s/step - loss: 0.0662 - accuracy:
1.0000

Epoch 1760/5000
1/1 [=====] - 0s 0s/step - loss: 0.0661 - accuracy:
1.0000

Epoch 1761/5000
1/1 [=====] - 0s 0s/step - loss: 0.0660 - accuracy:
1.0000

Epoch 1762/5000
1/1 [=====] - 0s 997us/step - loss: 0.0659 - accuracy:
1.0000

Epoch 1763/5000
1/1 [=====] - 0s 0s/step - loss: 0.0658 - accuracy:
1.0000

Epoch 1764/5000
1/1 [=====] - 0s 0s/step - loss: 0.0657 - accuracy:
1.0000

Epoch 1765/5000
1/1 [=====] - 0s 0s/step - loss: 0.0656 - accuracy:
1.0000
Epoch 1766/5000
1/1 [=====] - 0s 997us/step - loss: 0.0656 - accuracy:
1.0000
Epoch 1767/5000
1/1 [=====] - 0s 998us/step - loss: 0.0655 - accuracy:
1.0000
Epoch 1768/5000
1/1 [=====] - 0s 997us/step - loss: 0.0654 - accuracy:
1.0000
Epoch 1769/5000
1/1 [=====] - 0s 996us/step - loss: 0.0653 - accuracy:
1.0000
Epoch 1770/5000
1/1 [=====] - 0s 998us/step - loss: 0.0652 - accuracy:
1.0000
Epoch 1771/5000
1/1 [=====] - 0s 997us/step - loss: 0.0651 - accuracy:
1.0000
Epoch 1772/5000
1/1 [=====] - 0s 0s/step - loss: 0.0650 - accuracy:
1.0000
Epoch 1773/5000
1/1 [=====] - 0s 0s/step - loss: 0.0649 - accuracy:
1.0000
Epoch 1774/5000
1/1 [=====] - 0s 0s/step - loss: 0.0648 - accuracy:
1.0000
Epoch 1775/5000
1/1 [=====] - 0s 998us/step - loss: 0.0648 - accuracy:
1.0000
Epoch 1776/5000
1/1 [=====] - 0s 0s/step - loss: 0.0647 - accuracy:
1.0000
Epoch 1777/5000
1/1 [=====] - 0s 0s/step - loss: 0.0646 - accuracy:
1.0000
Epoch 1778/5000
1/1 [=====] - 0s 0s/step - loss: 0.0645 - accuracy:
1.0000
Epoch 1779/5000
1/1 [=====] - 0s 0s/step - loss: 0.0644 - accuracy:
1.0000
Epoch 1780/5000
1/1 [=====] - 0s 997us/step - loss: 0.0643 - accuracy:
1.0000

Epoch 1781/5000
1/1 [=====] - 0s 0s/step - loss: 0.0642 - accuracy:
1.0000

Epoch 1782/5000
1/1 [=====] - 0s 0s/step - loss: 0.0641 - accuracy:
1.0000

Epoch 1783/5000
1/1 [=====] - 0s 0s/step - loss: 0.0641 - accuracy:
1.0000

Epoch 1784/5000
1/1 [=====] - 0s 0s/step - loss: 0.0640 - accuracy:
1.0000

Epoch 1785/5000
1/1 [=====] - 0s 0s/step - loss: 0.0639 - accuracy:
1.0000

Epoch 1786/5000
1/1 [=====] - 0s 0s/step - loss: 0.0638 - accuracy:
1.0000

Epoch 1787/5000
1/1 [=====] - 0s 0s/step - loss: 0.0637 - accuracy:
1.0000

Epoch 1788/5000
1/1 [=====] - 0s 998us/step - loss: 0.0636 - accuracy:
1.0000

Epoch 1789/5000
1/1 [=====] - 0s 0s/step - loss: 0.0635 - accuracy:
1.0000

Epoch 1790/5000
1/1 [=====] - 0s 0s/step - loss: 0.0635 - accuracy:
1.0000

Epoch 1791/5000
1/1 [=====] - 0s 996us/step - loss: 0.0634 - accuracy:
1.0000

Epoch 1792/5000
1/1 [=====] - 0s 997us/step - loss: 0.0633 - accuracy:
1.0000

Epoch 1793/5000
1/1 [=====] - 0s 997us/step - loss: 0.0632 - accuracy:
1.0000

Epoch 1794/5000
1/1 [=====] - 0s 995us/step - loss: 0.0631 - accuracy:
1.0000

Epoch 1795/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0630 - accuracy:
1.0000

Epoch 1796/5000
1/1 [=====] - 0s 997us/step - loss: 0.0629 - accuracy:
1.0000

Epoch 1797/5000
1/1 [=====] - 0s 0s/step - loss: 0.0629 - accuracy:
1.0000

Epoch 1798/5000
1/1 [=====] - 0s 0s/step - loss: 0.0628 - accuracy:
1.0000

Epoch 1799/5000
1/1 [=====] - 0s 0s/step - loss: 0.0627 - accuracy:
1.0000

Epoch 1800/5000
1/1 [=====] - 0s 0s/step - loss: 0.0626 - accuracy:
1.0000

Epoch 1801/5000
1/1 [=====] - 0s 0s/step - loss: 0.0625 - accuracy:
1.0000

Epoch 1802/5000
1/1 [=====] - 0s 0s/step - loss: 0.0624 - accuracy:
1.0000

Epoch 1803/5000
1/1 [=====] - 0s 996us/step - loss: 0.0623 - accuracy:
1.0000

Epoch 1804/5000
1/1 [=====] - 0s 997us/step - loss: 0.0623 - accuracy:
1.0000

Epoch 1805/5000
1/1 [=====] - 0s 997us/step - loss: 0.0622 - accuracy:
1.0000

Epoch 1806/5000
1/1 [=====] - 0s 998us/step - loss: 0.0621 - accuracy:
1.0000

Epoch 1807/5000
1/1 [=====] - 0s 997us/step - loss: 0.0620 - accuracy:
1.0000

Epoch 1808/5000
1/1 [=====] - 0s 0s/step - loss: 0.0619 - accuracy:
1.0000

Epoch 1809/5000
1/1 [=====] - 0s 0s/step - loss: 0.0618 - accuracy:
1.0000

Epoch 1810/5000
1/1 [=====] - 0s 0s/step - loss: 0.0618 - accuracy:
1.0000

Epoch 1811/5000
1/1 [=====] - 0s 0s/step - loss: 0.0617 - accuracy:
1.0000

Epoch 1812/5000
1/1 [=====] - 0s 0s/step - loss: 0.0616 - accuracy:
1.0000

Epoch 1813/5000
1/1 [=====] - 0s 997us/step - loss: 0.0615 - accuracy:
1.0000

Epoch 1814/5000
1/1 [=====] - 0s 997us/step - loss: 0.0614 - accuracy:
1.0000

Epoch 1815/5000
1/1 [=====] - 0s 0s/step - loss: 0.0614 - accuracy:
1.0000

Epoch 1816/5000
1/1 [=====] - 0s 997us/step - loss: 0.0613 - accuracy:
1.0000

Epoch 1817/5000
1/1 [=====] - 0s 998us/step - loss: 0.0612 - accuracy:
1.0000

Epoch 1818/5000
1/1 [=====] - 0s 0s/step - loss: 0.0611 - accuracy:
1.0000

Epoch 1819/5000
1/1 [=====] - 0s 0s/step - loss: 0.0610 - accuracy:
1.0000

Epoch 1820/5000
1/1 [=====] - 0s 0s/step - loss: 0.0609 - accuracy:
1.0000

Epoch 1821/5000
1/1 [=====] - 0s 998us/step - loss: 0.0609 - accuracy:
1.0000

Epoch 1822/5000
1/1 [=====] - 0s 0s/step - loss: 0.0608 - accuracy:
1.0000

Epoch 1823/5000
1/1 [=====] - 0s 0s/step - loss: 0.0607 - accuracy:
1.0000

Epoch 1824/5000
1/1 [=====] - 0s 0s/step - loss: 0.0606 - accuracy:
1.0000

Epoch 1825/5000
1/1 [=====] - 0s 0s/step - loss: 0.0605 - accuracy:
1.0000

Epoch 1826/5000
1/1 [=====] - 0s 0s/step - loss: 0.0605 - accuracy:
1.0000

Epoch 1827/5000
1/1 [=====] - 0s 0s/step - loss: 0.0604 - accuracy:
1.0000

Epoch 1828/5000
1/1 [=====] - 0s 997us/step - loss: 0.0603 - accuracy:
1.0000

Epoch 1829/5000
1/1 [=====] - 0s 0s/step - loss: 0.0602 - accuracy:
1.0000

Epoch 1830/5000
1/1 [=====] - 0s 997us/step - loss: 0.0601 - accuracy:
1.0000

Epoch 1831/5000
1/1 [=====] - 0s 998us/step - loss: 0.0601 - accuracy:
1.0000

Epoch 1832/5000
1/1 [=====] - 0s 0s/step - loss: 0.0600 - accuracy:
1.0000

Epoch 1833/5000
1/1 [=====] - 0s 997us/step - loss: 0.0599 - accuracy:
1.0000

Epoch 1834/5000
1/1 [=====] - 0s 0s/step - loss: 0.0598 - accuracy:
1.0000

Epoch 1835/5000
1/1 [=====] - 0s 0s/step - loss: 0.0597 - accuracy:
1.0000

Epoch 1836/5000
1/1 [=====] - 0s 998us/step - loss: 0.0597 - accuracy:
1.0000

Epoch 1837/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0596 - accuracy:
1.0000

Epoch 1838/5000
1/1 [=====] - 0s 0s/step - loss: 0.0595 - accuracy:
1.0000

Epoch 1839/5000
1/1 [=====] - 0s 0s/step - loss: 0.0594 - accuracy:
1.0000

Epoch 1840/5000
1/1 [=====] - 0s 998us/step - loss: 0.0593 - accuracy:
1.0000

Epoch 1841/5000
1/1 [=====] - 0s 0s/step - loss: 0.0593 - accuracy:
1.0000

Epoch 1842/5000
1/1 [=====] - 0s 998us/step - loss: 0.0592 - accuracy:
1.0000

Epoch 1843/5000
1/1 [=====] - 0s 0s/step - loss: 0.0591 - accuracy:
1.0000

Epoch 1844/5000
1/1 [=====] - 0s 0s/step - loss: 0.0590 - accuracy:
1.0000

Epoch 1845/5000
1/1 [=====] - 0s 0s/step - loss: 0.0589 - accuracy:
1.0000

Epoch 1846/5000
1/1 [=====] - 0s 997us/step - loss: 0.0589 - accuracy:
1.0000

Epoch 1847/5000
1/1 [=====] - 0s 0s/step - loss: 0.0588 - accuracy:
1.0000

Epoch 1848/5000
1/1 [=====] - 0s 0s/step - loss: 0.0587 - accuracy:
1.0000

Epoch 1849/5000
1/1 [=====] - 0s 0s/step - loss: 0.0586 - accuracy:
1.0000

Epoch 1850/5000
1/1 [=====] - 0s 0s/step - loss: 0.0586 - accuracy:
1.0000

Epoch 1851/5000
1/1 [=====] - 0s 0s/step - loss: 0.0585 - accuracy:
1.0000

Epoch 1852/5000
1/1 [=====] - 0s 998us/step - loss: 0.0584 - accuracy:
1.0000

Epoch 1853/5000
1/1 [=====] - 0s 0s/step - loss: 0.0583 - accuracy:
1.0000

Epoch 1854/5000
1/1 [=====] - 0s 0s/step - loss: 0.0582 - accuracy:
1.0000

Epoch 1855/5000
1/1 [=====] - 0s 997us/step - loss: 0.0582 - accuracy:
1.0000

Epoch 1856/5000
1/1 [=====] - 0s 0s/step - loss: 0.0581 - accuracy:
1.0000

Epoch 1857/5000
1/1 [=====] - 0s 0s/step - loss: 0.0580 - accuracy:
1.0000

Epoch 1858/5000
1/1 [=====] - 0s 0s/step - loss: 0.0579 - accuracy:
1.0000

Epoch 1859/5000
1/1 [=====] - 0s 0s/step - loss: 0.0579 - accuracy:
1.0000

Epoch 1860/5000
1/1 [=====] - 0s 0s/step - loss: 0.0578 - accuracy:
1.0000

Epoch 1861/5000
1/1 [=====] - 0s 996us/step - loss: 0.0577 - accuracy:
1.0000
Epoch 1862/5000
1/1 [=====] - 0s 997us/step - loss: 0.0576 - accuracy:
1.0000
Epoch 1863/5000
1/1 [=====] - 0s 997us/step - loss: 0.0576 - accuracy:
1.0000
Epoch 1864/5000
1/1 [=====] - 0s 0s/step - loss: 0.0575 - accuracy:
1.0000
Epoch 1865/5000
1/1 [=====] - 0s 0s/step - loss: 0.0574 - accuracy:
1.0000
Epoch 1866/5000
1/1 [=====] - 0s 0s/step - loss: 0.0573 - accuracy:
1.0000
Epoch 1867/5000
1/1 [=====] - 0s 0s/step - loss: 0.0572 - accuracy:
1.0000
Epoch 1868/5000
1/1 [=====] - 0s 0s/step - loss: 0.0572 - accuracy:
1.0000
Epoch 1869/5000
1/1 [=====] - 0s 0s/step - loss: 0.0571 - accuracy:
1.0000
Epoch 1870/5000
1/1 [=====] - 0s 997us/step - loss: 0.0570 - accuracy:
1.0000
Epoch 1871/5000
1/1 [=====] - 0s 0s/step - loss: 0.0569 - accuracy:
1.0000
Epoch 1872/5000
1/1 [=====] - 0s 0s/step - loss: 0.0569 - accuracy:
1.0000
Epoch 1873/5000
1/1 [=====] - 0s 0s/step - loss: 0.0568 - accuracy:
1.0000
Epoch 1874/5000
1/1 [=====] - 0s 0s/step - loss: 0.0567 - accuracy:
1.0000
Epoch 1875/5000
1/1 [=====] - 0s 0s/step - loss: 0.0566 - accuracy:
1.0000
Epoch 1876/5000
1/1 [=====] - 0s 0s/step - loss: 0.0566 - accuracy:
1.0000

Epoch 1877/5000
1/1 [=====] - 0s 996us/step - loss: 0.0565 - accuracy:
1.0000

Epoch 1878/5000
1/1 [=====] - 0s 997us/step - loss: 0.0564 - accuracy:
1.0000

Epoch 1879/5000
1/1 [=====] - 0s 998us/step - loss: 0.0563 - accuracy:
1.0000

Epoch 1880/5000
1/1 [=====] - 0s 997us/step - loss: 0.0563 - accuracy:
1.0000

Epoch 1881/5000
1/1 [=====] - 0s 998us/step - loss: 0.0562 - accuracy:
1.0000

Epoch 1882/5000
1/1 [=====] - 0s 997us/step - loss: 0.0561 - accuracy:
1.0000

Epoch 1883/5000
1/1 [=====] - 0s 0s/step - loss: 0.0561 - accuracy:
1.0000

Epoch 1884/5000
1/1 [=====] - 0s 997us/step - loss: 0.0560 - accuracy:
1.0000

Epoch 1885/5000
1/1 [=====] - 0s 0s/step - loss: 0.0559 - accuracy:
1.0000

Epoch 1886/5000
1/1 [=====] - 0s 998us/step - loss: 0.0558 - accuracy:
1.0000

Epoch 1887/5000
1/1 [=====] - 0s 998us/step - loss: 0.0558 - accuracy:
1.0000

Epoch 1888/5000
1/1 [=====] - 0s 0s/step - loss: 0.0557 - accuracy:
1.0000

Epoch 1889/5000
1/1 [=====] - 0s 0s/step - loss: 0.0556 - accuracy:
1.0000

Epoch 1890/5000
1/1 [=====] - 0s 997us/step - loss: 0.0555 - accuracy:
1.0000

Epoch 1891/5000
1/1 [=====] - 0s 997us/step - loss: 0.0555 - accuracy:
1.0000

Epoch 1892/5000
1/1 [=====] - 0s 0s/step - loss: 0.0554 - accuracy:
1.0000

Epoch 1893/5000
1/1 [=====] - 0s 997us/step - loss: 0.0553 - accuracy:
1.0000
Epoch 1894/5000
1/1 [=====] - 0s 997us/step - loss: 0.0552 - accuracy:
1.0000
Epoch 1895/5000
1/1 [=====] - 0s 0s/step - loss: 0.0552 - accuracy:
1.0000
Epoch 1896/5000
1/1 [=====] - 0s 997us/step - loss: 0.0551 - accuracy:
1.0000
Epoch 1897/5000
1/1 [=====] - 0s 998us/step - loss: 0.0550 - accuracy:
1.0000
Epoch 1898/5000
1/1 [=====] - 0s 0s/step - loss: 0.0550 - accuracy:
1.0000
Epoch 1899/5000
1/1 [=====] - 0s 997us/step - loss: 0.0549 - accuracy:
1.0000
Epoch 1900/5000
1/1 [=====] - 0s 998us/step - loss: 0.0548 - accuracy:
1.0000
Epoch 1901/5000
1/1 [=====] - 0s 0s/step - loss: 0.0547 - accuracy:
1.0000
Epoch 1902/5000
1/1 [=====] - 0s 997us/step - loss: 0.0547 - accuracy:
1.0000
Epoch 1903/5000
1/1 [=====] - 0s 998us/step - loss: 0.0546 - accuracy:
1.0000
Epoch 1904/5000
1/1 [=====] - 0s 998us/step - loss: 0.0545 - accuracy:
1.0000
Epoch 1905/5000
1/1 [=====] - 0s 997us/step - loss: 0.0545 - accuracy:
1.0000
Epoch 1906/5000
1/1 [=====] - 0s 0s/step - loss: 0.0544 - accuracy:
1.0000
Epoch 1907/5000
1/1 [=====] - 0s 0s/step - loss: 0.0543 - accuracy:
1.0000
Epoch 1908/5000
1/1 [=====] - 0s 997us/step - loss: 0.0543 - accuracy:
1.0000

Epoch 1909/5000
1/1 [=====] - 0s 998us/step - loss: 0.0542 - accuracy:
1.0000

Epoch 1910/5000
1/1 [=====] - 0s 997us/step - loss: 0.0541 - accuracy:
1.0000

Epoch 1911/5000
1/1 [=====] - 0s 0s/step - loss: 0.0540 - accuracy:
1.0000

Epoch 1912/5000
1/1 [=====] - 0s 0s/step - loss: 0.0540 - accuracy:
1.0000

Epoch 1913/5000
1/1 [=====] - 0s 997us/step - loss: 0.0539 - accuracy:
1.0000

Epoch 1914/5000
1/1 [=====] - 0s 0s/step - loss: 0.0538 - accuracy:
1.0000

Epoch 1915/5000
1/1 [=====] - 0s 0s/step - loss: 0.0538 - accuracy:
1.0000

Epoch 1916/5000
1/1 [=====] - 0s 0s/step - loss: 0.0537 - accuracy:
1.0000

Epoch 1917/5000
1/1 [=====] - 0s 999us/step - loss: 0.0536 - accuracy:
1.0000

Epoch 1918/5000
1/1 [=====] - 0s 996us/step - loss: 0.0535 - accuracy:
1.0000

Epoch 1919/5000
1/1 [=====] - 0s 0s/step - loss: 0.0535 - accuracy:
1.0000

Epoch 1920/5000
1/1 [=====] - 0s 998us/step - loss: 0.0534 - accuracy:
1.0000

Epoch 1921/5000
1/1 [=====] - 0s 997us/step - loss: 0.0533 - accuracy:
1.0000

Epoch 1922/5000
1/1 [=====] - 0s 997us/step - loss: 0.0533 - accuracy:
1.0000

Epoch 1923/5000
1/1 [=====] - 0s 998us/step - loss: 0.0532 - accuracy:
1.0000

Epoch 1924/5000
1/1 [=====] - 0s 0s/step - loss: 0.0531 - accuracy:
1.0000

Epoch 1925/5000
1/1 [=====] - 0s 998us/step - loss: 0.0531 - accuracy:
1.0000

Epoch 1926/5000
1/1 [=====] - 0s 998us/step - loss: 0.0530 - accuracy:
1.0000

Epoch 1927/5000
1/1 [=====] - 0s 0s/step - loss: 0.0529 - accuracy:
1.0000

Epoch 1928/5000
1/1 [=====] - 0s 0s/step - loss: 0.0529 - accuracy:
1.0000

Epoch 1929/5000
1/1 [=====] - 0s 0s/step - loss: 0.0528 - accuracy:
1.0000

Epoch 1930/5000
1/1 [=====] - 0s 0s/step - loss: 0.0527 - accuracy:
1.0000

Epoch 1931/5000
1/1 [=====] - 0s 0s/step - loss: 0.0527 - accuracy:
1.0000

Epoch 1932/5000
1/1 [=====] - 0s 0s/step - loss: 0.0526 - accuracy:
1.0000

Epoch 1933/5000
1/1 [=====] - 0s 997us/step - loss: 0.0525 - accuracy:
1.0000

Epoch 1934/5000
1/1 [=====] - 0s 0s/step - loss: 0.0524 - accuracy:
1.0000

Epoch 1935/5000
1/1 [=====] - 0s 997us/step - loss: 0.0524 - accuracy:
1.0000

Epoch 1936/5000
1/1 [=====] - 0s 0s/step - loss: 0.0523 - accuracy:
1.0000

Epoch 1937/5000
1/1 [=====] - 0s 0s/step - loss: 0.0522 - accuracy:
1.0000

Epoch 1938/5000
1/1 [=====] - 0s 0s/step - loss: 0.0522 - accuracy:
1.0000

Epoch 1939/5000
1/1 [=====] - 0s 997us/step - loss: 0.0521 - accuracy:
1.0000

Epoch 1940/5000
1/1 [=====] - 0s 997us/step - loss: 0.0520 - accuracy:
1.0000

Epoch 1941/5000
1/1 [=====] - 0s 0s/step - loss: 0.0520 - accuracy:
1.0000

Epoch 1942/5000
1/1 [=====] - 0s 0s/step - loss: 0.0519 - accuracy:
1.0000

Epoch 1943/5000
1/1 [=====] - 0s 0s/step - loss: 0.0518 - accuracy:
1.0000

Epoch 1944/5000
1/1 [=====] - 0s 0s/step - loss: 0.0518 - accuracy:
1.0000

Epoch 1945/5000
1/1 [=====] - 0s 997us/step - loss: 0.0517 - accuracy:
1.0000

Epoch 1946/5000
1/1 [=====] - 0s 998us/step - loss: 0.0516 - accuracy:
1.0000

Epoch 1947/5000
1/1 [=====] - 0s 997us/step - loss: 0.0516 - accuracy:
1.0000

Epoch 1948/5000
1/1 [=====] - 0s 0s/step - loss: 0.0515 - accuracy:
1.0000

Epoch 1949/5000
1/1 [=====] - 0s 0s/step - loss: 0.0514 - accuracy:
1.0000

Epoch 1950/5000
1/1 [=====] - 0s 0s/step - loss: 0.0514 - accuracy:
1.0000

Epoch 1951/5000
1/1 [=====] - 0s 998us/step - loss: 0.0513 - accuracy:
1.0000

Epoch 1952/5000
1/1 [=====] - 0s 0s/step - loss: 0.0512 - accuracy:
1.0000

Epoch 1953/5000
1/1 [=====] - 0s 998us/step - loss: 0.0512 - accuracy:
1.0000

Epoch 1954/5000
1/1 [=====] - 0s 997us/step - loss: 0.0511 - accuracy:
1.0000

Epoch 1955/5000
1/1 [=====] - 0s 998us/step - loss: 0.0510 - accuracy:
1.0000

Epoch 1956/5000
1/1 [=====] - 0s 0s/step - loss: 0.0510 - accuracy:
1.0000

Epoch 1957/5000
1/1 [=====] - 0s 0s/step - loss: 0.0509 - accuracy:
1.0000

Epoch 1958/5000
1/1 [=====] - 0s 0s/step - loss: 0.0509 - accuracy:
1.0000

Epoch 1959/5000
1/1 [=====] - 0s 0s/step - loss: 0.0508 - accuracy:
1.0000

Epoch 1960/5000
1/1 [=====] - 0s 0s/step - loss: 0.0507 - accuracy:
1.0000

Epoch 1961/5000
1/1 [=====] - 0s 0s/step - loss: 0.0507 - accuracy:
1.0000

Epoch 1962/5000
1/1 [=====] - 0s 0s/step - loss: 0.0506 - accuracy:
1.0000

Epoch 1963/5000
1/1 [=====] - 0s 0s/step - loss: 0.0505 - accuracy:
1.0000

Epoch 1964/5000
1/1 [=====] - 0s 0s/step - loss: 0.0505 - accuracy:
1.0000

Epoch 1965/5000
1/1 [=====] - 0s 0s/step - loss: 0.0504 - accuracy:
1.0000

Epoch 1966/5000
1/1 [=====] - 0s 0s/step - loss: 0.0503 - accuracy:
1.0000

Epoch 1967/5000
1/1 [=====] - 0s 997us/step - loss: 0.0503 - accuracy:
1.0000

Epoch 1968/5000
1/1 [=====] - 0s 998us/step - loss: 0.0502 - accuracy:
1.0000

Epoch 1969/5000
1/1 [=====] - 0s 0s/step - loss: 0.0501 - accuracy:
1.0000

Epoch 1970/5000
1/1 [=====] - 0s 0s/step - loss: 0.0501 - accuracy:
1.0000

Epoch 1971/5000
1/1 [=====] - 0s 0s/step - loss: 0.0500 - accuracy:
1.0000

Epoch 1972/5000
1/1 [=====] - 0s 0s/step - loss: 0.0499 - accuracy:
1.0000

Epoch 1973/5000
1/1 [=====] - 0s 0s/step - loss: 0.0499 - accuracy:
1.0000

Epoch 1974/5000
1/1 [=====] - 0s 997us/step - loss: 0.0498 - accuracy:
1.0000

Epoch 1975/5000
1/1 [=====] - 0s 998us/step - loss: 0.0498 - accuracy:
1.0000

Epoch 1976/5000
1/1 [=====] - 0s 997us/step - loss: 0.0497 - accuracy:
1.0000

Epoch 1977/5000
1/1 [=====] - 0s 0s/step - loss: 0.0496 - accuracy:
1.0000

Epoch 1978/5000
1/1 [=====] - 0s 0s/step - loss: 0.0496 - accuracy:
1.0000

Epoch 1979/5000
1/1 [=====] - 0s 0s/step - loss: 0.0495 - accuracy:
1.0000

Epoch 1980/5000
1/1 [=====] - 0s 998us/step - loss: 0.0494 - accuracy:
1.0000

Epoch 1981/5000
1/1 [=====] - 0s 0s/step - loss: 0.0494 - accuracy:
1.0000

Epoch 1982/5000
1/1 [=====] - 0s 0s/step - loss: 0.0493 - accuracy:
1.0000

Epoch 1983/5000
1/1 [=====] - 0s 998us/step - loss: 0.0493 - accuracy:
1.0000

Epoch 1984/5000
1/1 [=====] - 0s 0s/step - loss: 0.0492 - accuracy:
1.0000

Epoch 1985/5000
1/1 [=====] - 0s 0s/step - loss: 0.0491 - accuracy:
1.0000

Epoch 1986/5000
1/1 [=====] - 0s 998us/step - loss: 0.0491 - accuracy:
1.0000

Epoch 1987/5000
1/1 [=====] - 0s 0s/step - loss: 0.0490 - accuracy:
1.0000

Epoch 1988/5000
1/1 [=====] - 0s 0s/step - loss: 0.0489 - accuracy:
1.0000

Epoch 1989/5000
1/1 [=====] - 0s 0s/step - loss: 0.0489 - accuracy:
1.0000

Epoch 1990/5000
1/1 [=====] - 0s 0s/step - loss: 0.0488 - accuracy:
1.0000

Epoch 1991/5000
1/1 [=====] - 0s 997us/step - loss: 0.0488 - accuracy:
1.0000

Epoch 1992/5000
1/1 [=====] - 0s 998us/step - loss: 0.0487 - accuracy:
1.0000

Epoch 1993/5000
1/1 [=====] - 0s 0s/step - loss: 0.0486 - accuracy:
1.0000

Epoch 1994/5000
1/1 [=====] - 0s 998us/step - loss: 0.0486 - accuracy:
1.0000

Epoch 1995/5000
1/1 [=====] - 0s 998us/step - loss: 0.0485 - accuracy:
1.0000

Epoch 1996/5000
1/1 [=====] - 0s 0s/step - loss: 0.0484 - accuracy:
1.0000

Epoch 1997/5000
1/1 [=====] - 0s 0s/step - loss: 0.0484 - accuracy:
1.0000

Epoch 1998/5000
1/1 [=====] - 0s 998us/step - loss: 0.0483 - accuracy:
1.0000

Epoch 1999/5000
1/1 [=====] - 0s 0s/step - loss: 0.0483 - accuracy:
1.0000

Epoch 2000/5000
1/1 [=====] - 0s 997us/step - loss: 0.0482 - accuracy:
1.0000

Epoch 2001/5000
1/1 [=====] - 0s 998us/step - loss: 0.0481 - accuracy:
1.0000

Epoch 2002/5000
1/1 [=====] - 0s 0s/step - loss: 0.0481 - accuracy:
1.0000

Epoch 2003/5000
1/1 [=====] - 0s 0s/step - loss: 0.0480 - accuracy:
1.0000

Epoch 2004/5000
1/1 [=====] - 0s 998us/step - loss: 0.0480 - accuracy:
1.0000

Epoch 2005/5000
1/1 [=====] - 0s 0s/step - loss: 0.0479 - accuracy:
1.0000

Epoch 2006/5000
1/1 [=====] - 0s 998us/step - loss: 0.0478 - accuracy:
1.0000

Epoch 2007/5000
1/1 [=====] - 0s 998us/step - loss: 0.0478 - accuracy:
1.0000

Epoch 2008/5000
1/1 [=====] - 0s 0s/step - loss: 0.0477 - accuracy:
1.0000

Epoch 2009/5000
1/1 [=====] - 0s 0s/step - loss: 0.0477 - accuracy:
1.0000

Epoch 2010/5000
1/1 [=====] - 0s 998us/step - loss: 0.0476 - accuracy:
1.0000

Epoch 2011/5000
1/1 [=====] - 0s 998us/step - loss: 0.0475 - accuracy:
1.0000

Epoch 2012/5000
1/1 [=====] - 0s 998us/step - loss: 0.0475 - accuracy:
1.0000

Epoch 2013/5000
1/1 [=====] - 0s 0s/step - loss: 0.0474 - accuracy:
1.0000

Epoch 2014/5000
1/1 [=====] - 0s 0s/step - loss: 0.0474 - accuracy:
1.0000

Epoch 2015/5000
1/1 [=====] - 0s 0s/step - loss: 0.0473 - accuracy:
1.0000

Epoch 2016/5000
1/1 [=====] - 0s 0s/step - loss: 0.0472 - accuracy:
1.0000

Epoch 2017/5000
1/1 [=====] - 0s 998us/step - loss: 0.0472 - accuracy:
1.0000

Epoch 2018/5000
1/1 [=====] - 0s 998us/step - loss: 0.0471 - accuracy:
1.0000

Epoch 2019/5000
1/1 [=====] - 0s 0s/step - loss: 0.0471 - accuracy:
1.0000

Epoch 2020/5000
1/1 [=====] - 0s 997us/step - loss: 0.0470 - accuracy:
1.0000

Epoch 2021/5000
1/1 [=====] - 0s 997us/step - loss: 0.0469 - accuracy:
1.0000

Epoch 2022/5000
1/1 [=====] - 0s 997us/step - loss: 0.0469 - accuracy:
1.0000

Epoch 2023/5000
1/1 [=====] - 0s 0s/step - loss: 0.0468 - accuracy:
1.0000

Epoch 2024/5000
1/1 [=====] - 0s 998us/step - loss: 0.0468 - accuracy:
1.0000

Epoch 2025/5000
1/1 [=====] - 0s 0s/step - loss: 0.0467 - accuracy:
1.0000

Epoch 2026/5000
1/1 [=====] - 0s 0s/step - loss: 0.0466 - accuracy:
1.0000

Epoch 2027/5000
1/1 [=====] - 0s 0s/step - loss: 0.0466 - accuracy:
1.0000

Epoch 2028/5000
1/1 [=====] - 0s 998us/step - loss: 0.0465 - accuracy:
1.0000

Epoch 2029/5000
1/1 [=====] - 0s 998us/step - loss: 0.0465 - accuracy:
1.0000

Epoch 2030/5000
1/1 [=====] - 0s 0s/step - loss: 0.0464 - accuracy:
1.0000

Epoch 2031/5000
1/1 [=====] - 0s 0s/step - loss: 0.0464 - accuracy:
1.0000

Epoch 2032/5000
1/1 [=====] - 0s 0s/step - loss: 0.0463 - accuracy:
1.0000

Epoch 2033/5000
1/1 [=====] - 0s 0s/step - loss: 0.0462 - accuracy:
1.0000

Epoch 2034/5000
1/1 [=====] - 0s 0s/step - loss: 0.0462 - accuracy:
1.0000

Epoch 2035/5000
1/1 [=====] - 0s 0s/step - loss: 0.0461 - accuracy:
1.0000

Epoch 2036/5000
1/1 [=====] - 0s 997us/step - loss: 0.0461 - accuracy:
1.0000

Epoch 2037/5000
1/1 [=====] - 0s 998us/step - loss: 0.0460 - accuracy:
1.0000

Epoch 2038/5000
1/1 [=====] - 0s 998us/step - loss: 0.0459 - accuracy:
1.0000

Epoch 2039/5000
1/1 [=====] - 0s 0s/step - loss: 0.0459 - accuracy:
1.0000

Epoch 2040/5000
1/1 [=====] - 0s 0s/step - loss: 0.0458 - accuracy:
1.0000

Epoch 2041/5000
1/1 [=====] - 0s 0s/step - loss: 0.0458 - accuracy:
1.0000

Epoch 2042/5000
1/1 [=====] - 0s 0s/step - loss: 0.0457 - accuracy:
1.0000

Epoch 2043/5000
1/1 [=====] - 0s 0s/step - loss: 0.0457 - accuracy:
1.0000

Epoch 2044/5000
1/1 [=====] - 0s 0s/step - loss: 0.0456 - accuracy:
1.0000

Epoch 2045/5000
1/1 [=====] - 0s 0s/step - loss: 0.0455 - accuracy:
1.0000

Epoch 2046/5000
1/1 [=====] - 0s 997us/step - loss: 0.0455 - accuracy:
1.0000

Epoch 2047/5000
1/1 [=====] - 0s 996us/step - loss: 0.0454 - accuracy:
1.0000

Epoch 2048/5000
1/1 [=====] - 0s 0s/step - loss: 0.0454 - accuracy:
1.0000

Epoch 2049/5000
1/1 [=====] - 0s 0s/step - loss: 0.0453 - accuracy:
1.0000

Epoch 2050/5000
1/1 [=====] - 0s 998us/step - loss: 0.0453 - accuracy:
1.0000

Epoch 2051/5000
1/1 [=====] - 0s 998us/step - loss: 0.0452 - accuracy:
1.0000

Epoch 2052/5000
1/1 [=====] - 0s 0s/step - loss: 0.0452 - accuracy:
1.0000

Epoch 2053/5000
1/1 [=====] - 0s 0s/step - loss: 0.0451 - accuracy:
1.0000

Epoch 2054/5000
1/1 [=====] - 0s 997us/step - loss: 0.0450 - accuracy:
1.0000

Epoch 2055/5000
1/1 [=====] - 0s 998us/step - loss: 0.0450 - accuracy:
1.0000

Epoch 2056/5000
1/1 [=====] - 0s 998us/step - loss: 0.0449 - accuracy:
1.0000

Epoch 2057/5000
1/1 [=====] - 0s 0s/step - loss: 0.0449 - accuracy:
1.0000

Epoch 2058/5000
1/1 [=====] - 0s 998us/step - loss: 0.0448 - accuracy:
1.0000

Epoch 2059/5000
1/1 [=====] - 0s 0s/step - loss: 0.0448 - accuracy:
1.0000

Epoch 2060/5000
1/1 [=====] - 0s 0s/step - loss: 0.0447 - accuracy:
1.0000

Epoch 2061/5000
1/1 [=====] - 0s 998us/step - loss: 0.0447 - accuracy:
1.0000

Epoch 2062/5000
1/1 [=====] - 0s 0s/step - loss: 0.0446 - accuracy:
1.0000

Epoch 2063/5000
1/1 [=====] - 0s 0s/step - loss: 0.0445 - accuracy:
1.0000

Epoch 2064/5000
1/1 [=====] - 0s 998us/step - loss: 0.0445 - accuracy:
1.0000

Epoch 2065/5000
1/1 [=====] - 0s 0s/step - loss: 0.0444 - accuracy:
1.0000

Epoch 2066/5000
1/1 [=====] - 0s 0s/step - loss: 0.0444 - accuracy:
1.0000

Epoch 2067/5000
1/1 [=====] - 0s 998us/step - loss: 0.0443 - accuracy:
1.0000

Epoch 2068/5000
1/1 [=====] - 0s 0s/step - loss: 0.0443 - accuracy:
1.0000

Epoch 2069/5000
1/1 [=====] - 0s 998us/step - loss: 0.0442 - accuracy:
1.0000

Epoch 2070/5000
1/1 [=====] - 0s 0s/step - loss: 0.0442 - accuracy:
1.0000

Epoch 2071/5000
1/1 [=====] - 0s 0s/step - loss: 0.0441 - accuracy:
1.0000

Epoch 2072/5000
1/1 [=====] - 0s 0s/step - loss: 0.0440 - accuracy:
1.0000

Epoch 2073/5000
1/1 [=====] - 0s 0s/step - loss: 0.0440 - accuracy:
1.0000

Epoch 2074/5000
1/1 [=====] - 0s 998us/step - loss: 0.0439 - accuracy:
1.0000

Epoch 2075/5000
1/1 [=====] - 0s 998us/step - loss: 0.0439 - accuracy:
1.0000

Epoch 2076/5000
1/1 [=====] - 0s 0s/step - loss: 0.0438 - accuracy:
1.0000

Epoch 2077/5000
1/1 [=====] - 0s 997us/step - loss: 0.0438 - accuracy:
1.0000

Epoch 2078/5000
1/1 [=====] - 0s 998us/step - loss: 0.0437 - accuracy:
1.0000

Epoch 2079/5000
1/1 [=====] - 0s 997us/step - loss: 0.0437 - accuracy:
1.0000

Epoch 2080/5000
1/1 [=====] - 0s 0s/step - loss: 0.0436 - accuracy:
1.0000

Epoch 2081/5000
1/1 [=====] - 0s 0s/step - loss: 0.0436 - accuracy:
1.0000

Epoch 2082/5000
1/1 [=====] - 0s 0s/step - loss: 0.0435 - accuracy:
1.0000

Epoch 2083/5000
1/1 [=====] - 0s 997us/step - loss: 0.0434 - accuracy:
1.0000

Epoch 2084/5000
1/1 [=====] - 0s 997us/step - loss: 0.0434 - accuracy:
1.0000

Epoch 2085/5000
1/1 [=====] - 0s 997us/step - loss: 0.0433 - accuracy: 1.0000

Epoch 2086/5000
1/1 [=====] - 0s 998us/step - loss: 0.0433 - accuracy: 1.0000

Epoch 2087/5000
1/1 [=====] - 0s 997us/step - loss: 0.0432 - accuracy: 1.0000

Epoch 2088/5000
1/1 [=====] - 0s 0s/step - loss: 0.0432 - accuracy: 1.0000

Epoch 2089/5000
1/1 [=====] - 0s 0s/step - loss: 0.0431 - accuracy: 1.0000

Epoch 2090/5000
1/1 [=====] - 0s 0s/step - loss: 0.0431 - accuracy: 1.0000

Epoch 2091/5000
1/1 [=====] - 0s 0s/step - loss: 0.0430 - accuracy: 1.0000

Epoch 2092/5000
1/1 [=====] - 0s 0s/step - loss: 0.0430 - accuracy: 1.0000

Epoch 2093/5000
1/1 [=====] - 0s 997us/step - loss: 0.0429 - accuracy: 1.0000

Epoch 2094/5000
1/1 [=====] - 0s 997us/step - loss: 0.0429 - accuracy: 1.0000

Epoch 2095/5000
1/1 [=====] - 0s 998us/step - loss: 0.0428 - accuracy: 1.0000

Epoch 2096/5000
1/1 [=====] - 0s 996us/step - loss: 0.0428 - accuracy: 1.0000

Epoch 2097/5000
1/1 [=====] - 0s 0s/step - loss: 0.0427 - accuracy: 1.0000

Epoch 2098/5000
1/1 [=====] - 0s 0s/step - loss: 0.0427 - accuracy: 1.0000

Epoch 2099/5000
1/1 [=====] - 0s 996us/step - loss: 0.0426 - accuracy: 1.0000

Epoch 2100/5000
1/1 [=====] - 0s 997us/step - loss: 0.0425 - accuracy: 1.0000

Epoch 2101/5000
1/1 [=====] - 0s 997us/step - loss: 0.0425 - accuracy:
1.0000

Epoch 2102/5000
1/1 [=====] - 0s 998us/step - loss: 0.0424 - accuracy:
1.0000

Epoch 2103/5000
1/1 [=====] - 0s 0s/step - loss: 0.0424 - accuracy:
1.0000

Epoch 2104/5000
1/1 [=====] - 0s 0s/step - loss: 0.0423 - accuracy:
1.0000

Epoch 2105/5000
1/1 [=====] - 0s 0s/step - loss: 0.0423 - accuracy:
1.0000

Epoch 2106/5000
1/1 [=====] - 0s 0s/step - loss: 0.0422 - accuracy:
1.0000

Epoch 2107/5000
1/1 [=====] - 0s 998us/step - loss: 0.0422 - accuracy:
1.0000

Epoch 2108/5000
1/1 [=====] - 0s 0s/step - loss: 0.0421 - accuracy:
1.0000

Epoch 2109/5000
1/1 [=====] - 0s 997us/step - loss: 0.0421 - accuracy:
1.0000

Epoch 2110/5000
1/1 [=====] - 0s 998us/step - loss: 0.0420 - accuracy:
1.0000

Epoch 2111/5000
1/1 [=====] - 0s 998us/step - loss: 0.0420 - accuracy:
1.0000

Epoch 2112/5000
1/1 [=====] - 0s 0s/step - loss: 0.0419 - accuracy:
1.0000

Epoch 2113/5000
1/1 [=====] - 0s 998us/step - loss: 0.0419 - accuracy:
1.0000

Epoch 2114/5000
1/1 [=====] - 0s 0s/step - loss: 0.0418 - accuracy:
1.0000

Epoch 2115/5000
1/1 [=====] - 0s 0s/step - loss: 0.0418 - accuracy:
1.0000

Epoch 2116/5000
1/1 [=====] - 0s 998us/step - loss: 0.0417 - accuracy:
1.0000

Epoch 2117/5000
1/1 [=====] - 0s 998us/step - loss: 0.0417 - accuracy:
1.0000
Epoch 2118/5000
1/1 [=====] - 0s 998us/step - loss: 0.0416 - accuracy:
1.0000
Epoch 2119/5000
1/1 [=====] - 0s 0s/step - loss: 0.0416 - accuracy:
1.0000
Epoch 2120/5000
1/1 [=====] - 0s 0s/step - loss: 0.0415 - accuracy:
1.0000
Epoch 2121/5000
1/1 [=====] - 0s 0s/step - loss: 0.0415 - accuracy:
1.0000
Epoch 2122/5000
1/1 [=====] - 0s 998us/step - loss: 0.0414 - accuracy:
1.0000
Epoch 2123/5000
1/1 [=====] - 0s 998us/step - loss: 0.0414 - accuracy:
1.0000
Epoch 2124/5000
1/1 [=====] - 0s 998us/step - loss: 0.0413 - accuracy:
1.0000
Epoch 2125/5000
1/1 [=====] - 0s 997us/step - loss: 0.0413 - accuracy:
1.0000
Epoch 2126/5000
1/1 [=====] - 0s 0s/step - loss: 0.0412 - accuracy:
1.0000
Epoch 2127/5000
1/1 [=====] - 0s 0s/step - loss: 0.0412 - accuracy:
1.0000
Epoch 2128/5000
1/1 [=====] - 0s 0s/step - loss: 0.0411 - accuracy:
1.0000
Epoch 2129/5000
1/1 [=====] - 0s 0s/step - loss: 0.0411 - accuracy:
1.0000
Epoch 2130/5000
1/1 [=====] - 0s 0s/step - loss: 0.0410 - accuracy:
1.0000
Epoch 2131/5000
1/1 [=====] - 0s 0s/step - loss: 0.0410 - accuracy:
1.0000
Epoch 2132/5000
1/1 [=====] - 0s 0s/step - loss: 0.0409 - accuracy:
1.0000

Epoch 2133/5000
1/1 [=====] - 0s 998us/step - loss: 0.0409 - accuracy:
1.0000

Epoch 2134/5000
1/1 [=====] - 0s 0s/step - loss: 0.0408 - accuracy:
1.0000

Epoch 2135/5000
1/1 [=====] - 0s 0s/step - loss: 0.0408 - accuracy:
1.0000

Epoch 2136/5000
1/1 [=====] - 0s 998us/step - loss: 0.0407 - accuracy:
1.0000

Epoch 2137/5000
1/1 [=====] - 0s 997us/step - loss: 0.0407 - accuracy:
1.0000

Epoch 2138/5000
1/1 [=====] - 0s 0s/step - loss: 0.0406 - accuracy:
1.0000

Epoch 2139/5000
1/1 [=====] - 0s 0s/step - loss: 0.0406 - accuracy:
1.0000

Epoch 2140/5000
1/1 [=====] - 0s 0s/step - loss: 0.0405 - accuracy:
1.0000

Epoch 2141/5000
1/1 [=====] - 0s 0s/step - loss: 0.0405 - accuracy:
1.0000

Epoch 2142/5000
1/1 [=====] - 0s 0s/step - loss: 0.0404 - accuracy:
1.0000

Epoch 2143/5000
1/1 [=====] - 0s 998us/step - loss: 0.0404 - accuracy:
1.0000

Epoch 2144/5000
1/1 [=====] - 0s 0s/step - loss: 0.0403 - accuracy:
1.0000

Epoch 2145/5000
1/1 [=====] - 0s 0s/step - loss: 0.0403 - accuracy:
1.0000

Epoch 2146/5000
1/1 [=====] - 0s 998us/step - loss: 0.0402 - accuracy:
1.0000

Epoch 2147/5000
1/1 [=====] - 0s 998us/step - loss: 0.0402 - accuracy:
1.0000

Epoch 2148/5000
1/1 [=====] - 0s 997us/step - loss: 0.0401 - accuracy:
1.0000

Epoch 2149/5000
1/1 [=====] - 0s 997us/step - loss: 0.0401 - accuracy:
1.0000

Epoch 2150/5000
1/1 [=====] - 0s 0s/step - loss: 0.0400 - accuracy:
1.0000

Epoch 2151/5000
1/1 [=====] - 0s 0s/step - loss: 0.0400 - accuracy:
1.0000

Epoch 2152/5000
1/1 [=====] - 0s 0s/step - loss: 0.0399 - accuracy:
1.0000

Epoch 2153/5000
1/1 [=====] - 0s 0s/step - loss: 0.0399 - accuracy:
1.0000

Epoch 2154/5000
1/1 [=====] - 0s 997us/step - loss: 0.0398 - accuracy:
1.0000

Epoch 2155/5000
1/1 [=====] - 0s 998us/step - loss: 0.0398 - accuracy:
1.0000

Epoch 2156/5000
1/1 [=====] - 0s 0s/step - loss: 0.0397 - accuracy:
1.0000

Epoch 2157/5000
1/1 [=====] - 0s 998us/step - loss: 0.0397 - accuracy:
1.0000

Epoch 2158/5000
1/1 [=====] - 0s 997us/step - loss: 0.0396 - accuracy:
1.0000

Epoch 2159/5000
1/1 [=====] - 0s 0s/step - loss: 0.0396 - accuracy:
1.0000

Epoch 2160/5000
1/1 [=====] - 0s 998us/step - loss: 0.0396 - accuracy:
1.0000

Epoch 2161/5000
1/1 [=====] - 0s 0s/step - loss: 0.0395 - accuracy:
1.0000

Epoch 2162/5000
1/1 [=====] - 0s 998us/step - loss: 0.0395 - accuracy:
1.0000

Epoch 2163/5000
1/1 [=====] - 0s 998us/step - loss: 0.0394 - accuracy:
1.0000

Epoch 2164/5000
1/1 [=====] - 0s 0s/step - loss: 0.0394 - accuracy:
1.0000

Epoch 2165/5000
1/1 [=====] - 0s 0s/step - loss: 0.0393 - accuracy:
1.0000

Epoch 2166/5000
1/1 [=====] - 0s 0s/step - loss: 0.0393 - accuracy:
1.0000

Epoch 2167/5000
1/1 [=====] - 0s 0s/step - loss: 0.0392 - accuracy:
1.0000

Epoch 2168/5000
1/1 [=====] - 0s 0s/step - loss: 0.0392 - accuracy:
1.0000

Epoch 2169/5000
1/1 [=====] - 0s 997us/step - loss: 0.0391 - accuracy:
1.0000

Epoch 2170/5000
1/1 [=====] - 0s 0s/step - loss: 0.0391 - accuracy:
1.0000

Epoch 2171/5000
1/1 [=====] - 0s 997us/step - loss: 0.0390 - accuracy:
1.0000

Epoch 2172/5000
1/1 [=====] - 0s 0s/step - loss: 0.0390 - accuracy:
1.0000

Epoch 2173/5000
1/1 [=====] - 0s 995us/step - loss: 0.0389 - accuracy:
1.0000

Epoch 2174/5000
1/1 [=====] - 0s 0s/step - loss: 0.0389 - accuracy:
1.0000

Epoch 2175/5000
1/1 [=====] - 0s 0s/step - loss: 0.0388 - accuracy:
1.0000

Epoch 2176/5000
1/1 [=====] - 0s 999us/step - loss: 0.0388 - accuracy:
1.0000

Epoch 2177/5000
1/1 [=====] - 0s 997us/step - loss: 0.0387 - accuracy:
1.0000

Epoch 2178/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0387 - accuracy:
1.0000

Epoch 2179/5000
1/1 [=====] - 0s 0s/step - loss: 0.0387 - accuracy:
1.0000

Epoch 2180/5000
1/1 [=====] - 0s 997us/step - loss: 0.0386 - accuracy:
1.0000

Epoch 2181/5000
1/1 [=====] - 0s 998us/step - loss: 0.0386 - accuracy: 1.0000

Epoch 2182/5000
1/1 [=====] - 0s 997us/step - loss: 0.0385 - accuracy: 1.0000

Epoch 2183/5000
1/1 [=====] - 0s 997us/step - loss: 0.0385 - accuracy: 1.0000

Epoch 2184/5000
1/1 [=====] - 0s 997us/step - loss: 0.0384 - accuracy: 1.0000

Epoch 2185/5000
1/1 [=====] - 0s 0s/step - loss: 0.0384 - accuracy: 1.0000

Epoch 2186/5000
1/1 [=====] - 0s 0s/step - loss: 0.0383 - accuracy: 1.0000

Epoch 2187/5000
1/1 [=====] - 0s 0s/step - loss: 0.0383 - accuracy: 1.0000

Epoch 2188/5000
1/1 [=====] - 0s 997us/step - loss: 0.0382 - accuracy: 1.0000

Epoch 2189/5000
1/1 [=====] - 0s 997us/step - loss: 0.0382 - accuracy: 1.0000

Epoch 2190/5000
1/1 [=====] - 0s 998us/step - loss: 0.0382 - accuracy: 1.0000

Epoch 2191/5000
1/1 [=====] - 0s 0s/step - loss: 0.0381 - accuracy: 1.0000

Epoch 2192/5000
1/1 [=====] - 0s 996us/step - loss: 0.0381 - accuracy: 1.0000

Epoch 2193/5000
1/1 [=====] - 0s 0s/step - loss: 0.0380 - accuracy: 1.0000

Epoch 2194/5000
1/1 [=====] - 0s 0s/step - loss: 0.0380 - accuracy: 1.0000

Epoch 2195/5000
1/1 [=====] - 0s 997us/step - loss: 0.0379 - accuracy: 1.0000

Epoch 2196/5000
1/1 [=====] - 0s 997us/step - loss: 0.0379 - accuracy: 1.0000

Epoch 2197/5000
1/1 [=====] - 0s 0s/step - loss: 0.0378 - accuracy:
1.0000

Epoch 2198/5000
1/1 [=====] - 0s 0s/step - loss: 0.0378 - accuracy:
1.0000

Epoch 2199/5000
1/1 [=====] - 0s 997us/step - loss: 0.0377 - accuracy:
1.0000

Epoch 2200/5000
1/1 [=====] - 0s 997us/step - loss: 0.0377 - accuracy:
1.0000

Epoch 2201/5000
1/1 [=====] - 0s 0s/step - loss: 0.0377 - accuracy:
1.0000

Epoch 2202/5000
1/1 [=====] - 0s 998us/step - loss: 0.0376 - accuracy:
1.0000

Epoch 2203/5000
1/1 [=====] - 0s 998us/step - loss: 0.0376 - accuracy:
1.0000

Epoch 2204/5000
1/1 [=====] - 0s 998us/step - loss: 0.0375 - accuracy:
1.0000

Epoch 2205/5000
1/1 [=====] - 0s 0s/step - loss: 0.0375 - accuracy:
1.0000

Epoch 2206/5000
1/1 [=====] - 0s 997us/step - loss: 0.0374 - accuracy:
1.0000

Epoch 2207/5000
1/1 [=====] - 0s 998us/step - loss: 0.0374 - accuracy:
1.0000

Epoch 2208/5000
1/1 [=====] - 0s 0s/step - loss: 0.0373 - accuracy:
1.0000

Epoch 2209/5000
1/1 [=====] - 0s 0s/step - loss: 0.0373 - accuracy:
1.0000

Epoch 2210/5000
1/1 [=====] - 0s 0s/step - loss: 0.0373 - accuracy:
1.0000

Epoch 2211/5000
1/1 [=====] - 0s 0s/step - loss: 0.0372 - accuracy:
1.0000

Epoch 2212/5000
1/1 [=====] - 0s 0s/step - loss: 0.0372 - accuracy:
1.0000

Epoch 2213/5000
1/1 [=====] - 0s 998us/step - loss: 0.0371 - accuracy: 1.0000

Epoch 2214/5000
1/1 [=====] - 0s 997us/step - loss: 0.0371 - accuracy: 1.0000

Epoch 2215/5000
1/1 [=====] - 0s 0s/step - loss: 0.0370 - accuracy: 1.0000

Epoch 2216/5000
1/1 [=====] - 0s 0s/step - loss: 0.0370 - accuracy: 1.0000

Epoch 2217/5000
1/1 [=====] - 0s 0s/step - loss: 0.0369 - accuracy: 1.0000

Epoch 2218/5000
1/1 [=====] - 0s 0s/step - loss: 0.0369 - accuracy: 1.0000

Epoch 2219/5000
1/1 [=====] - 0s 0s/step - loss: 0.0369 - accuracy: 1.0000

Epoch 2220/5000
1/1 [=====] - 0s 0s/step - loss: 0.0368 - accuracy: 1.0000

Epoch 2221/5000
1/1 [=====] - 0s 998us/step - loss: 0.0368 - accuracy: 1.0000

Epoch 2222/5000
1/1 [=====] - 0s 0s/step - loss: 0.0367 - accuracy: 1.0000

Epoch 2223/5000
1/1 [=====] - 0s 0s/step - loss: 0.0367 - accuracy: 1.0000

Epoch 2224/5000
1/1 [=====] - 0s 0s/step - loss: 0.0366 - accuracy: 1.0000

Epoch 2225/5000
1/1 [=====] - 0s 0s/step - loss: 0.0366 - accuracy: 1.0000

Epoch 2226/5000
1/1 [=====] - 0s 997us/step - loss: 0.0366 - accuracy: 1.0000

Epoch 2227/5000
1/1 [=====] - 0s 0s/step - loss: 0.0365 - accuracy: 1.0000

Epoch 2228/5000
1/1 [=====] - 0s 998us/step - loss: 0.0365 - accuracy: 1.0000

Epoch 2229/5000
1/1 [=====] - 0s 0s/step - loss: 0.0364 - accuracy:
1.0000

Epoch 2230/5000
1/1 [=====] - 0s 996us/step - loss: 0.0364 - accuracy:
1.0000

Epoch 2231/5000
1/1 [=====] - 0s 0s/step - loss: 0.0363 - accuracy:
1.0000

Epoch 2232/5000
1/1 [=====] - 0s 997us/step - loss: 0.0363 - accuracy:
1.0000

Epoch 2233/5000
1/1 [=====] - 0s 0s/step - loss: 0.0363 - accuracy:
1.0000

Epoch 2234/5000
1/1 [=====] - 0s 999us/step - loss: 0.0362 - accuracy:
1.0000

Epoch 2235/5000
1/1 [=====] - 0s 997us/step - loss: 0.0362 - accuracy:
1.0000

Epoch 2236/5000
1/1 [=====] - 0s 996us/step - loss: 0.0361 - accuracy:
1.0000

Epoch 2237/5000
1/1 [=====] - 0s 0s/step - loss: 0.0361 - accuracy:
1.0000

Epoch 2238/5000
1/1 [=====] - 0s 0s/step - loss: 0.0360 - accuracy:
1.0000

Epoch 2239/5000
1/1 [=====] - 0s 997us/step - loss: 0.0360 - accuracy:
1.0000

Epoch 2240/5000
1/1 [=====] - 0s 997us/step - loss: 0.0360 - accuracy:
1.0000

Epoch 2241/5000
1/1 [=====] - 0s 0s/step - loss: 0.0359 - accuracy:
1.0000

Epoch 2242/5000
1/1 [=====] - 0s 0s/step - loss: 0.0359 - accuracy:
1.0000

Epoch 2243/5000
1/1 [=====] - 0s 997us/step - loss: 0.0358 - accuracy:
1.0000

Epoch 2244/5000
1/1 [=====] - 0s 997us/step - loss: 0.0358 - accuracy:
1.0000

Epoch 2245/5000
1/1 [=====] - 0s 0s/step - loss: 0.0357 - accuracy:
1.0000

Epoch 2246/5000
1/1 [=====] - 0s 0s/step - loss: 0.0357 - accuracy:
1.0000

Epoch 2247/5000
1/1 [=====] - 0s 997us/step - loss: 0.0357 - accuracy:
1.0000

Epoch 2248/5000
1/1 [=====] - 0s 996us/step - loss: 0.0356 - accuracy:
1.0000

Epoch 2249/5000
1/1 [=====] - 0s 999us/step - loss: 0.0356 - accuracy:
1.0000

Epoch 2250/5000
1/1 [=====] - 0s 0s/step - loss: 0.0355 - accuracy:
1.0000

Epoch 2251/5000
1/1 [=====] - 0s 0s/step - loss: 0.0355 - accuracy:
1.0000

Epoch 2252/5000
1/1 [=====] - 0s 997us/step - loss: 0.0354 - accuracy:
1.0000

Epoch 2253/5000
1/1 [=====] - 0s 997us/step - loss: 0.0354 - accuracy:
1.0000

Epoch 2254/5000
1/1 [=====] - 0s 0s/step - loss: 0.0354 - accuracy:
1.0000

Epoch 2255/5000
1/1 [=====] - 0s 997us/step - loss: 0.0353 - accuracy:
1.0000

Epoch 2256/5000
1/1 [=====] - 0s 997us/step - loss: 0.0353 - accuracy:
1.0000

Epoch 2257/5000
1/1 [=====] - 0s 0s/step - loss: 0.0352 - accuracy:
1.0000

Epoch 2258/5000
1/1 [=====] - 0s 0s/step - loss: 0.0352 - accuracy:
1.0000

Epoch 2259/5000
1/1 [=====] - 0s 0s/step - loss: 0.0352 - accuracy:
1.0000

Epoch 2260/5000
1/1 [=====] - 0s 997us/step - loss: 0.0351 - accuracy:
1.0000

Epoch 2261/5000
1/1 [=====] - 0s 0s/step - loss: 0.0351 - accuracy: 1.0000

Epoch 2262/5000
1/1 [=====] - 0s 0s/step - loss: 0.0350 - accuracy: 1.0000

Epoch 2263/5000
1/1 [=====] - 0s 0s/step - loss: 0.0350 - accuracy: 1.0000

Epoch 2264/5000
1/1 [=====] - 0s 0s/step - loss: 0.0350 - accuracy: 1.0000

Epoch 2265/5000
1/1 [=====] - 0s 0s/step - loss: 0.0349 - accuracy: 1.0000

Epoch 2266/5000
1/1 [=====] - 0s 0s/step - loss: 0.0349 - accuracy: 1.0000

Epoch 2267/5000
1/1 [=====] - 0s 0s/step - loss: 0.0348 - accuracy: 1.0000

Epoch 2268/5000
1/1 [=====] - 0s 997us/step - loss: 0.0348 - accuracy: 1.0000

Epoch 2269/5000
1/1 [=====] - 0s 998us/step - loss: 0.0347 - accuracy: 1.0000

Epoch 2270/5000
1/1 [=====] - 0s 0s/step - loss: 0.0347 - accuracy: 1.0000

Epoch 2271/5000
1/1 [=====] - 0s 0s/step - loss: 0.0347 - accuracy: 1.0000

Epoch 2272/5000
1/1 [=====] - 0s 0s/step - loss: 0.0346 - accuracy: 1.0000

Epoch 2273/5000
1/1 [=====] - 0s 0s/step - loss: 0.0346 - accuracy: 1.0000

Epoch 2274/5000
1/1 [=====] - 0s 998us/step - loss: 0.0345 - accuracy: 1.0000

Epoch 2275/5000
1/1 [=====] - 0s 0s/step - loss: 0.0345 - accuracy: 1.0000

Epoch 2276/5000
1/1 [=====] - 0s 0s/step - loss: 0.0345 - accuracy: 1.0000

Epoch 2277/5000
1/1 [=====] - 0s 998us/step - loss: 0.0344 - accuracy: 1.0000

Epoch 2278/5000
1/1 [=====] - 0s 996us/step - loss: 0.0344 - accuracy: 1.0000

Epoch 2279/5000
1/1 [=====] - 0s 998us/step - loss: 0.0343 - accuracy: 1.0000

Epoch 2280/5000
1/1 [=====] - 0s 0s/step - loss: 0.0343 - accuracy: 1.0000

Epoch 2281/5000
1/1 [=====] - 0s 0s/step - loss: 0.0343 - accuracy: 1.0000

Epoch 2282/5000
1/1 [=====] - 0s 0s/step - loss: 0.0342 - accuracy: 1.0000

Epoch 2283/5000
1/1 [=====] - 0s 996us/step - loss: 0.0342 - accuracy: 1.0000

Epoch 2284/5000
1/1 [=====] - 0s 0s/step - loss: 0.0341 - accuracy: 1.0000

Epoch 2285/5000
1/1 [=====] - 0s 0s/step - loss: 0.0341 - accuracy: 1.0000

Epoch 2286/5000
1/1 [=====] - 0s 0s/step - loss: 0.0341 - accuracy: 1.0000

Epoch 2287/5000
1/1 [=====] - 0s 0s/step - loss: 0.0340 - accuracy: 1.0000

Epoch 2288/5000
1/1 [=====] - 0s 0s/step - loss: 0.0340 - accuracy: 1.0000

Epoch 2289/5000
1/1 [=====] - 0s 0s/step - loss: 0.0339 - accuracy: 1.0000

Epoch 2290/5000
1/1 [=====] - 0s 997us/step - loss: 0.0339 - accuracy: 1.0000

Epoch 2291/5000
1/1 [=====] - 0s 997us/step - loss: 0.0339 - accuracy: 1.0000

Epoch 2292/5000
1/1 [=====] - 0s 997us/step - loss: 0.0338 - accuracy: 1.0000

Epoch 2293/5000
1/1 [=====] - 0s 998us/step - loss: 0.0338 - accuracy:
1.0000

Epoch 2294/5000
1/1 [=====] - 0s 997us/step - loss: 0.0338 - accuracy:
1.0000

Epoch 2295/5000
1/1 [=====] - 0s 0s/step - loss: 0.0337 - accuracy:
1.0000

Epoch 2296/5000
1/1 [=====] - 0s 0s/step - loss: 0.0337 - accuracy:
1.0000

Epoch 2297/5000
1/1 [=====] - 0s 998us/step - loss: 0.0336 - accuracy:
1.0000

Epoch 2298/5000
1/1 [=====] - 0s 997us/step - loss: 0.0336 - accuracy:
1.0000

Epoch 2299/5000
1/1 [=====] - 0s 998us/step - loss: 0.0336 - accuracy:
1.0000

Epoch 2300/5000
1/1 [=====] - 0s 0s/step - loss: 0.0335 - accuracy:
1.0000

Epoch 2301/5000
1/1 [=====] - 0s 0s/step - loss: 0.0335 - accuracy:
1.0000

Epoch 2302/5000
1/1 [=====] - 0s 0s/step - loss: 0.0334 - accuracy:
1.0000

Epoch 2303/5000
1/1 [=====] - 0s 997us/step - loss: 0.0334 - accuracy:
1.0000

Epoch 2304/5000
1/1 [=====] - 0s 998us/step - loss: 0.0334 - accuracy:
1.0000

Epoch 2305/5000
1/1 [=====] - 0s 998us/step - loss: 0.0333 - accuracy:
1.0000

Epoch 2306/5000
1/1 [=====] - 0s 0s/step - loss: 0.0333 - accuracy:
1.0000

Epoch 2307/5000
1/1 [=====] - 0s 0s/step - loss: 0.0332 - accuracy:
1.0000

Epoch 2308/5000
1/1 [=====] - 0s 0s/step - loss: 0.0332 - accuracy:
1.0000

Epoch 2309/5000
1/1 [=====] - 0s 0s/step - loss: 0.0332 - accuracy:
1.0000

Epoch 2310/5000
1/1 [=====] - 0s 0s/step - loss: 0.0331 - accuracy:
1.0000

Epoch 2311/5000
1/1 [=====] - 0s 997us/step - loss: 0.0331 - accuracy:
1.0000

Epoch 2312/5000
1/1 [=====] - 0s 998us/step - loss: 0.0331 - accuracy:
1.0000

Epoch 2313/5000
1/1 [=====] - 0s 997us/step - loss: 0.0330 - accuracy:
1.0000

Epoch 2314/5000
1/1 [=====] - 0s 0s/step - loss: 0.0330 - accuracy:
1.0000

Epoch 2315/5000
1/1 [=====] - 0s 997us/step - loss: 0.0329 - accuracy:
1.0000

Epoch 2316/5000
1/1 [=====] - 0s 0s/step - loss: 0.0329 - accuracy:
1.0000

Epoch 2317/5000
1/1 [=====] - 0s 0s/step - loss: 0.0329 - accuracy:
1.0000

Epoch 2318/5000
1/1 [=====] - 0s 998us/step - loss: 0.0328 - accuracy:
1.0000

Epoch 2319/5000
1/1 [=====] - 0s 0s/step - loss: 0.0328 - accuracy:
1.0000

Epoch 2320/5000
1/1 [=====] - 0s 0s/step - loss: 0.0328 - accuracy:
1.0000

Epoch 2321/5000
1/1 [=====] - 0s 0s/step - loss: 0.0327 - accuracy:
1.0000

Epoch 2322/5000
1/1 [=====] - 0s 0s/step - loss: 0.0327 - accuracy:
1.0000

Epoch 2323/5000
1/1 [=====] - 0s 0s/step - loss: 0.0326 - accuracy:
1.0000

Epoch 2324/5000
1/1 [=====] - 0s 0s/step - loss: 0.0326 - accuracy:
1.0000

Epoch 2325/5000
1/1 [=====] - 0s 999us/step - loss: 0.0326 - accuracy:
1.0000

Epoch 2326/5000
1/1 [=====] - 0s 0s/step - loss: 0.0325 - accuracy:
1.0000

Epoch 2327/5000
1/1 [=====] - 0s 0s/step - loss: 0.0325 - accuracy:
1.0000

Epoch 2328/5000
1/1 [=====] - 0s 998us/step - loss: 0.0325 - accuracy:
1.0000

Epoch 2329/5000
1/1 [=====] - 0s 997us/step - loss: 0.0324 - accuracy:
1.0000

Epoch 2330/5000
1/1 [=====] - 0s 998us/step - loss: 0.0324 - accuracy:
1.0000

Epoch 2331/5000
1/1 [=====] - 0s 998us/step - loss: 0.0323 - accuracy:
1.0000

Epoch 2332/5000
1/1 [=====] - 0s 0s/step - loss: 0.0323 - accuracy:
1.0000

Epoch 2333/5000
1/1 [=====] - 0s 0s/step - loss: 0.0323 - accuracy:
1.0000

Epoch 2334/5000
1/1 [=====] - 0s 0s/step - loss: 0.0322 - accuracy:
1.0000

Epoch 2335/5000
1/1 [=====] - 0s 0s/step - loss: 0.0322 - accuracy:
1.0000

Epoch 2336/5000
1/1 [=====] - 0s 998us/step - loss: 0.0322 - accuracy:
1.0000

Epoch 2337/5000
1/1 [=====] - 0s 997us/step - loss: 0.0321 - accuracy:
1.0000

Epoch 2338/5000
1/1 [=====] - 0s 998us/step - loss: 0.0321 - accuracy:
1.0000

Epoch 2339/5000
1/1 [=====] - 0s 0s/step - loss: 0.0320 - accuracy:
1.0000

Epoch 2340/5000
1/1 [=====] - 0s 0s/step - loss: 0.0320 - accuracy:
1.0000

Epoch 2341/5000
1/1 [=====] - 0s 0s/step - loss: 0.0320 - accuracy:
1.0000

Epoch 2342/5000
1/1 [=====] - 0s 997us/step - loss: 0.0319 - accuracy:
1.0000

Epoch 2343/5000
1/1 [=====] - 0s 0s/step - loss: 0.0319 - accuracy:
1.0000

Epoch 2344/5000
1/1 [=====] - 0s 998us/step - loss: 0.0319 - accuracy:
1.0000

Epoch 2345/5000
1/1 [=====] - 0s 997us/step - loss: 0.0318 - accuracy:
1.0000

Epoch 2346/5000
1/1 [=====] - 0s 0s/step - loss: 0.0318 - accuracy:
1.0000

Epoch 2347/5000
1/1 [=====] - 0s 0s/step - loss: 0.0318 - accuracy:
1.0000

Epoch 2348/5000
1/1 [=====] - 0s 998us/step - loss: 0.0317 - accuracy:
1.0000

Epoch 2349/5000
1/1 [=====] - 0s 997us/step - loss: 0.0317 - accuracy:
1.0000

Epoch 2350/5000
1/1 [=====] - 0s 996us/step - loss: 0.0316 - accuracy:
1.0000

Epoch 2351/5000
1/1 [=====] - 0s 0s/step - loss: 0.0316 - accuracy:
1.0000

Epoch 2352/5000
1/1 [=====] - 0s 0s/step - loss: 0.0316 - accuracy:
1.0000

Epoch 2353/5000
1/1 [=====] - 0s 997us/step - loss: 0.0315 - accuracy:
1.0000

Epoch 2354/5000
1/1 [=====] - 0s 0s/step - loss: 0.0315 - accuracy:
1.0000

Epoch 2355/5000
1/1 [=====] - 0s 453us/step - loss: 0.0315 - accuracy:
1.0000

Epoch 2356/5000
1/1 [=====] - 0s 999us/step - loss: 0.0314 - accuracy:
1.0000

Epoch 2357/5000
1/1 [=====] - 0s 0s/step - loss: 0.0314 - accuracy:
1.0000

Epoch 2358/5000
1/1 [=====] - 0s 0s/step - loss: 0.0314 - accuracy:
1.0000

Epoch 2359/5000
1/1 [=====] - 0s 0s/step - loss: 0.0313 - accuracy:
1.0000

Epoch 2360/5000
1/1 [=====] - 0s 998us/step - loss: 0.0313 - accuracy:
1.0000

Epoch 2361/5000
1/1 [=====] - 0s 0s/step - loss: 0.0312 - accuracy:
1.0000

Epoch 2362/5000
1/1 [=====] - 0s 0s/step - loss: 0.0312 - accuracy:
1.0000

Epoch 2363/5000
1/1 [=====] - 0s 0s/step - loss: 0.0312 - accuracy:
1.0000

Epoch 2364/5000
1/1 [=====] - 0s 0s/step - loss: 0.0311 - accuracy:
1.0000

Epoch 2365/5000
1/1 [=====] - 0s 998us/step - loss: 0.0311 - accuracy:
1.0000

Epoch 2366/5000
1/1 [=====] - 0s 0s/step - loss: 0.0311 - accuracy:
1.0000

Epoch 2367/5000
1/1 [=====] - 0s 0s/step - loss: 0.0310 - accuracy:
1.0000

Epoch 2368/5000
1/1 [=====] - 0s 998us/step - loss: 0.0310 - accuracy:
1.0000

Epoch 2369/5000
1/1 [=====] - 0s 0s/step - loss: 0.0310 - accuracy:
1.0000

Epoch 2370/5000
1/1 [=====] - 0s 997us/step - loss: 0.0309 - accuracy:
1.0000

Epoch 2371/5000
1/1 [=====] - 0s 997us/step - loss: 0.0309 - accuracy:
1.0000

Epoch 2372/5000
1/1 [=====] - 0s 0s/step - loss: 0.0309 - accuracy:
1.0000

Epoch 2373/5000
1/1 [=====] - 0s 0s/step - loss: 0.0308 - accuracy:
1.0000

Epoch 2374/5000
1/1 [=====] - 0s 997us/step - loss: 0.0308 - accuracy:
1.0000

Epoch 2375/5000
1/1 [=====] - 0s 0s/step - loss: 0.0308 - accuracy:
1.0000

Epoch 2376/5000
1/1 [=====] - 0s 997us/step - loss: 0.0307 - accuracy:
1.0000

Epoch 2377/5000
1/1 [=====] - 0s 0s/step - loss: 0.0307 - accuracy:
1.0000

Epoch 2378/5000
1/1 [=====] - 0s 998us/step - loss: 0.0307 - accuracy:
1.0000

Epoch 2379/5000
1/1 [=====] - 0s 0s/step - loss: 0.0306 - accuracy:
1.0000

Epoch 2380/5000
1/1 [=====] - 0s 997us/step - loss: 0.0306 - accuracy:
1.0000

Epoch 2381/5000
1/1 [=====] - 0s 0s/step - loss: 0.0305 - accuracy:
1.0000

Epoch 2382/5000
1/1 [=====] - 0s 997us/step - loss: 0.0305 - accuracy:
1.0000

Epoch 2383/5000
1/1 [=====] - 0s 997us/step - loss: 0.0305 - accuracy:
1.0000

Epoch 2384/5000
1/1 [=====] - 0s 998us/step - loss: 0.0304 - accuracy:
1.0000

Epoch 2385/5000
1/1 [=====] - 0s 997us/step - loss: 0.0304 - accuracy:
1.0000

Epoch 2386/5000
1/1 [=====] - 0s 0s/step - loss: 0.0304 - accuracy:
1.0000

Epoch 2387/5000
1/1 [=====] - 0s 0s/step - loss: 0.0303 - accuracy:
1.0000

Epoch 2388/5000
1/1 [=====] - 0s 0s/step - loss: 0.0303 - accuracy:
1.0000

Epoch 2389/5000
1/1 [=====] - 0s 998us/step - loss: 0.0303 - accuracy: 1.0000

Epoch 2390/5000
1/1 [=====] - 0s 997us/step - loss: 0.0302 - accuracy: 1.0000

Epoch 2391/5000
1/1 [=====] - 0s 998us/step - loss: 0.0302 - accuracy: 1.0000

Epoch 2392/5000
1/1 [=====] - 0s 997us/step - loss: 0.0302 - accuracy: 1.0000

Epoch 2393/5000
1/1 [=====] - 0s 0s/step - loss: 0.0301 - accuracy: 1.0000

Epoch 2394/5000
1/1 [=====] - 0s 0s/step - loss: 0.0301 - accuracy: 1.0000

Epoch 2395/5000
1/1 [=====] - 0s 0s/step - loss: 0.0301 - accuracy: 1.0000

Epoch 2396/5000
1/1 [=====] - 0s 0s/step - loss: 0.0300 - accuracy: 1.0000

Epoch 2397/5000
1/1 [=====] - 0s 0s/step - loss: 0.0300 - accuracy: 1.0000

Epoch 2398/5000
1/1 [=====] - 0s 997us/step - loss: 0.0300 - accuracy: 1.0000

Epoch 2399/5000
1/1 [=====] - 0s 998us/step - loss: 0.0299 - accuracy: 1.0000

Epoch 2400/5000
1/1 [=====] - 0s 0s/step - loss: 0.0299 - accuracy: 1.0000

Epoch 2401/5000
1/1 [=====] - 0s 0s/step - loss: 0.0299 - accuracy: 1.0000

Epoch 2402/5000
1/1 [=====] - 0s 998us/step - loss: 0.0298 - accuracy: 1.0000

Epoch 2403/5000
1/1 [=====] - 0s 998us/step - loss: 0.0298 - accuracy: 1.0000

Epoch 2404/5000
1/1 [=====] - 0s 0s/step - loss: 0.0298 - accuracy: 1.0000

Epoch 2405/5000
1/1 [=====] - 0s 996us/step - loss: 0.0297 - accuracy: 1.0000

Epoch 2406/5000
1/1 [=====] - 0s 997us/step - loss: 0.0297 - accuracy: 1.0000

Epoch 2407/5000
1/1 [=====] - 0s 998us/step - loss: 0.0297 - accuracy: 1.0000

Epoch 2408/5000
1/1 [=====] - 0s 998us/step - loss: 0.0296 - accuracy: 1.0000

Epoch 2409/5000
1/1 [=====] - 0s 0s/step - loss: 0.0296 - accuracy: 1.0000

Epoch 2410/5000
1/1 [=====] - 0s 0s/step - loss: 0.0296 - accuracy: 1.0000

Epoch 2411/5000
1/1 [=====] - 0s 0s/step - loss: 0.0295 - accuracy: 1.0000

Epoch 2412/5000
1/1 [=====] - 0s 0s/step - loss: 0.0295 - accuracy: 1.0000

Epoch 2413/5000
1/1 [=====] - 0s 0s/step - loss: 0.0295 - accuracy: 1.0000

Epoch 2414/5000
1/1 [=====] - 0s 998us/step - loss: 0.0294 - accuracy: 1.0000

Epoch 2415/5000
1/1 [=====] - 0s 0s/step - loss: 0.0294 - accuracy: 1.0000

Epoch 2416/5000
1/1 [=====] - 0s 969us/step - loss: 0.0294 - accuracy: 1.0000

Epoch 2417/5000
1/1 [=====] - 0s 996us/step - loss: 0.0293 - accuracy: 1.0000

Epoch 2418/5000
1/1 [=====] - 0s 998us/step - loss: 0.0293 - accuracy: 1.0000

Epoch 2419/5000
1/1 [=====] - 0s 998us/step - loss: 0.0293 - accuracy: 1.0000

Epoch 2420/5000
1/1 [=====] - 0s 0s/step - loss: 0.0292 - accuracy: 1.0000

Epoch 2421/5000
1/1 [=====] - 0s 996us/step - loss: 0.0292 - accuracy:
1.0000
Epoch 2422/5000
1/1 [=====] - 0s 998us/step - loss: 0.0292 - accuracy:
1.0000
Epoch 2423/5000
1/1 [=====] - 0s 0s/step - loss: 0.0291 - accuracy:
1.0000
Epoch 2424/5000
1/1 [=====] - 0s 0s/step - loss: 0.0291 - accuracy:
1.0000
Epoch 2425/5000
1/1 [=====] - 0s 0s/step - loss: 0.0291 - accuracy:
1.0000
Epoch 2426/5000
1/1 [=====] - 0s 999us/step - loss: 0.0290 - accuracy:
1.0000
Epoch 2427/5000
1/1 [=====] - 0s 0s/step - loss: 0.0290 - accuracy:
1.0000
Epoch 2428/5000
1/1 [=====] - 0s 0s/step - loss: 0.0290 - accuracy:
1.0000
Epoch 2429/5000
1/1 [=====] - 0s 0s/step - loss: 0.0289 - accuracy:
1.0000
Epoch 2430/5000
1/1 [=====] - 0s 0s/step - loss: 0.0289 - accuracy:
1.0000
Epoch 2431/5000
1/1 [=====] - 0s 0s/step - loss: 0.0289 - accuracy:
1.0000
Epoch 2432/5000
1/1 [=====] - 0s 0s/step - loss: 0.0288 - accuracy:
1.0000
Epoch 2433/5000
1/1 [=====] - 0s 0s/step - loss: 0.0288 - accuracy:
1.0000
Epoch 2434/5000
1/1 [=====] - 0s 997us/step - loss: 0.0288 - accuracy:
1.0000
Epoch 2435/5000
1/1 [=====] - 0s 998us/step - loss: 0.0287 - accuracy:
1.0000
Epoch 2436/5000
1/1 [=====] - 0s 997us/step - loss: 0.0287 - accuracy:
1.0000

Epoch 2437/5000
1/1 [=====] - 0s 0s/step - loss: 0.0287 - accuracy:
1.0000

Epoch 2438/5000
1/1 [=====] - 0s 0s/step - loss: 0.0287 - accuracy:
1.0000

Epoch 2439/5000
1/1 [=====] - 0s 0s/step - loss: 0.0286 - accuracy:
1.0000

Epoch 2440/5000
1/1 [=====] - 0s 997us/step - loss: 0.0286 - accuracy:
1.0000

Epoch 2441/5000
1/1 [=====] - 0s 998us/step - loss: 0.0286 - accuracy:
1.0000

Epoch 2442/5000
1/1 [=====] - 0s 997us/step - loss: 0.0285 - accuracy:
1.0000

Epoch 2443/5000
1/1 [=====] - 0s 0s/step - loss: 0.0285 - accuracy:
1.0000

Epoch 2444/5000
1/1 [=====] - 0s 0s/step - loss: 0.0285 - accuracy:
1.0000

Epoch 2445/5000
1/1 [=====] - 0s 0s/step - loss: 0.0284 - accuracy:
1.0000

Epoch 2446/5000
1/1 [=====] - 0s 997us/step - loss: 0.0284 - accuracy:
1.0000

Epoch 2447/5000
1/1 [=====] - 0s 998us/step - loss: 0.0284 - accuracy:
1.0000

Epoch 2448/5000
1/1 [=====] - 0s 0s/step - loss: 0.0283 - accuracy:
1.0000

Epoch 2449/5000
1/1 [=====] - 0s 0s/step - loss: 0.0283 - accuracy:
1.0000

Epoch 2450/5000
1/1 [=====] - 0s 0s/step - loss: 0.0283 - accuracy:
1.0000

Epoch 2451/5000
1/1 [=====] - 0s 999us/step - loss: 0.0282 - accuracy:
1.0000

Epoch 2452/5000
1/1 [=====] - 0s 0s/step - loss: 0.0282 - accuracy:
1.0000

Epoch 2453/5000
1/1 [=====] - 0s 0s/step - loss: 0.0282 - accuracy:
1.0000

Epoch 2454/5000
1/1 [=====] - 0s 998us/step - loss: 0.0281 - accuracy:
1.0000

Epoch 2455/5000
1/1 [=====] - 0s 996us/step - loss: 0.0281 - accuracy:
1.0000

Epoch 2456/5000
1/1 [=====] - 0s 0s/step - loss: 0.0281 - accuracy:
1.0000

Epoch 2457/5000
1/1 [=====] - 0s 0s/step - loss: 0.0281 - accuracy:
1.0000

Epoch 2458/5000
1/1 [=====] - 0s 998us/step - loss: 0.0280 - accuracy:
1.0000

Epoch 2459/5000
1/1 [=====] - 0s 0s/step - loss: 0.0280 - accuracy:
1.0000

Epoch 2460/5000
1/1 [=====] - 0s 0s/step - loss: 0.0280 - accuracy:
1.0000

Epoch 2461/5000
1/1 [=====] - 0s 997us/step - loss: 0.0279 - accuracy:
1.0000

Epoch 2462/5000
1/1 [=====] - 0s 998us/step - loss: 0.0279 - accuracy:
1.0000

Epoch 2463/5000
1/1 [=====] - 0s 997us/step - loss: 0.0279 - accuracy:
1.0000

Epoch 2464/5000
1/1 [=====] - 0s 997us/step - loss: 0.0278 - accuracy:
1.0000

Epoch 2465/5000
1/1 [=====] - 0s 0s/step - loss: 0.0278 - accuracy:
1.0000

Epoch 2466/5000
1/1 [=====] - 0s 0s/step - loss: 0.0278 - accuracy:
1.0000

Epoch 2467/5000
1/1 [=====] - 0s 0s/step - loss: 0.0277 - accuracy:
1.0000

Epoch 2468/5000
1/1 [=====] - 0s 0s/step - loss: 0.0277 - accuracy:
1.0000

Epoch 2469/5000
1/1 [=====] - 0s 998us/step - loss: 0.0277 - accuracy:
1.0000

Epoch 2470/5000
1/1 [=====] - 0s 997us/step - loss: 0.0277 - accuracy:
1.0000

Epoch 2471/5000
1/1 [=====] - 0s 0s/step - loss: 0.0276 - accuracy:
1.0000

Epoch 2472/5000
1/1 [=====] - 0s 0s/step - loss: 0.0276 - accuracy:
1.0000

Epoch 2473/5000
1/1 [=====] - 0s 0s/step - loss: 0.0276 - accuracy:
1.0000

Epoch 2474/5000
1/1 [=====] - 0s 998us/step - loss: 0.0275 - accuracy:
1.0000

Epoch 2475/5000
1/1 [=====] - 0s 0s/step - loss: 0.0275 - accuracy:
1.0000

Epoch 2476/5000
1/1 [=====] - 0s 999us/step - loss: 0.0275 - accuracy:
1.0000

Epoch 2477/5000
1/1 [=====] - 0s 0s/step - loss: 0.0274 - accuracy:
1.0000

Epoch 2478/5000
1/1 [=====] - 0s 0s/step - loss: 0.0274 - accuracy:
1.0000

Epoch 2479/5000
1/1 [=====] - 0s 998us/step - loss: 0.0274 - accuracy:
1.0000

Epoch 2480/5000
1/1 [=====] - 0s 998us/step - loss: 0.0274 - accuracy:
1.0000

Epoch 2481/5000
1/1 [=====] - 0s 998us/step - loss: 0.0273 - accuracy:
1.0000

Epoch 2482/5000
1/1 [=====] - 0s 0s/step - loss: 0.0273 - accuracy:
1.0000

Epoch 2483/5000
1/1 [=====] - 0s 0s/step - loss: 0.0273 - accuracy:
1.0000

Epoch 2484/5000
1/1 [=====] - 0s 0s/step - loss: 0.0272 - accuracy:
1.0000

Epoch 2485/5000
1/1 [=====] - 0s 998us/step - loss: 0.0272 - accuracy:
1.0000

Epoch 2486/5000
1/1 [=====] - 0s 998us/step - loss: 0.0272 - accuracy:
1.0000

Epoch 2487/5000
1/1 [=====] - 0s 998us/step - loss: 0.0271 - accuracy:
1.0000

Epoch 2488/5000
1/1 [=====] - 0s 997us/step - loss: 0.0271 - accuracy:
1.0000

Epoch 2489/5000
1/1 [=====] - 0s 997us/step - loss: 0.0271 - accuracy:
1.0000

Epoch 2490/5000
1/1 [=====] - 0s 996us/step - loss: 0.0271 - accuracy:
1.0000

Epoch 2491/5000
1/1 [=====] - 0s 997us/step - loss: 0.0270 - accuracy:
1.0000

Epoch 2492/5000
1/1 [=====] - 0s 0s/step - loss: 0.0270 - accuracy:
1.0000

Epoch 2493/5000
1/1 [=====] - 0s 0s/step - loss: 0.0270 - accuracy:
1.0000

Epoch 2494/5000
1/1 [=====] - 0s 0s/step - loss: 0.0269 - accuracy:
1.0000

Epoch 2495/5000
1/1 [=====] - 0s 0s/step - loss: 0.0269 - accuracy:
1.0000

Epoch 2496/5000
1/1 [=====] - 0s 997us/step - loss: 0.0269 - accuracy:
1.0000

Epoch 2497/5000
1/1 [=====] - 0s 998us/step - loss: 0.0268 - accuracy:
1.0000

Epoch 2498/5000
1/1 [=====] - 0s 0s/step - loss: 0.0268 - accuracy:
1.0000

Epoch 2499/5000
1/1 [=====] - 0s 996us/step - loss: 0.0268 - accuracy:
1.0000

Epoch 2500/5000
1/1 [=====] - 0s 0s/step - loss: 0.0268 - accuracy:
1.0000

Epoch 2501/5000
1/1 [=====] - 0s 0s/step - loss: 0.0267 - accuracy:
1.0000

Epoch 2502/5000
1/1 [=====] - 0s 0s/step - loss: 0.0267 - accuracy:
1.0000

Epoch 2503/5000
1/1 [=====] - 0s 0s/step - loss: 0.0267 - accuracy:
1.0000

Epoch 2504/5000
1/1 [=====] - 0s 0s/step - loss: 0.0266 - accuracy:
1.0000

Epoch 2505/5000
1/1 [=====] - 0s 999us/step - loss: 0.0266 - accuracy:
1.0000

Epoch 2506/5000
1/1 [=====] - 0s 0s/step - loss: 0.0266 - accuracy:
1.0000

Epoch 2507/5000
1/1 [=====] - 0s 0s/step - loss: 0.0266 - accuracy:
1.0000

Epoch 2508/5000
1/1 [=====] - 0s 997us/step - loss: 0.0265 - accuracy:
1.0000

Epoch 2509/5000
1/1 [=====] - 0s 0s/step - loss: 0.0265 - accuracy:
1.0000

Epoch 2510/5000
1/1 [=====] - 0s 0s/step - loss: 0.0265 - accuracy:
1.0000

Epoch 2511/5000
1/1 [=====] - 0s 0s/step - loss: 0.0264 - accuracy:
1.0000

Epoch 2512/5000
1/1 [=====] - 0s 0s/step - loss: 0.0264 - accuracy:
1.0000

Epoch 2513/5000
1/1 [=====] - 0s 0s/step - loss: 0.0264 - accuracy:
1.0000

Epoch 2514/5000
1/1 [=====] - 0s 0s/step - loss: 0.0264 - accuracy:
1.0000

Epoch 2515/5000
1/1 [=====] - 0s 998us/step - loss: 0.0263 - accuracy:
1.0000

Epoch 2516/5000
1/1 [=====] - 0s 0s/step - loss: 0.0263 - accuracy:
1.0000

Epoch 2517/5000
1/1 [=====] - 0s 0s/step - loss: 0.0263 - accuracy:
1.0000

Epoch 2518/5000
1/1 [=====] - 0s 997us/step - loss: 0.0262 - accuracy:
1.0000

Epoch 2519/5000
1/1 [=====] - 0s 997us/step - loss: 0.0262 - accuracy:
1.0000

Epoch 2520/5000
1/1 [=====] - 0s 0s/step - loss: 0.0262 - accuracy:
1.0000

Epoch 2521/5000
1/1 [=====] - 0s 0s/step - loss: 0.0261 - accuracy:
1.0000

Epoch 2522/5000
1/1 [=====] - 0s 997us/step - loss: 0.0261 - accuracy:
1.0000

Epoch 2523/5000
1/1 [=====] - 0s 996us/step - loss: 0.0261 - accuracy:
1.0000

Epoch 2524/5000
1/1 [=====] - 0s 998us/step - loss: 0.0261 - accuracy:
1.0000

Epoch 2525/5000
1/1 [=====] - 0s 0s/step - loss: 0.0260 - accuracy:
1.0000

Epoch 2526/5000
1/1 [=====] - 0s 0s/step - loss: 0.0260 - accuracy:
1.0000

Epoch 2527/5000
1/1 [=====] - 0s 0s/step - loss: 0.0260 - accuracy:
1.0000

Epoch 2528/5000
1/1 [=====] - 0s 998us/step - loss: 0.0259 - accuracy:
1.0000

Epoch 2529/5000
1/1 [=====] - 0s 998us/step - loss: 0.0259 - accuracy:
1.0000

Epoch 2530/5000
1/1 [=====] - 0s 997us/step - loss: 0.0259 - accuracy:
1.0000

Epoch 2531/5000
1/1 [=====] - 0s 997us/step - loss: 0.0259 - accuracy:
1.0000

Epoch 2532/5000
1/1 [=====] - 0s 0s/step - loss: 0.0258 - accuracy:
1.0000

Epoch 2533/5000
1/1 [=====] - 0s 0s/step - loss: 0.0258 - accuracy:
1.0000

Epoch 2534/5000
1/1 [=====] - 0s 997us/step - loss: 0.0258 - accuracy:
1.0000

Epoch 2535/5000
1/1 [=====] - 0s 0s/step - loss: 0.0258 - accuracy:
1.0000

Epoch 2536/5000
1/1 [=====] - 0s 0s/step - loss: 0.0257 - accuracy:
1.0000

Epoch 2537/5000
1/1 [=====] - 0s 998us/step - loss: 0.0257 - accuracy:
1.0000

Epoch 2538/5000
1/1 [=====] - 0s 0s/step - loss: 0.0257 - accuracy:
1.0000

Epoch 2539/5000
1/1 [=====] - 0s 0s/step - loss: 0.0256 - accuracy:
1.0000

Epoch 2540/5000
1/1 [=====] - 0s 997us/step - loss: 0.0256 - accuracy:
1.0000

Epoch 2541/5000
1/1 [=====] - 0s 0s/step - loss: 0.0256 - accuracy:
1.0000

Epoch 2542/5000
1/1 [=====] - 0s 0s/step - loss: 0.0256 - accuracy:
1.0000

Epoch 2543/5000
1/1 [=====] - 0s 0s/step - loss: 0.0255 - accuracy:
1.0000

Epoch 2544/5000
1/1 [=====] - 0s 0s/step - loss: 0.0255 - accuracy:
1.0000

Epoch 2545/5000
1/1 [=====] - 0s 0s/step - loss: 0.0255 - accuracy:
1.0000

Epoch 2546/5000
1/1 [=====] - 0s 0s/step - loss: 0.0254 - accuracy:
1.0000

Epoch 2547/5000
1/1 [=====] - 0s 997us/step - loss: 0.0254 - accuracy:
1.0000

Epoch 2548/5000
1/1 [=====] - 0s 0s/step - loss: 0.0254 - accuracy:
1.0000

Epoch 2549/5000
1/1 [=====] - 0s 0s/step - loss: 0.0254 - accuracy:
1.0000

Epoch 2550/5000
1/1 [=====] - 0s 0s/step - loss: 0.0253 - accuracy:
1.0000

Epoch 2551/5000
1/1 [=====] - 0s 998us/step - loss: 0.0253 - accuracy:
1.0000

Epoch 2552/5000
1/1 [=====] - 0s 997us/step - loss: 0.0253 - accuracy:
1.0000

Epoch 2553/5000
1/1 [=====] - 0s 997us/step - loss: 0.0253 - accuracy:
1.0000

Epoch 2554/5000
1/1 [=====] - 0s 0s/step - loss: 0.0252 - accuracy:
1.0000

Epoch 2555/5000
1/1 [=====] - 0s 0s/step - loss: 0.0252 - accuracy:
1.0000

Epoch 2556/5000
1/1 [=====] - 0s 0s/step - loss: 0.0252 - accuracy:
1.0000

Epoch 2557/5000
1/1 [=====] - 0s 0s/step - loss: 0.0251 - accuracy:
1.0000

Epoch 2558/5000
1/1 [=====] - 0s 0s/step - loss: 0.0251 - accuracy:
1.0000

Epoch 2559/5000
1/1 [=====] - 0s 0s/step - loss: 0.0251 - accuracy:
1.0000

Epoch 2560/5000
1/1 [=====] - 0s 997us/step - loss: 0.0251 - accuracy:
1.0000

Epoch 2561/5000
1/1 [=====] - 0s 998us/step - loss: 0.0250 - accuracy:
1.0000

Epoch 2562/5000
1/1 [=====] - 0s 998us/step - loss: 0.0250 - accuracy:
1.0000

Epoch 2563/5000
1/1 [=====] - 0s 0s/step - loss: 0.0250 - accuracy:
1.0000

Epoch 2564/5000
1/1 [=====] - 0s 0s/step - loss: 0.0250 - accuracy:
1.0000

Epoch 2565/5000
1/1 [=====] - 0s 0s/step - loss: 0.0249 - accuracy:
1.0000

Epoch 2566/5000
1/1 [=====] - 0s 0s/step - loss: 0.0249 - accuracy:
1.0000

Epoch 2567/5000
1/1 [=====] - 0s 0s/step - loss: 0.0249 - accuracy:
1.0000

Epoch 2568/5000
1/1 [=====] - 0s 0s/step - loss: 0.0249 - accuracy:
1.0000

Epoch 2569/5000
1/1 [=====] - 0s 997us/step - loss: 0.0248 - accuracy:
1.0000

Epoch 2570/5000
1/1 [=====] - 0s 0s/step - loss: 0.0248 - accuracy:
1.0000

Epoch 2571/5000
1/1 [=====] - 0s 0s/step - loss: 0.0248 - accuracy:
1.0000

Epoch 2572/5000
1/1 [=====] - 0s 0s/step - loss: 0.0247 - accuracy:
1.0000

Epoch 2573/5000
1/1 [=====] - 0s 0s/step - loss: 0.0247 - accuracy:
1.0000

Epoch 2574/5000
1/1 [=====] - 0s 998us/step - loss: 0.0247 - accuracy:
1.0000

Epoch 2575/5000
1/1 [=====] - 0s 0s/step - loss: 0.0247 - accuracy:
1.0000

Epoch 2576/5000
1/1 [=====] - 0s 997us/step - loss: 0.0246 - accuracy:
1.0000

Epoch 2577/5000
1/1 [=====] - 0s 0s/step - loss: 0.0246 - accuracy:
1.0000

Epoch 2578/5000
1/1 [=====] - 0s 997us/step - loss: 0.0246 - accuracy:
1.0000

Epoch 2579/5000
1/1 [=====] - 0s 997us/step - loss: 0.0246 - accuracy:
1.0000

Epoch 2580/5000
1/1 [=====] - 0s 0s/step - loss: 0.0245 - accuracy:
1.0000

Epoch 2581/5000
1/1 [=====] - 0s 997us/step - loss: 0.0245 - accuracy:
1.0000

Epoch 2582/5000
1/1 [=====] - 0s 0s/step - loss: 0.0245 - accuracy:
1.0000

Epoch 2583/5000
1/1 [=====] - 0s 999us/step - loss: 0.0245 - accuracy:
1.0000

Epoch 2584/5000
1/1 [=====] - 0s 997us/step - loss: 0.0244 - accuracy:
1.0000

Epoch 2585/5000
1/1 [=====] - 0s 0s/step - loss: 0.0244 - accuracy:
1.0000

Epoch 2586/5000
1/1 [=====] - 0s 0s/step - loss: 0.0244 - accuracy:
1.0000

Epoch 2587/5000
1/1 [=====] - 0s 0s/step - loss: 0.0243 - accuracy:
1.0000

Epoch 2588/5000
1/1 [=====] - 0s 998us/step - loss: 0.0243 - accuracy:
1.0000

Epoch 2589/5000
1/1 [=====] - 0s 0s/step - loss: 0.0243 - accuracy:
1.0000

Epoch 2590/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0243 - accuracy:
1.0000

Epoch 2591/5000
1/1 [=====] - 0s 0s/step - loss: 0.0242 - accuracy:
1.0000

Epoch 2592/5000
1/1 [=====] - 0s 0s/step - loss: 0.0242 - accuracy:
1.0000

Epoch 2593/5000
1/1 [=====] - 0s 0s/step - loss: 0.0242 - accuracy:
1.0000

Epoch 2594/5000
1/1 [=====] - 0s 0s/step - loss: 0.0242 - accuracy:
1.0000

Epoch 2595/5000
1/1 [=====] - 0s 0s/step - loss: 0.0241 - accuracy:
1.0000

Epoch 2596/5000
1/1 [=====] - 0s 997us/step - loss: 0.0241 - accuracy:
1.0000

Epoch 2597/5000
1/1 [=====] - 0s 998us/step - loss: 0.0241 - accuracy: 1.0000

Epoch 2598/5000
1/1 [=====] - 0s 998us/step - loss: 0.0241 - accuracy: 1.0000

Epoch 2599/5000
1/1 [=====] - 0s 998us/step - loss: 0.0240 - accuracy: 1.0000

Epoch 2600/5000
1/1 [=====] - 0s 0s/step - loss: 0.0240 - accuracy: 1.0000

Epoch 2601/5000
1/1 [=====] - 0s 0s/step - loss: 0.0240 - accuracy: 1.0000

Epoch 2602/5000
1/1 [=====] - 0s 0s/step - loss: 0.0240 - accuracy: 1.0000

Epoch 2603/5000
1/1 [=====] - 0s 997us/step - loss: 0.0239 - accuracy: 1.0000

Epoch 2604/5000
1/1 [=====] - 0s 0s/step - loss: 0.0239 - accuracy: 1.0000

Epoch 2605/5000
1/1 [=====] - 0s 0s/step - loss: 0.0239 - accuracy: 1.0000

Epoch 2606/5000
1/1 [=====] - 0s 0s/step - loss: 0.0239 - accuracy: 1.0000

Epoch 2607/5000
1/1 [=====] - 0s 0s/step - loss: 0.0238 - accuracy: 1.0000

Epoch 2608/5000
1/1 [=====] - 0s 0s/step - loss: 0.0238 - accuracy: 1.0000

Epoch 2609/5000
1/1 [=====] - 0s 0s/step - loss: 0.0238 - accuracy: 1.0000

Epoch 2610/5000
1/1 [=====] - 0s 0s/step - loss: 0.0238 - accuracy: 1.0000

Epoch 2611/5000
1/1 [=====] - 0s 998us/step - loss: 0.0237 - accuracy: 1.0000

Epoch 2612/5000
1/1 [=====] - 0s 998us/step - loss: 0.0237 - accuracy: 1.0000

Epoch 2613/5000
1/1 [=====] - 0s 0s/step - loss: 0.0237 - accuracy:
1.0000

Epoch 2614/5000
1/1 [=====] - 0s 0s/step - loss: 0.0237 - accuracy:
1.0000

Epoch 2615/5000
1/1 [=====] - 0s 998us/step - loss: 0.0236 - accuracy:
1.0000

Epoch 2616/5000
1/1 [=====] - 0s 998us/step - loss: 0.0236 - accuracy:
1.0000

Epoch 2617/5000
1/1 [=====] - 0s 997us/step - loss: 0.0236 - accuracy:
1.0000

Epoch 2618/5000
1/1 [=====] - 0s 0s/step - loss: 0.0236 - accuracy:
1.0000

Epoch 2619/5000
1/1 [=====] - 0s 997us/step - loss: 0.0235 - accuracy:
1.0000

Epoch 2620/5000
1/1 [=====] - 0s 997us/step - loss: 0.0235 - accuracy:
1.0000

Epoch 2621/5000
1/1 [=====] - 0s 998us/step - loss: 0.0235 - accuracy:
1.0000

Epoch 2622/5000
1/1 [=====] - 0s 997us/step - loss: 0.0235 - accuracy:
1.0000

Epoch 2623/5000
1/1 [=====] - 0s 998us/step - loss: 0.0234 - accuracy:
1.0000

Epoch 2624/5000
1/1 [=====] - 0s 0s/step - loss: 0.0234 - accuracy:
1.0000

Epoch 2625/5000
1/1 [=====] - 0s 0s/step - loss: 0.0234 - accuracy:
1.0000

Epoch 2626/5000
1/1 [=====] - 0s 997us/step - loss: 0.0234 - accuracy:
1.0000

Epoch 2627/5000
1/1 [=====] - 0s 998us/step - loss: 0.0233 - accuracy:
1.0000

Epoch 2628/5000
1/1 [=====] - 0s 0s/step - loss: 0.0233 - accuracy:
1.0000

Epoch 2629/5000
1/1 [=====] - 0s 0s/step - loss: 0.0233 - accuracy:
1.0000

Epoch 2630/5000
1/1 [=====] - 0s 997us/step - loss: 0.0233 - accuracy:
1.0000

Epoch 2631/5000
1/1 [=====] - 0s 0s/step - loss: 0.0232 - accuracy:
1.0000

Epoch 2632/5000
1/1 [=====] - 0s 0s/step - loss: 0.0232 - accuracy:
1.0000

Epoch 2633/5000
1/1 [=====] - 0s 997us/step - loss: 0.0232 - accuracy:
1.0000

Epoch 2634/5000
1/1 [=====] - 0s 997us/step - loss: 0.0232 - accuracy:
1.0000

Epoch 2635/5000
1/1 [=====] - 0s 0s/step - loss: 0.0231 - accuracy:
1.0000

Epoch 2636/5000
1/1 [=====] - 0s 0s/step - loss: 0.0231 - accuracy:
1.0000

Epoch 2637/5000
1/1 [=====] - 0s 0s/step - loss: 0.0231 - accuracy:
1.0000

Epoch 2638/5000
1/1 [=====] - 0s 997us/step - loss: 0.0231 - accuracy:
1.0000

Epoch 2639/5000
1/1 [=====] - 0s 997us/step - loss: 0.0230 - accuracy:
1.0000

Epoch 2640/5000
1/1 [=====] - 0s 0s/step - loss: 0.0230 - accuracy:
1.0000

Epoch 2641/5000
1/1 [=====] - 0s 997us/step - loss: 0.0230 - accuracy:
1.0000

Epoch 2642/5000
1/1 [=====] - 0s 998us/step - loss: 0.0230 - accuracy:
1.0000

Epoch 2643/5000
1/1 [=====] - 0s 997us/step - loss: 0.0229 - accuracy:
1.0000

Epoch 2644/5000
1/1 [=====] - 0s 997us/step - loss: 0.0229 - accuracy:
1.0000

Epoch 2645/5000
1/1 [=====] - 0s 998us/step - loss: 0.0229 - accuracy:
1.0000

Epoch 2646/5000
1/1 [=====] - 0s 998us/step - loss: 0.0229 - accuracy:
1.0000

Epoch 2647/5000
1/1 [=====] - 0s 0s/step - loss: 0.0228 - accuracy:
1.0000

Epoch 2648/5000
1/1 [=====] - 0s 0s/step - loss: 0.0228 - accuracy:
1.0000

Epoch 2649/5000
1/1 [=====] - 0s 0s/step - loss: 0.0228 - accuracy:
1.0000

Epoch 2650/5000
1/1 [=====] - 0s 995us/step - loss: 0.0228 - accuracy:
1.0000

Epoch 2651/5000
1/1 [=====] - 0s 998us/step - loss: 0.0227 - accuracy:
1.0000

Epoch 2652/5000
1/1 [=====] - 0s 0s/step - loss: 0.0227 - accuracy:
1.0000

Epoch 2653/5000
1/1 [=====] - 0s 0s/step - loss: 0.0227 - accuracy:
1.0000

Epoch 2654/5000
1/1 [=====] - 0s 0s/step - loss: 0.0227 - accuracy:
1.0000

Epoch 2655/5000
1/1 [=====] - 0s 0s/step - loss: 0.0227 - accuracy:
1.0000

Epoch 2656/5000
1/1 [=====] - 0s 0s/step - loss: 0.0226 - accuracy:
1.0000

Epoch 2657/5000
1/1 [=====] - 0s 997us/step - loss: 0.0226 - accuracy:
1.0000

Epoch 2658/5000
1/1 [=====] - 0s 997us/step - loss: 0.0226 - accuracy:
1.0000

Epoch 2659/5000
1/1 [=====] - 0s 0s/step - loss: 0.0226 - accuracy:
1.0000

Epoch 2660/5000
1/1 [=====] - 0s 997us/step - loss: 0.0225 - accuracy:
1.0000

Epoch 2661/5000
1/1 [=====] - 0s 997us/step - loss: 0.0225 - accuracy: 1.0000

Epoch 2662/5000
1/1 [=====] - 0s 0s/step - loss: 0.0225 - accuracy: 1.0000

Epoch 2663/5000
1/1 [=====] - 0s 0s/step - loss: 0.0225 - accuracy: 1.0000

Epoch 2664/5000
1/1 [=====] - 0s 0s/step - loss: 0.0224 - accuracy: 1.0000

Epoch 2665/5000
1/1 [=====] - 0s 0s/step - loss: 0.0224 - accuracy: 1.0000

Epoch 2666/5000
1/1 [=====] - 0s 0s/step - loss: 0.0224 - accuracy: 1.0000

Epoch 2667/5000
1/1 [=====] - 0s 0s/step - loss: 0.0224 - accuracy: 1.0000

Epoch 2668/5000
1/1 [=====] - 0s 0s/step - loss: 0.0223 - accuracy: 1.0000

Epoch 2669/5000
1/1 [=====] - 0s 0s/step - loss: 0.0223 - accuracy: 1.0000

Epoch 2670/5000
1/1 [=====] - 0s 998us/step - loss: 0.0223 - accuracy: 1.0000

Epoch 2671/5000
1/1 [=====] - 0s 998us/step - loss: 0.0223 - accuracy: 1.0000

Epoch 2672/5000
1/1 [=====] - 0s 0s/step - loss: 0.0223 - accuracy: 1.0000

Epoch 2673/5000
1/1 [=====] - 0s 997us/step - loss: 0.0222 - accuracy: 1.0000

Epoch 2674/5000
1/1 [=====] - 0s 0s/step - loss: 0.0222 - accuracy: 1.0000

Epoch 2675/5000
1/1 [=====] - 0s 0s/step - loss: 0.0222 - accuracy: 1.0000

Epoch 2676/5000
1/1 [=====] - 0s 0s/step - loss: 0.0222 - accuracy: 1.0000

Epoch 2677/5000
1/1 [=====] - 0s 998us/step - loss: 0.0221 - accuracy: 1.0000

Epoch 2678/5000
1/1 [=====] - 0s 0s/step - loss: 0.0221 - accuracy: 1.0000

Epoch 2679/5000
1/1 [=====] - 0s 0s/step - loss: 0.0221 - accuracy: 1.0000

Epoch 2680/5000
1/1 [=====] - 0s 997us/step - loss: 0.0221 - accuracy: 1.0000

Epoch 2681/5000
1/1 [=====] - 0s 996us/step - loss: 0.0220 - accuracy: 1.0000

Epoch 2682/5000
1/1 [=====] - 0s 0s/step - loss: 0.0220 - accuracy: 1.0000

Epoch 2683/5000
1/1 [=====] - 0s 0s/step - loss: 0.0220 - accuracy: 1.0000

Epoch 2684/5000
1/1 [=====] - 0s 997us/step - loss: 0.0220 - accuracy: 1.0000

Epoch 2685/5000
1/1 [=====] - 0s 998us/step - loss: 0.0219 - accuracy: 1.0000

Epoch 2686/5000
1/1 [=====] - 0s 0s/step - loss: 0.0219 - accuracy: 1.0000

Epoch 2687/5000
1/1 [=====] - 0s 0s/step - loss: 0.0219 - accuracy: 1.0000

Epoch 2688/5000
1/1 [=====] - 0s 0s/step - loss: 0.0219 - accuracy: 1.0000

Epoch 2689/5000
1/1 [=====] - 0s 998us/step - loss: 0.0219 - accuracy: 1.0000

Epoch 2690/5000
1/1 [=====] - 0s 0s/step - loss: 0.0218 - accuracy: 1.0000

Epoch 2691/5000
1/1 [=====] - 0s 0s/step - loss: 0.0218 - accuracy: 1.0000

Epoch 2692/5000
1/1 [=====] - 0s 998us/step - loss: 0.0218 - accuracy: 1.0000

Epoch 2693/5000
1/1 [=====] - 0s 998us/step - loss: 0.0218 - accuracy:
1.0000

Epoch 2694/5000
1/1 [=====] - 0s 0s/step - loss: 0.0217 - accuracy:
1.0000

Epoch 2695/5000
1/1 [=====] - 0s 998us/step - loss: 0.0217 - accuracy:
1.0000

Epoch 2696/5000
1/1 [=====] - 0s 0s/step - loss: 0.0217 - accuracy:
1.0000

Epoch 2697/5000
1/1 [=====] - 0s 0s/step - loss: 0.0217 - accuracy:
1.0000

Epoch 2698/5000
1/1 [=====] - 0s 0s/step - loss: 0.0217 - accuracy:
1.0000

Epoch 2699/5000
1/1 [=====] - 0s 997us/step - loss: 0.0216 - accuracy:
1.0000

Epoch 2700/5000
1/1 [=====] - 0s 998us/step - loss: 0.0216 - accuracy:
1.0000

Epoch 2701/5000
1/1 [=====] - 0s 0s/step - loss: 0.0216 - accuracy:
1.0000

Epoch 2702/5000
1/1 [=====] - 0s 997us/step - loss: 0.0216 - accuracy:
1.0000

Epoch 2703/5000
1/1 [=====] - 0s 0s/step - loss: 0.0215 - accuracy:
1.0000

Epoch 2704/5000
1/1 [=====] - 0s 0s/step - loss: 0.0215 - accuracy:
1.0000

Epoch 2705/5000
1/1 [=====] - 0s 0s/step - loss: 0.0215 - accuracy:
1.0000

Epoch 2706/5000
1/1 [=====] - 0s 0s/step - loss: 0.0215 - accuracy:
1.0000

Epoch 2707/5000
1/1 [=====] - 0s 0s/step - loss: 0.0215 - accuracy:
1.0000

Epoch 2708/5000
1/1 [=====] - 0s 997us/step - loss: 0.0214 - accuracy:
1.0000

Epoch 2709/5000
1/1 [=====] - 0s 997us/step - loss: 0.0214 - accuracy:
1.0000

Epoch 2710/5000
1/1 [=====] - 0s 997us/step - loss: 0.0214 - accuracy:
1.0000

Epoch 2711/5000
1/1 [=====] - 0s 0s/step - loss: 0.0214 - accuracy:
1.0000

Epoch 2712/5000
1/1 [=====] - 0s 0s/step - loss: 0.0213 - accuracy:
1.0000

Epoch 2713/5000
1/1 [=====] - 0s 0s/step - loss: 0.0213 - accuracy:
1.0000

Epoch 2714/5000
1/1 [=====] - 0s 998us/step - loss: 0.0213 - accuracy:
1.0000

Epoch 2715/5000
1/1 [=====] - 0s 0s/step - loss: 0.0213 - accuracy:
1.0000

Epoch 2716/5000
1/1 [=====] - 0s 0s/step - loss: 0.0213 - accuracy:
1.0000

Epoch 2717/5000
1/1 [=====] - 0s 998us/step - loss: 0.0212 - accuracy:
1.0000

Epoch 2718/5000
1/1 [=====] - 0s 998us/step - loss: 0.0212 - accuracy:
1.0000

Epoch 2719/5000
1/1 [=====] - 0s 999us/step - loss: 0.0212 - accuracy:
1.0000

Epoch 2720/5000
1/1 [=====] - 0s 0s/step - loss: 0.0212 - accuracy:
1.0000

Epoch 2721/5000
1/1 [=====] - 0s 0s/step - loss: 0.0211 - accuracy:
1.0000

Epoch 2722/5000
1/1 [=====] - 0s 998us/step - loss: 0.0211 - accuracy:
1.0000

Epoch 2723/5000
1/1 [=====] - 0s 0s/step - loss: 0.0211 - accuracy:
1.0000

Epoch 2724/5000
1/1 [=====] - 0s 0s/step - loss: 0.0211 - accuracy:
1.0000

Epoch 2725/5000
1/1 [=====] - 0s 0s/step - loss: 0.0211 - accuracy:
1.0000

Epoch 2726/5000
1/1 [=====] - 0s 0s/step - loss: 0.0210 - accuracy:
1.0000

Epoch 2727/5000
1/1 [=====] - 0s 0s/step - loss: 0.0210 - accuracy:
1.0000

Epoch 2728/5000
1/1 [=====] - 0s 983us/step - loss: 0.0210 - accuracy:
1.0000

Epoch 2729/5000
1/1 [=====] - 0s 0s/step - loss: 0.0210 - accuracy:
1.0000

Epoch 2730/5000
1/1 [=====] - 0s 0s/step - loss: 0.0209 - accuracy:
1.0000

Epoch 2731/5000
1/1 [=====] - 0s 0s/step - loss: 0.0209 - accuracy:
1.0000

Epoch 2732/5000
1/1 [=====] - 0s 0s/step - loss: 0.0209 - accuracy:
1.0000

Epoch 2733/5000
1/1 [=====] - 0s 997us/step - loss: 0.0209 - accuracy:
1.0000

Epoch 2734/5000
1/1 [=====] - 0s 996us/step - loss: 0.0209 - accuracy:
1.0000

Epoch 2735/5000
1/1 [=====] - 0s 0s/step - loss: 0.0208 - accuracy:
1.0000

Epoch 2736/5000
1/1 [=====] - 0s 997us/step - loss: 0.0208 - accuracy:
1.0000

Epoch 2737/5000
1/1 [=====] - 0s 998us/step - loss: 0.0208 - accuracy:
1.0000

Epoch 2738/5000
1/1 [=====] - 0s 999us/step - loss: 0.0208 - accuracy:
1.0000

Epoch 2739/5000
1/1 [=====] - 0s 997us/step - loss: 0.0208 - accuracy:
1.0000

Epoch 2740/5000
1/1 [=====] - 0s 998us/step - loss: 0.0207 - accuracy:
1.0000

Epoch 2741/5000
1/1 [=====] - 0s 998us/step - loss: 0.0207 - accuracy: 1.0000

Epoch 2742/5000
1/1 [=====] - 0s 997us/step - loss: 0.0207 - accuracy: 1.0000

Epoch 2743/5000
1/1 [=====] - 0s 998us/step - loss: 0.0207 - accuracy: 1.0000

Epoch 2744/5000
1/1 [=====] - 0s 997us/step - loss: 0.0206 - accuracy: 1.0000

Epoch 2745/5000
1/1 [=====] - 0s 997us/step - loss: 0.0206 - accuracy: 1.0000

Epoch 2746/5000
1/1 [=====] - 0s 998us/step - loss: 0.0206 - accuracy: 1.0000

Epoch 2747/5000
1/1 [=====] - 0s 0s/step - loss: 0.0206 - accuracy: 1.0000

Epoch 2748/5000
1/1 [=====] - 0s 0s/step - loss: 0.0206 - accuracy: 1.0000

Epoch 2749/5000
1/1 [=====] - 0s 0s/step - loss: 0.0205 - accuracy: 1.0000

Epoch 2750/5000
1/1 [=====] - 0s 998us/step - loss: 0.0205 - accuracy: 1.0000

Epoch 2751/5000
1/1 [=====] - 0s 0s/step - loss: 0.0205 - accuracy: 1.0000

Epoch 2752/5000
1/1 [=====] - 0s 997us/step - loss: 0.0205 - accuracy: 1.0000

Epoch 2753/5000
1/1 [=====] - 0s 998us/step - loss: 0.0205 - accuracy: 1.0000

Epoch 2754/5000
1/1 [=====] - 0s 0s/step - loss: 0.0204 - accuracy: 1.0000

Epoch 2755/5000
1/1 [=====] - 0s 997us/step - loss: 0.0204 - accuracy: 1.0000

Epoch 2756/5000
1/1 [=====] - 0s 997us/step - loss: 0.0204 - accuracy: 1.0000

Epoch 2757/5000
1/1 [=====] - 0s 997us/step - loss: 0.0204 - accuracy: 1.0000

Epoch 2758/5000
1/1 [=====] - 0s 0s/step - loss: 0.0203 - accuracy: 1.0000

Epoch 2759/5000
1/1 [=====] - 0s 0s/step - loss: 0.0203 - accuracy: 1.0000

Epoch 2760/5000
1/1 [=====] - 0s 997us/step - loss: 0.0203 - accuracy: 1.0000

Epoch 2761/5000
1/1 [=====] - 0s 998us/step - loss: 0.0203 - accuracy: 1.0000

Epoch 2762/5000
1/1 [=====] - 0s 0s/step - loss: 0.0203 - accuracy: 1.0000

Epoch 2763/5000
1/1 [=====] - 0s 0s/step - loss: 0.0202 - accuracy: 1.0000

Epoch 2764/5000
1/1 [=====] - 0s 998us/step - loss: 0.0202 - accuracy: 1.0000

Epoch 2765/5000
1/1 [=====] - 0s 997us/step - loss: 0.0202 - accuracy: 1.0000

Epoch 2766/5000
1/1 [=====] - 0s 0s/step - loss: 0.0202 - accuracy: 1.0000

Epoch 2767/5000
1/1 [=====] - 0s 0s/step - loss: 0.0202 - accuracy: 1.0000

Epoch 2768/5000
1/1 [=====] - 0s 0s/step - loss: 0.0201 - accuracy: 1.0000

Epoch 2769/5000
1/1 [=====] - 0s 997us/step - loss: 0.0201 - accuracy: 1.0000

Epoch 2770/5000
1/1 [=====] - 0s 997us/step - loss: 0.0201 - accuracy: 1.0000

Epoch 2771/5000
1/1 [=====] - 0s 0s/step - loss: 0.0201 - accuracy: 1.0000

Epoch 2772/5000
1/1 [=====] - 0s 998us/step - loss: 0.0201 - accuracy: 1.0000

Epoch 2773/5000
1/1 [=====] - 0s 997us/step - loss: 0.0200 - accuracy:
1.0000

Epoch 2774/5000
1/1 [=====] - 0s 997us/step - loss: 0.0200 - accuracy:
1.0000

Epoch 2775/5000
1/1 [=====] - 0s 0s/step - loss: 0.0200 - accuracy:
1.0000

Epoch 2776/5000
1/1 [=====] - 0s 0s/step - loss: 0.0200 - accuracy:
1.0000

Epoch 2777/5000
1/1 [=====] - 0s 0s/step - loss: 0.0200 - accuracy:
1.0000

Epoch 2778/5000
1/1 [=====] - 0s 998us/step - loss: 0.0199 - accuracy:
1.0000

Epoch 2779/5000
1/1 [=====] - 0s 0s/step - loss: 0.0199 - accuracy:
1.0000

Epoch 2780/5000
1/1 [=====] - 0s 997us/step - loss: 0.0199 - accuracy:
1.0000

Epoch 2781/5000
1/1 [=====] - 0s 0s/step - loss: 0.0199 - accuracy:
1.0000

Epoch 2782/5000
1/1 [=====] - 0s 997us/step - loss: 0.0199 - accuracy:
1.0000

Epoch 2783/5000
1/1 [=====] - 0s 998us/step - loss: 0.0198 - accuracy:
1.0000

Epoch 2784/5000
1/1 [=====] - 0s 0s/step - loss: 0.0198 - accuracy:
1.0000

Epoch 2785/5000
1/1 [=====] - 0s 998us/step - loss: 0.0198 - accuracy:
1.0000

Epoch 2786/5000
1/1 [=====] - 0s 998us/step - loss: 0.0198 - accuracy:
1.0000

Epoch 2787/5000
1/1 [=====] - 0s 998us/step - loss: 0.0198 - accuracy:
1.0000

Epoch 2788/5000
1/1 [=====] - 0s 998us/step - loss: 0.0197 - accuracy:
1.0000

Epoch 2789/5000
1/1 [=====] - 0s 998us/step - loss: 0.0197 - accuracy: 1.0000

Epoch 2790/5000
1/1 [=====] - 0s 0s/step - loss: 0.0197 - accuracy: 1.0000

Epoch 2791/5000
1/1 [=====] - 0s 997us/step - loss: 0.0197 - accuracy: 1.0000

Epoch 2792/5000
1/1 [=====] - 0s 997us/step - loss: 0.0197 - accuracy: 1.0000

Epoch 2793/5000
1/1 [=====] - 0s 998us/step - loss: 0.0196 - accuracy: 1.0000

Epoch 2794/5000
1/1 [=====] - 0s 997us/step - loss: 0.0196 - accuracy: 1.0000

Epoch 2795/5000
1/1 [=====] - 0s 997us/step - loss: 0.0196 - accuracy: 1.0000

Epoch 2796/5000
1/1 [=====] - 0s 0s/step - loss: 0.0196 - accuracy: 1.0000

Epoch 2797/5000
1/1 [=====] - 0s 0s/step - loss: 0.0196 - accuracy: 1.0000

Epoch 2798/5000
1/1 [=====] - 0s 998us/step - loss: 0.0195 - accuracy: 1.0000

Epoch 2799/5000
1/1 [=====] - 0s 998us/step - loss: 0.0195 - accuracy: 1.0000

Epoch 2800/5000
1/1 [=====] - 0s 999us/step - loss: 0.0195 - accuracy: 1.0000

Epoch 2801/5000
1/1 [=====] - 0s 998us/step - loss: 0.0195 - accuracy: 1.0000

Epoch 2802/5000
1/1 [=====] - 0s 0s/step - loss: 0.0195 - accuracy: 1.0000

Epoch 2803/5000
1/1 [=====] - 0s 0s/step - loss: 0.0194 - accuracy: 1.0000

Epoch 2804/5000
1/1 [=====] - 0s 997us/step - loss: 0.0194 - accuracy: 1.0000

Epoch 2805/5000
1/1 [=====] - 0s 998us/step - loss: 0.0194 - accuracy:
1.0000

Epoch 2806/5000
1/1 [=====] - 0s 998us/step - loss: 0.0194 - accuracy:
1.0000

Epoch 2807/5000
1/1 [=====] - 0s 997us/step - loss: 0.0194 - accuracy:
1.0000

Epoch 2808/5000
1/1 [=====] - 0s 998us/step - loss: 0.0193 - accuracy:
1.0000

Epoch 2809/5000
1/1 [=====] - 0s 998us/step - loss: 0.0193 - accuracy:
1.0000

Epoch 2810/5000
1/1 [=====] - 0s 997us/step - loss: 0.0193 - accuracy:
1.0000

Epoch 2811/5000
1/1 [=====] - 0s 0s/step - loss: 0.0193 - accuracy:
1.0000

Epoch 2812/5000
1/1 [=====] - 0s 0s/step - loss: 0.0193 - accuracy:
1.0000

Epoch 2813/5000
1/1 [=====] - 0s 998us/step - loss: 0.0192 - accuracy:
1.0000

Epoch 2814/5000
1/1 [=====] - 0s 0s/step - loss: 0.0192 - accuracy:
1.0000

Epoch 2815/5000
1/1 [=====] - 0s 0s/step - loss: 0.0192 - accuracy:
1.0000

Epoch 2816/5000
1/1 [=====] - 0s 0s/step - loss: 0.0192 - accuracy:
1.0000

Epoch 2817/5000
1/1 [=====] - 0s 997us/step - loss: 0.0192 - accuracy:
1.0000

Epoch 2818/5000
1/1 [=====] - 0s 998us/step - loss: 0.0191 - accuracy:
1.0000

Epoch 2819/5000
1/1 [=====] - 0s 998us/step - loss: 0.0191 - accuracy:
1.0000

Epoch 2820/5000
1/1 [=====] - 0s 998us/step - loss: 0.0191 - accuracy:
1.0000

Epoch 2821/5000
1/1 [=====] - 0s 997us/step - loss: 0.0191 - accuracy:
1.0000

Epoch 2822/5000
1/1 [=====] - 0s 998us/step - loss: 0.0191 - accuracy:
1.0000

Epoch 2823/5000
1/1 [=====] - 0s 0s/step - loss: 0.0190 - accuracy:
1.0000

Epoch 2824/5000
1/1 [=====] - 0s 0s/step - loss: 0.0190 - accuracy:
1.0000

Epoch 2825/5000
1/1 [=====] - 0s 0s/step - loss: 0.0190 - accuracy:
1.0000

Epoch 2826/5000
1/1 [=====] - 0s 0s/step - loss: 0.0190 - accuracy:
1.0000

Epoch 2827/5000
1/1 [=====] - 0s 998us/step - loss: 0.0190 - accuracy:
1.0000

Epoch 2828/5000
1/1 [=====] - 0s 997us/step - loss: 0.0189 - accuracy:
1.0000

Epoch 2829/5000
1/1 [=====] - 0s 997us/step - loss: 0.0189 - accuracy:
1.0000

Epoch 2830/5000
1/1 [=====] - 0s 0s/step - loss: 0.0189 - accuracy:
1.0000

Epoch 2831/5000
1/1 [=====] - 0s 0s/step - loss: 0.0189 - accuracy:
1.0000

Epoch 2832/5000
1/1 [=====] - 0s 0s/step - loss: 0.0189 - accuracy:
1.0000

Epoch 2833/5000
1/1 [=====] - 0s 0s/step - loss: 0.0189 - accuracy:
1.0000

Epoch 2834/5000
1/1 [=====] - 0s 0s/step - loss: 0.0188 - accuracy:
1.0000

Epoch 2835/5000
1/1 [=====] - 0s 0s/step - loss: 0.0188 - accuracy:
1.0000

Epoch 2836/5000
1/1 [=====] - 0s 997us/step - loss: 0.0188 - accuracy:
1.0000

Epoch 2837/5000
1/1 [=====] - 0s 0s/step - loss: 0.0188 - accuracy:
1.0000

Epoch 2838/5000
1/1 [=====] - 0s 0s/step - loss: 0.0188 - accuracy:
1.0000

Epoch 2839/5000
1/1 [=====] - 0s 998us/step - loss: 0.0187 - accuracy:
1.0000

Epoch 2840/5000
1/1 [=====] - 0s 0s/step - loss: 0.0187 - accuracy:
1.0000

Epoch 2841/5000
1/1 [=====] - 0s 997us/step - loss: 0.0187 - accuracy:
1.0000

Epoch 2842/5000
1/1 [=====] - 0s 998us/step - loss: 0.0187 - accuracy:
1.0000

Epoch 2843/5000
1/1 [=====] - 0s 0s/step - loss: 0.0187 - accuracy:
1.0000

Epoch 2844/5000
1/1 [=====] - 0s 997us/step - loss: 0.0186 - accuracy:
1.0000

Epoch 2845/5000
1/1 [=====] - 0s 999us/step - loss: 0.0186 - accuracy:
1.0000

Epoch 2846/5000
1/1 [=====] - 0s 0s/step - loss: 0.0186 - accuracy:
1.0000

Epoch 2847/5000
1/1 [=====] - 0s 0s/step - loss: 0.0186 - accuracy:
1.0000

Epoch 2848/5000
1/1 [=====] - 0s 0s/step - loss: 0.0186 - accuracy:
1.0000

Epoch 2849/5000
1/1 [=====] - 0s 0s/step - loss: 0.0186 - accuracy:
1.0000

Epoch 2850/5000
1/1 [=====] - 0s 997us/step - loss: 0.0185 - accuracy:
1.0000

Epoch 2851/5000
1/1 [=====] - 0s 997us/step - loss: 0.0185 - accuracy:
1.0000

Epoch 2852/5000
1/1 [=====] - 0s 0s/step - loss: 0.0185 - accuracy:
1.0000

Epoch 2853/5000
1/1 [=====] - 0s 0s/step - loss: 0.0185 - accuracy:
1.0000
Epoch 2854/5000
1/1 [=====] - 0s 997us/step - loss: 0.0185 - accuracy:
1.0000
Epoch 2855/5000
1/1 [=====] - 0s 997us/step - loss: 0.0184 - accuracy:
1.0000
Epoch 2856/5000
1/1 [=====] - 0s 997us/step - loss: 0.0184 - accuracy:
1.0000
Epoch 2857/5000
1/1 [=====] - 0s 0s/step - loss: 0.0184 - accuracy:
1.0000
Epoch 2858/5000
1/1 [=====] - 0s 0s/step - loss: 0.0184 - accuracy:
1.0000
Epoch 2859/5000
1/1 [=====] - 0s 0s/step - loss: 0.0184 - accuracy:
1.0000
Epoch 2860/5000
1/1 [=====] - 0s 0s/step - loss: 0.0183 - accuracy:
1.0000
Epoch 2861/5000
1/1 [=====] - 0s 0s/step - loss: 0.0183 - accuracy:
1.0000
Epoch 2862/5000
1/1 [=====] - 0s 998us/step - loss: 0.0183 - accuracy:
1.0000
Epoch 2863/5000
1/1 [=====] - 0s 998us/step - loss: 0.0183 - accuracy:
1.0000
Epoch 2864/5000
1/1 [=====] - 0s 0s/step - loss: 0.0183 - accuracy:
1.0000
Epoch 2865/5000
1/1 [=====] - 0s 998us/step - loss: 0.0183 - accuracy:
1.0000
Epoch 2866/5000
1/1 [=====] - 0s 996us/step - loss: 0.0182 - accuracy:
1.0000
Epoch 2867/5000
1/1 [=====] - 0s 0s/step - loss: 0.0182 - accuracy:
1.0000
Epoch 2868/5000
1/1 [=====] - 0s 0s/step - loss: 0.0182 - accuracy:
1.0000

Epoch 2869/5000
1/1 [=====] - 0s 0s/step - loss: 0.0182 - accuracy:
1.0000

Epoch 2870/5000
1/1 [=====] - 0s 998us/step - loss: 0.0182 - accuracy:
1.0000

Epoch 2871/5000
1/1 [=====] - 0s 0s/step - loss: 0.0181 - accuracy:
1.0000

Epoch 2872/5000
1/1 [=====] - 0s 997us/step - loss: 0.0181 - accuracy:
1.0000

Epoch 2873/5000
1/1 [=====] - 0s 998us/step - loss: 0.0181 - accuracy:
1.0000

Epoch 2874/5000
1/1 [=====] - 0s 0s/step - loss: 0.0181 - accuracy:
1.0000

Epoch 2875/5000
1/1 [=====] - 0s 0s/step - loss: 0.0181 - accuracy:
1.0000

Epoch 2876/5000
1/1 [=====] - 0s 0s/step - loss: 0.0181 - accuracy:
1.0000

Epoch 2877/5000
1/1 [=====] - 0s 997us/step - loss: 0.0180 - accuracy:
1.0000

Epoch 2878/5000
1/1 [=====] - 0s 998us/step - loss: 0.0180 - accuracy:
1.0000

Epoch 2879/5000
1/1 [=====] - 0s 998us/step - loss: 0.0180 - accuracy:
1.0000

Epoch 2880/5000
1/1 [=====] - 0s 0s/step - loss: 0.0180 - accuracy:
1.0000

Epoch 2881/5000
1/1 [=====] - 0s 0s/step - loss: 0.0180 - accuracy:
1.0000

Epoch 2882/5000
1/1 [=====] - 0s 0s/step - loss: 0.0180 - accuracy:
1.0000

Epoch 2883/5000
1/1 [=====] - 0s 0s/step - loss: 0.0179 - accuracy:
1.0000

Epoch 2884/5000
1/1 [=====] - 0s 997us/step - loss: 0.0179 - accuracy:
1.0000

Epoch 2885/5000
1/1 [=====] - 0s 0s/step - loss: 0.0179 - accuracy:
1.0000

Epoch 2886/5000
1/1 [=====] - 0s 0s/step - loss: 0.0179 - accuracy:
1.0000

Epoch 2887/5000
1/1 [=====] - 0s 0s/step - loss: 0.0179 - accuracy:
1.0000

Epoch 2888/5000
1/1 [=====] - 0s 998us/step - loss: 0.0178 - accuracy:
1.0000

Epoch 2889/5000
1/1 [=====] - 0s 997us/step - loss: 0.0178 - accuracy:
1.0000

Epoch 2890/5000
1/1 [=====] - 0s 0s/step - loss: 0.0178 - accuracy:
1.0000

Epoch 2891/5000
1/1 [=====] - 0s 995us/step - loss: 0.0178 - accuracy:
1.0000

Epoch 2892/5000
1/1 [=====] - 0s 0s/step - loss: 0.0178 - accuracy:
1.0000

Epoch 2893/5000
1/1 [=====] - 0s 0s/step - loss: 0.0178 - accuracy:
1.0000

Epoch 2894/5000
1/1 [=====] - 0s 0s/step - loss: 0.0177 - accuracy:
1.0000

Epoch 2895/5000
1/1 [=====] - 0s 0s/step - loss: 0.0177 - accuracy:
1.0000

Epoch 2896/5000
1/1 [=====] - 0s 998us/step - loss: 0.0177 - accuracy:
1.0000

Epoch 2897/5000
1/1 [=====] - 0s 0s/step - loss: 0.0177 - accuracy:
1.0000

Epoch 2898/5000
1/1 [=====] - 0s 0s/step - loss: 0.0177 - accuracy:
1.0000

Epoch 2899/5000
1/1 [=====] - 0s 0s/step - loss: 0.0176 - accuracy:
1.0000

Epoch 2900/5000
1/1 [=====] - 0s 0s/step - loss: 0.0176 - accuracy:
1.0000

Epoch 2901/5000
1/1 [=====] - 0s 997us/step - loss: 0.0176 - accuracy:
1.0000

Epoch 2902/5000
1/1 [=====] - 0s 998us/step - loss: 0.0176 - accuracy:
1.0000

Epoch 2903/5000
1/1 [=====] - 0s 0s/step - loss: 0.0176 - accuracy:
1.0000

Epoch 2904/5000
1/1 [=====] - 0s 997us/step - loss: 0.0176 - accuracy:
1.0000

Epoch 2905/5000
1/1 [=====] - 0s 998us/step - loss: 0.0175 - accuracy:
1.0000

Epoch 2906/5000
1/1 [=====] - 0s 0s/step - loss: 0.0175 - accuracy:
1.0000

Epoch 2907/5000
1/1 [=====] - 0s 0s/step - loss: 0.0175 - accuracy:
1.0000

Epoch 2908/5000
1/1 [=====] - 0s 0s/step - loss: 0.0175 - accuracy:
1.0000

Epoch 2909/5000
1/1 [=====] - 0s 0s/step - loss: 0.0175 - accuracy:
1.0000

Epoch 2910/5000
1/1 [=====] - 0s 996us/step - loss: 0.0175 - accuracy:
1.0000

Epoch 2911/5000
1/1 [=====] - 0s 997us/step - loss: 0.0174 - accuracy:
1.0000

Epoch 2912/5000
1/1 [=====] - 0s 998us/step - loss: 0.0174 - accuracy:
1.0000

Epoch 2913/5000
1/1 [=====] - 0s 0s/step - loss: 0.0174 - accuracy:
1.0000

Epoch 2914/5000
1/1 [=====] - 0s 997us/step - loss: 0.0174 - accuracy:
1.0000

Epoch 2915/5000
1/1 [=====] - 0s 0s/step - loss: 0.0174 - accuracy:
1.0000

Epoch 2916/5000
1/1 [=====] - 0s 0s/step - loss: 0.0174 - accuracy:
1.0000

Epoch 2917/5000
1/1 [=====] - 0s 997us/step - loss: 0.0173 - accuracy:
1.0000

Epoch 2918/5000
1/1 [=====] - 0s 0s/step - loss: 0.0173 - accuracy:
1.0000

Epoch 2919/5000
1/1 [=====] - 0s 998us/step - loss: 0.0173 - accuracy:
1.0000

Epoch 2920/5000
1/1 [=====] - 0s 0s/step - loss: 0.0173 - accuracy:
1.0000

Epoch 2921/5000
1/1 [=====] - 0s 998us/step - loss: 0.0173 - accuracy:
1.0000

Epoch 2922/5000
1/1 [=====] - 0s 0s/step - loss: 0.0173 - accuracy:
1.0000

Epoch 2923/5000
1/1 [=====] - 0s 998us/step - loss: 0.0172 - accuracy:
1.0000

Epoch 2924/5000
1/1 [=====] - 0s 998us/step - loss: 0.0172 - accuracy:
1.0000

Epoch 2925/5000
1/1 [=====] - 0s 0s/step - loss: 0.0172 - accuracy:
1.0000

Epoch 2926/5000
1/1 [=====] - 0s 0s/step - loss: 0.0172 - accuracy:
1.0000

Epoch 2927/5000
1/1 [=====] - 0s 998us/step - loss: 0.0172 - accuracy:
1.0000

Epoch 2928/5000
1/1 [=====] - 0s 0s/step - loss: 0.0171 - accuracy:
1.0000

Epoch 2929/5000
1/1 [=====] - 0s 997us/step - loss: 0.0171 - accuracy:
1.0000

Epoch 2930/5000
1/1 [=====] - 0s 997us/step - loss: 0.0171 - accuracy:
1.0000

Epoch 2931/5000
1/1 [=====] - 0s 997us/step - loss: 0.0171 - accuracy:
1.0000

Epoch 2932/5000
1/1 [=====] - 0s 998us/step - loss: 0.0171 - accuracy:
1.0000

Epoch 2933/5000
1/1 [=====] - 0s 0s/step - loss: 0.0171 - accuracy:
1.0000

Epoch 2934/5000
1/1 [=====] - 0s 997us/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2935/5000
1/1 [=====] - 0s 0s/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2936/5000
1/1 [=====] - 0s 0s/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2937/5000
1/1 [=====] - 0s 0s/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2938/5000
1/1 [=====] - 0s 0s/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2939/5000
1/1 [=====] - 0s 0s/step - loss: 0.0170 - accuracy:
1.0000

Epoch 2940/5000
1/1 [=====] - 0s 998us/step - loss: 0.0169 - accuracy:
1.0000

Epoch 2941/5000
1/1 [=====] - 0s 998us/step - loss: 0.0169 - accuracy:
1.0000

Epoch 2942/5000
1/1 [=====] - 0s 0s/step - loss: 0.0169 - accuracy:
1.0000

Epoch 2943/5000
1/1 [=====] - 0s 997us/step - loss: 0.0169 - accuracy:
1.0000

Epoch 2944/5000
1/1 [=====] - 0s 998us/step - loss: 0.0169 - accuracy:
1.0000

Epoch 2945/5000
1/1 [=====] - 0s 998us/step - loss: 0.0169 - accuracy:
1.0000

Epoch 2946/5000
1/1 [=====] - 0s 998us/step - loss: 0.0168 - accuracy:
1.0000

Epoch 2947/5000
1/1 [=====] - 0s 0s/step - loss: 0.0168 - accuracy:
1.0000

Epoch 2948/5000
1/1 [=====] - 0s 0s/step - loss: 0.0168 - accuracy:
1.0000

Epoch 2949/5000
1/1 [=====] - 0s 0s/step - loss: 0.0168 - accuracy:
1.0000

Epoch 2950/5000
1/1 [=====] - 0s 0s/step - loss: 0.0168 - accuracy:
1.0000

Epoch 2951/5000
1/1 [=====] - 0s 997us/step - loss: 0.0168 - accuracy:
1.0000

Epoch 2952/5000
1/1 [=====] - 0s 998us/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2953/5000
1/1 [=====] - 0s 998us/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2954/5000
1/1 [=====] - 0s 0s/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2955/5000
1/1 [=====] - 0s 0s/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2956/5000
1/1 [=====] - 0s 0s/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2957/5000
1/1 [=====] - 0s 996us/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2958/5000
1/1 [=====] - 0s 998us/step - loss: 0.0167 - accuracy:
1.0000

Epoch 2959/5000
1/1 [=====] - 0s 998us/step - loss: 0.0166 - accuracy:
1.0000

Epoch 2960/5000
1/1 [=====] - 0s 0s/step - loss: 0.0166 - accuracy:
1.0000

Epoch 2961/5000
1/1 [=====] - 0s 0s/step - loss: 0.0166 - accuracy:
1.0000

Epoch 2962/5000
1/1 [=====] - 0s 0s/step - loss: 0.0166 - accuracy:
1.0000

Epoch 2963/5000
1/1 [=====] - 0s 998us/step - loss: 0.0166 - accuracy:
1.0000

Epoch 2964/5000
1/1 [=====] - 0s 0s/step - loss: 0.0166 - accuracy:
1.0000

Epoch 2965/5000
1/1 [=====] - 0s 997us/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2966/5000
1/1 [=====] - 0s 0s/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2967/5000
1/1 [=====] - 0s 998us/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2968/5000
1/1 [=====] - 0s 0s/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2969/5000
1/1 [=====] - 0s 0s/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2970/5000
1/1 [=====] - 0s 997us/step - loss: 0.0165 - accuracy:
1.0000

Epoch 2971/5000
1/1 [=====] - 0s 997us/step - loss: 0.0164 - accuracy:
1.0000

Epoch 2972/5000
1/1 [=====] - 0s 998us/step - loss: 0.0164 - accuracy:
1.0000

Epoch 2973/5000
1/1 [=====] - 0s 998us/step - loss: 0.0164 - accuracy:
1.0000

Epoch 2974/5000
1/1 [=====] - 0s 997us/step - loss: 0.0164 - accuracy:
1.0000

Epoch 2975/5000
1/1 [=====] - 0s 0s/step - loss: 0.0164 - accuracy:
1.0000

Epoch 2976/5000
1/1 [=====] - 0s 997us/step - loss: 0.0164 - accuracy:
1.0000

Epoch 2977/5000
1/1 [=====] - 0s 0s/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2978/5000
1/1 [=====] - 0s 0s/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2979/5000
1/1 [=====] - 0s 997us/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2980/5000
1/1 [=====] - 0s 998us/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2981/5000
1/1 [=====] - 0s 998us/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2982/5000
1/1 [=====] - 0s 996us/step - loss: 0.0163 - accuracy:
1.0000

Epoch 2983/5000
1/1 [=====] - 0s 0s/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2984/5000
1/1 [=====] - 0s 0s/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2985/5000
1/1 [=====] - 0s 0s/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2986/5000
1/1 [=====] - 0s 0s/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2987/5000
1/1 [=====] - 0s 998us/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2988/5000
1/1 [=====] - 0s 0s/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2989/5000
1/1 [=====] - 0s 0s/step - loss: 0.0162 - accuracy:
1.0000

Epoch 2990/5000
1/1 [=====] - 0s 0s/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2991/5000
1/1 [=====] - 0s 996us/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2992/5000
1/1 [=====] - 0s 997us/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2993/5000
1/1 [=====] - 0s 997us/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2994/5000
1/1 [=====] - 0s 998us/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2995/5000
1/1 [=====] - 0s 997us/step - loss: 0.0161 - accuracy:
1.0000

Epoch 2996/5000
1/1 [=====] - 0s 0s/step - loss: 0.0160 - accuracy:
1.0000

Epoch 2997/5000
1/1 [=====] - 0s 999us/step - loss: 0.0160 - accuracy:
1.0000

Epoch 2998/5000
1/1 [=====] - 0s 0s/step - loss: 0.0160 - accuracy:
1.0000

Epoch 2999/5000
1/1 [=====] - 0s 0s/step - loss: 0.0160 - accuracy:
1.0000

Epoch 3000/5000
1/1 [=====] - 0s 0s/step - loss: 0.0160 - accuracy:
1.0000

Epoch 3001/5000
1/1 [=====] - 0s 0s/step - loss: 0.0160 - accuracy:
1.0000

Epoch 3002/5000
1/1 [=====] - 0s 0s/step - loss: 0.0160 - accuracy:
1.0000

Epoch 3003/5000
1/1 [=====] - 0s 0s/step - loss: 0.0159 - accuracy:
1.0000

Epoch 3004/5000
1/1 [=====] - 0s 998us/step - loss: 0.0159 - accuracy:
1.0000

Epoch 3005/5000
1/1 [=====] - 0s 997us/step - loss: 0.0159 - accuracy:
1.0000

Epoch 3006/5000
1/1 [=====] - 0s 0s/step - loss: 0.0159 - accuracy:
1.0000

Epoch 3007/5000
1/1 [=====] - 0s 997us/step - loss: 0.0159 - accuracy:
1.0000

Epoch 3008/5000
1/1 [=====] - 0s 0s/step - loss: 0.0159 - accuracy:
1.0000

Epoch 3009/5000
1/1 [=====] - 0s 0s/step - loss: 0.0158 - accuracy:
1.0000

Epoch 3010/5000
1/1 [=====] - 0s 0s/step - loss: 0.0158 - accuracy:
1.0000

Epoch 3011/5000
1/1 [=====] - 0s 997us/step - loss: 0.0158 - accuracy:
1.0000

Epoch 3012/5000
1/1 [=====] - 0s 999us/step - loss: 0.0158 - accuracy:
1.0000

Epoch 3013/5000
1/1 [=====] - 0s 996us/step - loss: 0.0158 - accuracy:
1.0000

Epoch 3014/5000
1/1 [=====] - 0s 997us/step - loss: 0.0158 - accuracy:
1.0000

Epoch 3015/5000
1/1 [=====] - 0s 998us/step - loss: 0.0158 - accuracy:
1.0000

Epoch 3016/5000
1/1 [=====] - 0s 999us/step - loss: 0.0157 - accuracy:
1.0000

Epoch 3017/5000
1/1 [=====] - 0s 0s/step - loss: 0.0157 - accuracy:
1.0000

Epoch 3018/5000
1/1 [=====] - 0s 998us/step - loss: 0.0157 - accuracy:
1.0000

Epoch 3019/5000
1/1 [=====] - 0s 998us/step - loss: 0.0157 - accuracy:
1.0000

Epoch 3020/5000
1/1 [=====] - 0s 0s/step - loss: 0.0157 - accuracy:
1.0000

Epoch 3021/5000
1/1 [=====] - 0s 998us/step - loss: 0.0157 - accuracy:
1.0000

Epoch 3022/5000
1/1 [=====] - 0s 998us/step - loss: 0.0156 - accuracy:
1.0000

Epoch 3023/5000
1/1 [=====] - 0s 0s/step - loss: 0.0156 - accuracy:
1.0000

Epoch 3024/5000
1/1 [=====] - 0s 0s/step - loss: 0.0156 - accuracy:
1.0000

Epoch 3025/5000
1/1 [=====] - 0s 0s/step - loss: 0.0156 - accuracy:
1.0000

Epoch 3026/5000
1/1 [=====] - 0s 0s/step - loss: 0.0156 - accuracy:
1.0000

Epoch 3027/5000
1/1 [=====] - 0s 0s/step - loss: 0.0156 - accuracy:
1.0000

Epoch 3028/5000
1/1 [=====] - 0s 999us/step - loss: 0.0156 - accuracy:
1.0000

Epoch 3029/5000
1/1 [=====] - 0s 0s/step - loss: 0.0155 - accuracy:
1.0000

Epoch 3030/5000
1/1 [=====] - 0s 0s/step - loss: 0.0155 - accuracy:
1.0000

Epoch 3031/5000
1/1 [=====] - 0s 998us/step - loss: 0.0155 - accuracy:
1.0000

Epoch 3032/5000
1/1 [=====] - 0s 0s/step - loss: 0.0155 - accuracy:
1.0000

Epoch 3033/5000
1/1 [=====] - 0s 0s/step - loss: 0.0155 - accuracy:
1.0000

Epoch 3034/5000
1/1 [=====] - 0s 997us/step - loss: 0.0155 - accuracy:
1.0000

Epoch 3035/5000
1/1 [=====] - 0s 0s/step - loss: 0.0155 - accuracy:
1.0000

Epoch 3036/5000
1/1 [=====] - 0s 0s/step - loss: 0.0154 - accuracy:
1.0000

Epoch 3037/5000
1/1 [=====] - 0s 0s/step - loss: 0.0154 - accuracy:
1.0000

Epoch 3038/5000
1/1 [=====] - 0s 0s/step - loss: 0.0154 - accuracy:
1.0000

Epoch 3039/5000
1/1 [=====] - 0s 0s/step - loss: 0.0154 - accuracy:
1.0000

Epoch 3040/5000
1/1 [=====] - 0s 0s/step - loss: 0.0154 - accuracy:
1.0000

Epoch 3041/5000
1/1 [=====] - 0s 998us/step - loss: 0.0154 - accuracy:
1.0000

Epoch 3042/5000
1/1 [=====] - 0s 998us/step - loss: 0.0153 - accuracy:
1.0000

Epoch 3043/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0153 - accuracy:
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Epoch 3044/5000
1/1 [=====] - 0s 0s/step - loss: 0.0153 - accuracy:
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Epoch 3045/5000
1/1 [=====] - 0s 0s/step - loss: 0.0153 - accuracy:
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Epoch 3046/5000
1/1 [=====] - 0s 0s/step - loss: 0.0153 - accuracy:
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Epoch 3047/5000
1/1 [=====] - 0s 997us/step - loss: 0.0153 - accuracy:
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Epoch 3048/5000
1/1 [=====] - 0s 998us/step - loss: 0.0153 - accuracy:
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Epoch 3049/5000
1/1 [=====] - 0s 0s/step - loss: 0.0152 - accuracy:
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Epoch 3050/5000
1/1 [=====] - 0s 997us/step - loss: 0.0152 - accuracy:
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Epoch 3051/5000
1/1 [=====] - 0s 0s/step - loss: 0.0152 - accuracy:
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Epoch 3052/5000
1/1 [=====] - 0s 998us/step - loss: 0.0152 - accuracy:
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Epoch 3053/5000
1/1 [=====] - 0s 0s/step - loss: 0.0152 - accuracy:
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Epoch 3054/5000
1/1 [=====] - 0s 0s/step - loss: 0.0152 - accuracy:
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Epoch 3055/5000
1/1 [=====] - 0s 0s/step - loss: 0.0152 - accuracy:
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Epoch 3056/5000
1/1 [=====] - 0s 0s/step - loss: 0.0151 - accuracy:
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Epoch 3057/5000
1/1 [=====] - 0s 0s/step - loss: 0.0151 - accuracy:
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Epoch 3058/5000
1/1 [=====] - 0s 0s/step - loss: 0.0151 - accuracy:
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Epoch 3059/5000
1/1 [=====] - 0s 997us/step - loss: 0.0151 - accuracy:
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Epoch 3060/5000
1/1 [=====] - 0s 0s/step - loss: 0.0151 - accuracy:
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Epoch 3061/5000
1/1 [=====] - 0s 0s/step - loss: 0.0151 - accuracy:
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Epoch 3062/5000
1/1 [=====] - 0s 0s/step - loss: 0.0151 - accuracy:
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Epoch 3063/5000
1/1 [=====] - 0s 997us/step - loss: 0.0150 - accuracy:
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Epoch 3064/5000
1/1 [=====] - 0s 997us/step - loss: 0.0150 - accuracy:
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Epoch 3065/5000
1/1 [=====] - 0s 0s/step - loss: 0.0150 - accuracy:
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Epoch 3066/5000
1/1 [=====] - 0s 997us/step - loss: 0.0150 - accuracy:
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Epoch 3067/5000
1/1 [=====] - 0s 0s/step - loss: 0.0150 - accuracy:
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Epoch 3068/5000
1/1 [=====] - 0s 0s/step - loss: 0.0150 - accuracy:
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Epoch 3069/5000
1/1 [=====] - 0s 0s/step - loss: 0.0150 - accuracy:
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Epoch 3070/5000
1/1 [=====] - 0s 0s/step - loss: 0.0149 - accuracy:
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Epoch 3071/5000
1/1 [=====] - 0s 0s/step - loss: 0.0149 - accuracy:
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Epoch 3072/5000
1/1 [=====] - 0s 997us/step - loss: 0.0149 - accuracy:
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Epoch 3073/5000
1/1 [=====] - 0s 998us/step - loss: 0.0149 - accuracy:
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Epoch 3074/5000
1/1 [=====] - 0s 0s/step - loss: 0.0149 - accuracy:
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Epoch 3075/5000
1/1 [=====] - 0s 997us/step - loss: 0.0149 - accuracy:
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Epoch 3076/5000
1/1 [=====] - 0s 0s/step - loss: 0.0149 - accuracy:
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Epoch 3077/5000
1/1 [=====] - 0s 998us/step - loss: 0.0148 - accuracy:
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Epoch 3078/5000
1/1 [=====] - 0s 997us/step - loss: 0.0148 - accuracy:
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Epoch 3079/5000
1/1 [=====] - 0s 0s/step - loss: 0.0148 - accuracy:
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Epoch 3080/5000
1/1 [=====] - 0s 0s/step - loss: 0.0148 - accuracy:
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Epoch 3081/5000
1/1 [=====] - 0s 998us/step - loss: 0.0148 - accuracy:
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Epoch 3082/5000
1/1 [=====] - 0s 998us/step - loss: 0.0148 - accuracy:
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Epoch 3083/5000
1/1 [=====] - 0s 0s/step - loss: 0.0148 - accuracy:
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Epoch 3084/5000
1/1 [=====] - 0s 0s/step - loss: 0.0147 - accuracy:
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Epoch 3085/5000
1/1 [=====] - 0s 998us/step - loss: 0.0147 - accuracy:
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Epoch 3086/5000
1/1 [=====] - 0s 998us/step - loss: 0.0147 - accuracy:
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Epoch 3087/5000
1/1 [=====] - 0s 998us/step - loss: 0.0147 - accuracy:
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Epoch 3088/5000
1/1 [=====] - 0s 998us/step - loss: 0.0147 - accuracy:
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Epoch 3089/5000
1/1 [=====] - 0s 992us/step - loss: 0.0147 - accuracy:
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Epoch 3090/5000
1/1 [=====] - 0s 0s/step - loss: 0.0147 - accuracy:
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Epoch 3091/5000
1/1 [=====] - 0s 998us/step - loss: 0.0146 - accuracy:
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Epoch 3092/5000
1/1 [=====] - 0s 998us/step - loss: 0.0146 - accuracy:
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Epoch 3093/5000
1/1 [=====] - 0s 997us/step - loss: 0.0146 - accuracy:
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Epoch 3094/5000
1/1 [=====] - 0s 997us/step - loss: 0.0146 - accuracy:
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Epoch 3095/5000
1/1 [=====] - 0s 0s/step - loss: 0.0146 - accuracy:
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Epoch 3096/5000
1/1 [=====] - 0s 998us/step - loss: 0.0146 - accuracy:
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Epoch 3097/5000
1/1 [=====] - 0s 997us/step - loss: 0.0146 - accuracy:
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Epoch 3098/5000
1/1 [=====] - 0s 0s/step - loss: 0.0145 - accuracy:
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Epoch 3099/5000
1/1 [=====] - 0s 996us/step - loss: 0.0145 - accuracy:
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Epoch 3100/5000
1/1 [=====] - 0s 997us/step - loss: 0.0145 - accuracy:
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Epoch 3101/5000
1/1 [=====] - 0s 0s/step - loss: 0.0145 - accuracy:
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Epoch 3102/5000
1/1 [=====] - 0s 998us/step - loss: 0.0145 - accuracy:
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Epoch 3103/5000
1/1 [=====] - 0s 998us/step - loss: 0.0145 - accuracy:
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Epoch 3104/5000
1/1 [=====] - 0s 998us/step - loss: 0.0145 - accuracy:
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Epoch 3105/5000
1/1 [=====] - 0s 0s/step - loss: 0.0144 - accuracy:
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Epoch 3106/5000
1/1 [=====] - 0s 996us/step - loss: 0.0144 - accuracy:
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Epoch 3107/5000
1/1 [=====] - 0s 998us/step - loss: 0.0144 - accuracy:
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Epoch 3108/5000
1/1 [=====] - 0s 998us/step - loss: 0.0144 - accuracy:
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Epoch 3109/5000
1/1 [=====] - 0s 997us/step - loss: 0.0144 - accuracy:
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Epoch 3110/5000
1/1 [=====] - 0s 0s/step - loss: 0.0144 - accuracy:
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Epoch 3111/5000
1/1 [=====] - 0s 997us/step - loss: 0.0144 - accuracy:
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Epoch 3112/5000
1/1 [=====] - 0s 0s/step - loss: 0.0144 - accuracy:
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Epoch 3113/5000
1/1 [=====] - 0s 0s/step - loss: 0.0143 - accuracy:
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Epoch 3114/5000
1/1 [=====] - 0s 0s/step - loss: 0.0143 - accuracy:
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Epoch 3115/5000
1/1 [=====] - 0s 997us/step - loss: 0.0143 - accuracy:
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Epoch 3116/5000
1/1 [=====] - 0s 997us/step - loss: 0.0143 - accuracy:
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Epoch 3117/5000
1/1 [=====] - 0s 998us/step - loss: 0.0143 - accuracy:
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Epoch 3118/5000
1/1 [=====] - 0s 997us/step - loss: 0.0143 - accuracy:
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Epoch 3119/5000
1/1 [=====] - 0s 997us/step - loss: 0.0143 - accuracy:
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Epoch 3120/5000
1/1 [=====] - 0s 994us/step - loss: 0.0142 - accuracy:
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Epoch 3121/5000
1/1 [=====] - 0s 0s/step - loss: 0.0142 - accuracy:
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Epoch 3122/5000
1/1 [=====] - 0s 0s/step - loss: 0.0142 - accuracy:
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Epoch 3123/5000
1/1 [=====] - 0s 998us/step - loss: 0.0142 - accuracy:
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Epoch 3124/5000
1/1 [=====] - 0s 0s/step - loss: 0.0142 - accuracy:
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Epoch 3125/5000
1/1 [=====] - 0s 998us/step - loss: 0.0142 - accuracy:
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Epoch 3126/5000
1/1 [=====] - 0s 0s/step - loss: 0.0142 - accuracy:
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Epoch 3127/5000
1/1 [=====] - 0s 997us/step - loss: 0.0142 - accuracy:
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Epoch 3128/5000
1/1 [=====] - 0s 998us/step - loss: 0.0141 - accuracy:
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Epoch 3129/5000
1/1 [=====] - 0s 0s/step - loss: 0.0141 - accuracy:
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Epoch 3130/5000
1/1 [=====] - 0s 998us/step - loss: 0.0141 - accuracy:
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Epoch 3131/5000
1/1 [=====] - 0s 0s/step - loss: 0.0141 - accuracy:
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Epoch 3132/5000
1/1 [=====] - 0s 0s/step - loss: 0.0141 - accuracy:
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Epoch 3133/5000
1/1 [=====] - 0s 999us/step - loss: 0.0141 - accuracy:
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Epoch 3134/5000
1/1 [=====] - 0s 0s/step - loss: 0.0141 - accuracy:
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Epoch 3135/5000
1/1 [=====] - 0s 998us/step - loss: 0.0140 - accuracy:
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Epoch 3136/5000
1/1 [=====] - 0s 0s/step - loss: 0.0140 - accuracy:
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Epoch 3137/5000
1/1 [=====] - 0s 0s/step - loss: 0.0140 - accuracy:
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Epoch 3138/5000
1/1 [=====] - 0s 998us/step - loss: 0.0140 - accuracy:
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Epoch 3139/5000
1/1 [=====] - 0s 0s/step - loss: 0.0140 - accuracy:
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Epoch 3140/5000
1/1 [=====] - 0s 998us/step - loss: 0.0140 - accuracy:
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Epoch 3141/5000
1/1 [=====] - 0s 998us/step - loss: 0.0140 - accuracy: 1.0000

Epoch 3142/5000
1/1 [=====] - 0s 0s/step - loss: 0.0140 - accuracy: 1.0000

Epoch 3143/5000
1/1 [=====] - 0s 998us/step - loss: 0.0139 - accuracy: 1.0000

Epoch 3144/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0139 - accuracy: 1.0000

Epoch 3145/5000
1/1 [=====] - 0s 0s/step - loss: 0.0139 - accuracy: 1.0000

Epoch 3146/5000
1/1 [=====] - 0s 997us/step - loss: 0.0139 - accuracy: 1.0000

Epoch 3147/5000
1/1 [=====] - 0s 997us/step - loss: 0.0139 - accuracy: 1.0000

Epoch 3148/5000
1/1 [=====] - 0s 995us/step - loss: 0.0139 - accuracy: 1.0000

Epoch 3149/5000
1/1 [=====] - 0s 997us/step - loss: 0.0139 - accuracy: 1.0000

Epoch 3150/5000
1/1 [=====] - 0s 997us/step - loss: 0.0138 - accuracy: 1.0000

Epoch 3151/5000
1/1 [=====] - 0s 997us/step - loss: 0.0138 - accuracy: 1.0000

Epoch 3152/5000
1/1 [=====] - 0s 998us/step - loss: 0.0138 - accuracy: 1.0000

Epoch 3153/5000
1/1 [=====] - 0s 998us/step - loss: 0.0138 - accuracy: 1.0000

Epoch 3154/5000
1/1 [=====] - 0s 998us/step - loss: 0.0138 - accuracy: 1.0000

Epoch 3155/5000
1/1 [=====] - 0s 998us/step - loss: 0.0138 - accuracy: 1.0000

Epoch 3156/5000
1/1 [=====] - 0s 0s/step - loss: 0.0138 - accuracy: 1.0000

Epoch 3157/5000
1/1 [=====] - 0s 998us/step - loss: 0.0138 - accuracy:
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Epoch 3158/5000
1/1 [=====] - 0s 997us/step - loss: 0.0137 - accuracy:
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Epoch 3159/5000
1/1 [=====] - 0s 998us/step - loss: 0.0137 - accuracy:
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Epoch 3160/5000
1/1 [=====] - 0s 0s/step - loss: 0.0137 - accuracy:
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Epoch 3161/5000
1/1 [=====] - 0s 998us/step - loss: 0.0137 - accuracy:
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Epoch 3162/5000
1/1 [=====] - 0s 997us/step - loss: 0.0137 - accuracy:
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Epoch 3163/5000
1/1 [=====] - 0s 0s/step - loss: 0.0137 - accuracy:
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Epoch 3164/5000
1/1 [=====] - 0s 996us/step - loss: 0.0137 - accuracy:
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Epoch 3165/5000
1/1 [=====] - 0s 0s/step - loss: 0.0137 - accuracy:
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Epoch 3166/5000
1/1 [=====] - 0s 0s/step - loss: 0.0136 - accuracy:
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Epoch 3167/5000
1/1 [=====] - 0s 998us/step - loss: 0.0136 - accuracy:
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Epoch 3168/5000
1/1 [=====] - 0s 997us/step - loss: 0.0136 - accuracy:
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Epoch 3169/5000
1/1 [=====] - 0s 0s/step - loss: 0.0136 - accuracy:
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Epoch 3170/5000
1/1 [=====] - 0s 997us/step - loss: 0.0136 - accuracy:
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Epoch 3171/5000
1/1 [=====] - 0s 997us/step - loss: 0.0136 - accuracy:
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Epoch 3172/5000
1/1 [=====] - 0s 998us/step - loss: 0.0136 - accuracy:
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Epoch 3173/5000
1/1 [=====] - 0s 997us/step - loss: 0.0136 - accuracy:
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Epoch 3174/5000
1/1 [=====] - 0s 0s/step - loss: 0.0135 - accuracy:
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Epoch 3175/5000
1/1 [=====] - 0s 998us/step - loss: 0.0135 - accuracy:
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Epoch 3176/5000
1/1 [=====] - 0s 0s/step - loss: 0.0135 - accuracy:
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Epoch 3177/5000
1/1 [=====] - 0s 998us/step - loss: 0.0135 - accuracy:
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Epoch 3178/5000
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Epoch 3179/5000
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Epoch 3180/5000
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Epoch 3181/5000
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Epoch 3182/5000
1/1 [=====] - 0s 997us/step - loss: 0.0134 - accuracy:
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Epoch 3183/5000
1/1 [=====] - 0s 0s/step - loss: 0.0134 - accuracy:
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Epoch 3184/5000
1/1 [=====] - 0s 996us/step - loss: 0.0134 - accuracy:
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Epoch 3185/5000
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Epoch 3186/5000
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Epoch 3187/5000
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Epoch 3188/5000
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Epoch 3189/5000
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Epoch 3190/5000
1/1 [=====] - 0s 998us/step - loss: 0.0133 - accuracy:
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Epoch 3191/5000
1/1 [=====] - 0s 0s/step - loss: 0.0133 - accuracy:
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Epoch 3192/5000
1/1 [=====] - 0s 997us/step - loss: 0.0133 - accuracy:
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Epoch 3193/5000
1/1 [=====] - 0s 998us/step - loss: 0.0133 - accuracy:
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Epoch 3194/5000
1/1 [=====] - 0s 0s/step - loss: 0.0133 - accuracy:
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Epoch 3195/5000
1/1 [=====] - 0s 0s/step - loss: 0.0133 - accuracy:
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Epoch 3196/5000
1/1 [=====] - 0s 0s/step - loss: 0.0133 - accuracy:
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Epoch 3197/5000
1/1 [=====] - 0s 0s/step - loss: 0.0133 - accuracy:
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Epoch 3198/5000
1/1 [=====] - 0s 998us/step - loss: 0.0132 - accuracy:
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Epoch 3199/5000
1/1 [=====] - 0s 0s/step - loss: 0.0132 - accuracy:
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Epoch 3200/5000
1/1 [=====] - 0s 997us/step - loss: 0.0132 - accuracy:
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Epoch 3201/5000
1/1 [=====] - 0s 998us/step - loss: 0.0132 - accuracy:
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Epoch 3202/5000
1/1 [=====] - 0s 0s/step - loss: 0.0132 - accuracy:
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Epoch 3203/5000
1/1 [=====] - 0s 0s/step - loss: 0.0132 - accuracy:
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Epoch 3204/5000
1/1 [=====] - 0s 995us/step - loss: 0.0132 - accuracy:
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Epoch 3205/5000
1/1 [=====] - 0s 0s/step - loss: 0.0132 - accuracy:
1.0000
Epoch 3206/5000
1/1 [=====] - 0s 997us/step - loss: 0.0131 - accuracy:
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Epoch 3207/5000
1/1 [=====] - 0s 997us/step - loss: 0.0131 - accuracy:
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Epoch 3208/5000
1/1 [=====] - 0s 997us/step - loss: 0.0131 - accuracy:
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Epoch 3209/5000
1/1 [=====] - 0s 998us/step - loss: 0.0131 - accuracy:
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Epoch 3210/5000
1/1 [=====] - 0s 0s/step - loss: 0.0131 - accuracy:
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Epoch 3211/5000
1/1 [=====] - 0s 997us/step - loss: 0.0131 - accuracy:
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Epoch 3212/5000
1/1 [=====] - 0s 997us/step - loss: 0.0131 - accuracy:
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Epoch 3213/5000
1/1 [=====] - 0s 0s/step - loss: 0.0131 - accuracy:
1.0000
Epoch 3214/5000
1/1 [=====] - 0s 0s/step - loss: 0.0130 - accuracy:
1.0000
Epoch 3215/5000
1/1 [=====] - 0s 998us/step - loss: 0.0130 - accuracy:
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Epoch 3216/5000
1/1 [=====] - 0s 997us/step - loss: 0.0130 - accuracy:
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Epoch 3217/5000
1/1 [=====] - 0s 997us/step - loss: 0.0130 - accuracy:
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Epoch 3218/5000
1/1 [=====] - 0s 997us/step - loss: 0.0130 - accuracy:
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Epoch 3219/5000
1/1 [=====] - 0s 998us/step - loss: 0.0130 - accuracy:
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Epoch 3220/5000
1/1 [=====] - 0s 0s/step - loss: 0.0130 - accuracy:
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Epoch 3221/5000
1/1 [=====] - 0s 998us/step - loss: 0.0130 - accuracy:
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Epoch 3222/5000
1/1 [=====] - 0s 998us/step - loss: 0.0129 - accuracy:
1.0000
Epoch 3223/5000
1/1 [=====] - 0s 0s/step - loss: 0.0129 - accuracy:
1.0000
Epoch 3224/5000
1/1 [=====] - 0s 0s/step - loss: 0.0129 - accuracy:
1.0000
Epoch 3225/5000
1/1 [=====] - 0s 998us/step - loss: 0.0129 - accuracy:
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Epoch 3226/5000
1/1 [=====] - 0s 0s/step - loss: 0.0129 - accuracy:
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Epoch 3227/5000
1/1 [=====] - 0s 0s/step - loss: 0.0129 - accuracy:
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Epoch 3228/5000
1/1 [=====] - 0s 0s/step - loss: 0.0129 - accuracy:
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Epoch 3229/5000
1/1 [=====] - 0s 0s/step - loss: 0.0129 - accuracy:
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Epoch 3230/5000
1/1 [=====] - 0s 997us/step - loss: 0.0129 - accuracy:
1.0000
Epoch 3231/5000
1/1 [=====] - 0s 997us/step - loss: 0.0128 - accuracy:
1.0000
Epoch 3232/5000
1/1 [=====] - 0s 999us/step - loss: 0.0128 - accuracy:
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Epoch 3233/5000
1/1 [=====] - 0s 0s/step - loss: 0.0128 - accuracy:
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Epoch 3234/5000
1/1 [=====] - 0s 998us/step - loss: 0.0128 - accuracy:
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Epoch 3235/5000
1/1 [=====] - 0s 998us/step - loss: 0.0128 - accuracy:
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Epoch 3236/5000
1/1 [=====] - 0s 997us/step - loss: 0.0128 - accuracy:
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Epoch 3237/5000
1/1 [=====] - 0s 0s/step - loss: 0.0128 - accuracy:
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Epoch 3238/5000
1/1 [=====] - 0s 997us/step - loss: 0.0128 - accuracy:
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Epoch 3239/5000
1/1 [=====] - 0s 0s/step - loss: 0.0127 - accuracy:
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Epoch 3240/5000
1/1 [=====] - 0s 0s/step - loss: 0.0127 - accuracy:
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Epoch 3241/5000
1/1 [=====] - 0s 997us/step - loss: 0.0127 - accuracy:
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Epoch 3242/5000
1/1 [=====] - 0s 0s/step - loss: 0.0127 - accuracy:
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Epoch 3243/5000
1/1 [=====] - 0s 997us/step - loss: 0.0127 - accuracy:
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Epoch 3244/5000
1/1 [=====] - 0s 997us/step - loss: 0.0127 - accuracy:
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Epoch 3245/5000
1/1 [=====] - 0s 0s/step - loss: 0.0127 - accuracy:
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Epoch 3246/5000
1/1 [=====] - 0s 997us/step - loss: 0.0127 - accuracy:
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Epoch 3247/5000
1/1 [=====] - 0s 998us/step - loss: 0.0127 - accuracy:
1.0000

Epoch 3248/5000
1/1 [=====] - 0s 0s/step - loss: 0.0126 - accuracy:
1.0000

Epoch 3249/5000
1/1 [=====] - 0s 0s/step - loss: 0.0126 - accuracy:
1.0000

Epoch 3250/5000
1/1 [=====] - 0s 998us/step - loss: 0.0126 - accuracy:
1.0000

Epoch 3251/5000
1/1 [=====] - 0s 0s/step - loss: 0.0126 - accuracy:
1.0000

Epoch 3252/5000
1/1 [=====] - 0s 0s/step - loss: 0.0126 - accuracy:
1.0000

Epoch 3253/5000
1/1 [=====] - 0s 998us/step - loss: 0.0126 - accuracy:
1.0000

Epoch 3254/5000
1/1 [=====] - 0s 997us/step - loss: 0.0126 - accuracy:
1.0000

Epoch 3255/5000
1/1 [=====] - 0s 998us/step - loss: 0.0126 - accuracy:
1.0000

Epoch 3256/5000
1/1 [=====] - 0s 0s/step - loss: 0.0125 - accuracy:
1.0000

Epoch 3257/5000
1/1 [=====] - 0s 999us/step - loss: 0.0125 - accuracy:
1.0000

Epoch 3258/5000
1/1 [=====] - 0s 0s/step - loss: 0.0125 - accuracy:
1.0000

Epoch 3259/5000
1/1 [=====] - 0s 997us/step - loss: 0.0125 - accuracy:
1.0000

Epoch 3260/5000
1/1 [=====] - 0s 0s/step - loss: 0.0125 - accuracy:
1.0000

Epoch 3261/5000
1/1 [=====] - 0s 0s/step - loss: 0.0125 - accuracy:
1.0000

Epoch 3262/5000
1/1 [=====] - 0s 0s/step - loss: 0.0125 - accuracy:
1.0000

Epoch 3263/5000
1/1 [=====] - 0s 997us/step - loss: 0.0125 - accuracy:
1.0000

Epoch 3264/5000
1/1 [=====] - 0s 997us/step - loss: 0.0125 - accuracy:
1.0000

Epoch 3265/5000
1/1 [=====] - 0s 0s/step - loss: 0.0124 - accuracy:
1.0000

Epoch 3266/5000
1/1 [=====] - 0s 0s/step - loss: 0.0124 - accuracy:
1.0000

Epoch 3267/5000
1/1 [=====] - 0s 0s/step - loss: 0.0124 - accuracy:
1.0000

Epoch 3268/5000
1/1 [=====] - 0s 997us/step - loss: 0.0124 - accuracy:
1.0000

Epoch 3269/5000
1/1 [=====] - 0s 0s/step - loss: 0.0124 - accuracy:
1.0000

Epoch 3270/5000
1/1 [=====] - 0s 998us/step - loss: 0.0124 - accuracy:
1.0000

Epoch 3271/5000
1/1 [=====] - 0s 997us/step - loss: 0.0124 - accuracy:
1.0000

Epoch 3272/5000
1/1 [=====] - 0s 0s/step - loss: 0.0124 - accuracy:
1.0000

Epoch 3273/5000
1/1 [=====] - 0s 0s/step - loss: 0.0124 - accuracy:
1.0000

Epoch 3274/5000
1/1 [=====] - 0s 996us/step - loss: 0.0123 - accuracy:
1.0000

Epoch 3275/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000

Epoch 3276/5000
1/1 [=====] - 0s 997us/step - loss: 0.0123 - accuracy:
1.0000

Epoch 3277/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000

Epoch 3278/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000

Epoch 3279/5000
1/1 [=====] - 0s 0s/step - loss: 0.0123 - accuracy:
1.0000

Epoch 3280/5000
1/1 [=====] - 0s 998us/step - loss: 0.0123 - accuracy:
1.0000

Epoch 3281/5000
1/1 [=====] - 0s 997us/step - loss: 0.0123 - accuracy:
1.0000

Epoch 3282/5000
1/1 [=====] - 0s 0s/step - loss: 0.0122 - accuracy:
1.0000

Epoch 3283/5000
1/1 [=====] - 0s 996us/step - loss: 0.0122 - accuracy:
1.0000

Epoch 3284/5000
1/1 [=====] - 0s 0s/step - loss: 0.0122 - accuracy:
1.0000

Epoch 3285/5000
1/1 [=====] - 0s 0s/step - loss: 0.0122 - accuracy:
1.0000

Epoch 3286/5000
1/1 [=====] - 0s 996us/step - loss: 0.0122 - accuracy:
1.0000

Epoch 3287/5000
1/1 [=====] - 0s 0s/step - loss: 0.0122 - accuracy:
1.0000

Epoch 3288/5000
1/1 [=====] - 0s 0s/step - loss: 0.0122 - accuracy:
1.0000

Epoch 3289/5000
1/1 [=====] - 0s 997us/step - loss: 0.0122 - accuracy:
1.0000

Epoch 3290/5000
1/1 [=====] - 0s 0s/step - loss: 0.0122 - accuracy:
1.0000

Epoch 3291/5000
1/1 [=====] - 0s 997us/step - loss: 0.0121 - accuracy:
1.0000

Epoch 3292/5000
1/1 [=====] - 0s 0s/step - loss: 0.0121 - accuracy:
1.0000

Epoch 3293/5000
1/1 [=====] - 0s 997us/step - loss: 0.0121 - accuracy:
1.0000

Epoch 3294/5000
1/1 [=====] - 0s 997us/step - loss: 0.0121 - accuracy:
1.0000

Epoch 3295/5000
1/1 [=====] - 0s 997us/step - loss: 0.0121 - accuracy:
1.0000

Epoch 3296/5000
1/1 [=====] - 0s 998us/step - loss: 0.0121 - accuracy:
1.0000

Epoch 3297/5000
1/1 [=====] - 0s 0s/step - loss: 0.0121 - accuracy:
1.0000

Epoch 3298/5000
1/1 [=====] - 0s 0s/step - loss: 0.0121 - accuracy:
1.0000

Epoch 3299/5000
1/1 [=====] - 0s 0s/step - loss: 0.0121 - accuracy:
1.0000

Epoch 3300/5000
1/1 [=====] - 0s 997us/step - loss: 0.0120 - accuracy:
1.0000

```

Epoch 3301/5000
1/1 [=====] - 0s 998us/step - loss: 0.0120 - accuracy:
1.0000
Epoch 3302/5000
1/1 [=====] - 0s 0s/step - loss: 0.0120 - accuracy:
1.0000
Epoch 3303/5000
1/1 [=====] - 0s 0s/step - loss: 0.0120 - accuracy:
1.0000
Epoch 3304/5000
1/1 [=====] - 0s 0s/step - loss: 0.0120 - accuracy:
1.0000
Epoch 3305/5000
1/1 [=====] - 0s 0s/step - loss: 0.0120 - accuracy:
1.0000
Epoch 3306/5000
1/1 [=====] - 0s 998us/step - loss: 0.0120 - accuracy:
1.0000
Epoch 3307/5000
1/1 [=====] - 0s 997us/step - loss: 0.0120 - accuracy:
1.0000
Epoch 3308/5000
1/1 [=====] - 0s 999us/step - loss: 0.0120 - accuracy:
1.0000
Epoch 3309/5000
1/1 [=====] - 0s 998us/step - loss: 0.0120 - accuracy:
1.0000
Epoch 3310/5000
1/1 [=====] - 0s 999us/step - loss: 0.0119 - accuracy:
1.0000
Epoch 3311/5000
1/1 [=====] - 0s 0s/step - loss: 0.0119 - accuracy:
1.0000
Epoch 3312/5000
1/1 [=====] - 0s 995us/step - loss: 0.0119 - accuracy:
1.0000
Epoch 3313/5000
1/1 [=====] - 0s 997us/step - loss: 0.0119 - accuracy:
1.0000
Epoch 3314/5000
1/1 [=====] - 0s 997us/step - loss: 0.0119 - accuracy:
1.0000
Epoch 3315/5000
1/1 [=====] - 0s 998us/step - loss: 0.0119 - accuracy:
1.0000
Epoch 3316/5000
1/1 [=====] - 0s 998us/step - loss: 0.0119 - accuracy:
1.0000

```

Epoch 3317/5000
1/1 [=====] - 0s 997us/step - loss: 0.0119 - accuracy: 1.0000

Epoch 3318/5000
1/1 [=====] - 0s 998us/step - loss: 0.0119 - accuracy: 1.0000

Epoch 3319/5000
1/1 [=====] - 0s 0s/step - loss: 0.0118 - accuracy: 1.0000

Epoch 3320/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0118 - accuracy: 1.0000

Epoch 3321/5000
1/1 [=====] - 0s 989us/step - loss: 0.0118 - accuracy: 1.0000

Epoch 3322/5000
1/1 [=====] - 0s 996us/step - loss: 0.0118 - accuracy: 1.0000

Epoch 3323/5000
1/1 [=====] - 0s 998us/step - loss: 0.0118 - accuracy: 1.0000

Epoch 3324/5000
1/1 [=====] - 0s 997us/step - loss: 0.0118 - accuracy: 1.0000

Epoch 3325/5000
1/1 [=====] - 0s 997us/step - loss: 0.0118 - accuracy: 1.0000

Epoch 3326/5000
1/1 [=====] - 0s 997us/step - loss: 0.0118 - accuracy: 1.0000

Epoch 3327/5000
1/1 [=====] - 0s 0s/step - loss: 0.0118 - accuracy: 1.0000

Epoch 3328/5000
1/1 [=====] - 0s 997us/step - loss: 0.0117 - accuracy: 1.0000

Epoch 3329/5000
1/1 [=====] - 0s 0s/step - loss: 0.0117 - accuracy: 1.0000

Epoch 3330/5000
1/1 [=====] - 0s 998us/step - loss: 0.0117 - accuracy: 1.0000

Epoch 3331/5000
1/1 [=====] - 0s 997us/step - loss: 0.0117 - accuracy: 1.0000

Epoch 3332/5000
1/1 [=====] - 0s 997us/step - loss: 0.0117 - accuracy: 1.0000

Epoch 3333/5000
1/1 [=====] - 0s 998us/step - loss: 0.0117 - accuracy: 1.0000

Epoch 3334/5000
1/1 [=====] - 0s 998us/step - loss: 0.0117 - accuracy: 1.0000

Epoch 3335/5000
1/1 [=====] - 0s 997us/step - loss: 0.0117 - accuracy: 1.0000

Epoch 3336/5000
1/1 [=====] - 0s 0s/step - loss: 0.0117 - accuracy: 1.0000

Epoch 3337/5000
1/1 [=====] - 0s 997us/step - loss: 0.0117 - accuracy: 1.0000

Epoch 3338/5000
1/1 [=====] - 0s 0s/step - loss: 0.0116 - accuracy: 1.0000

Epoch 3339/5000
1/1 [=====] - 0s 998us/step - loss: 0.0116 - accuracy: 1.0000

Epoch 3340/5000
1/1 [=====] - 0s 997us/step - loss: 0.0116 - accuracy: 1.0000

Epoch 3341/5000
1/1 [=====] - 0s 997us/step - loss: 0.0116 - accuracy: 1.0000

Epoch 3342/5000
1/1 [=====] - 0s 998us/step - loss: 0.0116 - accuracy: 1.0000

Epoch 3343/5000
1/1 [=====] - 0s 997us/step - loss: 0.0116 - accuracy: 1.0000

Epoch 3344/5000
1/1 [=====] - 0s 0s/step - loss: 0.0116 - accuracy: 1.0000

Epoch 3345/5000
1/1 [=====] - 0s 997us/step - loss: 0.0116 - accuracy: 1.0000

Epoch 3346/5000
1/1 [=====] - 0s 998us/step - loss: 0.0116 - accuracy: 1.0000

Epoch 3347/5000
1/1 [=====] - 0s 997us/step - loss: 0.0115 - accuracy: 1.0000

Epoch 3348/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0115 - accuracy: 1.0000

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Epoch 3349/5000
1/1 [=====] - 0s 997us/step - loss: 0.0115 - accuracy:
1.0000
Epoch 3350/5000
1/1 [=====] - 0s 998us/step - loss: 0.0115 - accuracy:
1.0000
Epoch 3351/5000
1/1 [=====] - 0s 998us/step - loss: 0.0115 - accuracy:
1.0000
Epoch 3352/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0115 - accuracy:
1.0000
Epoch 3353/5000
1/1 [=====] - 0s 0s/step - loss: 0.0115 - accuracy:
1.0000
Epoch 3354/5000
1/1 [=====] - 0s 0s/step - loss: 0.0115 - accuracy:
1.0000
Epoch 3355/5000
1/1 [=====] - 0s 998us/step - loss: 0.0115 - accuracy:
1.0000
Epoch 3356/5000
1/1 [=====] - 0s 0s/step - loss: 0.0115 - accuracy:
1.0000
Epoch 3357/5000
1/1 [=====] - 0s 0s/step - loss: 0.0114 - accuracy:
1.0000
Epoch 3358/5000
1/1 [=====] - 0s 0s/step - loss: 0.0114 - accuracy:
1.0000
Epoch 3359/5000
1/1 [=====] - 0s 997us/step - loss: 0.0114 - accuracy:
1.0000
Epoch 3360/5000
1/1 [=====] - 0s 998us/step - loss: 0.0114 - accuracy:
1.0000
Epoch 3361/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0114 - accuracy:
1.0000
Epoch 3362/5000
1/1 [=====] - 0s 998us/step - loss: 0.0114 - accuracy:
1.0000
Epoch 3363/5000
1/1 [=====] - 0s 998us/step - loss: 0.0114 - accuracy:
1.0000
Epoch 3364/5000
1/1 [=====] - 0s 998us/step - loss: 0.0114 - accuracy:
1.0000

```

Epoch 3365/5000
1/1 [=====] - 0s 998us/step - loss: 0.0114 - accuracy: 1.0000

Epoch 3366/5000
1/1 [=====] - 0s 998us/step - loss: 0.0113 - accuracy: 1.0000

Epoch 3367/5000
1/1 [=====] - 0s 996us/step - loss: 0.0113 - accuracy: 1.0000

Epoch 3368/5000
1/1 [=====] - 0s 0s/step - loss: 0.0113 - accuracy: 1.0000

Epoch 3369/5000
1/1 [=====] - 0s 0s/step - loss: 0.0113 - accuracy: 1.0000

Epoch 3370/5000
1/1 [=====] - 0s 0s/step - loss: 0.0113 - accuracy: 1.0000

Epoch 3371/5000
1/1 [=====] - 0s 0s/step - loss: 0.0113 - accuracy: 1.0000

Epoch 3372/5000
1/1 [=====] - 0s 0s/step - loss: 0.0113 - accuracy: 1.0000

Epoch 3373/5000
1/1 [=====] - 0s 998us/step - loss: 0.0113 - accuracy: 1.0000

Epoch 3374/5000
1/1 [=====] - 0s 0s/step - loss: 0.0113 - accuracy: 1.0000

Epoch 3375/5000
1/1 [=====] - 0s 0s/step - loss: 0.0113 - accuracy: 1.0000

Epoch 3376/5000
1/1 [=====] - 0s 997us/step - loss: 0.0112 - accuracy: 1.0000

Epoch 3377/5000
1/1 [=====] - 0s 997us/step - loss: 0.0112 - accuracy: 1.0000

Epoch 3378/5000
1/1 [=====] - 0s 998us/step - loss: 0.0112 - accuracy: 1.0000

Epoch 3379/5000
1/1 [=====] - 0s 0s/step - loss: 0.0112 - accuracy: 1.0000

Epoch 3380/5000
1/1 [=====] - 0s 0s/step - loss: 0.0112 - accuracy: 1.0000

Epoch 3381/5000
1/1 [=====] - 0s 998us/step - loss: 0.0112 - accuracy: 1.0000

Epoch 3382/5000
1/1 [=====] - 0s 997us/step - loss: 0.0112 - accuracy: 1.0000

Epoch 3383/5000
1/1 [=====] - 0s 997us/step - loss: 0.0112 - accuracy: 1.0000

Epoch 3384/5000
1/1 [=====] - 0s 998us/step - loss: 0.0112 - accuracy: 1.0000

Epoch 3385/5000
1/1 [=====] - 0s 0s/step - loss: 0.0112 - accuracy: 1.0000

Epoch 3386/5000
1/1 [=====] - 0s 0s/step - loss: 0.0111 - accuracy: 1.0000

Epoch 3387/5000
1/1 [=====] - 0s 998us/step - loss: 0.0111 - accuracy: 1.0000

Epoch 3388/5000
1/1 [=====] - 0s 996us/step - loss: 0.0111 - accuracy: 1.0000

Epoch 3389/5000
1/1 [=====] - 0s 998us/step - loss: 0.0111 - accuracy: 1.0000

Epoch 3390/5000
1/1 [=====] - 0s 998us/step - loss: 0.0111 - accuracy: 1.0000

Epoch 3391/5000
1/1 [=====] - 0s 996us/step - loss: 0.0111 - accuracy: 1.0000

Epoch 3392/5000
1/1 [=====] - 0s 0s/step - loss: 0.0111 - accuracy: 1.0000

Epoch 3393/5000
1/1 [=====] - 0s 0s/step - loss: 0.0111 - accuracy: 1.0000

Epoch 3394/5000
1/1 [=====] - 0s 0s/step - loss: 0.0111 - accuracy: 1.0000

Epoch 3395/5000
1/1 [=====] - 0s 996us/step - loss: 0.0111 - accuracy: 1.0000

Epoch 3396/5000
1/1 [=====] - 0s 998us/step - loss: 0.0110 - accuracy: 1.0000

Epoch 3397/5000
1/1 [=====] - 0s 0s/step - loss: 0.0110 - accuracy:
1.0000
Epoch 3398/5000
1/1 [=====] - 0s 997us/step - loss: 0.0110 - accuracy:
1.0000
Epoch 3399/5000
1/1 [=====] - 0s 0s/step - loss: 0.0110 - accuracy:
1.0000
Epoch 3400/5000
1/1 [=====] - 0s 0s/step - loss: 0.0110 - accuracy:
1.0000
Epoch 3401/5000
1/1 [=====] - 0s 0s/step - loss: 0.0110 - accuracy:
1.0000
Epoch 3402/5000
1/1 [=====] - 0s 0s/step - loss: 0.0110 - accuracy:
1.0000
Epoch 3403/5000
1/1 [=====] - 0s 997us/step - loss: 0.0110 - accuracy:
1.0000
Epoch 3404/5000
1/1 [=====] - 0s 0s/step - loss: 0.0110 - accuracy:
1.0000
Epoch 3405/5000
1/1 [=====] - 0s 998us/step - loss: 0.0110 - accuracy:
1.0000
Epoch 3406/5000
1/1 [=====] - 0s 997us/step - loss: 0.0109 - accuracy:
1.0000
Epoch 3407/5000
1/1 [=====] - 0s 997us/step - loss: 0.0109 - accuracy:
1.0000
Epoch 3408/5000
1/1 [=====] - 0s 0s/step - loss: 0.0109 - accuracy:
1.0000
Epoch 3409/5000
1/1 [=====] - 0s 997us/step - loss: 0.0109 - accuracy:
1.0000
Epoch 3410/5000
1/1 [=====] - 0s 998us/step - loss: 0.0109 - accuracy:
1.0000
Epoch 3411/5000
1/1 [=====] - 0s 0s/step - loss: 0.0109 - accuracy:
1.0000
Epoch 3412/5000
1/1 [=====] - 0s 997us/step - loss: 0.0109 - accuracy:
1.0000

Epoch 3413/5000
1/1 [=====] - 0s 0s/step - loss: 0.0109 - accuracy:
1.0000

Epoch 3414/5000
1/1 [=====] - 0s 0s/step - loss: 0.0109 - accuracy:
1.0000

Epoch 3415/5000
1/1 [=====] - 0s 0s/step - loss: 0.0109 - accuracy:
1.0000

Epoch 3416/5000
1/1 [=====] - 0s 998us/step - loss: 0.0109 - accuracy:
1.0000

Epoch 3417/5000
1/1 [=====] - 0s 0s/step - loss: 0.0108 - accuracy:
1.0000

Epoch 3418/5000
1/1 [=====] - 0s 997us/step - loss: 0.0108 - accuracy:
1.0000

Epoch 3419/5000
1/1 [=====] - 0s 994us/step - loss: 0.0108 - accuracy:
1.0000

Epoch 3420/5000
1/1 [=====] - 0s 0s/step - loss: 0.0108 - accuracy:
1.0000

Epoch 3421/5000
1/1 [=====] - 0s 0s/step - loss: 0.0108 - accuracy:
1.0000

Epoch 3422/5000
1/1 [=====] - 0s 0s/step - loss: 0.0108 - accuracy:
1.0000

Epoch 3423/5000
1/1 [=====] - 0s 997us/step - loss: 0.0108 - accuracy:
1.0000

Epoch 3424/5000
1/1 [=====] - 0s 997us/step - loss: 0.0108 - accuracy:
1.0000

Epoch 3425/5000
1/1 [=====] - 0s 997us/step - loss: 0.0108 - accuracy:
1.0000

Epoch 3426/5000
1/1 [=====] - 0s 0s/step - loss: 0.0108 - accuracy:
1.0000

Epoch 3427/5000
1/1 [=====] - 0s 0s/step - loss: 0.0107 - accuracy:
1.0000

Epoch 3428/5000
1/1 [=====] - 0s 997us/step - loss: 0.0107 - accuracy:
1.0000

Epoch 3429/5000
1/1 [=====] - 0s 0s/step - loss: 0.0107 - accuracy:
1.0000

Epoch 3430/5000
1/1 [=====] - 0s 998us/step - loss: 0.0107 - accuracy:
1.0000

Epoch 3431/5000
1/1 [=====] - 0s 0s/step - loss: 0.0107 - accuracy:
1.0000

Epoch 3432/5000
1/1 [=====] - 0s 997us/step - loss: 0.0107 - accuracy:
1.0000

Epoch 3433/5000
1/1 [=====] - 0s 998us/step - loss: 0.0107 - accuracy:
1.0000

Epoch 3434/5000
1/1 [=====] - 0s 997us/step - loss: 0.0107 - accuracy:
1.0000

Epoch 3435/5000
1/1 [=====] - 0s 997us/step - loss: 0.0107 - accuracy:
1.0000

Epoch 3436/5000
1/1 [=====] - 0s 998us/step - loss: 0.0107 - accuracy:
1.0000

Epoch 3437/5000
1/1 [=====] - 0s 998us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 3438/5000
1/1 [=====] - 0s 996us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 3439/5000
1/1 [=====] - 0s 0s/step - loss: 0.0106 - accuracy:
1.0000

Epoch 3440/5000
1/1 [=====] - 0s 998us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 3441/5000
1/1 [=====] - 0s 0s/step - loss: 0.0106 - accuracy:
1.0000

Epoch 3442/5000
1/1 [=====] - 0s 997us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 3443/5000
1/1 [=====] - 0s 0s/step - loss: 0.0106 - accuracy:
1.0000

Epoch 3444/5000
1/1 [=====] - 0s 0s/step - loss: 0.0106 - accuracy:
1.0000

Epoch 3445/5000
1/1 [=====] - 0s 0s/step - loss: 0.0106 - accuracy:
1.0000

Epoch 3446/5000
1/1 [=====] - 0s 0s/step - loss: 0.0106 - accuracy:
1.0000

Epoch 3447/5000
1/1 [=====] - 0s 998us/step - loss: 0.0106 - accuracy:
1.0000

Epoch 3448/5000
1/1 [=====] - 0s 995us/step - loss: 0.0105 - accuracy:
1.0000

Epoch 3449/5000
1/1 [=====] - 0s 0s/step - loss: 0.0105 - accuracy:
1.0000

Epoch 3450/5000
1/1 [=====] - 0s 0s/step - loss: 0.0105 - accuracy:
1.0000

Epoch 3451/5000
1/1 [=====] - 0s 997us/step - loss: 0.0105 - accuracy:
1.0000

Epoch 3452/5000
1/1 [=====] - 0s 998us/step - loss: 0.0105 - accuracy:
1.0000

Epoch 3453/5000
1/1 [=====] - 0s 0s/step - loss: 0.0105 - accuracy:
1.0000

Epoch 3454/5000
1/1 [=====] - 0s 997us/step - loss: 0.0105 - accuracy:
1.0000

Epoch 3455/5000
1/1 [=====] - 0s 998us/step - loss: 0.0105 - accuracy:
1.0000

Epoch 3456/5000
1/1 [=====] - 0s 0s/step - loss: 0.0105 - accuracy:
1.0000

Epoch 3457/5000
1/1 [=====] - 0s 998us/step - loss: 0.0105 - accuracy:
1.0000

Epoch 3458/5000
1/1 [=====] - 0s 997us/step - loss: 0.0105 - accuracy:
1.0000

Epoch 3459/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0104 - accuracy:
1.0000

Epoch 3460/5000
1/1 [=====] - 0s 997us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 3461/5000
1/1 [=====] - 0s 997us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 3462/5000
1/1 [=====] - 0s 0s/step - loss: 0.0104 - accuracy:
1.0000

Epoch 3463/5000
1/1 [=====] - 0s 995us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 3464/5000
1/1 [=====] - 0s 997us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 3465/5000
1/1 [=====] - 0s 998us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 3466/5000
1/1 [=====] - 0s 997us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 3467/5000
1/1 [=====] - 0s 997us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 3468/5000
1/1 [=====] - 0s 998us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 3469/5000
1/1 [=====] - 0s 998us/step - loss: 0.0104 - accuracy:
1.0000

Epoch 3470/5000
1/1 [=====] - 0s 997us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 3471/5000
1/1 [=====] - 0s 0s/step - loss: 0.0103 - accuracy:
1.0000

Epoch 3472/5000
1/1 [=====] - 0s 997us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 3473/5000
1/1 [=====] - 0s 997us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 3474/5000
1/1 [=====] - 0s 998us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 3475/5000
1/1 [=====] - 0s 997us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 3476/5000
1/1 [=====] - 0s 997us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 3477/5000
1/1 [=====] - 0s 998us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 3478/5000
1/1 [=====] - 0s 998us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 3479/5000
1/1 [=====] - 0s 0s/step - loss: 0.0103 - accuracy:
1.0000

Epoch 3480/5000
1/1 [=====] - 0s 997us/step - loss: 0.0103 - accuracy:
1.0000

Epoch 3481/5000
1/1 [=====] - 0s 998us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 3482/5000
1/1 [=====] - 0s 999us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 3483/5000
1/1 [=====] - 0s 997us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 3484/5000
1/1 [=====] - 0s 998us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 3485/5000
1/1 [=====] - 0s 997us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 3486/5000
1/1 [=====] - 0s 998us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 3487/5000
1/1 [=====] - 0s 998us/step - loss: 0.0102 - accuracy:
1.0000

Epoch 3488/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0102 - accuracy:
1.0000

Epoch 3489/5000
1/1 [=====] - 0s 0s/step - loss: 0.0102 - accuracy:
1.0000

Epoch 3490/5000
1/1 [=====] - 0s 0s/step - loss: 0.0102 - accuracy:
1.0000

Epoch 3491/5000
1/1 [=====] - 0s 0s/step - loss: 0.0102 - accuracy:
1.0000

Epoch 3492/5000
1/1 [=====] - 0s 0s/step - loss: 0.0101 - accuracy:
1.0000

Epoch 3493/5000
1/1 [=====] - 0s 0s/step - loss: 0.0101 - accuracy:
1.0000

Epoch 3494/5000
1/1 [=====] - 0s 998us/step - loss: 0.0101 - accuracy:
1.0000

Epoch 3495/5000
1/1 [=====] - 0s 0s/step - loss: 0.0101 - accuracy:
1.0000

Epoch 3496/5000
1/1 [=====] - 0s 997us/step - loss: 0.0101 - accuracy:
1.0000

Epoch 3497/5000
1/1 [=====] - 0s 996us/step - loss: 0.0101 - accuracy:
1.0000

Epoch 3498/5000
1/1 [=====] - 0s 997us/step - loss: 0.0101 - accuracy:
1.0000

Epoch 3499/5000
1/1 [=====] - 0s 998us/step - loss: 0.0101 - accuracy:
1.0000

Epoch 3500/5000
1/1 [=====] - 0s 998us/step - loss: 0.0101 - accuracy:
1.0000

Epoch 3501/5000
1/1 [=====] - 0s 997us/step - loss: 0.0101 - accuracy:
1.0000

Epoch 3502/5000
1/1 [=====] - 0s 996us/step - loss: 0.0101 - accuracy:
1.0000

Epoch 3503/5000
1/1 [=====] - 0s 998us/step - loss: 0.0100 - accuracy:
1.0000

Epoch 3504/5000
1/1 [=====] - 0s 998us/step - loss: 0.0100 - accuracy:
1.0000

Epoch 3505/5000
1/1 [=====] - 0s 0s/step - loss: 0.0100 - accuracy:
1.0000

Epoch 3506/5000
1/1 [=====] - 0s 998us/step - loss: 0.0100 - accuracy:
1.0000

Epoch 3507/5000
1/1 [=====] - 0s 998us/step - loss: 0.0100 - accuracy:
1.0000

Epoch 3508/5000
1/1 [=====] - 0s 997us/step - loss: 0.0100 - accuracy:
1.0000

Epoch 3509/5000
1/1 [=====] - 0s 997us/step - loss: 0.0100 - accuracy:
1.0000
Epoch 3510/5000
1/1 [=====] - 0s 997us/step - loss: 0.0100 - accuracy:
1.0000
Epoch 3511/5000
1/1 [=====] - 0s 0s/step - loss: 0.0100 - accuracy:
1.0000
Epoch 3512/5000
1/1 [=====] - 0s 0s/step - loss: 0.0100 - accuracy:
1.0000
Epoch 3513/5000
1/1 [=====] - 0s 0s/step - loss: 0.0100 - accuracy:
1.0000
Epoch 3514/5000
1/1 [=====] - 0s 0s/step - loss: 0.0099 - accuracy:
1.0000
Epoch 3515/5000
1/1 [=====] - 0s 998us/step - loss: 0.0099 - accuracy:
1.0000
Epoch 3516/5000
1/1 [=====] - 0s 997us/step - loss: 0.0099 - accuracy:
1.0000
Epoch 3517/5000
1/1 [=====] - 0s 997us/step - loss: 0.0099 - accuracy:
1.0000
Epoch 3518/5000
1/1 [=====] - 0s 996us/step - loss: 0.0099 - accuracy:
1.0000
Epoch 3519/5000
1/1 [=====] - 0s 0s/step - loss: 0.0099 - accuracy:
1.0000
Epoch 3520/5000
1/1 [=====] - 0s 0s/step - loss: 0.0099 - accuracy:
1.0000
Epoch 3521/5000
1/1 [=====] - 0s 997us/step - loss: 0.0099 - accuracy:
1.0000
Epoch 3522/5000
1/1 [=====] - 0s 997us/step - loss: 0.0099 - accuracy:
1.0000
Epoch 3523/5000
1/1 [=====] - 0s 998us/step - loss: 0.0099 - accuracy:
1.0000
Epoch 3524/5000
1/1 [=====] - 0s 998us/step - loss: 0.0099 - accuracy:
1.0000

Epoch 3525/5000
1/1 [=====] - 0s 998us/step - loss: 0.0099 - accuracy:
1.0000

Epoch 3526/5000
1/1 [=====] - 0s 0s/step - loss: 0.0098 - accuracy:
1.0000

Epoch 3527/5000
1/1 [=====] - 0s 997us/step - loss: 0.0098 - accuracy:
1.0000

Epoch 3528/5000
1/1 [=====] - 0s 997us/step - loss: 0.0098 - accuracy:
1.0000

Epoch 3529/5000
1/1 [=====] - 0s 995us/step - loss: 0.0098 - accuracy:
1.0000

Epoch 3530/5000
1/1 [=====] - 0s 0s/step - loss: 0.0098 - accuracy:
1.0000

Epoch 3531/5000
1/1 [=====] - 0s 0s/step - loss: 0.0098 - accuracy:
1.0000

Epoch 3532/5000
1/1 [=====] - 0s 996us/step - loss: 0.0098 - accuracy:
1.0000

Epoch 3533/5000
1/1 [=====] - 0s 0s/step - loss: 0.0098 - accuracy:
1.0000

Epoch 3534/5000
1/1 [=====] - 0s 998us/step - loss: 0.0098 - accuracy:
1.0000

Epoch 3535/5000
1/1 [=====] - 0s 0s/step - loss: 0.0098 - accuracy:
1.0000

Epoch 3536/5000
1/1 [=====] - 0s 997us/step - loss: 0.0098 - accuracy:
1.0000

Epoch 3537/5000
1/1 [=====] - 0s 998us/step - loss: 0.0097 - accuracy:
1.0000

Epoch 3538/5000
1/1 [=====] - 0s 0s/step - loss: 0.0097 - accuracy:
1.0000

Epoch 3539/5000
1/1 [=====] - 0s 998us/step - loss: 0.0097 - accuracy:
1.0000

Epoch 3540/5000
1/1 [=====] - 0s 999us/step - loss: 0.0097 - accuracy:
1.0000

Epoch 3541/5000
1/1 [=====] - 0s 0s/step - loss: 0.0097 - accuracy:
1.0000
Epoch 3542/5000
1/1 [=====] - 0s 997us/step - loss: 0.0097 - accuracy:
1.0000
Epoch 3543/5000
1/1 [=====] - 0s 998us/step - loss: 0.0097 - accuracy:
1.0000
Epoch 3544/5000
1/1 [=====] - 0s 0s/step - loss: 0.0097 - accuracy:
1.0000
Epoch 3545/5000
1/1 [=====] - 0s 998us/step - loss: 0.0097 - accuracy:
1.0000
Epoch 3546/5000
1/1 [=====] - 0s 0s/step - loss: 0.0097 - accuracy:
1.0000
Epoch 3547/5000
1/1 [=====] - 0s 998us/step - loss: 0.0097 - accuracy:
1.0000
Epoch 3548/5000
1/1 [=====] - 0s 998us/step - loss: 0.0097 - accuracy:
1.0000
Epoch 3549/5000
1/1 [=====] - 0s 997us/step - loss: 0.0096 - accuracy:
1.0000
Epoch 3550/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 3551/5000
1/1 [=====] - 0s 997us/step - loss: 0.0096 - accuracy:
1.0000
Epoch 3552/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 3553/5000
1/1 [=====] - 0s 998us/step - loss: 0.0096 - accuracy:
1.0000
Epoch 3554/5000
1/1 [=====] - 0s 998us/step - loss: 0.0096 - accuracy:
1.0000
Epoch 3555/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 3556/5000
1/1 [=====] - 0s 998us/step - loss: 0.0096 - accuracy:
1.0000

Epoch 3557/5000
1/1 [=====] - 0s 997us/step - loss: 0.0096 - accuracy:
1.0000
Epoch 3558/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 3559/5000
1/1 [=====] - 0s 0s/step - loss: 0.0096 - accuracy:
1.0000
Epoch 3560/5000
1/1 [=====] - 0s 997us/step - loss: 0.0096 - accuracy:
1.0000
Epoch 3561/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000
Epoch 3562/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000
Epoch 3563/5000
1/1 [=====] - 0s 998us/step - loss: 0.0095 - accuracy:
1.0000
Epoch 3564/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000
Epoch 3565/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000
Epoch 3566/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000
Epoch 3567/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000
Epoch 3568/5000
1/1 [=====] - 0s 997us/step - loss: 0.0095 - accuracy:
1.0000
Epoch 3569/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000
Epoch 3570/5000
1/1 [=====] - 0s 997us/step - loss: 0.0095 - accuracy:
1.0000
Epoch 3571/5000
1/1 [=====] - 0s 998us/step - loss: 0.0095 - accuracy:
1.0000
Epoch 3572/5000
1/1 [=====] - 0s 0s/step - loss: 0.0095 - accuracy:
1.0000

Epoch 3573/5000
1/1 [=====] - 0s 998us/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3574/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3575/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3576/5000
1/1 [=====] - 0s 997us/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3577/5000
1/1 [=====] - 0s 998us/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3578/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3579/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3580/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3581/5000
1/1 [=====] - 0s 998us/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3582/5000
1/1 [=====] - 0s 997us/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3583/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3584/5000
1/1 [=====] - 0s 0s/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3585/5000
1/1 [=====] - 0s 997us/step - loss: 0.0094 - accuracy: 1.0000

Epoch 3586/5000
1/1 [=====] - 0s 998us/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3587/5000
1/1 [=====] - 0s 998us/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3588/5000
1/1 [=====] - 0s 0s/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3589/5000
1/1 [=====] - 0s 997us/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3590/5000
1/1 [=====] - 0s 998us/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3591/5000
1/1 [=====] - 0s 997us/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3592/5000
1/1 [=====] - 0s 997us/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3593/5000
1/1 [=====] - 0s 998us/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3594/5000
1/1 [=====] - 0s 0s/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3595/5000
1/1 [=====] - 0s 0s/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3596/5000
1/1 [=====] - 0s 997us/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3597/5000
1/1 [=====] - 0s 998us/step - loss: 0.0093 - accuracy: 1.0000

Epoch 3598/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy: 1.0000

Epoch 3599/5000
1/1 [=====] - 0s 998us/step - loss: 0.0092 - accuracy: 1.0000

Epoch 3600/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy: 1.0000

Epoch 3601/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy: 1.0000

Epoch 3602/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy: 1.0000

Epoch 3603/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy: 1.0000

Epoch 3604/5000
1/1 [=====] - 0s 997us/step - loss: 0.0092 - accuracy: 1.0000

Epoch 3605/5000
1/1 [=====] - 0s 999us/step - loss: 0.0092 - accuracy:
1.0000

Epoch 3606/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy:
1.0000

Epoch 3607/5000
1/1 [=====] - 0s 0s/step - loss: 0.0092 - accuracy:
1.0000

Epoch 3608/5000
1/1 [=====] - 0s 998us/step - loss: 0.0092 - accuracy:
1.0000

Epoch 3609/5000
1/1 [=====] - 0s 998us/step - loss: 0.0092 - accuracy:
1.0000

Epoch 3610/5000
1/1 [=====] - 0s 997us/step - loss: 0.0092 - accuracy:
1.0000

Epoch 3611/5000
1/1 [=====] - 0s 0s/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3612/5000
1/1 [=====] - 0s 998us/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3613/5000
1/1 [=====] - 0s 999us/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3614/5000
1/1 [=====] - 0s 997us/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3615/5000
1/1 [=====] - 0s 0s/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3616/5000
1/1 [=====] - 0s 998us/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3617/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3618/5000
1/1 [=====] - 0s 998us/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3619/5000
1/1 [=====] - 0s 998us/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3620/5000
1/1 [=====] - 0s 999us/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3621/5000
1/1 [=====] - 0s 0s/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3622/5000
1/1 [=====] - 0s 997us/step - loss: 0.0091 - accuracy:
1.0000

Epoch 3623/5000
1/1 [=====] - 0s 998us/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3624/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3625/5000
1/1 [=====] - 0s 999us/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3626/5000
1/1 [=====] - 0s 0s/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3627/5000
1/1 [=====] - 0s 997us/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3628/5000
1/1 [=====] - 0s 0s/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3629/5000
1/1 [=====] - 0s 998us/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3630/5000
1/1 [=====] - 0s 997us/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3631/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3632/5000
1/1 [=====] - 0s 0s/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3633/5000
1/1 [=====] - 0s 0s/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3634/5000
1/1 [=====] - 0s 997us/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3635/5000
1/1 [=====] - 0s 0s/step - loss: 0.0090 - accuracy:
1.0000

Epoch 3636/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3637/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3638/5000
1/1 [=====] - 0s 998us/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3639/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3640/5000
1/1 [=====] - 0s 998us/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3641/5000
1/1 [=====] - 0s 997us/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3642/5000
1/1 [=====] - 0s 998us/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3643/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3644/5000
1/1 [=====] - 0s 998us/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3645/5000
1/1 [=====] - 0s 995us/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3646/5000
1/1 [=====] - 0s 998us/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3647/5000
1/1 [=====] - 0s 997us/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3648/5000
1/1 [=====] - 0s 0s/step - loss: 0.0089 - accuracy:
1.0000

Epoch 3649/5000
1/1 [=====] - 0s 0s/step - loss: 0.0088 - accuracy:
1.0000

Epoch 3650/5000
1/1 [=====] - 0s 998us/step - loss: 0.0088 - accuracy:
1.0000

Epoch 3651/5000
1/1 [=====] - 0s 998us/step - loss: 0.0088 - accuracy:
1.0000

Epoch 3652/5000
1/1 [=====] - 0s 997us/step - loss: 0.0088 - accuracy:
1.0000

Epoch 3653/5000
1/1 [=====] - 0s 997us/step - loss: 0.0088 - accuracy: 1.0000

Epoch 3654/5000
1/1 [=====] - 0s 997us/step - loss: 0.0088 - accuracy: 1.0000

Epoch 3655/5000
1/1 [=====] - 0s 998us/step - loss: 0.0088 - accuracy: 1.0000

Epoch 3656/5000
1/1 [=====] - 0s 0s/step - loss: 0.0088 - accuracy: 1.0000

Epoch 3657/5000
1/1 [=====] - 0s 998us/step - loss: 0.0088 - accuracy: 1.0000

Epoch 3658/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0088 - accuracy: 1.0000

Epoch 3659/5000
1/1 [=====] - 0s 996us/step - loss: 0.0088 - accuracy: 1.0000

Epoch 3660/5000
1/1 [=====] - 0s 998us/step - loss: 0.0088 - accuracy: 1.0000

Epoch 3661/5000
1/1 [=====] - 0s 997us/step - loss: 0.0088 - accuracy: 1.0000

Epoch 3662/5000
1/1 [=====] - 0s 998us/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3663/5000
1/1 [=====] - 0s 996us/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3664/5000
1/1 [=====] - 0s 999us/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3665/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3666/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3667/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3668/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3669/5000
1/1 [=====] - 0s 997us/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3670/5000
1/1 [=====] - 0s 997us/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3671/5000
1/1 [=====] - 0s 995us/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3672/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3673/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3674/5000
1/1 [=====] - 0s 0s/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3675/5000
1/1 [=====] - 0s 997us/step - loss: 0.0087 - accuracy: 1.0000

Epoch 3676/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy: 1.0000

Epoch 3677/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy: 1.0000

Epoch 3678/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy: 1.0000

Epoch 3679/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy: 1.0000

Epoch 3680/5000
1/1 [=====] - 0s 998us/step - loss: 0.0086 - accuracy: 1.0000

Epoch 3681/5000
1/1 [=====] - 0s 997us/step - loss: 0.0086 - accuracy: 1.0000

Epoch 3682/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy: 1.0000

Epoch 3683/5000
1/1 [=====] - 0s 998us/step - loss: 0.0086 - accuracy: 1.0000

Epoch 3684/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy: 1.0000

Epoch 3685/5000
1/1 [=====] - 0s 998us/step - loss: 0.0086 - accuracy:
1.0000

Epoch 3686/5000
1/1 [=====] - 0s 998us/step - loss: 0.0086 - accuracy:
1.0000

Epoch 3687/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy:
1.0000

Epoch 3688/5000
1/1 [=====] - 0s 0s/step - loss: 0.0086 - accuracy:
1.0000

Epoch 3689/5000
1/1 [=====] - 0s 997us/step - loss: 0.0086 - accuracy:
1.0000

Epoch 3690/5000
1/1 [=====] - 0s 998us/step - loss: 0.0085 - accuracy:
1.0000

Epoch 3691/5000
1/1 [=====] - 0s 997us/step - loss: 0.0085 - accuracy:
1.0000

Epoch 3692/5000
1/1 [=====] - 0s 997us/step - loss: 0.0085 - accuracy:
1.0000

Epoch 3693/5000
1/1 [=====] - 0s 998us/step - loss: 0.0085 - accuracy:
1.0000

Epoch 3694/5000
1/1 [=====] - 0s 997us/step - loss: 0.0085 - accuracy:
1.0000

Epoch 3695/5000
1/1 [=====] - 0s 998us/step - loss: 0.0085 - accuracy:
1.0000

Epoch 3696/5000
1/1 [=====] - 0s 997us/step - loss: 0.0085 - accuracy:
1.0000

Epoch 3697/5000
1/1 [=====] - 0s 998us/step - loss: 0.0085 - accuracy:
1.0000

Epoch 3698/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy:
1.0000

Epoch 3699/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy:
1.0000

Epoch 3700/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy:
1.0000

Epoch 3701/5000
1/1 [=====] - 0s 0s/step - loss: 0.0085 - accuracy:
1.0000
Epoch 3702/5000
1/1 [=====] - 0s 997us/step - loss: 0.0085 - accuracy:
1.0000
Epoch 3703/5000
1/1 [=====] - 0s 998us/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3704/5000
1/1 [=====] - 0s 998us/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3705/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3706/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3707/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3708/5000
1/1 [=====] - 0s 996us/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3709/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3710/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3711/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3712/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3713/5000
1/1 [=====] - 0s 0s/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3714/5000
1/1 [=====] - 0s 998us/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3715/5000
1/1 [=====] - 0s 998us/step - loss: 0.0084 - accuracy:
1.0000
Epoch 3716/5000
1/1 [=====] - 0s 998us/step - loss: 0.0084 - accuracy:
1.0000

Epoch 3717/5000
1/1 [=====] - 0s 997us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3718/5000
1/1 [=====] - 0s 998us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3719/5000
1/1 [=====] - 0s 997us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3720/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3721/5000
1/1 [=====] - 0s 996us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3722/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3723/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3724/5000
1/1 [=====] - 0s 997us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3725/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3726/5000
1/1 [=====] - 0s 998us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3727/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3728/5000
1/1 [=====] - 0s 998us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3729/5000
1/1 [=====] - 0s 997us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3730/5000
1/1 [=====] - 0s 0s/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3731/5000
1/1 [=====] - 0s 998us/step - loss: 0.0083 - accuracy:
1.0000

Epoch 3732/5000
1/1 [=====] - 0s 997us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3733/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3734/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3735/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3736/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3737/5000
1/1 [=====] - 0s 997us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3738/5000
1/1 [=====] - 0s 997us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3739/5000
1/1 [=====] - 0s 998us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3740/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3741/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3742/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3743/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3744/5000
1/1 [=====] - 0s 0s/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3745/5000
1/1 [=====] - 0s 997us/step - loss: 0.0082 - accuracy:
1.0000

Epoch 3746/5000
1/1 [=====] - 0s 0s/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3747/5000
1/1 [=====] - 0s 998us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3748/5000
1/1 [=====] - 0s 998us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3749/5000
1/1 [=====] - 0s 996us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3750/5000
1/1 [=====] - 0s 0s/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3751/5000
1/1 [=====] - 0s 0s/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3752/5000
1/1 [=====] - 0s 998us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3753/5000
1/1 [=====] - 0s 997us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3754/5000
1/1 [=====] - 0s 998us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3755/5000
1/1 [=====] - 0s 997us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3756/5000
1/1 [=====] - 0s 0s/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3757/5000
1/1 [=====] - 0s 0s/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3758/5000
1/1 [=====] - 0s 997us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3759/5000
1/1 [=====] - 0s 997us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3760/5000
1/1 [=====] - 0s 997us/step - loss: 0.0081 - accuracy:
1.0000

Epoch 3761/5000
1/1 [=====] - 0s 997us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3762/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3763/5000
1/1 [=====] - 0s 997us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3764/5000
1/1 [=====] - 0s 998us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3765/5000
1/1 [=====] - 0s 998us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3766/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3767/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3768/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3769/5000
1/1 [=====] - 0s 0s/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3770/5000
1/1 [=====] - 0s 998us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3771/5000
1/1 [=====] - 0s 998us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3772/5000
1/1 [=====] - 0s 998us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3773/5000
1/1 [=====] - 0s 998us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3774/5000
1/1 [=====] - 0s 996us/step - loss: 0.0080 - accuracy:
1.0000

Epoch 3775/5000
1/1 [=====] - 0s 998us/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3776/5000
1/1 [=====] - 0s 997us/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3777/5000
1/1 [=====] - 0s 997us/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3778/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3779/5000
1/1 [=====] - 0s 984us/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3780/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000

Epoch 3781/5000
1/1 [=====] - 0s 997us/step - loss: 0.0079 - accuracy:
1.0000
Epoch 3782/5000
1/1 [=====] - 0s 997us/step - loss: 0.0079 - accuracy:
1.0000
Epoch 3783/5000
1/1 [=====] - 0s 997us/step - loss: 0.0079 - accuracy:
1.0000
Epoch 3784/5000
1/1 [=====] - 0s 998us/step - loss: 0.0079 - accuracy:
1.0000
Epoch 3785/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000
Epoch 3786/5000
1/1 [=====] - 0s 998us/step - loss: 0.0079 - accuracy:
1.0000
Epoch 3787/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000
Epoch 3788/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000
Epoch 3789/5000
1/1 [=====] - 0s 0s/step - loss: 0.0079 - accuracy:
1.0000
Epoch 3790/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000
Epoch 3791/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000
Epoch 3792/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000
Epoch 3793/5000
1/1 [=====] - 0s 997us/step - loss: 0.0078 - accuracy:
1.0000
Epoch 3794/5000
1/1 [=====] - 0s 997us/step - loss: 0.0078 - accuracy:
1.0000
Epoch 3795/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000
Epoch 3796/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3797/5000
1/1 [=====] - 0s 998us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3798/5000
1/1 [=====] - 0s 997us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3799/5000
1/1 [=====] - 0s 997us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3800/5000
1/1 [=====] - 0s 997us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3801/5000
1/1 [=====] - 0s 998us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3802/5000
1/1 [=====] - 0s 0s/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3803/5000
1/1 [=====] - 0s 997us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3804/5000
1/1 [=====] - 0s 998us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3805/5000
1/1 [=====] - 0s 998us/step - loss: 0.0078 - accuracy:
1.0000

Epoch 3806/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3807/5000
1/1 [=====] - 0s 997us/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3808/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3809/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3810/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3811/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3812/5000
1/1 [=====] - 0s 998us/step - loss: 0.0077 - accuracy:
1.0000

Epoch 3813/5000
1/1 [=====] - 0s 997us/step - loss: 0.0077 - accuracy: 1.0000

Epoch 3814/5000
1/1 [=====] - 0s 998us/step - loss: 0.0077 - accuracy: 1.0000

Epoch 3815/5000
1/1 [=====] - 0s 997us/step - loss: 0.0077 - accuracy: 1.0000

Epoch 3816/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy: 1.0000

Epoch 3817/5000
1/1 [=====] - 0s 997us/step - loss: 0.0077 - accuracy: 1.0000

Epoch 3818/5000
1/1 [=====] - 0s 997us/step - loss: 0.0077 - accuracy: 1.0000

Epoch 3819/5000
1/1 [=====] - 0s 996us/step - loss: 0.0077 - accuracy: 1.0000

Epoch 3820/5000
1/1 [=====] - 0s 0s/step - loss: 0.0077 - accuracy: 1.0000

Epoch 3821/5000
1/1 [=====] - 0s 998us/step - loss: 0.0076 - accuracy: 1.0000

Epoch 3822/5000
1/1 [=====] - 0s 997us/step - loss: 0.0076 - accuracy: 1.0000

Epoch 3823/5000
1/1 [=====] - 0s 998us/step - loss: 0.0076 - accuracy: 1.0000

Epoch 3824/5000
1/1 [=====] - 0s 997us/step - loss: 0.0076 - accuracy: 1.0000

Epoch 3825/5000
1/1 [=====] - 0s 0s/step - loss: 0.0076 - accuracy: 1.0000

Epoch 3826/5000
1/1 [=====] - 0s 997us/step - loss: 0.0076 - accuracy: 1.0000

Epoch 3827/5000
1/1 [=====] - 0s 998us/step - loss: 0.0076 - accuracy: 1.0000

Epoch 3828/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0076 - accuracy: 1.0000

Epoch 3829/5000
1/1 [=====] - 0s 998us/step - loss: 0.0076 - accuracy:
1.0000
Epoch 3830/5000
1/1 [=====] - 0s 998us/step - loss: 0.0076 - accuracy:
1.0000
Epoch 3831/5000
1/1 [=====] - 0s 0s/step - loss: 0.0076 - accuracy:
1.0000
Epoch 3832/5000
1/1 [=====] - 0s 0s/step - loss: 0.0076 - accuracy:
1.0000
Epoch 3833/5000
1/1 [=====] - 0s 997us/step - loss: 0.0076 - accuracy:
1.0000
Epoch 3834/5000
1/1 [=====] - 0s 0s/step - loss: 0.0076 - accuracy:
1.0000
Epoch 3835/5000
1/1 [=====] - 0s 0s/step - loss: 0.0076 - accuracy:
1.0000
Epoch 3836/5000
1/1 [=====] - 0s 998us/step - loss: 0.0076 - accuracy:
1.0000
Epoch 3837/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy:
1.0000
Epoch 3838/5000
1/1 [=====] - 0s 998us/step - loss: 0.0075 - accuracy:
1.0000
Epoch 3839/5000
1/1 [=====] - 0s 998us/step - loss: 0.0075 - accuracy:
1.0000
Epoch 3840/5000
1/1 [=====] - 0s 997us/step - loss: 0.0075 - accuracy:
1.0000
Epoch 3841/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy:
1.0000
Epoch 3842/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy:
1.0000
Epoch 3843/5000
1/1 [=====] - 0s 998us/step - loss: 0.0075 - accuracy:
1.0000
Epoch 3844/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy:
1.0000

Epoch 3845/5000
1/1 [=====] - 0s 998us/step - loss: 0.0075 - accuracy: 1.0000

Epoch 3846/5000
1/1 [=====] - 0s 998us/step - loss: 0.0075 - accuracy: 1.0000

Epoch 3847/5000
1/1 [=====] - 0s 997us/step - loss: 0.0075 - accuracy: 1.0000

Epoch 3848/5000
1/1 [=====] - 0s 999us/step - loss: 0.0075 - accuracy: 1.0000

Epoch 3849/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy: 1.0000

Epoch 3850/5000
1/1 [=====] - 0s 997us/step - loss: 0.0075 - accuracy: 1.0000

Epoch 3851/5000
1/1 [=====] - 0s 0s/step - loss: 0.0075 - accuracy: 1.0000

Epoch 3852/5000
1/1 [=====] - 0s 998us/step - loss: 0.0075 - accuracy: 1.0000

Epoch 3853/5000
1/1 [=====] - 0s 997us/step - loss: 0.0074 - accuracy: 1.0000

Epoch 3854/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy: 1.0000

Epoch 3855/5000
1/1 [=====] - 0s 997us/step - loss: 0.0074 - accuracy: 1.0000

Epoch 3856/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy: 1.0000

Epoch 3857/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy: 1.0000

Epoch 3858/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy: 1.0000

Epoch 3859/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy: 1.0000

Epoch 3860/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy: 1.0000

Epoch 3861/5000
1/1 [=====] - 0s 999us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3862/5000
1/1 [=====] - 0s 998us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3863/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3864/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3865/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3866/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3867/5000
1/1 [=====] - 0s 0s/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3868/5000
1/1 [=====] - 0s 996us/step - loss: 0.0074 - accuracy:
1.0000

Epoch 3869/5000
1/1 [=====] - 0s 998us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3870/5000
1/1 [=====] - 0s 998us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3871/5000
1/1 [=====] - 0s 998us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3872/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3873/5000
1/1 [=====] - 0s 997us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3874/5000
1/1 [=====] - 0s 998us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3875/5000
1/1 [=====] - 0s 998us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3876/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3877/5000
1/1 [=====] - 0s 999us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3878/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3879/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3880/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3881/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3882/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3883/5000
1/1 [=====] - 0s 0s/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3884/5000
1/1 [=====] - 0s 998us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3885/5000
1/1 [=====] - 0s 998us/step - loss: 0.0073 - accuracy:
1.0000

Epoch 3886/5000
1/1 [=====] - 0s 997us/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3887/5000
1/1 [=====] - 0s 998us/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3888/5000
1/1 [=====] - 0s 997us/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3889/5000
1/1 [=====] - 0s 997us/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3890/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3891/5000
1/1 [=====] - 0s 999us/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3892/5000
1/1 [=====] - 0s 997us/step - loss: 0.0072 - accuracy:
1.0000

Epoch 3893/5000
1/1 [=====] - 0s 998us/step - loss: 0.0072 - accuracy: 1.0000

Epoch 3894/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy: 1.0000

Epoch 3895/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy: 1.0000

Epoch 3896/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy: 1.0000

Epoch 3897/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy: 1.0000

Epoch 3898/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy: 1.0000

Epoch 3899/5000
1/1 [=====] - 0s 998us/step - loss: 0.0072 - accuracy: 1.0000

Epoch 3900/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy: 1.0000

Epoch 3901/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy: 1.0000

Epoch 3902/5000
1/1 [=====] - 0s 0s/step - loss: 0.0072 - accuracy: 1.0000

Epoch 3903/5000
1/1 [=====] - 0s 997us/step - loss: 0.0071 - accuracy: 1.0000

Epoch 3904/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0071 - accuracy: 1.0000

Epoch 3905/5000
1/1 [=====] - 0s 998us/step - loss: 0.0071 - accuracy: 1.0000

Epoch 3906/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy: 1.0000

Epoch 3907/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy: 1.0000

Epoch 3908/5000
1/1 [=====] - 0s 998us/step - loss: 0.0071 - accuracy: 1.0000

Epoch 3909/5000
1/1 [=====] - 0s 997us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3910/5000
1/1 [=====] - 0s 998us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3911/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3912/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3913/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3914/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3915/5000
1/1 [=====] - 0s 996us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3916/5000
1/1 [=====] - 0s 998us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3917/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3918/5000
1/1 [=====] - 0s 998us/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3919/5000
1/1 [=====] - 0s 0s/step - loss: 0.0071 - accuracy:
1.0000

Epoch 3920/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3921/5000
1/1 [=====] - 0s 997us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3922/5000
1/1 [=====] - 0s 998us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3923/5000
1/1 [=====] - 0s 998us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3924/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3925/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3926/5000
1/1 [=====] - 0s 997us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3927/5000
1/1 [=====] - 0s 997us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3928/5000
1/1 [=====] - 0s 997us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3929/5000
1/1 [=====] - 0s 997us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3930/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3931/5000
1/1 [=====] - 0s 997us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3932/5000
1/1 [=====] - 0s 997us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3933/5000
1/1 [=====] - 0s 998us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3934/5000
1/1 [=====] - 0s 998us/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3935/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3936/5000
1/1 [=====] - 0s 0s/step - loss: 0.0070 - accuracy:
1.0000

Epoch 3937/5000
1/1 [=====] - 0s 998us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3938/5000
1/1 [=====] - 0s 996us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3939/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3940/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3941/5000
1/1 [=====] - 0s 997us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3942/5000
1/1 [=====] - 0s 998us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3943/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3944/5000
1/1 [=====] - 0s 996us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3945/5000
1/1 [=====] - 0s 997us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3946/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3947/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3948/5000
1/1 [=====] - 0s 996us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3949/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3950/5000
1/1 [=====] - 0s 998us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3951/5000
1/1 [=====] - 0s 0s/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3952/5000
1/1 [=====] - 0s 997us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3953/5000
1/1 [=====] - 0s 997us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3954/5000
1/1 [=====] - 0s 998us/step - loss: 0.0069 - accuracy:
1.0000

Epoch 3955/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3956/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3957/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3958/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3959/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3960/5000
1/1 [=====] - 0s 998us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3961/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3962/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3963/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3964/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3965/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3966/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3967/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3968/5000
1/1 [=====] - 0s 998us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3969/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3970/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3971/5000
1/1 [=====] - 0s 997us/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3972/5000
1/1 [=====] - 0s 0s/step - loss: 0.0068 - accuracy:
1.0000

Epoch 3973/5000
1/1 [=====] - 0s 998us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3974/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3975/5000
1/1 [=====] - 0s 998us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3976/5000
1/1 [=====] - 0s 997us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3977/5000
1/1 [=====] - 0s 997us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3978/5000
1/1 [=====] - 0s 996us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3979/5000
1/1 [=====] - 0s 998us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3980/5000
1/1 [=====] - 0s 996us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3981/5000
1/1 [=====] - 0s 998us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3982/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3983/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3984/5000
1/1 [=====] - 0s 997us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3985/5000
1/1 [=====] - 0s 999us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3986/5000
1/1 [=====] - 0s 997us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3987/5000
1/1 [=====] - 0s 997us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3988/5000
1/1 [=====] - 0s 997us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3989/5000
1/1 [=====] - 0s 0s/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3990/5000
1/1 [=====] - 0s 999us/step - loss: 0.0067 - accuracy:
1.0000

Epoch 3991/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3992/5000
1/1 [=====] - 0s 998us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3993/5000
1/1 [=====] - 0s 998us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3994/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3995/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3996/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3997/5000
1/1 [=====] - 0s 998us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3998/5000
1/1 [=====] - 0s 998us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 3999/5000
1/1 [=====] - 0s 997us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 4000/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 4001/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 4002/5000
1/1 [=====] - 0s 997us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 4003/5000
1/1 [=====] - 0s 997us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 4004/5000
1/1 [=====] - 0s 998us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 4005/5000
1/1 [=====] - 0s 997us/step - loss: 0.0066 - accuracy:
1.0000

Epoch 4006/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 4007/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 4008/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 4009/5000
1/1 [=====] - 0s 0s/step - loss: 0.0066 - accuracy:
1.0000

Epoch 4010/5000
1/1 [=====] - 0s 997us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4011/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4012/5000
1/1 [=====] - 0s 997us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4013/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4014/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4015/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4016/5000
1/1 [=====] - 0s 997us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4017/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4018/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4019/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4020/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4021/5000
1/1 [=====] - 0s 998us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4022/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4023/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4024/5000
1/1 [=====] - 0s 998us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4025/5000
1/1 [=====] - 0s 998us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4026/5000
1/1 [=====] - 0s 996us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4027/5000
1/1 [=====] - 0s 0s/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4028/5000
1/1 [=====] - 0s 997us/step - loss: 0.0065 - accuracy:
1.0000

Epoch 4029/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000

Epoch 4030/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000

Epoch 4031/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000

Epoch 4032/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000

Epoch 4033/5000
1/1 [=====] - 0s 998us/step - loss: 0.0064 - accuracy:
1.0000

Epoch 4034/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000

Epoch 4035/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000

Epoch 4036/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000

Epoch 4037/5000
1/1 [=====] - 0s 997us/step - loss: 0.0064 - accuracy:
1.0000
Epoch 4038/5000
1/1 [=====] - 0s 998us/step - loss: 0.0064 - accuracy:
1.0000
Epoch 4039/5000
1/1 [=====] - 0s 998us/step - loss: 0.0064 - accuracy:
1.0000
Epoch 4040/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 4041/5000
1/1 [=====] - 0s 997us/step - loss: 0.0064 - accuracy:
1.0000
Epoch 4042/5000
1/1 [=====] - 0s 998us/step - loss: 0.0064 - accuracy:
1.0000
Epoch 4043/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 4044/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 4045/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 4046/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 4047/5000
1/1 [=====] - 0s 0s/step - loss: 0.0064 - accuracy:
1.0000
Epoch 4048/5000
1/1 [=====] - 0s 997us/step - loss: 0.0063 - accuracy:
1.0000
Epoch 4049/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000
Epoch 4050/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000
Epoch 4051/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000
Epoch 4052/5000
1/1 [=====] - 0s 998us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4053/5000
1/1 [=====] - 0s 998us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4054/5000
1/1 [=====] - 0s 998us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4055/5000
1/1 [=====] - 0s 997us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4056/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4057/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4058/5000
1/1 [=====] - 0s 996us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4059/5000
1/1 [=====] - 0s 997us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4060/5000
1/1 [=====] - 0s 998us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4061/5000
1/1 [=====] - 0s 999us/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4062/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4063/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4064/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4065/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4066/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4067/5000
1/1 [=====] - 0s 0s/step - loss: 0.0063 - accuracy:
1.0000

Epoch 4068/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4069/5000
1/1 [=====] - 0s 998us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4070/5000
1/1 [=====] - 0s 998us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4071/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4072/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4073/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4074/5000
1/1 [=====] - 0s 992us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4075/5000
1/1 [=====] - 0s 997us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4076/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4077/5000
1/1 [=====] - 0s 996us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4078/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4079/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4080/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4081/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4082/5000
1/1 [=====] - 0s 998us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4083/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4084/5000
1/1 [=====] - 0s 0s/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4085/5000
1/1 [=====] - 0s 999us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4086/5000
1/1 [=====] - 0s 997us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4087/5000
1/1 [=====] - 0s 997us/step - loss: 0.0062 - accuracy:
1.0000

Epoch 4088/5000
1/1 [=====] - 0s 996us/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4089/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4090/5000
1/1 [=====] - 0s 997us/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4091/5000
1/1 [=====] - 0s 998us/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4092/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4093/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4094/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4095/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4096/5000
1/1 [=====] - 0s 997us/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4097/5000
1/1 [=====] - 0s 997us/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4098/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4099/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4100/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4101/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4102/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4103/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4104/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4105/5000
1/1 [=====] - 0s 997us/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4106/5000
1/1 [=====] - 0s 997us/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4107/5000
1/1 [=====] - 0s 0s/step - loss: 0.0061 - accuracy:
1.0000

Epoch 4108/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4109/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4110/5000
1/1 [=====] - 0s 998us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4111/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4112/5000
1/1 [=====] - 0s 998us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4113/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4114/5000
1/1 [=====] - 0s 998us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4115/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4116/5000
1/1 [=====] - 0s 3ms/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4117/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4118/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4119/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4120/5000
1/1 [=====] - 0s 998us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4121/5000
1/1 [=====] - 0s 998us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4122/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4123/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4124/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4125/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4126/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4127/5000
1/1 [=====] - 0s 0s/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4128/5000
1/1 [=====] - 0s 997us/step - loss: 0.0060 - accuracy:
1.0000

Epoch 4129/5000
1/1 [=====] - 0s 998us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4130/5000
1/1 [=====] - 0s 997us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4131/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4132/5000
1/1 [=====] - 0s 998us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4133/5000
1/1 [=====] - 0s 998us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4134/5000
1/1 [=====] - 0s 997us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4135/5000
1/1 [=====] - 0s 996us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4136/5000
1/1 [=====] - 0s 997us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4137/5000
1/1 [=====] - 0s 995us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4138/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4139/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4140/5000
1/1 [=====] - 0s 998us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4141/5000
1/1 [=====] - 0s 997us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4142/5000
1/1 [=====] - 0s 997us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4143/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4144/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4145/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4146/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4147/5000
1/1 [=====] - 0s 997us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4148/5000
1/1 [=====] - 0s 0s/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4149/5000
1/1 [=====] - 0s 999us/step - loss: 0.0059 - accuracy:
1.0000

Epoch 4150/5000
1/1 [=====] - 0s 997us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 4151/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
1.0000

Epoch 4152/5000
1/1 [=====] - 0s 997us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 4153/5000
1/1 [=====] - 0s 996us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 4154/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
1.0000

Epoch 4155/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0058 - accuracy:
1.0000

Epoch 4156/5000
1/1 [=====] - 0s 998us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 4157/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
1.0000

Epoch 4158/5000
1/1 [=====] - 0s 995us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 4159/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 4160/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 4161/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 4162/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 4163/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 4164/5000
1/1 [=====] - 0s 997us/step - loss: 0.0058 - accuracy:
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Epoch 4165/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 4166/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 4167/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 4168/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 4169/5000
1/1 [=====] - 0s 0s/step - loss: 0.0058 - accuracy:
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Epoch 4170/5000
1/1 [=====] - 0s 998us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 4171/5000
1/1 [=====] - 0s 998us/step - loss: 0.0058 - accuracy:
1.0000

Epoch 4172/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 4173/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 4174/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
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Epoch 4175/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
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Epoch 4176/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
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Epoch 4177/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
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Epoch 4178/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
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Epoch 4179/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
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Epoch 4180/5000
1/1 [=====] - 0s 998us/step - loss: 0.0057 - accuracy:
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Epoch 4181/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
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Epoch 4182/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
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Epoch 4183/5000
1/1 [=====] - 0s 997us/step - loss: 0.0057 - accuracy:
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Epoch 4184/5000
1/1 [=====] - 0s 999us/step - loss: 0.0057 - accuracy:
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Epoch 4185/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
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Epoch 4186/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
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Epoch 4187/5000
1/1 [=====] - 0s 998us/step - loss: 0.0057 - accuracy:
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Epoch 4188/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
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Epoch 4189/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
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Epoch 4190/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
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Epoch 4191/5000
1/1 [=====] - 0s 998us/step - loss: 0.0057 - accuracy:
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Epoch 4192/5000
1/1 [=====] - 0s 0s/step - loss: 0.0057 - accuracy:
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Epoch 4193/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0057 - accuracy:
1.0000

Epoch 4194/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4195/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4196/5000
1/1 [=====] - 0s 998us/step - loss: 0.0056 - accuracy:
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Epoch 4197/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4198/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4199/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
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Epoch 4200/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4201/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4202/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4203/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4204/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4205/5000
1/1 [=====] - 0s 998us/step - loss: 0.0056 - accuracy:
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Epoch 4206/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4207/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
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Epoch 4208/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4209/5000
1/1 [=====] - 0s 998us/step - loss: 0.0056 - accuracy:
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Epoch 4210/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
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Epoch 4211/5000
1/1 [=====] - 0s 998us/step - loss: 0.0056 - accuracy:
1.0000
Epoch 4212/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4213/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 4214/5000
1/1 [=====] - 0s 0s/step - loss: 0.0056 - accuracy:
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Epoch 4215/5000
1/1 [=====] - 0s 997us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 4216/5000
1/1 [=====] - 0s 998us/step - loss: 0.0056 - accuracy:
1.0000

Epoch 4217/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 4218/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 4219/5000
1/1 [=====] - 0s 998us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 4220/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 4221/5000
1/1 [=====] - 0s 997us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 4222/5000
1/1 [=====] - 0s 998us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 4223/5000
1/1 [=====] - 0s 997us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 4224/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 4225/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 4226/5000
1/1 [=====] - 0s 998us/step - loss: 0.0055 - accuracy:
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Epoch 4227/5000
1/1 [=====] - 0s 996us/step - loss: 0.0055 - accuracy:
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Epoch 4228/5000
1/1 [=====] - 0s 996us/step - loss: 0.0055 - accuracy:
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Epoch 4229/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
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Epoch 4230/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
1.0000

Epoch 4231/5000
1/1 [=====] - 0s 999us/step - loss: 0.0055 - accuracy:
1.0000

Epoch 4232/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
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Epoch 4233/5000
1/1 [=====] - 0s 996us/step - loss: 0.0055 - accuracy:
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Epoch 4234/5000
1/1 [=====] - 0s 998us/step - loss: 0.0055 - accuracy:
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Epoch 4235/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
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Epoch 4236/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
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Epoch 4237/5000
1/1 [=====] - 0s 0s/step - loss: 0.0055 - accuracy:
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Epoch 4238/5000
1/1 [=====] - 0s 997us/step - loss: 0.0055 - accuracy:
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Epoch 4239/5000
1/1 [=====] - 0s 997us/step - loss: 0.0055 - accuracy:
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Epoch 4240/5000
1/1 [=====] - 0s 999us/step - loss: 0.0054 - accuracy:
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Epoch 4241/5000
1/1 [=====] - 0s 996us/step - loss: 0.0054 - accuracy:
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Epoch 4242/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
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Epoch 4243/5000
1/1 [=====] - 0s 997us/step - loss: 0.0054 - accuracy:
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Epoch 4244/5000
1/1 [=====] - 0s 997us/step - loss: 0.0054 - accuracy:
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Epoch 4245/5000
1/1 [=====] - 0s 998us/step - loss: 0.0054 - accuracy:
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Epoch 4246/5000
1/1 [=====] - 0s 997us/step - loss: 0.0054 - accuracy:
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Epoch 4247/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
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Epoch 4248/5000
1/1 [=====] - 0s 998us/step - loss: 0.0054 - accuracy:
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Epoch 4249/5000
1/1 [=====] - 0s 998us/step - loss: 0.0054 - accuracy:
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Epoch 4250/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
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Epoch 4251/5000
1/1 [=====] - 0s 998us/step - loss: 0.0054 - accuracy:
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Epoch 4252/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
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Epoch 4253/5000
1/1 [=====] - 0s 997us/step - loss: 0.0054 - accuracy:
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Epoch 4254/5000
1/1 [=====] - 0s 997us/step - loss: 0.0054 - accuracy:
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Epoch 4255/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
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Epoch 4256/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
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Epoch 4257/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
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Epoch 4258/5000
1/1 [=====] - 0s 997us/step - loss: 0.0054 - accuracy:
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Epoch 4259/5000
1/1 [=====] - 0s 998us/step - loss: 0.0054 - accuracy:
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Epoch 4260/5000
1/1 [=====] - 0s 997us/step - loss: 0.0054 - accuracy:
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Epoch 4261/5000
1/1 [=====] - 0s 0s/step - loss: 0.0054 - accuracy:
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Epoch 4262/5000
1/1 [=====] - 0s 998us/step - loss: 0.0054 - accuracy:
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Epoch 4263/5000
1/1 [=====] - 0s 998us/step - loss: 0.0053 - accuracy:
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Epoch 4264/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
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Epoch 4265/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
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Epoch 4266/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
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Epoch 4267/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
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Epoch 4268/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
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Epoch 4269/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
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Epoch 4270/5000
1/1 [=====] - 0s 994us/step - loss: 0.0053 - accuracy:
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Epoch 4271/5000
1/1 [=====] - 0s 998us/step - loss: 0.0053 - accuracy:
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Epoch 4272/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
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Epoch 4273/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
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Epoch 4274/5000
1/1 [=====] - 0s 999us/step - loss: 0.0053 - accuracy:
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Epoch 4275/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
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Epoch 4276/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
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Epoch 4277/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
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Epoch 4278/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
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Epoch 4279/5000
1/1 [=====] - 0s 996us/step - loss: 0.0053 - accuracy:
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Epoch 4280/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
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Epoch 4281/5000
1/1 [=====] - 0s 997us/step - loss: 0.0053 - accuracy:
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Epoch 4282/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
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Epoch 4283/5000
1/1 [=====] - 0s 996us/step - loss: 0.0053 - accuracy:
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Epoch 4284/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
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Epoch 4285/5000
1/1 [=====] - 0s 0s/step - loss: 0.0053 - accuracy:
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Epoch 4286/5000
1/1 [=====] - 0s 996us/step - loss: 0.0053 - accuracy:
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Epoch 4287/5000
1/1 [=====] - 0s 997us/step - loss: 0.0052 - accuracy:
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Epoch 4288/5000
1/1 [=====] - 0s 997us/step - loss: 0.0052 - accuracy:
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Epoch 4289/5000
1/1 [=====] - 0s 997us/step - loss: 0.0052 - accuracy:
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Epoch 4290/5000
1/1 [=====] - 0s 998us/step - loss: 0.0052 - accuracy:
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Epoch 4291/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
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Epoch 4292/5000
1/1 [=====] - 0s 997us/step - loss: 0.0052 - accuracy:
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Epoch 4293/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
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Epoch 4294/5000
1/1 [=====] - 0s 999us/step - loss: 0.0052 - accuracy:
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Epoch 4295/5000
1/1 [=====] - 0s 998us/step - loss: 0.0052 - accuracy:
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Epoch 4296/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
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Epoch 4297/5000
1/1 [=====] - 0s 996us/step - loss: 0.0052 - accuracy:
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Epoch 4298/5000
1/1 [=====] - 0s 997us/step - loss: 0.0052 - accuracy:
1.0000
Epoch 4299/5000
1/1 [=====] - 0s 998us/step - loss: 0.0052 - accuracy:
1.0000
Epoch 4300/5000
1/1 [=====] - 0s 998us/step - loss: 0.0052 - accuracy:
1.0000
Epoch 4301/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
1.0000
Epoch 4302/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
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Epoch 4303/5000
1/1 [=====] - 0s 998us/step - loss: 0.0052 - accuracy:
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Epoch 4304/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
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Epoch 4305/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
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Epoch 4306/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
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Epoch 4307/5000
1/1 [=====] - 0s 998us/step - loss: 0.0052 - accuracy:
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Epoch 4308/5000
1/1 [=====] - 0s 997us/step - loss: 0.0052 - accuracy:
1.0000

Epoch 4309/5000
1/1 [=====] - 0s 995us/step - loss: 0.0052 - accuracy:
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Epoch 4310/5000
1/1 [=====] - 0s 997us/step - loss: 0.0052 - accuracy:
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Epoch 4311/5000
1/1 [=====] - 0s 0s/step - loss: 0.0052 - accuracy:
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Epoch 4312/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
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Epoch 4313/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
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Epoch 4314/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
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Epoch 4315/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
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Epoch 4316/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
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Epoch 4317/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
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Epoch 4318/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
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Epoch 4319/5000
1/1 [=====] - 0s 996us/step - loss: 0.0051 - accuracy:
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Epoch 4320/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 4321/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 4322/5000
1/1 [=====] - 0s 999us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 4323/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 4324/5000
1/1 [=====] - 0s 996us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 4325/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 4326/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
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Epoch 4327/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
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Epoch 4328/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
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Epoch 4329/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
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Epoch 4330/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 4331/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
1.0000

Epoch 4332/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
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Epoch 4333/5000
1/1 [=====] - 0s 997us/step - loss: 0.0051 - accuracy:
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Epoch 4334/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
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Epoch 4335/5000
1/1 [=====] - 0s 0s/step - loss: 0.0051 - accuracy:
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Epoch 4336/5000
1/1 [=====] - 0s 998us/step - loss: 0.0051 - accuracy:
1.0000

Epoch 4337/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 4338/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
1.0000

Epoch 4339/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
1.0000

Epoch 4340/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
1.0000

Epoch 4341/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
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Epoch 4342/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
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Epoch 4343/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
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Epoch 4344/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
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Epoch 4345/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
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Epoch 4346/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
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Epoch 4347/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
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Epoch 4348/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
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Epoch 4349/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
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Epoch 4350/5000
1/1 [=====] - 0s 998us/step - loss: 0.0050 - accuracy:
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Epoch 4351/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
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Epoch 4352/5000
1/1 [=====] - 0s 999us/step - loss: 0.0050 - accuracy:
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Epoch 4353/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
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Epoch 4354/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
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Epoch 4355/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
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Epoch 4356/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
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Epoch 4357/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
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Epoch 4358/5000
1/1 [=====] - 0s 996us/step - loss: 0.0050 - accuracy:
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Epoch 4359/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
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Epoch 4360/5000
1/1 [=====] - 0s 997us/step - loss: 0.0050 - accuracy:
1.0000
Epoch 4361/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
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Epoch 4362/5000
1/1 [=====] - 0s 0s/step - loss: 0.0050 - accuracy:
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Epoch 4363/5000
1/1 [=====] - 0s 998us/step - loss: 0.0049 - accuracy:
1.0000
Epoch 4364/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
1.0000
Epoch 4365/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy:
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Epoch 4366/5000
1/1 [=====] - 0s 998us/step - loss: 0.0049 - accuracy:
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Epoch 4367/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy:
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Epoch 4368/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy:
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Epoch 4369/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy:
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Epoch 4370/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy:
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Epoch 4371/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy:
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Epoch 4372/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy:
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Epoch 4373/5000
1/1 [=====] - 0s 998us/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4374/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4375/5000
1/1 [=====] - 0s 998us/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4376/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4377/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4378/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4379/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4380/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4381/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4382/5000
1/1 [=====] - 0s 998us/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4383/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4384/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4385/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4386/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4387/5000
1/1 [=====] - 0s 0s/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4388/5000
1/1 [=====] - 0s 997us/step - loss: 0.0049 - accuracy: 1.0000

Epoch 4389/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4390/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4391/5000
1/1 [=====] - 0s 998us/step - loss: 0.0048 - accuracy:
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Epoch 4392/5000
1/1 [=====] - 0s 997us/step - loss: 0.0048 - accuracy:
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Epoch 4393/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4394/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4395/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4396/5000
1/1 [=====] - 0s 998us/step - loss: 0.0048 - accuracy:
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Epoch 4397/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4398/5000
1/1 [=====] - 0s 998us/step - loss: 0.0048 - accuracy:
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Epoch 4399/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4400/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4401/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4402/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4403/5000
1/1 [=====] - 0s 999us/step - loss: 0.0048 - accuracy:
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Epoch 4404/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4405/5000
1/1 [=====] - 0s 997us/step - loss: 0.0048 - accuracy:
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Epoch 4406/5000
1/1 [=====] - 0s 997us/step - loss: 0.0048 - accuracy:
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Epoch 4407/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4408/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4409/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4410/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4411/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4412/5000
1/1 [=====] - 0s 998us/step - loss: 0.0048 - accuracy:
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Epoch 4413/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
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Epoch 4414/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
1.0000
Epoch 4415/5000
1/1 [=====] - 0s 0s/step - loss: 0.0048 - accuracy:
1.0000
Epoch 4416/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
1.0000
Epoch 4417/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000
Epoch 4418/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
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Epoch 4419/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
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Epoch 4420/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
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Epoch 4421/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
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Epoch 4422/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
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Epoch 4423/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
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Epoch 4424/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
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Epoch 4425/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
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Epoch 4426/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
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Epoch 4427/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
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Epoch 4428/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
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Epoch 4429/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
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Epoch 4430/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
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Epoch 4431/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
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Epoch 4432/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
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Epoch 4433/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
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Epoch 4434/5000
1/1 [=====] - 0s 996us/step - loss: 0.0047 - accuracy:
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Epoch 4435/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
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Epoch 4436/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
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Epoch 4437/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
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Epoch 4438/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
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Epoch 4439/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
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Epoch 4440/5000
1/1 [=====] - 0s 997us/step - loss: 0.0047 - accuracy:
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Epoch 4441/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
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Epoch 4442/5000
1/1 [=====] - 0s 998us/step - loss: 0.0047 - accuracy:
1.0000
Epoch 4443/5000
1/1 [=====] - 0s 0s/step - loss: 0.0047 - accuracy:
1.0000
Epoch 4444/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000
Epoch 4445/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000
Epoch 4446/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000
Epoch 4447/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000
Epoch 4448/5000
1/1 [=====] - 0s 996us/step - loss: 0.0046 - accuracy:
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Epoch 4449/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000
Epoch 4450/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000
Epoch 4451/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
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Epoch 4452/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
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Epoch 4453/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
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Epoch 4454/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4455/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4456/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
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Epoch 4457/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
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Epoch 4458/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
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Epoch 4459/5000
1/1 [=====] - 0s 997us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4460/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4461/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
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Epoch 4462/5000
1/1 [=====] - 0s 998us/step - loss: 0.0046 - accuracy:
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Epoch 4463/5000
1/1 [=====] - 0s 997us/step - loss: 0.0046 - accuracy:
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Epoch 4464/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4465/5000
1/1 [=====] - 0s 997us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4466/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4467/5000
1/1 [=====] - 0s 997us/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4468/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4469/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4470/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4471/5000
1/1 [=====] - 0s 0s/step - loss: 0.0046 - accuracy:
1.0000

Epoch 4472/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4473/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4474/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4475/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4476/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4477/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4478/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4479/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4480/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4481/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
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Epoch 4482/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4483/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4484/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
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Epoch 4485/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
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Epoch 4486/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
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Epoch 4487/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
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Epoch 4488/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
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Epoch 4489/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
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Epoch 4490/5000
1/1 [=====] - 0s 997us/step - loss: 0.0045 - accuracy:
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Epoch 4491/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
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Epoch 4492/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
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Epoch 4493/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
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Epoch 4494/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4495/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4496/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4497/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4498/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4499/5000
1/1 [=====] - 0s 0s/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4500/5000
1/1 [=====] - 0s 998us/step - loss: 0.0045 - accuracy:
1.0000

Epoch 4501/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4502/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4503/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4504/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4505/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4506/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4507/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4508/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4509/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4510/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4511/5000
1/1 [=====] - 0s 996us/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4512/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4513/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4514/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4515/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4516/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy: 1.0000

Epoch 4517/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4518/5000
1/1 [=====] - 0s 1ms/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4519/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4520/5000
1/1 [=====] - 0s 996us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4521/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy:
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Epoch 4522/5000
1/1 [=====] - 0s 997us/step - loss: 0.0044 - accuracy:
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Epoch 4523/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4524/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4525/5000
1/1 [=====] - 0s 1000us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4526/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4527/5000
1/1 [=====] - 0s 996us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4528/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4529/5000
1/1 [=====] - 0s 998us/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4530/5000
1/1 [=====] - 0s 0s/step - loss: 0.0044 - accuracy:
1.0000

Epoch 4531/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4532/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4533/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4534/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4535/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4536/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4537/5000
1/1 [=====] - 0s 996us/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4538/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4539/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4540/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4541/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4542/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4543/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4544/5000
1/1 [=====] - 0s 996us/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4545/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4546/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4547/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000
Epoch 4548/5000
1/1 [=====] - 0s 0s/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4549/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4550/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4551/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4552/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4553/5000
1/1 [=====] - 0s 4ms/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4554/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4555/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4556/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4557/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4558/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4559/5000
1/1 [=====] - 0s 997us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4560/5000
1/1 [=====] - 0s 998us/step - loss: 0.0043 - accuracy:
1.0000

Epoch 4561/5000
1/1 [=====] - 0s 997us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4562/5000
1/1 [=====] - 0s 998us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4563/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4564/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4565/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4566/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4567/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4568/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4569/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4570/5000
1/1 [=====] - 0s 997us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4571/5000
1/1 [=====] - 0s 999us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4572/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4573/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4574/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4575/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4576/5000
1/1 [=====] - 0s 995us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4577/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4578/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4579/5000
1/1 [=====] - 0s 998us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4580/5000
1/1 [=====] - 0s 998us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4581/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4582/5000
1/1 [=====] - 0s 997us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4583/5000
1/1 [=====] - 0s 997us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4584/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4585/5000
1/1 [=====] - 0s 997us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4586/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4587/5000
1/1 [=====] - 0s 997us/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4588/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4589/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4590/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4591/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4592/5000
1/1 [=====] - 0s 0s/step - loss: 0.0042 - accuracy:
1.0000

Epoch 4593/5000
1/1 [=====] - 0s 998us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4594/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4595/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4596/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4597/5000
1/1 [=====] - 0s 997us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4598/5000
1/1 [=====] - 0s 998us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4599/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4600/5000
1/1 [=====] - 0s 998us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4601/5000
1/1 [=====] - 0s 998us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4602/5000
1/1 [=====] - 0s 998us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4603/5000
1/1 [=====] - 0s 997us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4604/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4605/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4606/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4607/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4608/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4609/5000
1/1 [=====] - 0s 999us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4610/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4611/5000
1/1 [=====] - 0s 997us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4612/5000
1/1 [=====] - 0s 994us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4613/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4614/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4615/5000
1/1 [=====] - 0s 994us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4616/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4617/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4618/5000
1/1 [=====] - 0s 997us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4619/5000
1/1 [=====] - 0s 997us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4620/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4621/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4622/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4623/5000
1/1 [=====] - 0s 998us/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4624/5000
1/1 [=====] - 0s 0s/step - loss: 0.0041 - accuracy:
1.0000

Epoch 4625/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4626/5000
1/1 [=====] - 0s 999us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4627/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4628/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4629/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4630/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4631/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4632/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4633/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4634/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4635/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4636/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4637/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4638/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4639/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4640/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4641/5000
1/1 [=====] - 0s 999us/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4642/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4643/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000
Epoch 4644/5000
1/1 [=====] - 0s 999us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4645/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4646/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4647/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4648/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4649/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4650/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4651/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4652/5000
1/1 [=====] - 0s 997us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4653/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4654/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4655/5000
1/1 [=====] - 0s 999us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4656/5000
1/1 [=====] - 0s 0s/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4657/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4658/5000
1/1 [=====] - 0s 998us/step - loss: 0.0040 - accuracy:
1.0000

Epoch 4659/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4660/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4661/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4662/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4663/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4664/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4665/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4666/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4667/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4668/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4669/5000
1/1 [=====] - 0s 989us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4670/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4671/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4672/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4673/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4674/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4675/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4676/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy:
1.0000

Epoch 4677/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4678/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4679/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4680/5000
1/1 [=====] - 0s 6ms/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4681/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4682/5000
1/1 [=====] - 0s 0s/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4683/5000
1/1 [=====] - 0s 2ms/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4684/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4685/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4686/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4687/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4688/5000
1/1 [=====] - 0s 996us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4689/5000
1/1 [=====] - 0s 998us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4690/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4691/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4692/5000
1/1 [=====] - 0s 997us/step - loss: 0.0039 - accuracy: 1.0000

Epoch 4693/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4694/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4695/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4696/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4697/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4698/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4699/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4700/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4701/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4702/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4703/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4704/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4705/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4706/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4707/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4708/5000
1/1 [=====] - 0s 996us/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4709/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4710/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4711/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4712/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4713/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4714/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4715/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4716/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4717/5000
1/1 [=====] - 0s 997us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4718/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4719/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4720/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4721/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4722/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4723/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000
Epoch 4724/5000
1/1 [=====] - 0s 0s/step - loss: 0.0038 - accuracy:
1.0000

Epoch 4725/5000
1/1 [=====] - 0s 996us/step - loss: 0.0038 - accuracy: 1.0000
Epoch 4726/5000
1/1 [=====] - 0s 998us/step - loss: 0.0038 - accuracy: 1.0000
Epoch 4727/5000
1/1 [=====] - 0s 996us/step - loss: 0.0038 - accuracy: 1.0000
Epoch 4728/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4729/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4730/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4731/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4732/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4733/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4734/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4735/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4736/5000
1/1 [=====] - 0s 996us/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4737/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4738/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4739/5000
1/1 [=====] - 0s 996us/step - loss: 0.0037 - accuracy: 1.0000
Epoch 4740/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 4741/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4742/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4743/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4744/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4745/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4746/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4747/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4748/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4749/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4750/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4751/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4752/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4753/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4754/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4755/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy:
1.0000
Epoch 4756/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy:
1.0000

Epoch 4757/5000
1/1 [=====] - 0s 998us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 4758/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 4759/5000
1/1 [=====] - 0s 997us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 4760/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 4761/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 4762/5000
1/1 [=====] - 0s 0s/step - loss: 0.0037 - accuracy: 1.0000

Epoch 4763/5000
1/1 [=====] - 0s 996us/step - loss: 0.0037 - accuracy: 1.0000

Epoch 4764/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy: 1.0000

Epoch 4765/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy: 1.0000

Epoch 4766/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy: 1.0000

Epoch 4767/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy: 1.0000

Epoch 4768/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy: 1.0000

Epoch 4769/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy: 1.0000

Epoch 4770/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy: 1.0000

Epoch 4771/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy: 1.0000

Epoch 4772/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy: 1.0000

Epoch 4773/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4774/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4775/5000
1/1 [=====] - 0s 996us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4776/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4777/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4778/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4779/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4780/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4781/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4782/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4783/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4784/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4785/5000
1/1 [=====] - 0s 999us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4786/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4787/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4788/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4789/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4790/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4791/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4792/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4793/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4794/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4795/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4796/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4797/5000
1/1 [=====] - 0s 998us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4798/5000
1/1 [=====] - 0s 996us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4799/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4800/5000
1/1 [=====] - 0s 0s/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4801/5000
1/1 [=====] - 0s 997us/step - loss: 0.0036 - accuracy:
1.0000

Epoch 4802/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4803/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4804/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4805/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4806/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4807/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4808/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4809/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4810/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4811/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4812/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4813/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4814/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4815/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4816/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4817/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4818/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4819/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4820/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

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Epoch 4821/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4822/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4823/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4824/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4825/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4826/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4827/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4828/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4829/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4830/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4831/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4832/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4833/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4834/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4835/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000
Epoch 4836/5000
1/1 [=====] - 0s 998us/step - loss: 0.0035 - accuracy:
1.0000

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Epoch 4837/5000
1/1 [=====] - 0s 0s/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4838/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4839/5000
1/1 [=====] - 0s 997us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4840/5000
1/1 [=====] - 0s 996us/step - loss: 0.0035 - accuracy:
1.0000

Epoch 4841/5000
1/1 [=====] - 0s 998us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4842/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4843/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4844/5000
1/1 [=====] - 0s 998us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4845/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4846/5000
1/1 [=====] - 0s 999us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4847/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4848/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4849/5000
1/1 [=====] - 0s 998us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4850/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4851/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4852/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4853/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4854/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4855/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4856/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4857/5000
1/1 [=====] - 0s 996us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4858/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4859/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4860/5000
1/1 [=====] - 0s 996us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4861/5000
1/1 [=====] - 0s 998us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4862/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4863/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4864/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4865/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4866/5000
1/1 [=====] - 0s 996us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4867/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4868/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4869/5000
1/1 [=====] - 0s 996us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4870/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4871/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4872/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4873/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4874/5000
1/1 [=====] - 0s 997us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4875/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4876/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4877/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4878/5000
1/1 [=====] - 0s 998us/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4879/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4880/5000
1/1 [=====] - 0s 0s/step - loss: 0.0034 - accuracy:
1.0000

Epoch 4881/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4882/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4883/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4884/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4885/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy:
1.0000
Epoch 4886/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000
Epoch 4887/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy:
1.0000
Epoch 4888/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000
Epoch 4889/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000
Epoch 4890/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy:
1.0000
Epoch 4891/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
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Epoch 4892/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
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Epoch 4893/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000
Epoch 4894/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy:
1.0000
Epoch 4895/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
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Epoch 4896/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy:
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Epoch 4897/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000
Epoch 4898/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000
Epoch 4899/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy:
1.0000
Epoch 4900/5000
1/1 [=====] - 0s 996us/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4901/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4902/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4903/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4904/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4905/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4906/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4907/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4908/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4909/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4910/5000
1/1 [=====] - 0s 997us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4911/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4912/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4913/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4914/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4915/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4916/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy: 1.0000

Epoch 4917/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4918/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4919/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4920/5000
1/1 [=====] - 0s 998us/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4921/5000
1/1 [=====] - 0s 0s/step - loss: 0.0033 - accuracy:
1.0000

Epoch 4922/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4923/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4924/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4925/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4926/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4927/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4928/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4929/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4930/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4931/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4932/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000

Epoch 4933/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4934/5000
1/1 [=====] - 0s 999us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4935/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4936/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4937/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4938/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4939/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4940/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4941/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4942/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4943/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4944/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4945/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4946/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4947/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4948/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000

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Epoch 4949/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4950/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4951/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4952/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4953/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4954/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4955/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4956/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4957/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4958/5000
1/1 [=====] - 0s 998us/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4959/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4960/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4961/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4962/5000
1/1 [=====] - 0s 0s/step - loss: 0.0032 - accuracy:
1.0000
Epoch 4963/5000
1/1 [=====] - ETA: 0s - loss: 0.0032 - accuracy: 1.00 -
0s 0s/step - loss: 0.0032 - accuracy: 1.0000
Epoch 4964/5000
1/1 [=====] - 0s 997us/step - loss: 0.0032 - accuracy:
1.0000

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Epoch 4965/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4966/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4967/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4968/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4969/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4970/5000
1/1 [=====] - 0s 995us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4971/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4972/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4973/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4974/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4975/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4976/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4977/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4978/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4979/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4980/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4981/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4982/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4983/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4984/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4985/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4986/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4987/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4988/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4989/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4990/5000
1/1 [=====] - 0s 997us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4991/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4992/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4993/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4994/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4995/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

Epoch 4996/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000

```
Epoch 4997/5000
1/1 [=====] - 0s 998us/step - loss: 0.0031 - accuracy:
1.0000
Epoch 4998/5000
1/1 [=====] - 0s 996us/step - loss: 0.0031 - accuracy:
1.0000
Epoch 4999/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000
Epoch 5000/5000
1/1 [=====] - 0s 0s/step - loss: 0.0031 - accuracy:
1.0000
```

[21]: <tensorflow.python.keras.callbacks.History at 0x15d203b61f0>

```
[22]: # Test the output of the trained neural networks based NAND gate
y_predict = model_Dollar.predict(x_train)
print(y_predict)
```

```
[[1.2123852e-04]
 [4.0477812e-03]
 [4.0023923e-03]
 [9.9592638e-01]]
```

1.3.4 Componiendo los operadores

$A \& B$

```
[23]: A = np.array([1.001, 0, 0.001, 1])
B = np.array([0, 1, 0, 1])
AB = np.dstack((A,B))
A_Amp_B = model_Ampersand.predict(AB)
print(A_Amp_B)
```

WARNING:tensorflow:Model was constructed with shape (None, 2) for input Tensor("dense_input:0", shape=(None, 2), dtype=float32), but it was called on an input with incompatible shape (None, 4, 2).

```
[[[0.9975708 ]
 [0.99808466]
 [0.9999518 ]
 [0.00244385]]]
```

$(A \& B) \$ C$

```
[24]: C = np.array([0,1,1,0])
AAmpBC = np.dstack((A_Amp_B,C))
Result = model_Dollar.predict(AAmpBC)
print(Result)
```

WARNING:tensorflow:Model was constructed with shape (None, 2) for input

Tensor("dense_2_input:0", shape=(None, 2), dtype=float32), but it was called on an input with incompatible shape (None, 4, 2).

```
[[[4.0129423e-03]
  [9.9583989e-01]
  [9.9592423e-01]
  [1.2228360e-04]]]
```

1.4 Ejercicio 3

De un ensayo clínico, tenemos 12 pacientes con infección por VIH. Después del tratamiento, la enfermedad progresó en 6 pacientes (1) y en 6 pacientes la infección no progresó (0). Cuatro medidas se toman en los 12 pacientes (edad, niveles de azúcar, niveles de células T y colesterol).

¿Qué medida se puede utilizar como marcador para describir la progresión de la enfermedad?

¿Cuáles serán los criterios a predecir la progresión? Los datos se pueden encontrar en “problema3.csv (x_age, x_sugar, x_Tcell, x_cholesterol, Salir)”?

Ordene los datos y explique brevemente sus resultados. La variable “y” (objetivo) es un vector de 0 y 1 para representar la progresión.

1.4.1 Solución

```
[25]: # Letura de datos
datos = pd.read_csv('problem3.csv')
datos.head()
```

```
[25]:   x_age  x_cholesterol  x_sugar  x_Tcell  y
0     35             220       80     550  0
1     18             240      120     600  0
2     22             260       55     580  0
3     23             220       75     575  0
4     28             180      100     620  0
```

1.4.2 Probando la variable ‘age’

Definimos el modelo logístico

```
[26]: model = LogisticRegression(C=1.0, solver='lbfgs', multi_class='ovr')
y_resp = datos["y"]
x_expl = datos[["x_age"]]
```

Separamos en covariable y respuesta pero de un subconjunto de datos

```
[27]: # Separar datos
x_train, x_test, y_train, y_test = train_test_split(x_expl, y_resp, test_size=0.
↪ 3, random_state=5)
```

```
[28]: model.fit(x_train, y_train)
model.score(x_train, y_train)
```

```
[28]: 0.5
```

Mostramos los coeficientes del modelo

```
[29]: model.coef_
```

```
[29]: array([[0.07509664]])
```

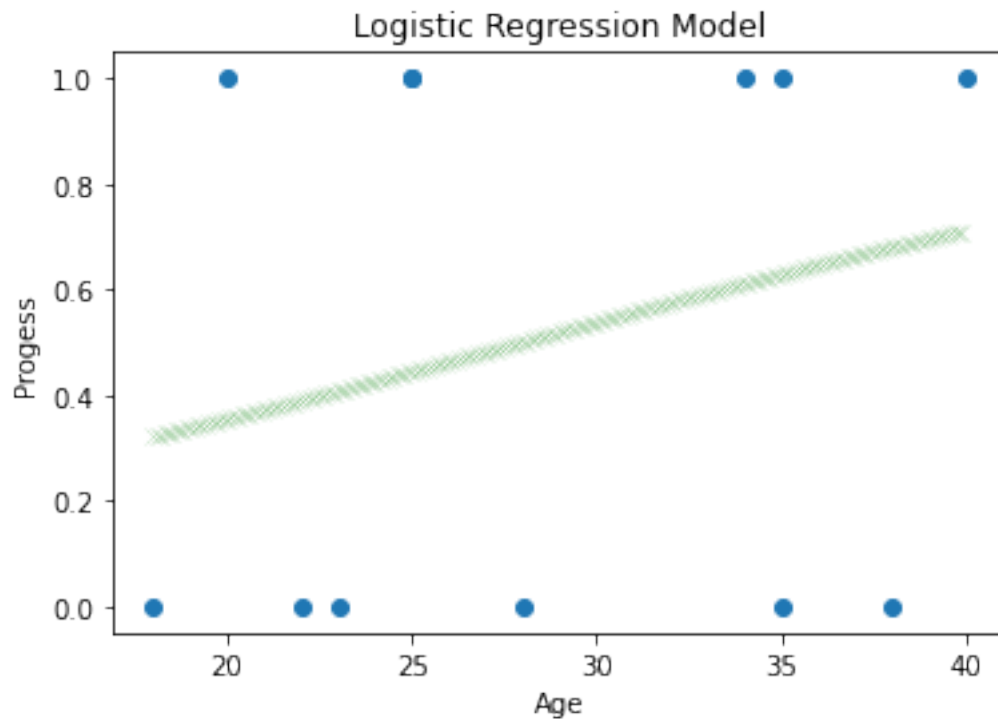
```
[30]: model.intercept_
```

```
[30]: array([-2.09950044])
```

Graficando el Modelo

```
[31]: X = np.arange(18, 40, 0.1)
X = X.reshape(-1, 1)
plt.scatter(x_expl, y_resp)
plt.scatter(X,model.predict_proba(X)[: ,1],marker='x',color='g',linewidth=.1)
plt.title("Logistic Regression Model")
plt.xlabel('Age')
plt.ylabel('Prograss')
```

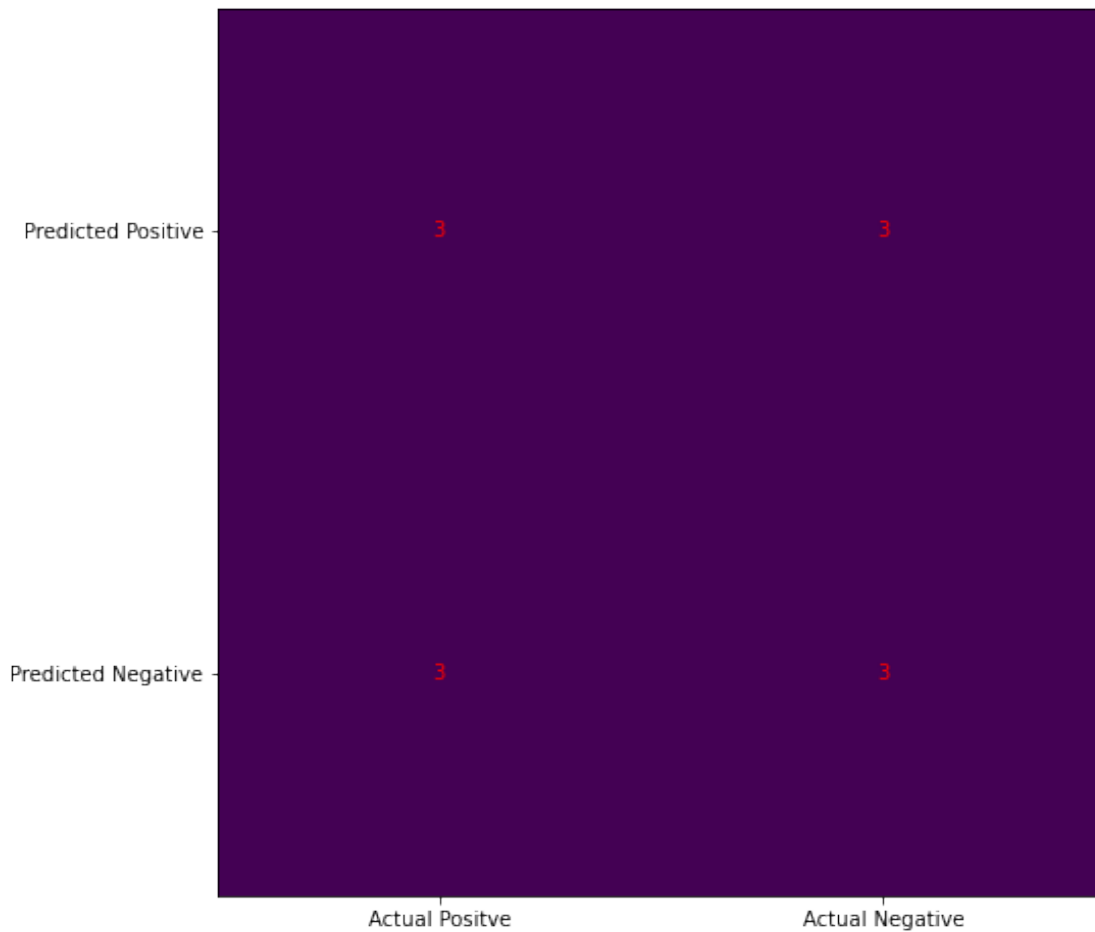
```
[31]: Text(0, 0.5, 'Prograss')
```



Matriz de Confusión

```
[32]: cm = confusion_matrix(y_resp, model.predict(x_expl))
```

```
[33]: fig, ax = plt.subplots(figsize=(8, 8))
ax.imshow(cm)
ax.grid(False)
ax.yaxis.set(ticks=(0, 1), ticklabels=('Predicted Positive', 'Predicted_
↪Negative'))
ax.xaxis.set(ticks=(0, 1), ticklabels=('Actual Positive', 'Actual Negative'))
ax.set_ylim(1.5, -0.5)
for i in range(2):
    for j in range(2):
        ax.text(j, i, cm[i, j], ha='center', va='center', color='red')
plt.show()
```



ROC

```
[34]: # Genrate a Diagonal(Random Guess)
ns_probs = [0 for _ in range(len(y_resp))]
```



```

# predict probabilities
lr_probs = model.predict_proba(x_expl)
# keep probabilities for the positive outcome only
lr_probs = lr_probs[:, 1]
# calculate scores
ns_auc = roc_auc_score(y_resp, ns_probs)
lr_auc = roc_auc_score(y_resp, lr_probs)

```

```

[35]: # summarize scores
print('ROC AUC for Logistic Model =%.3f' % (lr_auc))

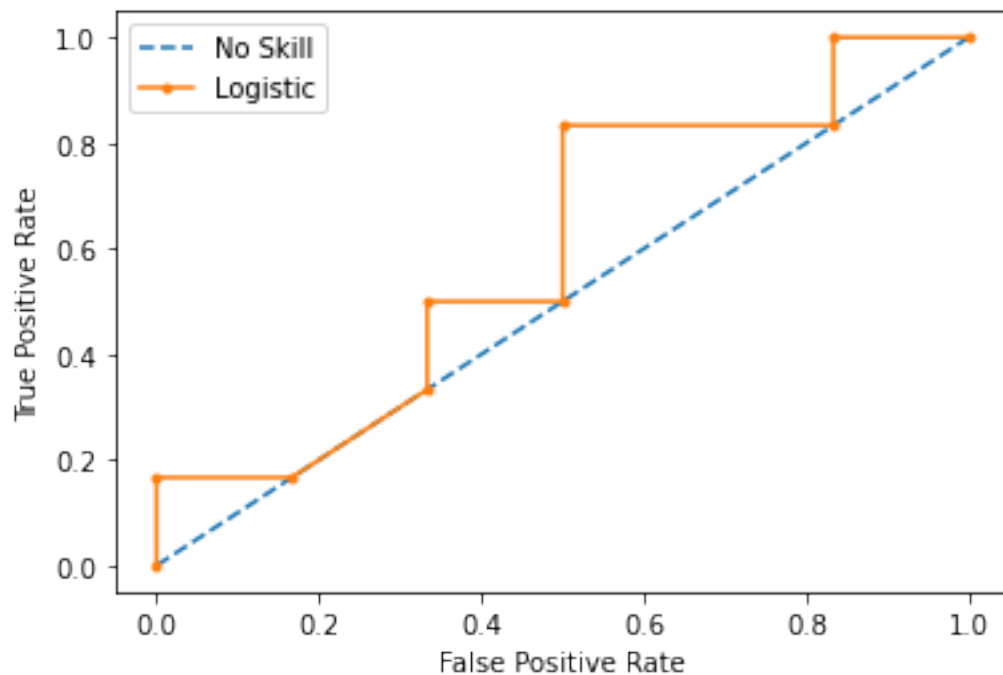
```

ROC AUC for Logistic Model =0.597

```

[36]: # calculate roc curves
ns_fpr, ns_tpr, _ = roc_curve(y_resp, ns_probs)
lr_fpr, lr_tpr, _ = roc_curve(y_resp, lr_probs)
# plot the roc curve for the model
plt.plot(ns_fpr, ns_tpr, linestyle='--', label='No Skill')
plt.plot(lr_fpr, lr_tpr, marker='.', label='Logistic')
# axis labels
plt.xlabel('False Positive Rate')
plt.ylabel('True Positive Rate')
# show the legend
plt.legend()
# show the plot
plt.show()

```



Esta variable no nos parece ayudar pues parece que predice prácticamente la certeza de un volado.

1.4.3 Probando la variable 'cholesterol'

Definimos el modelo logístico

```
[37]: model = LogisticRegression(C=1.0, solver='lbfgs', multi_class='ovr')
      y_resp = datos["y"]
      x_expl = datos[["x_cholesterol"]]
```

Separamos en covariable y respuesta pero de un subconjunto de datos

```
[38]: # Separar datos
      x_train, x_test, y_train, y_test = train_test_split(x_expl, y_resp, test_size=0.
      ↪3, random_state=5)
```

```
[39]: model.fit(x_train, y_train)
      model.score(x_train, y_train)
```

```
[39]: 0.625
```

Mostramos los coeficientes del modelo

```
[40]: model.coef_
```

```
[40]: array([[ -0.00722093]])
```

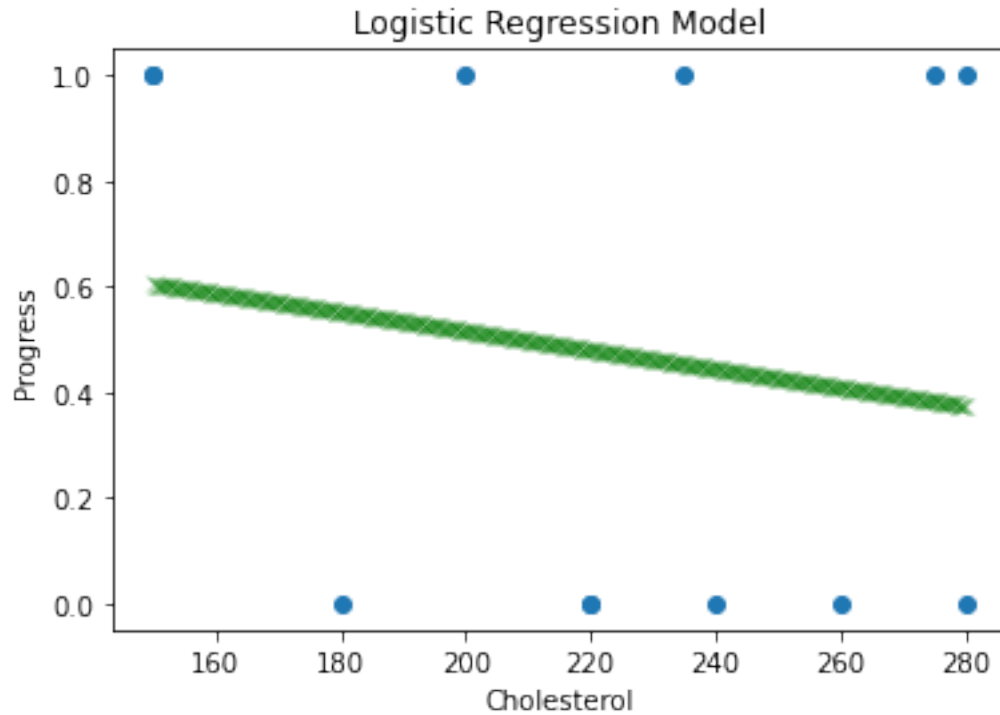
```
[41]: model.intercept_
```

```
[41]: array([1.50771544])
```

Graficando el Modelo

```
[42]: X = np.arange(150, 280, 0.1)
      X = X.reshape(-1, 1)
      plt.scatter(x_expl, y_resp)
      plt.scatter(X, model.predict_proba(X)[:,1], marker='x', color='g', linewidth=.1)
      plt.title("Logistic Regression Model")
      plt.xlabel('Cholesterol')
      plt.ylabel('Progress')
```

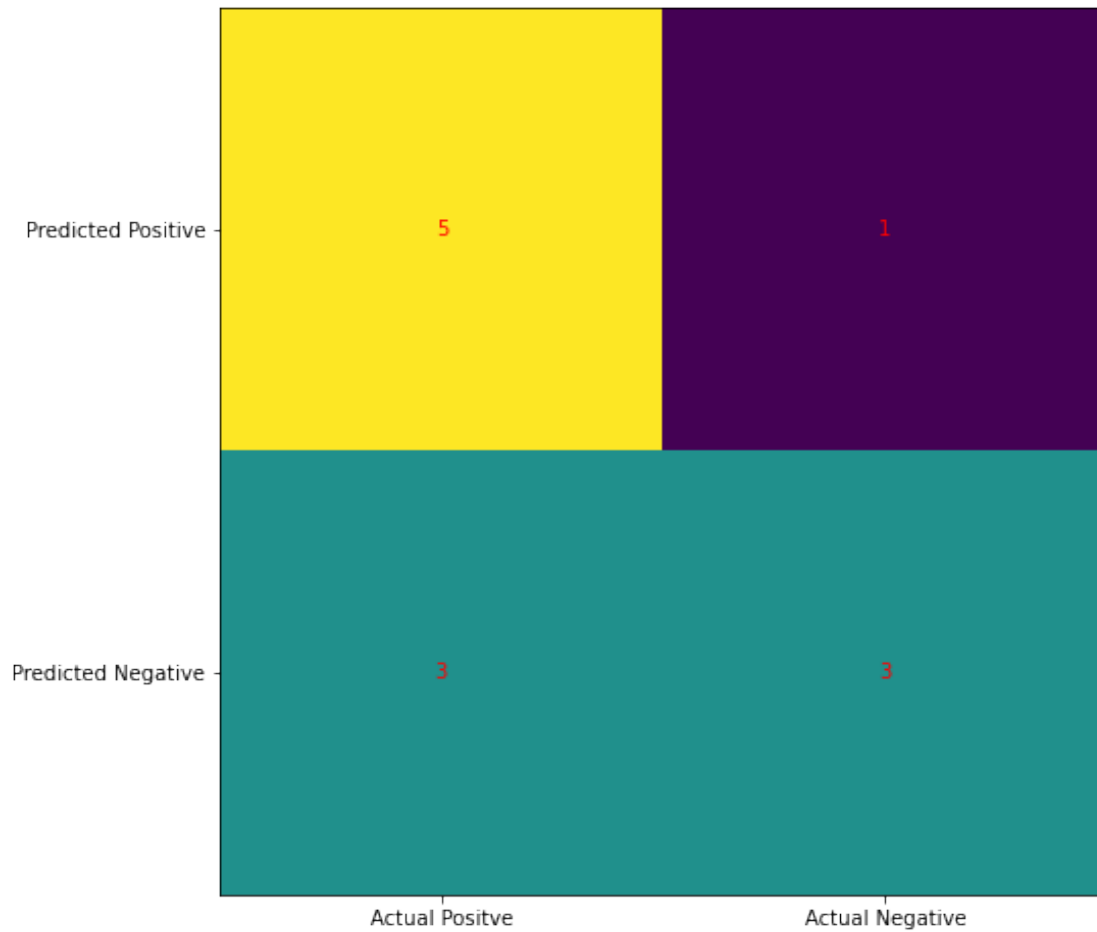
```
[42]: Text(0, 0.5, 'Progress')
```



Matriz de Confusión

```
[43]: cm = confusion_matrix(y_resp, model.predict(x_expl))
```

```
[44]: fig, ax = plt.subplots(figsize=(8, 8))
ax.imshow(cm)
ax.grid(False)
ax.yaxis.set(ticks=(0, 1), ticklabels=('Predicted Positive', 'Predicted_
↪Negative'))
ax.xaxis.set(ticks=(0, 1), ticklabels=('Actual Positive', 'Actual Negative'))
ax.set_ylim(1.5, -0.5)
for i in range(2):
    for j in range(2):
        ax.text(j, i, cm[i, j], ha='center', va='center', color='red')
plt.show()
```



ROC

```
[45]: # Genrate a Diagonal(Random Guess)
ns_probs = [0 for _ in range(len(y_resp))]
# predict probabilities
lr_probs = model.predict_proba(x_expl)
# keep probabilities for the positive outcome only
lr_probs = lr_probs[:, 1]
# calculate scores
ns_auc = roc_auc_score(y_resp, ns_probs)
lr_auc = roc_auc_score(y_resp, lr_probs)
```

```
[46]: # summarize scores
print('ROC AUC for Logistic Model =%.3f' % (lr_auc))
```

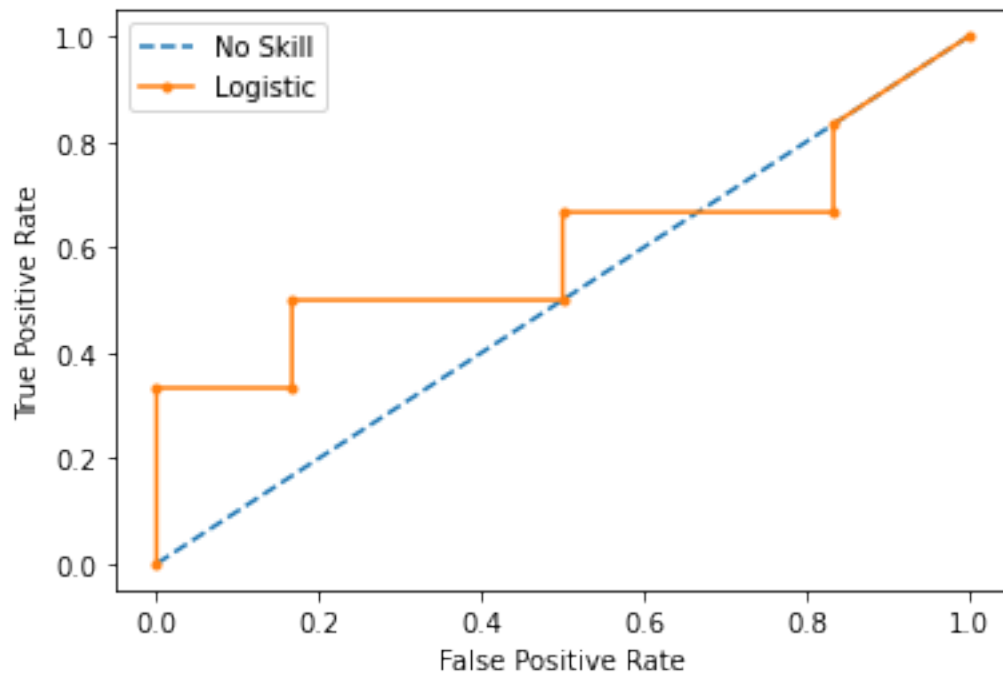
ROC AUC for Logistic Model =0.597

```
[47]: # calculate roc curves
ns_fpr, ns_tpr, _ = roc_curve(y_resp, ns_probs)
```

```

lr_fpr, lr_tpr, _ = roc_curve(y_resp, lr_probs)
# plot the roc curve for the model
plt.plot(ns_fpr, ns_tpr, linestyle='--', label='No Skill')
plt.plot(lr_fpr, lr_tpr, marker='.', label='Logistic')
# axis labels
plt.xlabel('False Positive Rate')
plt.ylabel('True Positive Rate')
# show the legend
plt.legend()
# show the plot
plt.show()

```



Esta variable mejora con respecto a la anterior, pero aún su poder de predicción no parece bueno.

1.4.4 Probando la variable 'sugar'

Definimos el modelo logístico

```

[48]: model = LogisticRegression(C=1.0, solver='lbfgs', multi_class='ovr')
      y_resp = datos["y"]
      x_expl = datos[["x_sugar"]]

```

Separamos en covariable y respuesta pero de un subconjunto de datos

```

[49]: # Separar datos

```

```
x_train, x_test, y_train, y_test = train_test_split(x_expl, y_resp, test_size=0.
↪3, random_state=5)
```

```
[50]: model.fit(x_train, y_train)
      model.score(x_train, y_train)
```

```
[50]: 1.0
```

Mostramos los coeficientes del modelo

```
[51]: model.coef_
```

```
[51]: array([[0.7157536]])
```

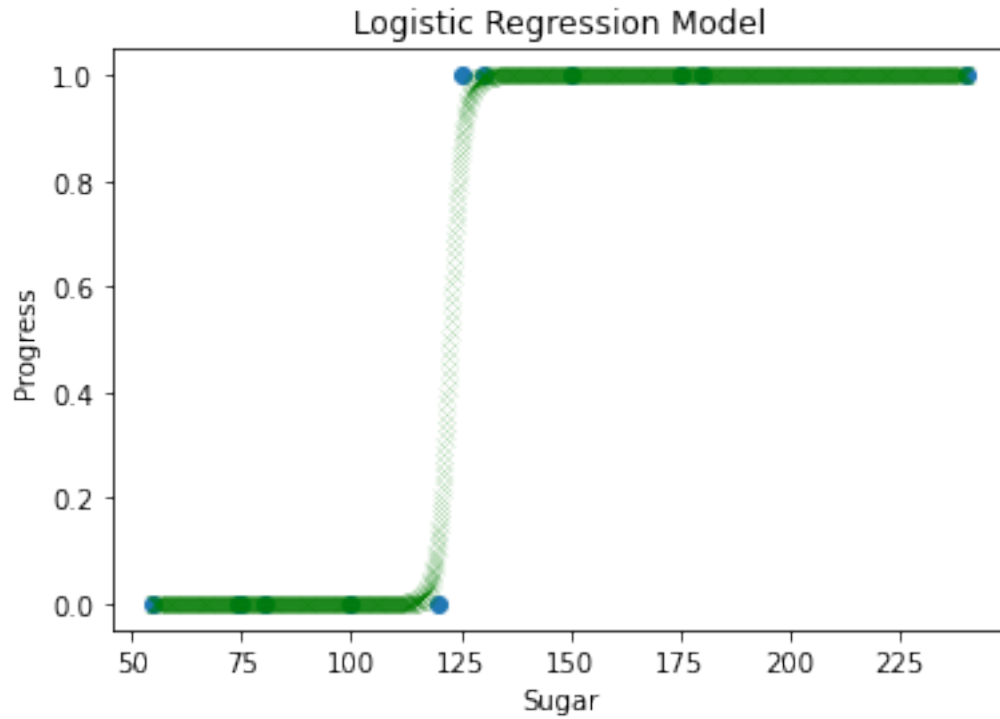
```
[52]: model.intercept_
```

```
[52]: array([-87.67981786])
```

Graficando el Modelo

```
[53]: X = np.arange(55, 240, 0.1)
      X = X.reshape(-1, 1)
      plt.scatter(x_expl, y_resp)
      plt.scatter(X, model.predict_proba(X)[: ,1], marker='x', color='g', linewidth=.1)
      plt.title("Logistic Regression Model")
      plt.xlabel('Sugar')
      plt.ylabel('Progress')
```

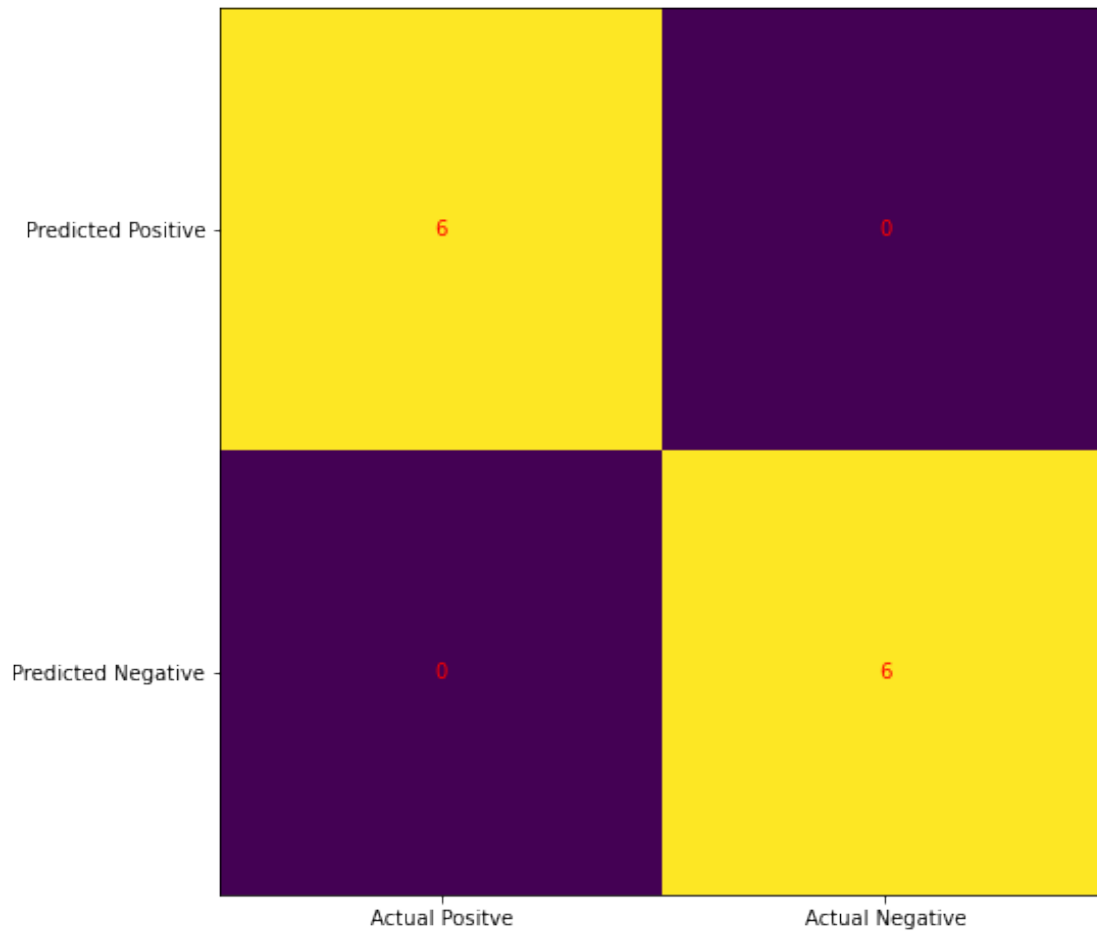
```
[53]: Text(0, 0.5, 'Progress')
```



Matriz de Confusión

```
[54]: cm = confusion_matrix(y_resp, model.predict(x_expl))
```

```
[55]: fig, ax = plt.subplots(figsize=(8, 8))
ax.imshow(cm)
ax.grid(False)
ax.yaxis.set(ticks=(0, 1), ticklabels=('Predicted Positive', 'Predicted_
↪Negative'))
ax.xaxis.set(ticks=(0, 1), ticklabels=('Actual Positive', 'Actual Negative'))
ax.set_ylim(1.5, -0.5)
for i in range(2):
    for j in range(2):
        ax.text(j, i, cm[i, j], ha='center', va='center', color='red')
plt.show()
```



ROC

```
[56]: # Genrate a Diagonal(Random Guess)
ns_probs = [0 for _ in range(len(y_resp))]
# predict probabilities
lr_probs = model.predict_proba(x_expl)
# keep probabilities for the positive outcome only
lr_probs = lr_probs[:, 1]
# calculate scores
ns_auc = roc_auc_score(y_resp, ns_probs)
lr_auc = roc_auc_score(y_resp, lr_probs)
```

```
[57]: # summarize scores
print('ROC AUC for Logistic Model =%.3f' % (lr_auc))
```

ROC AUC for Logistic Model =1.000

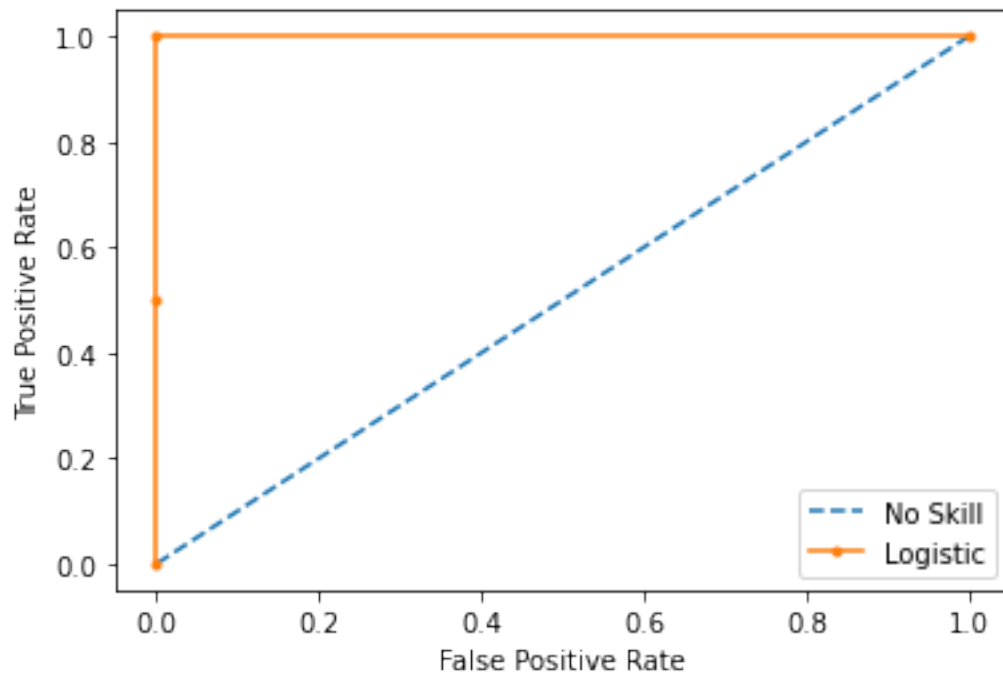
```
[58]: # calculate roc curves
ns_fpr, ns_tpr, _ = roc_curve(y_resp, ns_probs)
```



```

lr_fpr, lr_tpr, _ = roc_curve(y_resp, lr_probs)
# plot the roc curve for the model
plt.plot(ns_fpr, ns_tpr, linestyle='--', label='No Skill')
plt.plot(lr_fpr, lr_tpr, marker='.', label='Logistic')
# axis labels
plt.xlabel('False Positive Rate')
plt.ylabel('True Positive Rate')
# show the legend
plt.legend()
# show the plot
plt.show()

```



Esta variable predice demasiado bien, de hecho ajusta perfectamente a los datos que nosotros tenemos.

1.4.5 Probando la variable 'Tcell'

Definimos el modelo logístico

```

[59]: model = LogisticRegression(C=1.0, solver='lbfgs', multi_class='ovr')
y_resp = datos["y"]
x_expl = datos[["x_Tcell"]]

```

Separamos en covariable y respuesta pero de un subconjunto de datos

```
[60]: # Separar datos
x_train, x_test, y_train, y_test = train_test_split(x_expl, y_resp, test_size=0.
↳ 3, random_state=5)
```

```
[61]: model.fit(x_train, y_train)
model.score(x_train, y_train)
```

```
[61]: 1.0
```

Mostramos los coeficientes del modelo

```
[62]: model.coef_
```

```
[62]: array([[ -0.07262875]])
```

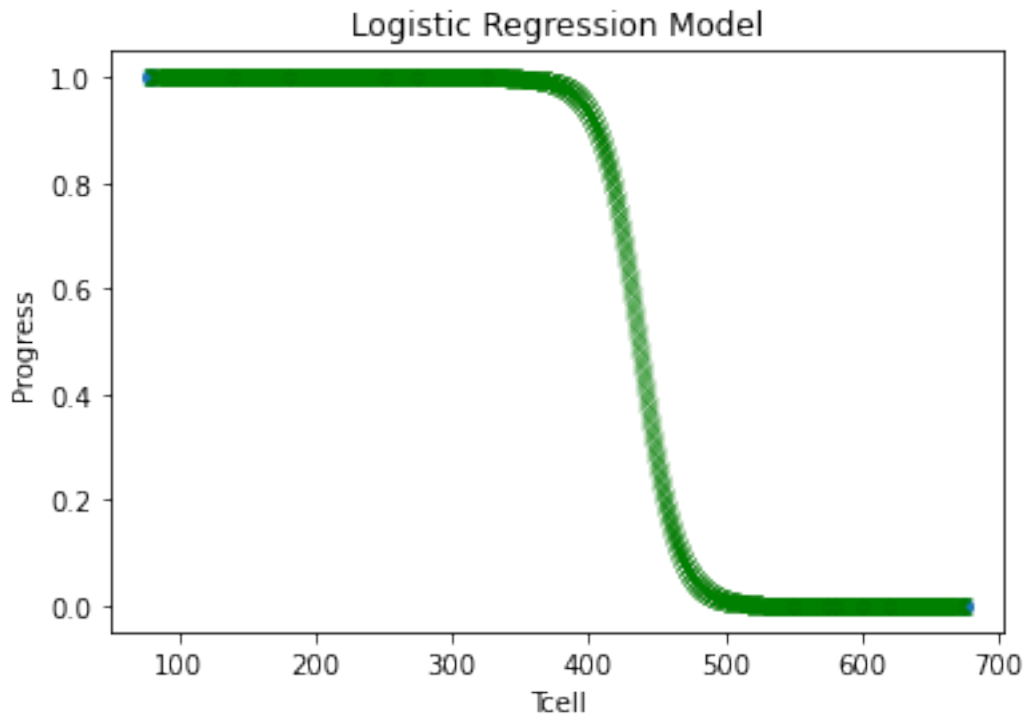
```
[63]: model.intercept_
```

```
[63]: array([31.70077079])
```

Graficando el Modelo

```
[64]: X = np.arange(80, 674, 0.1)
X = X.reshape(-1, 1)
plt.scatter(x_expl, y_resp)
plt.scatter(X, model.predict_proba(X)[:,1], marker='x', color='g', linewidth=.1)
plt.title("Logistic Regression Model")
plt.xlabel('Tcell')
plt.ylabel('Progress')
```

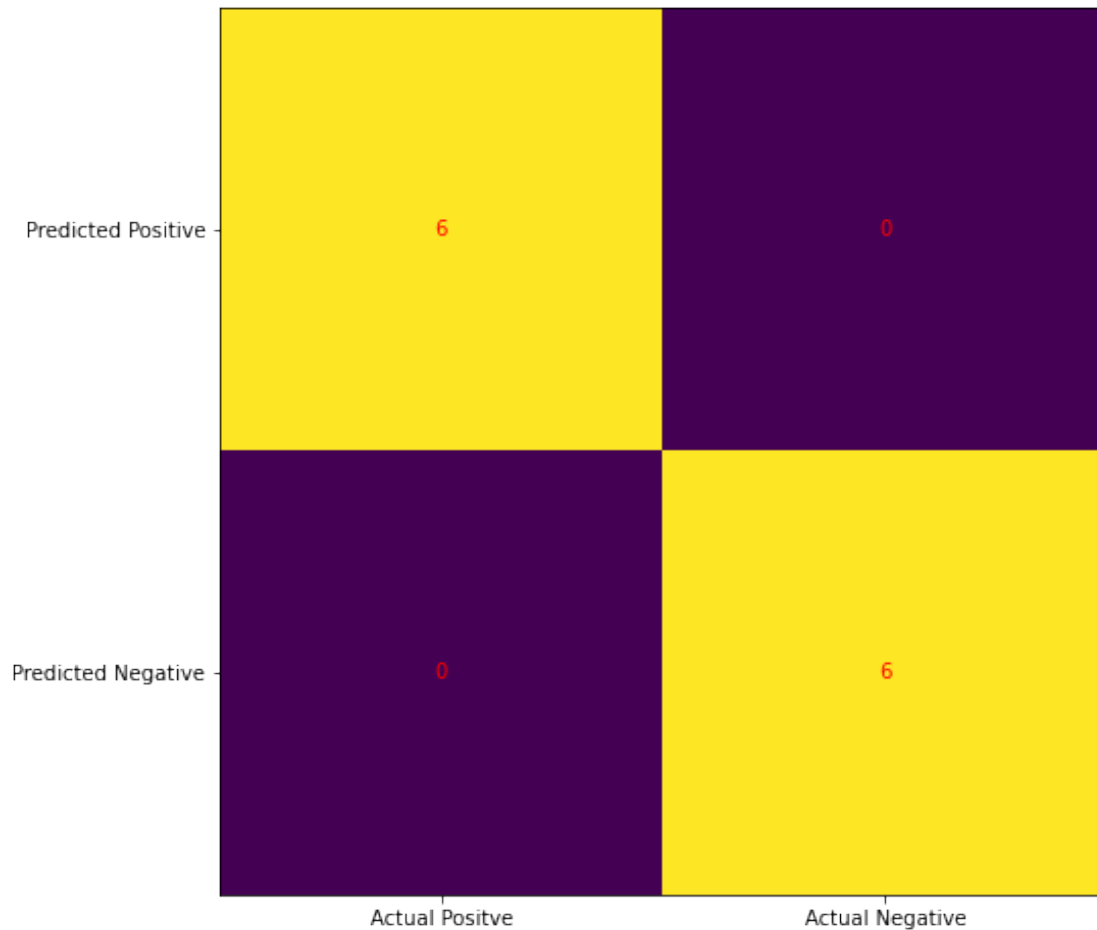
```
[64]: Text(0, 0.5, 'Progress')
```



Matriz de Confusión

```
[65]: cm = confusion_matrix(y_resp, model.predict(x_expl))
```

```
[66]: fig, ax = plt.subplots(figsize=(8, 8))
ax.imshow(cm)
ax.grid(False)
ax.yaxis.set(ticks=(0, 1), ticklabels=('Predicted Positive', 'Predicted_
→Negative'))
ax.xaxis.set(ticks=(0, 1), ticklabels=('Actual Positive', 'Actual Negative'))
ax.set_ylim(1.5, -0.5)
for i in range(2):
    for j in range(2):
        ax.text(j, i, cm[i, j], ha='center', va='center', color='red')
plt.show()
```



ROC

```
[67]: # Genrate a Diagonal(Random Guess)
ns_probs = [0 for _ in range(len(y_resp))]
# predict probabilities
lr_probs = model.predict_proba(x_expl)
# keep probabilities for the positive outcome only
lr_probs = lr_probs[:, 1]
# calculate scores
ns_auc = roc_auc_score(y_resp, ns_probs)
lr_auc = roc_auc_score(y_resp, lr_probs)
```

```
[68]: # summarize scores
print('ROC AUC for Logistic Model =%.3f' % (lr_auc))
```

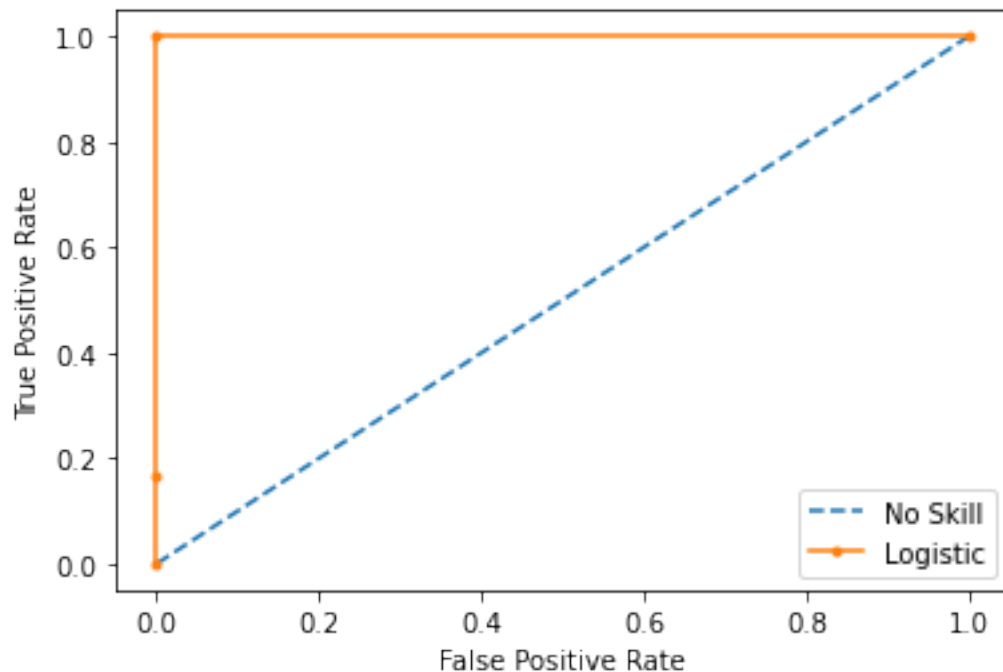
ROC AUC for Logistic Model =1.000

```
[69]: # calculate roc curves
ns_fpr, ns_tpr, _ = roc_curve(y_resp, ns_probs)
```

```

lr_fpr, lr_tpr, _ = roc_curve(y_resp, lr_probs)
# plot the roc curve for the model
plt.plot(ns_fpr, ns_tpr, linestyle='--', label='No Skill')
plt.plot(lr_fpr, lr_tpr, marker='.', label='Logistic')
# axis labels
plt.xlabel('False Positive Rate')
plt.ylabel('True Positive Rate')
# show the legend
plt.legend()
# show the plot
plt.show()

```



Esta variable al igual que la anterior ajusta muy bien a los datos. Con base en estas dos podemos darnos una buena idea de propuesta de modelo.

1.4.6 Conclusión

Lo que podemos proponer para lograr predecir la variable respuesta es usar las variables **sugar** y **Tcell** con el criterio de tomar como 1 la variable respuesta y si **sugar** ≥ 175 o bien **Tcell** ≤ 325 . Esta es la información inmediata que puede proporcionarnos nuestros datos.

1.5 Ejercicio 4

Usando un perceptron multicapa con Keras, produce un cono de la 'dimensión' de tu elección. Nota: En otras palabras, usa la ecuación de un cono y luego genera datos artificiales para generar X, Y y Z. Luego, usa los datos X, Y y Z para entrenar una red neuronal, y crea la forma de un

cono pero producida por la red neuronal. En tu reporte debes mencionar la ecuación del cono que seleccionaste, y la figura creada por la red neuronal.

1.5.1 Solución

Ecuación del cono que trabajaremos es

$$z = \sqrt{x^2 + y^2}$$

```
[70]: random.seed(10)
a = np.random.uniform(-1,1,1000)
b = np.random.uniform(-1,1,1000)
z = math.sqrt(2)-np.sqrt(a**2+b**2)

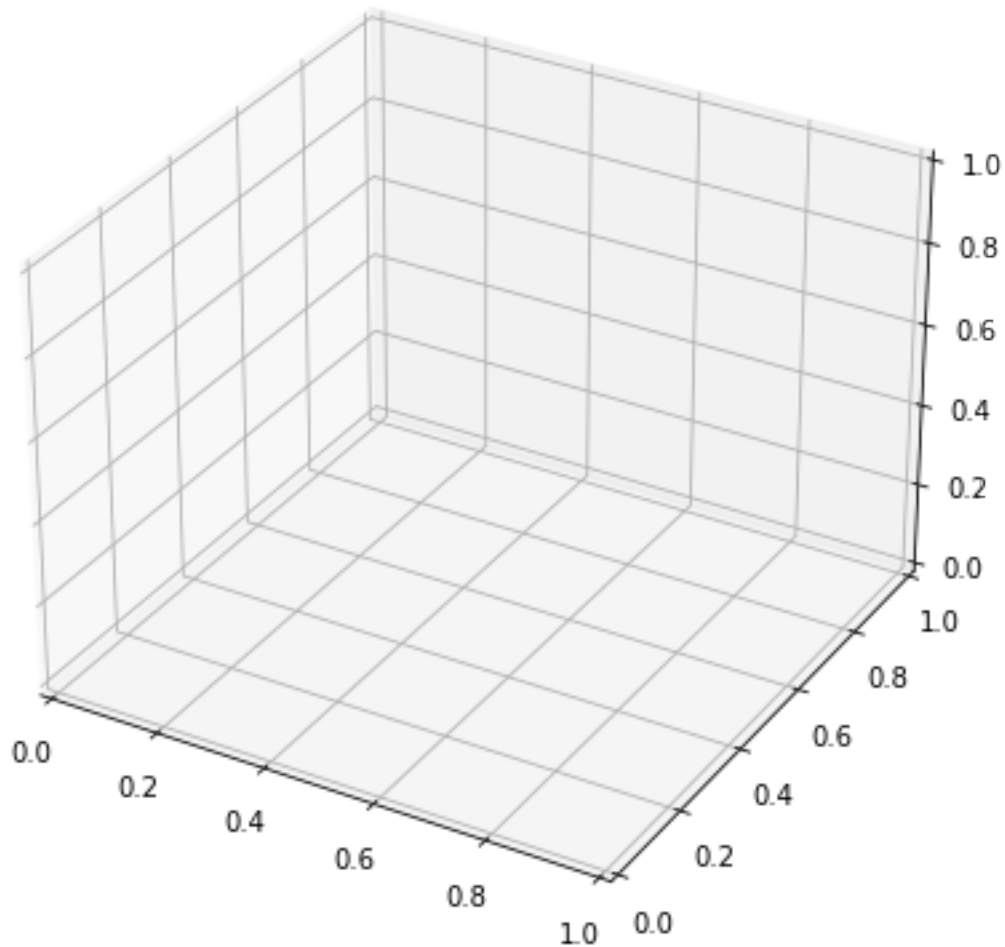
#from mpl_toolkits import mplot3d
fig = plt.figure(figsize = (10, 7))
ax = plt.axes(projection = "3d")

# Creating plot
#ax.scatter3D(a, b, z, color = "green")
#plt.title("simple 3D scatter plot")

# show plot
#plt.show()

fig = go.Figure(data=[go.Scatter3d(
    x=a,
    y=b,
    z=z,
    mode='markers',
    marker=dict(
        size=5,
        color=z,          # set color to an array/list of desired values
        colorscale='Viridis', # choose a colorscale
        opacity=0.8
    )
)])

# tight layout
fig.update_layout(margin=dict(l=0, r=0, b=0, t=0))
fig.show()
```



```
[71]: # The input and output, i.e. truth table, of a NAND gate
x_train = np.array(np.dstack((a,b)))
x_train = np.reshape(x_train, (1000, 2))

# Create neural networks model
model_cono = Sequential()
# Add layers to the model
model_cono.add(Dense(3, activation='relu', input_dim=2))      # first hidden_
↳ layer
model_cono.add(Dense(5, activation='relu'))                    # second hidden_
↳ layer
model_cono.add(Dense(1, activation='relu'))                    # output layer

# Compile the neural networks model
```

```
model_cono.compile(optimizer='sgd', loss='mse', metrics=['accuracy'])
# Train the neural networks model
model_cono.fit(x_train, z, epochs=1000)
```

```
Epoch 1/1000
32/32 [=====] - 0s 405us/step - loss: 0.2452 -
accuracy: 0.0000e+00
Epoch 2/1000
32/32 [=====] - 0s 374us/step - loss: 0.1621 -
accuracy: 0.0000e+00
Epoch 3/1000
32/32 [=====] - 0s 343us/step - loss: 0.1346 -
accuracy: 0.0000e+00
Epoch 4/1000
32/32 [=====] - 0s 374us/step - loss: 0.1192 -
accuracy: 0.0000e+00
Epoch 5/1000
32/32 [=====] - 0s 436us/step - loss: 0.1095 -
accuracy: 0.0000e+00
Epoch 6/1000
32/32 [=====] - 0s 343us/step - loss: 0.1022 -
accuracy: 0.0000e+00
Epoch 7/1000
32/32 [=====] - 0s 374us/step - loss: 0.0969 -
accuracy: 0.0000e+00
Epoch 8/1000
32/32 [=====] - 0s 374us/step - loss: 0.0924 -
accuracy: 0.0000e+00
Epoch 9/1000
32/32 [=====] - 0s 374us/step - loss: 0.0890 -
accuracy: 0.0000e+00
Epoch 10/1000
32/32 [=====] - 0s 343us/step - loss: 0.0858 -
accuracy: 0.0000e+00
Epoch 11/1000
32/32 [=====] - 0s 374us/step - loss: 0.0832 -
accuracy: 0.0000e+00
Epoch 12/1000
32/32 [=====] - 0s 405us/step - loss: 0.0809 -
accuracy: 0.0000e+00
Epoch 13/1000
32/32 [=====] - 0s 499us/step - loss: 0.0791 -
accuracy: 0.0000e+00
Epoch 14/1000
32/32 [=====] - 0s 530us/step - loss: 0.0772 -
accuracy: 0.0000e+00
Epoch 15/1000
32/32 [=====] - 0s 561us/step - loss: 0.0754 -
```


accuracy: 0.0000e+00
Epoch 16/1000
32/32 [=====] - 0s 499us/step - loss: 0.0738 -
accuracy: 0.0000e+00
Epoch 17/1000
32/32 [=====] - 0s 374us/step - loss: 0.0723 -
accuracy: 0.0000e+00
Epoch 18/1000
32/32 [=====] - 0s 405us/step - loss: 0.0709 -
accuracy: 0.0000e+00
Epoch 19/1000
32/32 [=====] - 0s 530us/step - loss: 0.0696 -
accuracy: 0.0000e+00
Epoch 20/1000
32/32 [=====] - 0s 561us/step - loss: 0.0683 -
accuracy: 0.0000e+00
Epoch 21/1000
32/32 [=====] - 0s 374us/step - loss: 0.0672 -
accuracy: 0.0000e+00
Epoch 22/1000
32/32 [=====] - 0s 374us/step - loss: 0.0662 -
accuracy: 0.0000e+00
Epoch 23/1000
32/32 [=====] - 0s 405us/step - loss: 0.0650 -
accuracy: 0.0000e+00
Epoch 24/1000
32/32 [=====] - 0s 374us/step - loss: 0.0640 -
accuracy: 0.0000e+00
Epoch 25/1000
32/32 [=====] - 0s 343us/step - loss: 0.0630 -
accuracy: 0.0000e+00
Epoch 26/1000
32/32 [=====] - 0s 374us/step - loss: 0.0621 -
accuracy: 0.0000e+00
Epoch 27/1000
32/32 [=====] - 0s 374us/step - loss: 0.0612 -
accuracy: 0.0000e+00
Epoch 28/1000
32/32 [=====] - 0s 343us/step - loss: 0.0604 -
accuracy: 0.0000e+00
Epoch 29/1000
32/32 [=====] - 0s 343us/step - loss: 0.0596 -
accuracy: 0.0000e+00
Epoch 30/1000
32/32 [=====] - 0s 405us/step - loss: 0.0589 -
accuracy: 0.0000e+00
Epoch 31/1000
32/32 [=====] - 0s 374us/step - loss: 0.0583 -

```

accuracy: 0.0000e+00
Epoch 32/1000
32/32 [=====] - 0s 374us/step - loss: 0.0576 -
accuracy: 0.0000e+00
Epoch 33/1000
32/32 [=====] - 0s 374us/step - loss: 0.0569 -
accuracy: 0.0000e+00
Epoch 34/1000
32/32 [=====] - 0s 592us/step - loss: 0.0562 -
accuracy: 0.0000e+00
Epoch 35/1000
32/32 [=====] - 0s 374us/step - loss: 0.0555 -
accuracy: 0.0000e+00
Epoch 36/1000
32/32 [=====] - 0s 406us/step - loss: 0.0549 -
accuracy: 0.0000e+00
Epoch 37/1000
32/32 [=====] - 0s 405us/step - loss: 0.0542 -
accuracy: 0.0000e+00
Epoch 38/1000
32/32 [=====] - 0s 405us/step - loss: 0.0536 -
accuracy: 0.0000e+00
Epoch 39/1000
32/32 [=====] - 0s 405us/step - loss: 0.0530 -
accuracy: 0.0000e+00
Epoch 40/1000
32/32 [=====] - 0s 405us/step - loss: 0.0524 -
accuracy: 0.0000e+00
Epoch 41/1000
32/32 [=====] - 0s 623us/step - loss: 0.0519 -
accuracy: 0.0000e+00
Epoch 42/1000
32/32 [=====] - 0s 592us/step - loss: 0.0514 -
accuracy: 0.0000e+00
Epoch 43/1000
32/32 [=====] - 0s 561us/step - loss: 0.0509 -
accuracy: 0.0000e+00
Epoch 44/1000
32/32 [=====] - 0s 405us/step - loss: 0.0504 -
accuracy: 0.0000e+00
Epoch 45/1000
32/32 [=====] - 0s 405us/step - loss: 0.0499 -
accuracy: 0.0000e+00
Epoch 46/1000
32/32 [=====] - 0s 467us/step - loss: 0.0494 -
accuracy: 0.0000e+00
Epoch 47/1000
32/32 [=====] - 0s 436us/step - loss: 0.0489 -

```

```

accuracy: 0.0000e+00
Epoch 48/1000
32/32 [=====] - 0s 405us/step - loss: 0.0484 -
accuracy: 0.0000e+00
Epoch 49/1000
32/32 [=====] - 0s 436us/step - loss: 0.0480 -
accuracy: 0.0000e+00
Epoch 50/1000
32/32 [=====] - 0s 436us/step - loss: 0.0475 -
accuracy: 0.0000e+00
Epoch 51/1000
32/32 [=====] - 0s 405us/step - loss: 0.0470 -
accuracy: 0.0000e+00
Epoch 52/1000
32/32 [=====] - 0s 405us/step - loss: 0.0466 -
accuracy: 0.0000e+00
Epoch 53/1000
32/32 [=====] - 0s 405us/step - loss: 0.0461 -
accuracy: 0.0000e+00
Epoch 54/1000
32/32 [=====] - 0s 374us/step - loss: 0.0456 -
accuracy: 0.0000e+00
Epoch 55/1000
32/32 [=====] - 0s 405us/step - loss: 0.0451 -
accuracy: 0.0000e+00
Epoch 56/1000
32/32 [=====] - 0s 499us/step - loss: 0.0446 -
accuracy: 0.0000e+00
Epoch 57/1000
32/32 [=====] - 0s 592us/step - loss: 0.0442 -
accuracy: 0.0000e+00
Epoch 58/1000
32/32 [=====] - 0s 623us/step - loss: 0.0437 -
accuracy: 0.0000e+00
Epoch 59/1000
32/32 [=====] - 0s 374us/step - loss: 0.0431 -
accuracy: 0.0000e+00
Epoch 60/1000
32/32 [=====] - 0s 374us/step - loss: 0.0426 -
accuracy: 0.0000e+00
Epoch 61/1000
32/32 [=====] - 0s 405us/step - loss: 0.0420 -
accuracy: 0.0000e+00
Epoch 62/1000
32/32 [=====] - 0s 374us/step - loss: 0.0415 -
accuracy: 0.0000e+00
Epoch 63/1000
32/32 [=====] - 0s 374us/step - loss: 0.0409 -

```

```

accuracy: 0.0000e+00
Epoch 64/1000
32/32 [=====] - 0s 374us/step - loss: 0.0404 -
accuracy: 0.0000e+00
Epoch 65/1000
32/32 [=====] - 0s 374us/step - loss: 0.0397 -
accuracy: 0.0000e+00
Epoch 66/1000
32/32 [=====] - 0s 374us/step - loss: 0.0391 -
accuracy: 0.0000e+00
Epoch 67/1000
32/32 [=====] - 0s 374us/step - loss: 0.0385 -
accuracy: 0.0000e+00
Epoch 68/1000
32/32 [=====] - 0s 374us/step - loss: 0.0378 -
accuracy: 0.0000e+00
Epoch 69/1000
32/32 [=====] - 0s 374us/step - loss: 0.0372 -
accuracy: 0.0000e+00
Epoch 70/1000
32/32 [=====] - 0s 374us/step - loss: 0.0366 -
accuracy: 0.0000e+00
Epoch 71/1000
32/32 [=====] - 0s 374us/step - loss: 0.0359 -
accuracy: 0.0000e+00
Epoch 72/1000
32/32 [=====] - 0s 405us/step - loss: 0.0352 -
accuracy: 0.0000e+00
Epoch 73/1000
32/32 [=====] - 0s 374us/step - loss: 0.0344 -
accuracy: 0.0000e+00
Epoch 74/1000
32/32 [=====] - 0s 374us/step - loss: 0.0337 -
accuracy: 0.0000e+00
Epoch 75/1000
32/32 [=====] - 0s 374us/step - loss: 0.0330 -
accuracy: 0.0000e+00
Epoch 76/1000
32/32 [=====] - 0s 405us/step - loss: 0.0323 -
accuracy: 0.0000e+00
Epoch 77/1000
32/32 [=====] - 0s 343us/step - loss: 0.0315 -
accuracy: 0.0000e+00
Epoch 78/1000
32/32 [=====] - 0s 374us/step - loss: 0.0308 -
accuracy: 0.0000e+00
Epoch 79/1000
32/32 [=====] - 0s 343us/step - loss: 0.0302 -

```

```

accuracy: 0.0000e+00
Epoch 80/1000
32/32 [=====] - 0s 468us/step - loss: 0.0294 -
accuracy: 0.0000e+00
Epoch 81/1000
32/32 [=====] - 0s 592us/step - loss: 0.0287 -
accuracy: 0.0000e+00
Epoch 82/1000
32/32 [=====] - 0s 530us/step - loss: 0.0280 -
accuracy: 0.0000e+00
Epoch 83/1000
32/32 [=====] - 0s 374us/step - loss: 0.0273 -
accuracy: 0.0000e+00
Epoch 84/1000
32/32 [=====] - 0s 405us/step - loss: 0.0267 -
accuracy: 0.0000e+00
Epoch 85/1000
32/32 [=====] - 0s 374us/step - loss: 0.0260 -
accuracy: 0.0000e+00
Epoch 86/1000
32/32 [=====] - 0s 405us/step - loss: 0.0254 -
accuracy: 0.0000e+00
Epoch 87/1000
32/32 [=====] - 0s 374us/step - loss: 0.0247 -
accuracy: 0.0000e+00
Epoch 88/1000
32/32 [=====] - 0s 374us/step - loss: 0.0241 -
accuracy: 0.0000e+00
Epoch 89/1000
32/32 [=====] - 0s 374us/step - loss: 0.0234 -
accuracy: 0.0000e+00
Epoch 90/1000
32/32 [=====] - 0s 467us/step - loss: 0.0228 -
accuracy: 0.0000e+00
Epoch 91/1000
32/32 [=====] - 0s 561us/step - loss: 0.0222 -
accuracy: 0.0000e+00
Epoch 92/1000
32/32 [=====] - 0s 530us/step - loss: 0.0216 -
accuracy: 0.0000e+00
Epoch 93/1000
32/32 [=====] - 0s 374us/step - loss: 0.0210 -
accuracy: 0.0000e+00
Epoch 94/1000
32/32 [=====] - 0s 374us/step - loss: 0.0203 -
accuracy: 0.0000e+00
Epoch 95/1000
32/32 [=====] - 0s 374us/step - loss: 0.0198 -

```

```

accuracy: 0.0000e+00
Epoch 96/1000
32/32 [=====] - 0s 374us/step - loss: 0.0192 -
accuracy: 0.0000e+00
Epoch 97/1000
32/32 [=====] - 0s 374us/step - loss: 0.0187 -
accuracy: 0.0000e+00
Epoch 98/1000
32/32 [=====] - 0s 374us/step - loss: 0.0181 -
accuracy: 0.0000e+00
Epoch 99/1000
32/32 [=====] - 0s 374us/step - loss: 0.0175 -
accuracy: 0.0000e+00
Epoch 100/1000
32/32 [=====] - 0s 343us/step - loss: 0.0170 -
accuracy: 0.0000e+00
Epoch 101/1000
32/32 [=====] - 0s 374us/step - loss: 0.0165 -
accuracy: 0.0000e+00
Epoch 102/1000
32/32 [=====] - 0s 374us/step - loss: 0.0161 -
accuracy: 0.0000e+00
Epoch 103/1000
32/32 [=====] - 0s 374us/step - loss: 0.0156 -
accuracy: 0.0000e+00
Epoch 104/1000
32/32 [=====] - 0s 374us/step - loss: 0.0151 -
accuracy: 0.0000e+00
Epoch 105/1000
32/32 [=====] - 0s 374us/step - loss: 0.0146 -
accuracy: 0.0000e+00
Epoch 106/1000
32/32 [=====] - 0s 374us/step - loss: 0.0142 -
accuracy: 0.0000e+00
Epoch 107/1000
32/32 [=====] - 0s 374us/step - loss: 0.0137 -
accuracy: 0.0000e+00
Epoch 108/1000
32/32 [=====] - 0s 374us/step - loss: 0.0133 -
accuracy: 0.0000e+00
Epoch 109/1000
32/32 [=====] - 0s 374us/step - loss: 0.0129 -
accuracy: 0.0000e+00
Epoch 110/1000
32/32 [=====] - 0s 374us/step - loss: 0.0125 -
accuracy: 0.0000e+00
Epoch 111/1000
32/32 [=====] - 0s 374us/step - loss: 0.0121 -

```

```

accuracy: 0.0000e+00
Epoch 112/1000
32/32 [=====] - 0s 467us/step - loss: 0.0118 -
accuracy: 0.0000e+00
Epoch 113/1000
32/32 [=====] - 0s 561us/step - loss: 0.0114 -
accuracy: 0.0000e+00
Epoch 114/1000
32/32 [=====] - 0s 530us/step - loss: 0.0111 -
accuracy: 0.0000e+00
Epoch 115/1000
32/32 [=====] - 0s 405us/step - loss: 0.0108 -
accuracy: 0.0000e+00
Epoch 116/1000
32/32 [=====] - 0s 374us/step - loss: 0.0105 -
accuracy: 0.0000e+00
Epoch 117/1000
32/32 [=====] - 0s 467us/step - loss: 0.0102 -
accuracy: 0.0000e+00
Epoch 118/1000
32/32 [=====] - 0s 561us/step - loss: 0.0099 -
accuracy: 0.0000e+00
Epoch 119/1000
32/32 [=====] - 0s 561us/step - loss: 0.0096 -
accuracy: 0.0000e+00
Epoch 120/1000
32/32 [=====] - 0s 374us/step - loss: 0.0093 -
accuracy: 0.0000e+00
Epoch 121/1000
32/32 [=====] - 0s 374us/step - loss: 0.0091 -
accuracy: 0.0000e+00
Epoch 122/1000
32/32 [=====] - 0s 374us/step - loss: 0.0088 -
accuracy: 0.0000e+00
Epoch 123/1000
32/32 [=====] - 0s 374us/step - loss: 0.0086 -
accuracy: 0.0000e+00
Epoch 124/1000
32/32 [=====] - 0s 374us/step - loss: 0.0084 -
accuracy: 0.0000e+00
Epoch 125/1000
32/32 [=====] - 0s 374us/step - loss: 0.0081 -
accuracy: 0.0000e+00
Epoch 126/1000
32/32 [=====] - 0s 374us/step - loss: 0.0079 -
accuracy: 0.0000e+00
Epoch 127/1000
32/32 [=====] - 0s 405us/step - loss: 0.0077 -

```

```
accuracy: 0.0000e+00
Epoch 128/1000
32/32 [=====] - 0s 374us/step - loss: 0.0076 -
accuracy: 0.0000e+00
Epoch 129/1000
32/32 [=====] - 0s 374us/step - loss: 0.0074 -
accuracy: 0.0000e+00
Epoch 130/1000
32/32 [=====] - 0s 405us/step - loss: 0.0072 -
accuracy: 0.0000e+00
Epoch 131/1000
32/32 [=====] - 0s 374us/step - loss: 0.0070 -
accuracy: 0.0000e+00
Epoch 132/1000
32/32 [=====] - 0s 374us/step - loss: 0.0069 -
accuracy: 0.0000e+00
Epoch 133/1000
32/32 [=====] - 0s 374us/step - loss: 0.0067 -
accuracy: 0.0000e+00
Epoch 134/1000
32/32 [=====] - 0s 374us/step - loss: 0.0066 -
accuracy: 0.0000e+00
Epoch 135/1000
32/32 [=====] - 0s 405us/step - loss: 0.0064 -
accuracy: 0.0000e+00
Epoch 136/1000
32/32 [=====] - 0s 374us/step - loss: 0.0063 -
accuracy: 0.0000e+00
Epoch 137/1000
32/32 [=====] - 0s 374us/step - loss: 0.0062 -
accuracy: 0.0000e+00
Epoch 138/1000
32/32 [=====] - 0s 374us/step - loss: 0.0061 -
accuracy: 0.0000e+00
Epoch 139/1000
32/32 [=====] - 0s 374us/step - loss: 0.0059 -
accuracy: 0.0000e+00
Epoch 140/1000
32/32 [=====] - 0s 374us/step - loss: 0.0058 -
accuracy: 0.0000e+00
Epoch 141/1000
32/32 [=====] - 0s 374us/step - loss: 0.0057 -
accuracy: 0.0000e+00
Epoch 142/1000
32/32 [=====] - 0s 374us/step - loss: 0.0056 -
accuracy: 0.0000e+00
Epoch 143/1000
32/32 [=====] - 0s 374us/step - loss: 0.0055 -
```


accuracy: 0.0000e+00
Epoch 144/1000
32/32 [=====] - 0s 374us/step - loss: 0.0054 -
accuracy: 0.0000e+00
Epoch 145/1000
32/32 [=====] - 0s 343us/step - loss: 0.0054 -
accuracy: 0.0000e+00
Epoch 146/1000
32/32 [=====] - 0s 343us/step - loss: 0.0053 -
accuracy: 0.0000e+00
Epoch 147/1000
32/32 [=====] - 0s 374us/step - loss: 0.0052 -
accuracy: 0.0000e+00
Epoch 148/1000
32/32 [=====] - 0s 374us/step - loss: 0.0051 -
accuracy: 0.0000e+00
Epoch 149/1000
32/32 [=====] - 0s 374us/step - loss: 0.0050 -
accuracy: 0.0000e+00
Epoch 150/1000
32/32 [=====] - 0s 343us/step - loss: 0.0050 -
accuracy: 0.0000e+00
Epoch 151/1000
32/32 [=====] - 0s 374us/step - loss: 0.0049 -
accuracy: 0.0000e+00
Epoch 152/1000
32/32 [=====] - 0s 374us/step - loss: 0.0049 -
accuracy: 0.0000e+00
Epoch 153/1000
32/32 [=====] - 0s 374us/step - loss: 0.0048 -
accuracy: 0.0000e+00
Epoch 154/1000
32/32 [=====] - 0s 374us/step - loss: 0.0047 -
accuracy: 0.0000e+00
Epoch 155/1000
32/32 [=====] - 0s 374us/step - loss: 0.0047 -
accuracy: 0.0000e+00
Epoch 156/1000
32/32 [=====] - 0s 374us/step - loss: 0.0046 -
accuracy: 0.0000e+00
Epoch 157/1000
32/32 [=====] - 0s 374us/step - loss: 0.0046 -
accuracy: 0.0000e+00
Epoch 158/1000
32/32 [=====] - 0s 374us/step - loss: 0.0045 -
accuracy: 0.0000e+00
Epoch 159/1000
32/32 [=====] - 0s 374us/step - loss: 0.0045 -

```
accuracy: 0.0000e+00
Epoch 160/1000
32/32 [=====] - 0s 374us/step - loss: 0.0044 -
accuracy: 0.0000e+00
Epoch 161/1000
32/32 [=====] - 0s 374us/step - loss: 0.0044 -
accuracy: 0.0000e+00
Epoch 162/1000
32/32 [=====] - 0s 405us/step - loss: 0.0043 -
accuracy: 0.0000e+00
Epoch 163/1000
32/32 [=====] - 0s 374us/step - loss: 0.0043 -
accuracy: 0.0000e+00
Epoch 164/1000
32/32 [=====] - 0s 374us/step - loss: 0.0043 -
accuracy: 0.0000e+00
Epoch 165/1000
32/32 [=====] - 0s 374us/step - loss: 0.0042 -
accuracy: 0.0000e+00
Epoch 166/1000
32/32 [=====] - 0s 374us/step - loss: 0.0042 -
accuracy: 0.0000e+00
Epoch 167/1000
32/32 [=====] - 0s 405us/step - loss: 0.0042 -
accuracy: 0.0000e+00
Epoch 168/1000
32/32 [=====] - 0s 405us/step - loss: 0.0041 -
accuracy: 0.0000e+00
Epoch 169/1000
32/32 [=====] - 0s 343us/step - loss: 0.0041 -
accuracy: 0.0000e+00
Epoch 170/1000
32/32 [=====] - 0s 374us/step - loss: 0.0040 -
accuracy: 0.0000e+00
Epoch 171/1000
32/32 [=====] - 0s 374us/step - loss: 0.0040 -
accuracy: 0.0000e+00
Epoch 172/1000
32/32 [=====] - 0s 374us/step - loss: 0.0040 -
accuracy: 0.0000e+00
Epoch 173/1000
32/32 [=====] - 0s 374us/step - loss: 0.0039 -
accuracy: 0.0000e+00
Epoch 174/1000
32/32 [=====] - 0s 374us/step - loss: 0.0039 -
accuracy: 0.0000e+00
Epoch 175/1000
32/32 [=====] - 0s 405us/step - loss: 0.0039 -
```

```

accuracy: 0.0000e+00
Epoch 176/1000
32/32 [=====] - 0s 405us/step - loss: 0.0038 -
accuracy: 0.0000e+00
Epoch 177/1000
32/32 [=====] - 0s 374us/step - loss: 0.0038 -
accuracy: 0.0000e+00
Epoch 178/1000
32/32 [=====] - 0s 343us/step - loss: 0.0038 -
accuracy: 0.0000e+00
Epoch 179/1000
32/32 [=====] - 0s 374us/step - loss: 0.0037 -
accuracy: 0.0000e+00
Epoch 180/1000
32/32 [=====] - 0s 343us/step - loss: 0.0037 -
accuracy: 0.0000e+00
Epoch 181/1000
32/32 [=====] - 0s 405us/step - loss: 0.0037 -
accuracy: 0.0000e+00
Epoch 182/1000
32/32 [=====] - 0s 374us/step - loss: 0.0036 -
accuracy: 0.0000e+00
Epoch 183/1000
32/32 [=====] - 0s 374us/step - loss: 0.0036 -
accuracy: 0.0000e+00
Epoch 184/1000
32/32 [=====] - 0s 374us/step - loss: 0.0036 -
accuracy: 0.0000e+00
Epoch 185/1000
32/32 [=====] - 0s 374us/step - loss: 0.0036 -
accuracy: 0.0000e+00
Epoch 186/1000
32/32 [=====] - 0s 374us/step - loss: 0.0036 -
accuracy: 0.0000e+00
Epoch 187/1000
32/32 [=====] - 0s 374us/step - loss: 0.0035 -
accuracy: 0.0000e+00
Epoch 188/1000
32/32 [=====] - 0s 405us/step - loss: 0.0035 -
accuracy: 0.0000e+00
Epoch 189/1000
32/32 [=====] - 0s 343us/step - loss: 0.0035 -
accuracy: 0.0000e+00
Epoch 190/1000
32/32 [=====] - 0s 374us/step - loss: 0.0035 -
accuracy: 0.0000e+00
Epoch 191/1000
32/32 [=====] - 0s 374us/step - loss: 0.0035 -

```

```
accuracy: 0.0000e+00
Epoch 192/1000
32/32 [=====] - 0s 343us/step - loss: 0.0034 -
accuracy: 0.0000e+00
Epoch 193/1000
32/32 [=====] - 0s 374us/step - loss: 0.0034 -
accuracy: 0.0000e+00
Epoch 194/1000
32/32 [=====] - 0s 405us/step - loss: 0.0034 -
accuracy: 0.0000e+00
Epoch 195/1000
32/32 [=====] - 0s 374us/step - loss: 0.0034 -
accuracy: 0.0000e+00
Epoch 196/1000
32/32 [=====] - 0s 374us/step - loss: 0.0034 -
accuracy: 0.0000e+00
Epoch 197/1000
32/32 [=====] - 0s 374us/step - loss: 0.0033 -
accuracy: 0.0000e+00
Epoch 198/1000
32/32 [=====] - 0s 374us/step - loss: 0.0033 -
accuracy: 0.0000e+00
Epoch 199/1000
32/32 [=====] - 0s 374us/step - loss: 0.0033 -
accuracy: 0.0000e+00
Epoch 200/1000
32/32 [=====] - 0s 405us/step - loss: 0.0033 -
accuracy: 0.0000e+00
Epoch 201/1000
32/32 [=====] - 0s 374us/step - loss: 0.0033 -
accuracy: 0.0000e+00
Epoch 202/1000
32/32 [=====] - 0s 405us/step - loss: 0.0033 -
accuracy: 0.0000e+00
Epoch 203/1000
32/32 [=====] - 0s 436us/step - loss: 0.0033 -
accuracy: 0.0000e+00
Epoch 204/1000
32/32 [=====] - 0s 405us/step - loss: 0.0032 -
accuracy: 0.0000e+00
Epoch 205/1000
32/32 [=====] - 0s 343us/step - loss: 0.0032 -
accuracy: 0.0000e+00
Epoch 206/1000
32/32 [=====] - 0s 374us/step - loss: 0.0032 -
accuracy: 0.0000e+00
Epoch 207/1000
32/32 [=====] - 0s 374us/step - loss: 0.0032 -
```

accuracy: 0.0000e+00
Epoch 208/1000
32/32 [=====] - 0s 405us/step - loss: 0.0032 -
accuracy: 0.0000e+00
Epoch 209/1000
32/32 [=====] - 0s 405us/step - loss: 0.0032 -
accuracy: 0.0000e+00
Epoch 210/1000
32/32 [=====] - 0s 374us/step - loss: 0.0032 -
accuracy: 0.0000e+00
Epoch 211/1000
32/32 [=====] - 0s 374us/step - loss: 0.0032 -
accuracy: 0.0000e+00
Epoch 212/1000
32/32 [=====] - 0s 374us/step - loss: 0.0032 -
accuracy: 0.0000e+00
Epoch 213/1000
32/32 [=====] - 0s 343us/step - loss: 0.0031 -
accuracy: 0.0000e+00
Epoch 214/1000
32/32 [=====] - 0s 374us/step - loss: 0.0031 -
accuracy: 0.0000e+00
Epoch 215/1000
32/32 [=====] - 0s 374us/step - loss: 0.0031 -
accuracy: 0.0000e+00
Epoch 216/1000
32/32 [=====] - 0s 374us/step - loss: 0.0031 -
accuracy: 0.0000e+00
Epoch 217/1000
32/32 [=====] - 0s 343us/step - loss: 0.0031 -
accuracy: 0.0000e+00
Epoch 218/1000
32/32 [=====] - 0s 374us/step - loss: 0.0031 -
accuracy: 0.0000e+00
Epoch 219/1000
32/32 [=====] - 0s 374us/step - loss: 0.0031 -
accuracy: 0.0000e+00
Epoch 220/1000
32/32 [=====] - 0s 374us/step - loss: 0.0031 -
accuracy: 0.0000e+00
Epoch 221/1000
32/32 [=====] - 0s 374us/step - loss: 0.0031 -
accuracy: 0.0000e+00
Epoch 222/1000
32/32 [=====] - 0s 343us/step - loss: 0.0031 -
accuracy: 0.0000e+00
Epoch 223/1000
32/32 [=====] - 0s 405us/step - loss: 0.0030 -

```

accuracy: 0.0000e+00
Epoch 224/1000
32/32 [=====] - 0s 374us/step - loss: 0.0030 -
accuracy: 0.0000e+00
Epoch 225/1000
32/32 [=====] - 0s 374us/step - loss: 0.0030 -
accuracy: 0.0000e+00
Epoch 226/1000
32/32 [=====] - 0s 374us/step - loss: 0.0030 -
accuracy: 0.0000e+00
Epoch 227/1000
32/32 [=====] - 0s 374us/step - loss: 0.0030 -
accuracy: 0.0000e+00
Epoch 228/1000
32/32 [=====] - 0s 405us/step - loss: 0.0030 -
accuracy: 0.0000e+00
Epoch 229/1000
32/32 [=====] - 0s 405us/step - loss: 0.0030 -
accuracy: 0.0000e+00
Epoch 230/1000
32/32 [=====] - 0s 374us/step - loss: 0.0030 -
accuracy: 0.0000e+00
Epoch 231/1000
32/32 [=====] - 0s 374us/step - loss: 0.0030 -
accuracy: 0.0000e+00
Epoch 232/1000
32/32 [=====] - 0s 374us/step - loss: 0.0030 -
accuracy: 0.0000e+00
Epoch 233/1000
32/32 [=====] - 0s 374us/step - loss: 0.0030 -
accuracy: 0.0000e+00
Epoch 234/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -
accuracy: 0.0000e+00
Epoch 235/1000
32/32 [=====] - 0s 374us/step - loss: 0.0030 -
accuracy: 0.0000e+00
Epoch 236/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -
accuracy: 0.0000e+00
Epoch 237/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -
accuracy: 0.0000e+00
Epoch 238/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -
accuracy: 0.0000e+00
Epoch 239/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -

```

accuracy: 0.0000e+00
Epoch 240/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -
accuracy: 0.0000e+00
Epoch 241/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -
accuracy: 0.0000e+00
Epoch 242/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -
accuracy: 0.0000e+00
Epoch 243/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -
accuracy: 0.0000e+00
Epoch 244/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -
accuracy: 0.0000e+00
Epoch 245/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -
accuracy: 0.0000e+00
Epoch 246/1000
32/32 [=====] - 0s 374us/step - loss: 0.0029 -
accuracy: 0.0000e+00
Epoch 247/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 248/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 249/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 250/1000
32/32 [=====] - 0s 405us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 251/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 252/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 253/1000
32/32 [=====] - 0s 343us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 254/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 255/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -

accuracy: 0.0000e+00
Epoch 256/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 257/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 258/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 259/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 260/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 261/1000
32/32 [=====] - 0s 405us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 262/1000
32/32 [=====] - 0s 374us/step - loss: 0.0028 -
accuracy: 0.0000e+00
Epoch 263/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 264/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 265/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 266/1000
32/32 [=====] - 0s 405us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 267/1000
32/32 [=====] - 0s 343us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 268/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 269/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 270/1000
32/32 [=====] - 0s 405us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 271/1000
32/32 [=====] - 0s 343us/step - loss: 0.0027 -


```

accuracy: 0.0000e+00
Epoch 272/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 273/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 274/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 275/1000
32/32 [=====] - 0s 405us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 276/1000
32/32 [=====] - 0s 405us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 277/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 278/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 279/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 280/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 281/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 282/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 283/1000
32/32 [=====] - 0s 374us/step - loss: 0.0027 -
accuracy: 0.0000e+00
Epoch 284/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 285/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 286/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 287/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -

```

```

accuracy: 0.0000e+00
Epoch 288/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 289/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 290/1000
32/32 [=====] - 0s 343us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 291/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 292/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 293/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 294/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 295/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 296/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 297/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 298/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 299/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 300/1000
32/32 [=====] - 0s 436us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 301/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 302/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 303/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -

```

accuracy: 0.0000e+00
Epoch 304/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 305/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 306/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 307/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 308/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 309/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 310/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 311/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 312/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 313/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 314/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 315/1000
32/32 [=====] - 0s 374us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 316/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 317/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 318/1000
32/32 [=====] - 0s 405us/step - loss: 0.0026 -
accuracy: 0.0000e+00
Epoch 319/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -

accuracy: 0.0000e+00
Epoch 320/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 321/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 322/1000
32/32 [=====] - 0s 436us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 323/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 324/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 325/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 326/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 327/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 328/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 329/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 330/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 331/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 332/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 333/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 334/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 335/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -

```

accuracy: 0.0000e+00
Epoch 336/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 337/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 338/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 339/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 340/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 341/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 342/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 343/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 344/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 345/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 346/1000
32/32 [=====] - 0s 436us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 347/1000
32/32 [=====] - 0s 406us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 348/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 349/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 350/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 351/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -

```

accuracy: 0.0000e+00
Epoch 352/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 353/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 354/1000
32/32 [=====] - 0s 405us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 355/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 356/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 357/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 358/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 359/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 360/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 361/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 362/1000
32/32 [=====] - 0s 374us/step - loss: 0.0025 -
accuracy: 0.0000e+00
Epoch 363/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 364/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 365/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 366/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 367/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -

```

accuracy: 0.0000e+00
Epoch 368/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 369/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 370/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 371/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 372/1000
32/32 [=====] - 0s 343us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 373/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 374/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 375/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 376/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 377/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 378/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 379/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 380/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 381/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 382/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 383/1000
32/32 [=====] - 0s 405us/step - loss: 0.0024 -

```

accuracy: 0.0000e+00
Epoch 384/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 385/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 386/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 387/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 388/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 389/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 390/1000
32/32 [=====] - 0s 405us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 391/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 392/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 393/1000
32/32 [=====] - 0s 405us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 394/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 395/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 396/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 397/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 398/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 399/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -

accuracy: 0.0000e+00
Epoch 400/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 401/1000
32/32 [=====] - 0s 343us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 402/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 403/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 404/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 405/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 406/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 407/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 408/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 409/1000
32/32 [=====] - 0s 343us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 410/1000
32/32 [=====] - 0s 405us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 411/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 412/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 413/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 414/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 415/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -

accuracy: 0.0000e+00
Epoch 416/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 417/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 418/1000
32/32 [=====] - 0s 405us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 419/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 420/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 421/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 422/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 423/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 424/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 425/1000
32/32 [=====] - 0s 374us/step - loss: 0.0024 -
accuracy: 0.0000e+00
Epoch 426/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 427/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 428/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 429/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 430/1000
32/32 [=====] - 0s 343us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 431/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -

```

accuracy: 0.0000e+00
Epoch 432/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 433/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 434/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 435/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 436/1000
32/32 [=====] - 0s 343us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 437/1000
32/32 [=====] - 0s 343us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 438/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 439/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 440/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 441/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 442/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 443/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 444/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 445/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 446/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 447/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -

```

```
accuracy: 0.0000e+00
Epoch 448/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 449/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 450/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 451/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 452/1000
32/32 [=====] - 0s 343us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 453/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 454/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 455/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 456/1000
32/32 [=====] - 0s 343us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 457/1000
32/32 [=====] - 0s 343us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 458/1000
32/32 [=====] - 0s 343us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 459/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 460/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 461/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 462/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 463/1000
32/32 [=====] - 0s 405us/step - loss: 0.0023 -
```

accuracy: 0.0000e+00
Epoch 464/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 465/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 466/1000
32/32 [=====] - 0s 405us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 467/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 468/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 469/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 470/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 471/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 472/1000
32/32 [=====] - 0s 343us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 473/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 474/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 475/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 476/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 477/1000
32/32 [=====] - 0s 343us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 478/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 479/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -

```
accuracy: 0.0000e+00
Epoch 480/1000
32/32 [=====] - 0s 343us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 481/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 482/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 483/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 484/1000
32/32 [=====] - 0s 343us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 485/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 486/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 487/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 488/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 489/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 490/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 491/1000
32/32 [=====] - 0s 405us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 492/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 493/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 494/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 495/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
```

accuracy: 0.0000e+00
Epoch 496/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 497/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 498/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 499/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 500/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 501/1000
32/32 [=====] - 0s 374us/step - loss: 0.0023 -
accuracy: 0.0000e+00
Epoch 502/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 503/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 504/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 505/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 506/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 507/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 508/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 509/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 510/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 511/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -

accuracy: 0.0000e+00
Epoch 512/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 513/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 514/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 515/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 516/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 517/1000
32/32 [=====] - 0s 343us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 518/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 519/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 520/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 521/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 522/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 523/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 524/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 525/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 526/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 527/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -


```

accuracy: 0.0000e+00
Epoch 528/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 529/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 530/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 531/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 532/1000
32/32 [=====] - 0s 343us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 533/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 534/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 535/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 536/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 537/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 538/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 539/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 540/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 541/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 542/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 543/1000
32/32 [=====] - 0s 343us/step - loss: 0.0022 -

```

```

accuracy: 0.0000e+00
Epoch 544/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 545/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 546/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 547/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 548/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 549/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 550/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 551/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 552/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 553/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 554/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 555/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 556/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 557/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 558/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 559/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -

```

```

accuracy: 0.0000e+00
Epoch 560/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 561/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 562/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 563/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 564/1000
32/32 [=====] - 0s 436us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 565/1000
32/32 [=====] - 0s 343us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 566/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 567/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 568/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 569/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 570/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 571/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 572/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 573/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 574/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 575/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -

```

accuracy: 0.0000e+00
Epoch 576/1000
32/32 [=====] - 0s 343us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 577/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 578/1000
32/32 [=====] - 0s 343us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 579/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 580/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 581/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 582/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 583/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 584/1000
32/32 [=====] - 0s 343us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 585/1000
32/32 [=====] - 0s 405us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 586/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 587/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 588/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 589/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 590/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 591/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -

```

accuracy: 0.0000e+00
Epoch 592/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 593/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 594/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 595/1000
32/32 [=====] - 0s 343us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 596/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 597/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 598/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 599/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -
accuracy: 0.0000e+00
Epoch 600/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 601/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 602/1000
32/32 [=====] - 0s 343us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 603/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 604/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 605/1000
32/32 [=====] - 0s 343us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 606/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 607/1000
32/32 [=====] - 0s 374us/step - loss: 0.0022 -

```

```
accuracy: 0.0000e+00
Epoch 608/1000
32/32 [=====] - 0s 343us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 609/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 610/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 611/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 612/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 613/1000
32/32 [=====] - 0s 436us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 614/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 615/1000
32/32 [=====] - 0s 436us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 616/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 617/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 618/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 619/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 620/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 621/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 622/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 623/1000
32/32 [=====] - 0s 436us/step - loss: 0.0021 -
```

accuracy: 0.0000e+00
Epoch 624/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 625/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 626/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 627/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 628/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 629/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 630/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 631/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 632/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 633/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 634/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 635/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 636/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 637/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 638/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 639/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -

```

accuracy: 0.0000e+00
Epoch 640/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 641/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 642/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 643/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 644/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 645/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 646/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 647/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 648/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 649/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 650/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 651/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 652/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 653/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 654/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 655/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -

```


accuracy: 0.0000e+00
Epoch 656/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 657/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 658/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 659/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 660/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 661/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 662/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 663/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 664/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 665/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 666/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 667/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 668/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 669/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 670/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 671/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -

```

accuracy: 0.0000e+00
Epoch 672/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 673/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 674/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 675/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 676/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 677/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 678/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 679/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 680/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 681/1000
32/32 [=====] - 0s 343us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 682/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 683/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 684/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 685/1000
32/32 [=====] - 0s 343us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 686/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 687/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -

```

```
accuracy: 0.0000e+00
Epoch 688/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 689/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 690/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 691/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 692/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 693/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 694/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 695/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 696/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 697/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 698/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 699/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 700/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 701/1000
32/32 [=====] - 0s 405us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 702/1000
32/32 [=====] - 0s 374us/step - loss: 0.0021 -
accuracy: 0.0000e+00
Epoch 703/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
```

accuracy: 0.0000e+00
Epoch 704/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 705/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 706/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 707/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 708/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 709/1000
32/32 [=====] - 0s 592us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 710/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 711/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 712/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 713/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 714/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 715/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 716/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 717/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 718/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 719/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -

accuracy: 0.0000e+00
Epoch 720/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 721/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 722/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 723/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 724/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 725/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 726/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 727/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 728/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 729/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 730/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 731/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 732/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 733/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 734/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 735/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -

```
accuracy: 0.0000e+00
Epoch 736/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 737/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 738/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 739/1000
32/32 [=====] - 0s 499us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 740/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 741/1000
32/32 [=====] - 0s 467us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 742/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 743/1000
32/32 [=====] - 0s 499us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 744/1000
32/32 [=====] - 0s 468us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 745/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 746/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 747/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 748/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 749/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 750/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 751/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
```

accuracy: 0.0000e+00
Epoch 752/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 753/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 754/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 755/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 756/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 757/1000
32/32 [=====] - 0s 467us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 758/1000
32/32 [=====] - 0s 468us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 759/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 760/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 761/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 762/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 763/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 764/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 765/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 766/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 767/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -

```

accuracy: 0.0000e+00
Epoch 768/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 769/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 770/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 771/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 772/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 773/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 774/1000
32/32 [=====] - 0s 468us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 775/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 776/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 777/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 778/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 779/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 780/1000
32/32 [=====] - 0s 405us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 781/1000
32/32 [=====] - 0s 499us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 782/1000
32/32 [=====] - 0s 499us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 783/1000
32/32 [=====] - 0s 224us/step - loss: 0.0020 -

```



```

accuracy: 0.0000e+00
Epoch 784/1000
32/32 [=====] - 0s 499us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 785/1000
32/32 [=====] - 0s 118us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 786/1000
32/32 [=====] - 0s 504us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 787/1000
32/32 [=====] - 0s 504us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 788/1000
32/32 [=====] - 0s 577us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 789/1000
32/32 [=====] - 0s 608us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 790/1000
32/32 [=====] - 0s 244us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 791/1000
32/32 [=====] - 0s 104us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 792/1000
32/32 [=====] - 0s 426us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 793/1000
32/32 [=====] - 0s 512us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 794/1000
32/32 [=====] - 0s 526us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 795/1000
32/32 [=====] - 0s 381us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 796/1000
32/32 [=====] - 0s 282us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 797/1000
32/32 [=====] - 0s 241us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 798/1000
32/32 [=====] - ETA: 0s - loss: 0.0017 - accuracy:
0.0000e+ - 0s 827us/step - loss: 0.0019 - accuracy: 0.0000e+00
Epoch 799/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -

```

```
accuracy: 0.0000e+00
Epoch 800/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 801/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 802/1000
32/32 [=====] - 0s 475us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 803/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 804/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 805/1000
32/32 [=====] - 0s 436us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 806/1000
32/32 [=====] - 0s 499us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 807/1000
32/32 [=====] - 0s 550us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 808/1000
32/32 [=====] - 0s 382us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 809/1000
32/32 [=====] - 0s 445us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 810/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 811/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 812/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 813/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 814/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 815/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
```

```

accuracy: 0.0000e+00
Epoch 816/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 817/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 818/1000
32/32 [=====] - 0s 374us/step - loss: 0.0020 -
accuracy: 0.0000e+00
Epoch 819/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 820/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 821/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 822/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 823/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 824/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 825/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 826/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 827/1000
32/32 [=====] - 0s 499us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 828/1000
32/32 [=====] - 0s 468us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 829/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 830/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 831/1000
32/32 [=====] - 0s 467us/step - loss: 0.0019 -

```

```

accuracy: 0.0000e+00
Epoch 832/1000
32/32 [=====] - 0s 467us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 833/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 834/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 835/1000
32/32 [=====] - 0s 467us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 836/1000
32/32 [=====] - 0s 219us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 837/1000
32/32 [=====] - 0s 95us/step - loss: 0.0019 - accuracy:
0.0000e+00
Epoch 838/1000
32/32 [=====] - 0s 565us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 839/1000
32/32 [=====] - 0s 378us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 840/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 841/1000
32/32 [=====] - 0s 409us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 842/1000
32/32 [=====] - 0s 439us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 843/1000
32/32 [=====] - 0s 407us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 844/1000
32/32 [=====] - 0s 460us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 845/1000
32/32 [=====] - 0s 370us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 846/1000
32/32 [=====] - 0s 437us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 847/1000
32/32 [=====] - 0s 416us/step - loss: 0.0019 -

```

```

accuracy: 0.0000e+00
Epoch 848/1000
32/32 [=====] - 0s 416us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 849/1000
32/32 [=====] - 0s 432us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 850/1000
32/32 [=====] - 0s 398us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 851/1000
32/32 [=====] - 0s 652us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 852/1000
32/32 [=====] - 0s 157us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 853/1000
32/32 [=====] - 0s 754us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 854/1000
32/32 [=====] - 0s 612us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 855/1000
32/32 [=====] - 0s 530us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 856/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 857/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 858/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 859/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 860/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 861/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 862/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 863/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -

```

```

accuracy: 0.0000e+00
Epoch 864/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 865/1000
32/32 [=====] - 0s 592us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 866/1000
32/32 [=====] - 0s 669us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 867/1000
32/32 [=====] - 0s 530us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 868/1000
32/32 [=====] - 0s 499us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 869/1000
32/32 [=====] - 0s 606us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 870/1000
32/32 [=====] - 0s 654us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 871/1000
32/32 [=====] - 0s 623us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 872/1000
32/32 [=====] - 0s 522us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 873/1000
32/32 [=====] - 0s 654us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 874/1000
32/32 [=====] - 0s 592us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 875/1000
32/32 [=====] - 0s 592us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 876/1000
32/32 [=====] - 0s 547us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 877/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 878/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 879/1000
32/32 [=====] - 0s 467us/step - loss: 0.0019 -

```

```

accuracy: 0.0000e+00
Epoch 880/1000
32/32 [=====] - 0s 499us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 881/1000
32/32 [=====] - 0s 467us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 882/1000
32/32 [=====] - 0s 467us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 883/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 884/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 885/1000
32/32 [=====] - 0s 468us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 886/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 887/1000
32/32 [=====] - 0s 467us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 888/1000
32/32 [=====] - 0s 468us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 889/1000
32/32 [=====] - 0s 423us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 890/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 891/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 892/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 893/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 894/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 895/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -

```

```
accuracy: 0.0000e+00
Epoch 896/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 897/1000
32/32 [=====] - 0s 467us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 898/1000
32/32 [=====] - 0s 789us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 899/1000
32/32 [=====] - 0s 813us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 900/1000
32/32 [=====] - 0s 641us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 901/1000
32/32 [=====] - 0s 718us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 902/1000
32/32 [=====] - 0s 515us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 903/1000
32/32 [=====] - 0s 515us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 904/1000
32/32 [=====] - 0s 464us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 905/1000
32/32 [=====] - 0s 621us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 906/1000
32/32 [=====] - 0s 535us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 907/1000
32/32 [=====] - 0s 647us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 908/1000
32/32 [=====] - 0s 530us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 909/1000
32/32 [=====] - 0s 499us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 910/1000
32/32 [=====] - 0s 530us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 911/1000
32/32 [=====] - 0s 530us/step - loss: 0.0019 -
```



```

accuracy: 0.0000e+00
Epoch 912/1000
32/32 [=====] - 0s 499us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 913/1000
32/32 [=====] - 0s 467us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 914/1000
32/32 [=====] - 0s 530us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 915/1000
32/32 [=====] - 0s 530us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 916/1000
32/32 [=====] - 0s 468us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 917/1000
32/32 [=====] - 0s 499us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 918/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 919/1000
32/32 [=====] - 0s 499us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 920/1000
32/32 [=====] - 0s 374us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 921/1000
32/32 [=====] - 0s 436us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 922/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 923/1000
32/32 [=====] - 0s 405us/step - loss: 0.0019 -
accuracy: 0.0000e+00
Epoch 924/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 925/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 926/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 927/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -

```

```

accuracy: 0.0000e+00
Epoch 928/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 929/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 930/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 931/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 932/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 933/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 934/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 935/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 936/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 937/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 938/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 939/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 940/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 941/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 942/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 943/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -

```

accuracy: 0.0000e+00
Epoch 944/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 945/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 946/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 947/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 948/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 949/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 950/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 951/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 952/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 953/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 954/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 955/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 956/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 957/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 958/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 959/1000
32/32 [=====] - 0s 373us/step - loss: 0.0018 -

```

accuracy: 0.0000e+00
Epoch 960/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 961/1000
32/32 [=====] - 0s 343us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 962/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 963/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 964/1000
32/32 [=====] - 0s 343us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 965/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 966/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 967/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 968/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 969/1000
32/32 [=====] - 0s 343us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 970/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 971/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 972/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 973/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 974/1000
32/32 [=====] - 0s 420us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 975/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -

```

accuracy: 0.0000e+00
Epoch 976/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 977/1000
32/32 [=====] - 0s 472us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 978/1000
32/32 [=====] - 0s 499us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 979/1000
32/32 [=====] - 0s 467us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 980/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 981/1000
32/32 [=====] - 0s 499us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 982/1000
32/32 [=====] - 0s 437us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 983/1000
32/32 [=====] - 0s 497us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 984/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 985/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 986/1000
32/32 [=====] - 0s 509us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 987/1000
32/32 [=====] - 0s 436us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 988/1000
32/32 [=====] - 0s 467us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 989/1000
32/32 [=====] - 0s 478us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 990/1000
32/32 [=====] - 0s 467us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 991/1000
32/32 [=====] - 0s 467us/step - loss: 0.0018 -

```

accuracy: 0.0000e+00
Epoch 992/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 993/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 994/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 995/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 996/1000
32/32 [=====] - 0s 405us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 997/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 998/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 999/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00
Epoch 1000/1000
32/32 [=====] - 0s 374us/step - loss: 0.0018 -
accuracy: 0.0000e+00

```

[71]: <tensorflow.python.keras.callbacks.History at 0x15d2329ba90>

```

[72]: random.seed(15)
xt = np.random.uniform(-1,1,500)
yt = np.random.uniform(-1,1,500)
x_test = np.array(np.dstack((xt,yt)))
x_test = np.reshape(x_test, (500, 2))
zt = model_cono.predict(x_test)

# Para el gráfico
fig = plt.figure(figsize = (10, 7))
ax = plt.axes(projection = "3d")
# Creating plot
ax.scatter3D(a, b, z, color = "green")
ax.scatter3D(xt, yt, zt, color = "red")
plt.title("Cono original y predicciones del Cono")

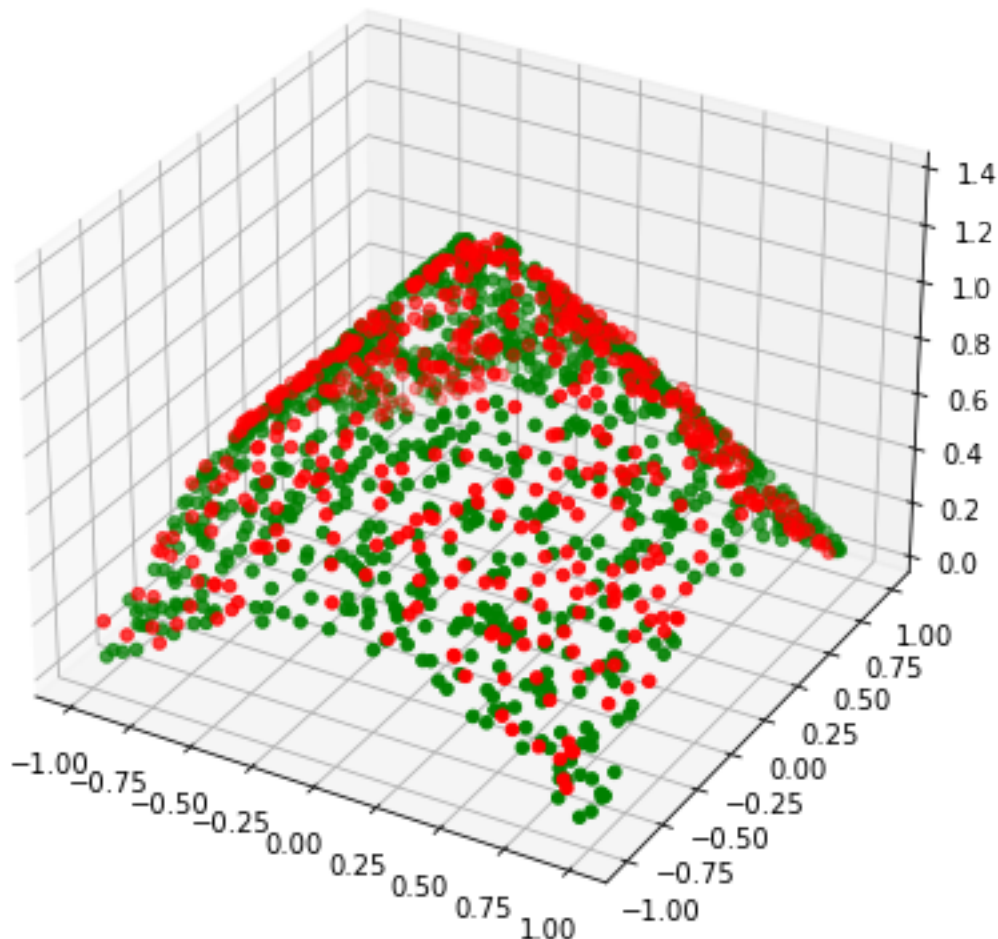
# show plot

```

```
plt.show()
```

WARNING:tensorflow:5 out of the last 5 calls to <function Model.make_predict_function.<locals>.predict_function at 0x0000015D22F02A60> triggered tf.function retracing. Tracing is expensive and the excessive number of tracings could be due to (1) creating @tf.function repeatedly in a loop, (2) passing tensors with different shapes, (3) passing Python objects instead of tensors. For (1), please define your @tf.function outside of the loop. For (2), @tf.function has experimental_relax_shapes=True option that relaxes argument shapes that can avoid unnecessary retracing. For (3), please refer to https://www.tensorflow.org/tutorials/customization/performance#python_or_tensor_args and https://www.tensorflow.org/api_docs/python/tf/function for more details.

Cono original y predicciones del Cono



```
[73]: zt = np.reshape(zt, 500)
```


- <https://machinelearningmastery.com/tutorial-first-neural-network-python-keras/>