```
from google.colab import drive

drive.mount('/content/drive')
```

⟳ Mounted at /content/drive

```
import numpy as np
import os
import tensorflow as tf
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import LSTM, Dense, Dropout
import matplotlib.pyplot as plt
from google.colab import drive

# Mount Google Drive
drive.mount('/content/drive')

# Set paths for loading and saving data
data_folder = '/content/drive/MyDrive/train test'
model_save_folder = '/content/drive/MyDrive/train test'
os.makedirs(model_save_folder, exist_ok=True)  # Create the model folder if it doesn't exist

# Load the data from .npy files
X_train = np.load(os.path.join(data_folder, 'X_train.npy'))
y_train = np.load(os.path.join(data_folder, 'y_train.npy'))
X_test = np.load(os.path.join(data_folder, 'X_test.npy'))
y_test = np.load(os.path.join(data_folder, 'y_test.npy'))

# Confirm the shapes of the loaded data
print(f'Loaded X_train shape: {X_train.shape}, y_train shape: {y_train.shape}')
print(f'Loaded X_test shape: {X_test.shape}, y_test shape: {y_test.shape}')

# Define the model
model = Sequential()

# LSTM Layer
model.add(LSTM(64, return_sequences=True, input_shape=(1, 21)))  # Adjust the input shape based on your data
model.add(Dropout(0.5))  # Dropout for regularization

# Another LSTM Layer
model.add(LSTM(64, return_sequences=False))
model.add(Dropout(0.5))

# Fully Connected Layer
model.add(Dense(64, activation='relu'))
model.add(Dense(len(np.unique(y_train)), activation='softmax'))  # Output layer for classification

# Compile the model
model.compile(optimizer='adam', loss='sparse_categorical_crossentropy', metrics=['accuracy'])

# Train the model
history = model.fit(X_train, y_train, epochs=400, batch_size=32, validation_data=(X_test, y_test))

# Evaluate the model
test_loss, test_accuracy = model.evaluate(X_test, y_test)
print(f'Test Accuracy: {test_accuracy:.2f}')

# Visualize training history
plt.plot(history.history['accuracy'], label='Train Accuracy')
plt.plot(history.history['val_accuracy'], label='Validation Accuracy')
plt.title('Model Accuracy')
plt.ylabel('Accuracy')
plt.xlabel('Epoch')
plt.legend()
plt.show()

# Save the trained model to Google Drive
model.save(os.path.join(model_save_folder, 'sign_language_model.h5'))
model.save(os.path.join(model_save_folder, 'sign_language_model.keras'))

print(f'Model saved to {model_save_folder}')
```

```
Drive already mounted at /content/drive; to attempt to forcibly remount, call drive.mount("/content/drive", force_remount=True).
Loaded X_train shape: (28824, 1, 21), y_train shape: (28824,)
Loaded X_test shape: (7207, 1, 21), y_test shape: (7207,)
/usr/local/lib/python3.10/dist-packages/keras/src/layers/rnn/rnn.py:204: UserWarning: Do not pass an `input_shape`/`input_dim` argum
  super().__init__(**kwargs)
Epoch 1/400
901/901 ─────────────────── 11s 6ms/step - accuracy: 0.0731 - loss: 3.3200 - val_accuracy: 0.4394 - val_loss: 1.8498
Epoch 2/400
901/901 ─────────────────── 8s 8ms/step - accuracy: 0.3563 - loss: 1.9351 - val_accuracy: 0.6426 - val_loss: 1.1178
Epoch 3/400
901/901 ─────────────────── 9s 6ms/step - accuracy: 0.5114 - loss: 1.3986 - val_accuracy: 0.7802 - val_loss: 0.7708
Epoch 4/400
901/901 ─────────────────── 8s 9ms/step - accuracy: 0.6041 - loss: 1.1181 - val_accuracy: 0.8335 - val_loss: 0.5804
Epoch 5/400
901/901 ─────────────────── 7s 6ms/step - accuracy: 0.6553 - loss: 0.9356 - val_accuracy: 0.8572 - val_loss: 0.4877
Epoch 6/400
901/901 ─────────────────── 7s 7ms/step - accuracy: 0.6854 - loss: 0.8450 - val_accuracy: 0.8821 - val_loss: 0.4067
Epoch 7/400
901/901 ─────────────────── 10s 7ms/step - accuracy: 0.7150 - loss: 0.7618 - val_accuracy: 0.8961 - val_loss: 0.3678
Epoch 8/400
901/901 ─────────────────── 9s 6ms/step - accuracy: 0.7388 - loss: 0.7026 - val_accuracy: 0.8876 - val_loss: 0.3402
Epoch 9/400
901/901 ─────────────────── 10s 6ms/step - accuracy: 0.7432 - loss: 0.6801 - val_accuracy: 0.9055 - val_loss: 0.3127
Epoch 10/400
901/901 ─────────────────── 11s 6ms/step - accuracy: 0.7665 - loss: 0.6283 - val_accuracy: 0.9247 - val_loss: 0.2823
Epoch 11/400
901/901 ─────────────────── 11s 7ms/step - accuracy: 0.7802 - loss: 0.6016 - val_accuracy: 0.9389 - val_loss: 0.2529
Epoch 12/400
901/901 ─────────────────── 5s 6ms/step - accuracy: 0.7917 - loss: 0.5661 - val_accuracy: 0.9348 - val_loss: 0.2343
Epoch 13/400
901/901 ─────────────────── 10s 6ms/step - accuracy: 0.7966 - loss: 0.5531 - val_accuracy: 0.9459 - val_loss: 0.2107
Epoch 14/400
901/901 ─────────────────── 6s 7ms/step - accuracy: 0.8073 - loss: 0.5294 - val_accuracy: 0.9488 - val_loss: 0.2012
Epoch 15/400
901/901 ─────────────────── 6s 7ms/step - accuracy: 0.8115 - loss: 0.5081 - val_accuracy: 0.9474 - val_loss: 0.1995
Epoch 16/400
901/901 ─────────────────── 11s 7ms/step - accuracy: 0.8187 - loss: 0.4901 - val_accuracy: 0.9570 - val_loss: 0.1738
Epoch 17/400
901/901 ─────────────────── 5s 6ms/step - accuracy: 0.8268 - loss: 0.4637 - val_accuracy: 0.9599 - val_loss: 0.1605
Epoch 18/400
901/901 ─────────────────── 7s 7ms/step - accuracy: 0.8322 - loss: 0.4536 - val_accuracy: 0.9548 - val_loss: 0.1670
Epoch 19/400
901/901 ─────────────────── 9s 6ms/step - accuracy: 0.8418 - loss: 0.4328 - val_accuracy: 0.9580 - val_loss: 0.1501
Epoch 20/400
901/901 ─────────────────── 7s 7ms/step - accuracy: 0.8417 - loss: 0.4273 - val_accuracy: 0.9636 - val_loss: 0.1322
Epoch 21/400
901/901 ─────────────────── 9s 6ms/step - accuracy: 0.8406 - loss: 0.4267 - val_accuracy: 0.9623 - val_loss: 0.1461
Epoch 22/400
901/901 ─────────────────── 10s 6ms/step - accuracy: 0.8560 - loss: 0.4041 - val_accuracy: 0.9664 - val_loss: 0.1254
Epoch 23/400
901/901 ─────────────────── 10s 6ms/step - accuracy: 0.8527 - loss: 0.4024 - val_accuracy: 0.9666 - val_loss: 0.1191
Epoch 24/400
901/901 ─────────────────── 11s 7ms/step - accuracy: 0.8572 - loss: 0.3892 - val_accuracy: 0.9667 - val_loss: 0.1184
Epoch 25/400
901/901 ─────────────────── 11s 7ms/step - accuracy: 0.8543 - loss: 0.3881 - val_accuracy: 0.9630 - val_loss: 0.1243
Epoch 26/400
901/901 ─────────────────── 9s 6ms/step - accuracy: 0.8679 - loss: 0.3618 - val_accuracy: 0.9567 - val_loss: 0.1342
Epoch 27/400
901/901 ─────────────────── 7s 7ms/step - accuracy: 0.8672 - loss: 0.3668 - val_accuracy: 0.9749 - val_loss: 0.1012
Epoch 28/400
901/901 ─────────────────── 5s 6ms/step - accuracy: 0.8660 - loss: 0.3654 - val_accuracy: 0.9681 - val_loss: 0.1031
Epoch 29/400
901/901 ─────────────────── 10s 6ms/step - accuracy: 0.8770 - loss: 0.3363 - val_accuracy: 0.9674 - val_loss: 0.1112
Epoch 30/400
901/901 ─────────────────── 12s 7ms/step - accuracy: 0.8683 - loss: 0.3625 - val_accuracy: 0.9695 - val_loss: 0.1025
Epoch 31/400
901/901 ─────────────────── 5s 6ms/step - accuracy: 0.8678 - loss: 0.3567 - val_accuracy: 0.9609 - val_loss: 0.1253
Epoch 32/400
901/901 ─────────────────── 7s 7ms/step - accuracy: 0.8742 - loss: 0.3447 - val_accuracy: 0.9747 - val_loss: 0.0879
Epoch 33/400
901/901 ─────────────────── 9s 6ms/step - accuracy: 0.8829 - loss: 0.3288 - val_accuracy: 0.9729 - val_loss: 0.0883
Epoch 34/400
901/901 ─────────────────── 10s 6ms/step - accuracy: 0.8787 - loss: 0.3304 - val_accuracy: 0.9722 - val_loss: 0.0910
Epoch 35/400
901/901 ─────────────────── 7s 7ms/step - accuracy: 0.8854 - loss: 0.3228 - val_accuracy: 0.9761 - val_loss: 0.0805
Epoch 36/400
901/901 ─────────────────── 9s 6ms/step - accuracy: 0.8852 - loss: 0.3175 - val_accuracy: 0.9735 - val_loss: 0.0843
Epoch 37/400
901/901 ─────────────────── 7s 7ms/step - accuracy: 0.8858 - loss: 0.3127 - val_accuracy: 0.9688 - val_loss: 0.0962
Epoch 38/400
901/901 ─────────────────── 10s 7ms/step - accuracy: 0.8849 - loss: 0.3134 - val_accuracy: 0.9679 - val_loss: 0.0965
Epoch 39/400
901/901 ─────────────────── 9s 6ms/step - accuracy: 0.8885 - loss: 0.3048 - val_accuracy: 0.9802 - val_loss: 0.0725
Epoch 40/400
901/901 ─────────────────── 7s 7ms/step - accuracy: 0.8885 - loss: 0.3174 - val_accuracy: 0.9760 - val_loss: 0.0770
Epoch 41/400
901/901 ─────────────────── 5s 6ms/step - accuracy: 0.8936 - loss: 0.2899 - val_accuracy: 0.9746 - val_loss: 0.0826
Epoch 42/400
901/901 ─────────────────── 6s 7ms/step - accuracy: 0.8910 - loss: 0.2963 - val_accuracy: 0.9797 - val_loss: 0.0750
Epoch 43/400
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901/901 ──────────── **9s** 6ms/step - accuracy: 0.8962 - loss: 0.2870 - val_accuracy: 0.9734 - val_loss: 0.0772
Epoch 44/400
901/901 ──────────── **10s** 6ms/step - accuracy: 0.8948 - loss: 0.2876 - val_accuracy: 0.9777 - val_loss: 0.0660
Epoch 45/400
901/901 ──────────── **11s** 7ms/step - accuracy: 0.8979 - loss: 0.2862 - val_accuracy: 0.9822 - val_loss: 0.0652
Epoch 46/400
901/901 ──────────── **11s** 7ms/step - accuracy: 0.9047 - loss: 0.2695 - val_accuracy: 0.9809 - val_loss: 0.0671
Epoch 47/400
901/901 ──────────── **5s** 6ms/step - accuracy: 0.9062 - loss: 0.2630 - val_accuracy: 0.9756 - val_loss: 0.0747
Epoch 48/400
901/901 ──────────── **11s** 6ms/step - accuracy: 0.8998 - loss: 0.2765 - val_accuracy: 0.9850 - val_loss: 0.0632
Epoch 49/400
901/901 ──────────── **11s** 8ms/step - accuracy: 0.9009 - loss: 0.2683 - val_accuracy: 0.9817 - val_loss: 0.0580
Epoch 50/400
901/901 ──────────── **10s** 7ms/step - accuracy: 0.9043 - loss: 0.2647 - val_accuracy: 0.9852 - val_loss: 0.0563
Epoch 51/400
901/901 ──────────── **9s** 6ms/step - accuracy: 0.9043 - loss: 0.2671 - val_accuracy: 0.9847 - val_loss: 0.0569
Epoch 52/400
901/901 ──────────── **7s** 7ms/step - accuracy: 0.9081 - loss: 0.2534 - val_accuracy: 0.9790 - val_loss: 0.0619
Epoch 53/400
901/901 ──────────── **5s** 6ms/step - accuracy: 0.9103 - loss: 0.2515 - val_accuracy: 0.9804 - val_loss: 0.0633
Epoch 54/400
901/901 ──────────── **7s** 8ms/step - accuracy: 0.9134 - loss: 0.2479 - val_accuracy: 0.9870 - val_loss: 0.0494
Epoch 55/400
901/901 ──────────── **9s** 6ms/step - accuracy: 0.9106 - loss: 0.2454 - val_accuracy: 0.9846 - val_loss: 0.0547
Epoch 56/400
901/901 ──────────── **10s** 6ms/step - accuracy: 0.9105 - loss: 0.2480 - val_accuracy: 0.9865 - val_loss: 0.0530
Epoch 57/400
901/901 ──────────── **10s** 6ms/step - accuracy: 0.9132 - loss: 0.2466 - val_accuracy: 0.9833 - val_loss: 0.0586
Epoch 58/400
901/901 ──────────── **5s** 6ms/step - accuracy: 0.9155 - loss: 0.2374 - val_accuracy: 0.9838 - val_loss: 0.0524
Epoch 59/400
901/901 ──────────── **10s** 6ms/step - accuracy: 0.9119 - loss: 0.2464 - val_accuracy: 0.9878 - val_loss: 0.0475
Epoch 60/400
901/901 ──────────── **11s** 6ms/step - accuracy: 0.9126 - loss: 0.2457 - val_accuracy: 0.9785 - val_loss: 0.0604
Epoch 61/400
901/901 ──────────── **7s** 7ms/step - accuracy: 0.9133 - loss: 0.2441 - val_accuracy: 0.9861 - val_loss: 0.0478
Epoch 62/400
901/901 ──────────── **5s** 6ms/step - accuracy: 0.9177 - loss: 0.2300 - val_accuracy: 0.9825 - val_loss: 0.0513
Epoch 63/400
901/901 ──────────── **11s** 7ms/step - accuracy: 0.9140 - loss: 0.2462 - val_accuracy: 0.9838 - val_loss: 0.0520
Epoch 64/400
901/901 ──────────── **5s** 6ms/step - accuracy: 0.9152 - loss: 0.2386 - val_accuracy: 0.9874 - val_loss: 0.0464
Epoch 65/400
901/901 ──────────── **7s** 8ms/step - accuracy: 0.9221 - loss: 0.2214 - val_accuracy: 0.9829 - val_loss: 0.0570
Epoch 66/400
901/901 ──────────── **9s** 6ms/step - accuracy: 0.9210 - loss: 0.2213 - val_accuracy: 0.9778 - val_loss: 0.0672
Epoch 67/400
901/901 ──────────── **7s** 7ms/step - accuracy: 0.9147 - loss: 0.2406 - val_accuracy: 0.9843 - val_loss: 0.0480
Epoch 68/400
901/901 ──────────── **10s** 7ms/step - accuracy: 0.9171 - loss: 0.2228 - val_accuracy: 0.9860 - val_loss: 0.0435
Epoch 69/400
901/901 ──────────── **9s** 6ms/step - accuracy: 0.9186 - loss: 0.2264 - val_accuracy: 0.9853 - val_loss: 0.0466
Epoch 70/400
901/901 ──────────── **10s** 6ms/step - accuracy: 0.9215 - loss: 0.2230 - val_accuracy: 0.9806 - val_loss: 0.0529
Epoch 71/400
901/901 ──────────── **11s** 6ms/step - accuracy: 0.9200 - loss: 0.2254 - val_accuracy: 0.9881 - val_loss: 0.0410
Epoch 72/400
901/901 ──────────── **11s** 8ms/step - accuracy: 0.9208 - loss: 0.2214 - val_accuracy: 0.9917 - val_loss: 0.0384
Epoch 73/400
901/901 ──────────── **9s** 6ms/step - accuracy: 0.9225 - loss: 0.2180 - val_accuracy: 0.9907 - val_loss: 0.0350
Epoch 74/400
901/901 ──────────── **7s** 7ms/step - accuracy: 0.9237 - loss: 0.2172 - val_accuracy: 0.9886 - val_loss: 0.0411
Epoch 75/400
901/901 ──────────── **10s** 7ms/step - accuracy: 0.9210 - loss: 0.2212 - val_accuracy: 0.9872 - val_loss: 0.0430
Epoch 76/400
901/901 ──────────── **9s** 6ms/step - accuracy: 0.9244 - loss: 0.2166 - val_accuracy: 0.9900 - val_loss: 0.0387
Epoch 77/400
901/901 ──────────── **10s** 6ms/step - accuracy: 0.9230 - loss: 0.2147 - val_accuracy: 0.9900 - val_loss: 0.0365
Epoch 78/400
901/901 ──────────── **11s** 6ms/step - accuracy: 0.9231 - loss: 0.2138 - val_accuracy: 0.9872 - val_loss: 0.0420
Epoch 79/400
901/901 ──────────── **6s** 6ms/step - accuracy: 0.9243 - loss: 0.2128 - val_accuracy: 0.9852 - val_loss: 0.0436
Epoch 80/400
901/901 ──────────── **10s** 6ms/step - accuracy: 0.9283 - loss: 0.2017 - val_accuracy: 0.9911 - val_loss: 0.0370
Epoch 81/400
901/901 ──────────── **7s** 7ms/step - accuracy: 0.9304 - loss: 0.1958 - val_accuracy: 0.9833 - val_loss: 0.0449
Epoch 82/400
901/901 ──────────── **5s** 6ms/step - accuracy: 0.9263 - loss: 0.2110 - val_accuracy: 0.9897 - val_loss: 0.0355
Epoch 83/400
901/901 ──────────── **6s** 7ms/step - accuracy: 0.9309 - loss: 0.1970 - val_accuracy: 0.9877 - val_loss: 0.0398
Epoch 84/400
901/901 ──────────── **10s** 6ms/step - accuracy: 0.9289 - loss: 0.2065 - val_accuracy: 0.9883 - val_loss: 0.0394
Epoch 85/400
901/901 ──────────── **10s** 6ms/step - accuracy: 0.9297 - loss: 0.2034 - val_accuracy: 0.9857 - val_loss: 0.0453
Epoch 86/400
901/901 ──────────── **10s** 6ms/step - accuracy: 0.9284 - loss: 0.2046 - val_accuracy: 0.9913 - val_loss: 0.0308
Epoch 87/400
901/901 ──────────── **11s** 8ms/step - accuracy: 0.9300 - loss: 0.2027 - val_accuracy: 0.9914 - val_loss: 0.0321
Epoch 88/400
901/901 ──────────── **5s** 6ms/step - accuracy: 0.9272 - loss: 0.2078 - val_accuracy: 0.9924 - val_loss: 0.0318

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                 55  8ms/step - accuracy: 0.9272 - loss: 0.2078 - val_accuracy: 0.9924 - val_loss: 0.0318
Epoch 89/400
901/901 ───────────────── 7s 7ms/step - accuracy: 0.9302 - loss: 0.1937 - val_accuracy: 0.9890 - val_loss: 0.0380
Epoch 90/400
901/901 ───────────────── 9s 6ms/step - accuracy: 0.9350 - loss: 0.1906 - val_accuracy: 0.9907 - val_loss: 0.0317
Epoch 91/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9327 - loss: 0.1933 - val_accuracy: 0.9883 - val_loss: 0.0403
Epoch 92/400
901/901 ───────────────── 11s 6ms/step - accuracy: 0.9324 - loss: 0.1907 - val_accuracy: 0.9888 - val_loss: 0.0342
Epoch 93/400
901/901 ───────────────── 5s 6ms/step - accuracy: 0.9342 - loss: 0.1873 - val_accuracy: 0.9896 - val_loss: 0.0350
Epoch 94/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9357 - loss: 0.1858 - val_accuracy: 0.9903 - val_loss: 0.0320
Epoch 95/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9331 - loss: 0.1960 - val_accuracy: 0.9860 - val_loss: 0.0444
Epoch 96/400
901/901 ───────────────── 7s 7ms/step - accuracy: 0.9337 - loss: 0.1900 - val_accuracy: 0.9911 - val_loss: 0.0322
Epoch 97/400
901/901 ───────────────── 9s 6ms/step - accuracy: 0.9318 - loss: 0.1926 - val_accuracy: 0.9895 - val_loss: 0.0373
Epoch 98/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9357 - loss: 0.1901 - val_accuracy: 0.9893 - val_loss: 0.0342
Epoch 99/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9364 - loss: 0.1835 - val_accuracy: 0.9907 - val_loss: 0.0307
Epoch 100/400
901/901 ───────────────── 9s 6ms/step - accuracy: 0.9332 - loss: 0.1977 - val_accuracy: 0.9899 - val_loss: 0.0328
Epoch 101/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9347 - loss: 0.1844 - val_accuracy: 0.9915 - val_loss: 0.0306
Epoch 102/400
901/901 ───────────────── 9s 6ms/step - accuracy: 0.9363 - loss: 0.1776 - val_accuracy: 0.9910 - val_loss: 0.0314
Epoch 103/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9379 - loss: 0.1776 - val_accuracy: 0.9893 - val_loss: 0.0375
Epoch 104/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9364 - loss: 0.1763 - val_accuracy: 0.9871 - val_loss: 0.0387
Epoch 105/400
901/901 ───────────────── 6s 7ms/step - accuracy: 0.9355 - loss: 0.1759 - val_accuracy: 0.9897 - val_loss: 0.0340
Epoch 106/400
901/901 ───────────────── 9s 6ms/step - accuracy: 0.9373 - loss: 0.1775 - val_accuracy: 0.9901 - val_loss: 0.0302
Epoch 107/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9358 - loss: 0.1775 - val_accuracy: 0.9915 - val_loss: 0.0289
Epoch 108/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9381 - loss: 0.1812 - val_accuracy: 0.9917 - val_loss: 0.0336
Epoch 109/400
901/901 ───────────────── 5s 6ms/step - accuracy: 0.9390 - loss: 0.1734 - val_accuracy: 0.9897 - val_loss: 0.0338
Epoch 110/400
901/901 ───────────────── 7s 7ms/step - accuracy: 0.9404 - loss: 0.1702 - val_accuracy: 0.9901 - val_loss: 0.0313
Epoch 111/400
901/901 ───────────────── 5s 6ms/step - accuracy: 0.9348 - loss: 0.1816 - val_accuracy: 0.9925 - val_loss: 0.0301
Epoch 112/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9395 - loss: 0.1741 - val_accuracy: 0.9928 - val_loss: 0.0264
Epoch 113/400
901/901 ───────────────── 11s 7ms/step - accuracy: 0.9416 - loss: 0.1676 - val_accuracy: 0.9896 - val_loss: 0.0318
Epoch 114/400
901/901 ───────────────── 5s 6ms/step - accuracy: 0.9398 - loss: 0.1765 - val_accuracy: 0.9917 - val_loss: 0.0293
Epoch 115/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9393 - loss: 0.1746 - val_accuracy: 0.9924 - val_loss: 0.0255
Epoch 116/400
901/901 ───────────────── 5s 6ms/step - accuracy: 0.9421 - loss: 0.1698 - val_accuracy: 0.9931 - val_loss: 0.0241
Epoch 117/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9450 - loss: 0.1573 - val_accuracy: 0.9907 - val_loss: 0.0313
Epoch 118/400
901/901 ───────────────── 11s 7ms/step - accuracy: 0.9420 - loss: 0.1647 - val_accuracy: 0.9926 - val_loss: 0.0277
Epoch 119/400
901/901 ───────────────── 11s 7ms/step - accuracy: 0.9399 - loss: 0.1686 - val_accuracy: 0.9938 - val_loss: 0.0253
Epoch 120/400
901/901 ───────────────── 5s 6ms/step - accuracy: 0.9441 - loss: 0.1620 - val_accuracy: 0.9900 - val_loss: 0.0323
Epoch 121/400
901/901 ───────────────── 7s 7ms/step - accuracy: 0.9436 - loss: 0.1699 - val_accuracy: 0.9932 - val_loss: 0.0247
Epoch 122/400
901/901 ───────────────── 6s 6ms/step - accuracy: 0.9428 - loss: 0.1671 - val_accuracy: 0.9924 - val_loss: 0.0289
Epoch 123/400
901/901 ───────────────── 5s 6ms/step - accuracy: 0.9443 - loss: 0.1613 - val_accuracy: 0.9929 - val_loss: 0.0276
Epoch 124/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9444 - loss: 0.1618 - val_accuracy: 0.9947 - val_loss: 0.0218
Epoch 125/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9377 - loss: 0.1773 - val_accuracy: 0.9932 - val_loss: 0.0255
Epoch 126/400
901/901 ───────────────── 9s 6ms/step - accuracy: 0.9459 - loss: 0.1513 - val_accuracy: 0.9939 - val_loss: 0.0217
Epoch 127/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9426 - loss: 0.1660 - val_accuracy: 0.9925 - val_loss: 0.0251
Epoch 128/400
901/901 ───────────────── 9s 7ms/step - accuracy: 0.9432 - loss: 0.1653 - val_accuracy: 0.9938 - val_loss: 0.0237
Epoch 129/400
901/901 ───────────────── 6s 7ms/step - accuracy: 0.9445 - loss: 0.1622 - val_accuracy: 0.9892 - val_loss: 0.0362
Epoch 130/400
901/901 ───────────────── 11s 7ms/step - accuracy: 0.9420 - loss: 0.1585 - val_accuracy: 0.9928 - val_loss: 0.0245
Epoch 131/400
901/901 ───────────────── 5s 6ms/step - accuracy: 0.9446 - loss: 0.1537 - val_accuracy: 0.9918 - val_loss: 0.0293
Epoch 132/400
901/901 ───────────────── 11s 7ms/step - accuracy: 0.9424 - loss: 0.1638 - val_accuracy: 0.9897 - val_loss: 0.0311
Epoch 133/400
901/901 ───────────────── 11s 8ms/step - accuracy: 0.9456 - loss: 0.1596 - val_accuracy: 0.9908 - val_loss: 0.0284
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Epoch 134/400
901/901 ———————————————— 6s 6ms/step - accuracy: 0.9460 - loss: 0.1560 - val_accuracy: 0.9939 - val_loss: 0.0239
Epoch 135/400
901/901 ———————————————— 7s 7ms/step - accuracy: 0.9424 - loss: 0.1689 - val_accuracy: 0.9944 - val_loss: 0.0241
Epoch 136/400
901/901 ———————————————— 6s 6ms/step - accuracy: 0.9444 - loss: 0.1614 - val_accuracy: 0.9922 - val_loss: 0.0256
Epoch 137/400
901/901 ———————————————— 11s 8ms/step - accuracy: 0.9485 - loss: 0.1517 - val_accuracy: 0.9925 - val_loss: 0.0264
Epoch 138/400
901/901 ———————————————— 5s 6ms/step - accuracy: 0.9460 - loss: 0.1597 - val_accuracy: 0.9929 - val_loss: 0.0242
Epoch 139/400
901/901 ———————————————— 10s 6ms/step - accuracy: 0.9471 - loss: 0.1533 - val_accuracy: 0.9944 - val_loss: 0.0216
Epoch 140/400
901/901 ———————————————— 11s 7ms/step - accuracy: 0.9441 - loss: 0.1611 - val_accuracy: 0.9936 - val_loss: 0.0219
Epoch 141/400
901/901 ———————————————— 11s 8ms/step - accuracy: 0.9468 - loss: 0.1537 - val_accuracy: 0.9944 - val_loss: 0.0217
Epoch 142/400
901/901 ———————————————— 5s 6ms/step - accuracy: 0.9477 - loss: 0.1543 - val_accuracy: 0.9935 - val_loss: 0.0231
Epoch 143/400
901/901 ———————————————— 11s 7ms/step - accuracy: 0.9474 - loss: 0.1488 - val_accuracy: 0.9924 - val_loss: 0.0264
Epoch 144/400
901/901 ———————————————— 5s 6ms/step - accuracy: 0.9494 - loss: 0.1482 - val_accuracy: 0.9946 - val_loss: 0.0214
Epoch 145/400
901/901 ———————————————— 7s 8ms/step - accuracy: 0.9478 - loss: 0.1482 - val_accuracy: 0.9936 - val_loss: 0.0225
Epoch 146/400
901/901 ———————————————— 9s 6ms/step - accuracy: 0.9497 - loss: 0.1447 - val_accuracy: 0.9938 - val_loss: 0.0235
Epoch 147/400
901/901 ———————————————— 7s 7ms/step - accuracy: 0.9498 - loss: 0.1412 - val_accuracy: 0.9925 - val_loss: 0.0259
Epoch 148/400
901/901 ———————————————— 6s 6ms/step - accuracy: 0.9458 - loss: 0.1609 - val_accuracy: 0.9925 - val_loss: 0.0259
Epoch 149/400
901/901 ———————————————— 7s 8ms/step - accuracy: 0.9472 - loss: 0.1558 - val_accuracy: 0.9922 - val_loss: 0.0247
Epoch 150/400
901/901 ———————————————— 5s 6ms/step - accuracy: 0.9493 - loss: 0.1485 - val_accuracy: 0.9917 - val_loss: 0.0258
Epoch 151/400
901/901 ———————————————— 7s 8ms/step - accuracy: 0.9450 - loss: 0.1558 - val_accuracy: 0.9918 - val_loss: 0.0305
Epoch 152/400
901/901 ———————————————— 6s 6ms/step - accuracy: 0.9493 - loss: 0.1449 - val_accuracy: 0.9940 - val_loss: 0.0210
Epoch 153/400
901/901 ———————————————— 11s 7ms/step - accuracy: 0.9445 - loss: 0.1554 - val_accuracy: 0.9938 - val_loss: 0.0242
Epoch 154/400
901/901 ———————————————— 6s 6ms/step - accuracy: 0.9488 - loss: 0.1429 - val_accuracy: 0.9942 - val_loss: 0.0212
Epoch 155/400
901/901 ———————————————— 10s 6ms/step - accuracy: 0.9469 - loss: 0.1487 - val_accuracy: 0.9883 - val_loss: 0.0338
Epoch 156/400
901/901 ———————————————— 10s 6ms/step - accuracy: 0.9472 - loss: 0.1515 - val_accuracy: 0.9947 - val_loss: 0.0210
Epoch 157/400
901/901 ———————————————— 11s 8ms/step - accuracy: 0.9491 - loss: 0.1446 - val_accuracy: 0.9933 - val_loss: 0.0230
Epoch 158/400
901/901 ———————————————— 10s 7ms/step - accuracy: 0.9529 - loss: 0.1404 - val_accuracy: 0.9943 - val_loss: 0.0218
Epoch 159/400
901/901 ———————————————— 10s 6ms/step - accuracy: 0.9495 - loss: 0.1488 - val_accuracy: 0.9936 - val_loss: 0.0239
Epoch 160/400
901/901 ———————————————— 7s 7ms/step - accuracy: 0.9474 - loss: 0.1564 - val_accuracy: 0.9960 - val_loss: 0.0177
Epoch 161/400
901/901 ———————————————— 10s 7ms/step - accuracy: 0.9510 - loss: 0.1456 - val_accuracy: 0.9957 - val_loss: 0.0186
Epoch 162/400
901/901 ———————————————— 9s 6ms/step - accuracy: 0.9455 - loss: 0.1550 - val_accuracy: 0.9943 - val_loss: 0.0210
Epoch 163/400
901/901 ———————————————— 10s 6ms/step - accuracy: 0.9481 - loss: 0.1501 - val_accuracy: 0.9946 - val_loss: 0.0198
Epoch 164/400
901/901 ———————————————— 11s 7ms/step - accuracy: 0.9548 - loss: 0.1336 - val_accuracy: 0.9950 - val_loss: 0.0191
Epoch 165/400
901/901 ———————————————— 11s 8ms/step - accuracy: 0.9503 - loss: 0.1401 - val_accuracy: 0.9954 - val_loss: 0.0204
Epoch 166/400
901/901 ———————————————— 9s 6ms/step - accuracy: 0.9511 - loss: 0.1417 - val_accuracy: 0.9943 - val_loss: 0.0178
Epoch 167/400
901/901 ———————————————— 10s 6ms/step - accuracy: 0.9502 - loss: 0.1496 - val_accuracy: 0.9913 - val_loss: 0.0288
Epoch 168/400
901/901 ———————————————— 7s 8ms/step - accuracy: 0.9493 - loss: 0.1532 - val_accuracy: 0.9946 - val_loss: 0.0202
Epoch 169/400
901/901 ———————————————— 9s 6ms/step - accuracy: 0.9507 - loss: 0.1441 - val_accuracy: 0.9947 - val_loss: 0.0210
Epoch 170/400
901/901 ———————————————— 10s 6ms/step - accuracy: 0.9497 - loss: 0.1401 - val_accuracy: 0.9931 - val_loss: 0.0216
Epoch 171/400
901/901 ———————————————— 10s 6ms/step - accuracy: 0.9519 - loss: 0.1371 - val_accuracy: 0.9953 - val_loss: 0.0196
Epoch 172/400
901/901 ———————————————— 11s 7ms/step - accuracy: 0.9504 - loss: 0.1481 - val_accuracy: 0.9949 - val_loss: 0.0216
Epoch 173/400
901/901 ———————————————— 11s 8ms/step - accuracy: 0.9514 - loss: 0.1404 - val_accuracy: 0.9951 - val_loss: 0.0172
Epoch 174/400
901/901 ———————————————— 9s 6ms/step - accuracy: 0.9523 - loss: 0.1350 - val_accuracy: 0.9939 - val_loss: 0.0229
Epoch 175/400
901/901 ———————————————— 10s 6ms/step - accuracy: 0.9524 - loss: 0.1393 - val_accuracy: 0.9960 - val_loss: 0.0174
Epoch 176/400
901/901 ———————————————— 7s 7ms/step - accuracy: 0.9518 - loss: 0.1397 - val_accuracy: 0.9943 - val_loss: 0.0200
Epoch 177/400
901/901 ———————————————— 9s 6ms/step - accuracy: 0.9493 - loss: 0.1433 - val_accuracy: 0.9951 - val_loss: 0.0188
Epoch 178/400
901/901 ———————————————— 10s 6ms/step - accuracy: 0.9545 - loss: 0.1353 - val_accuracy: 0.9963 - val_loss: 0.0165
Epoch 179/400
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Epoch 179/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9525 - loss: 0.1417 - val_accuracy: 0.9936 - val_loss: 0.0234
Epoch 180/400
901/901 ───────────────── 5s 6ms/step - accuracy: 0.9509 - loss: 0.1397 - val_accuracy: 0.9926 - val_loss: 0.0236
Epoch 181/400
901/901 ───────────────── 6s 7ms/step - accuracy: 0.9558 - loss: 0.1320 - val_accuracy: 0.9953 - val_loss: 0.0194
Epoch 182/400
901/901 ───────────────── 6s 7ms/step - accuracy: 0.9527 - loss: 0.1341 - val_accuracy: 0.9960 - val_loss: 0.0158
Epoch 183/400
901/901 ───────────────── 5s 6ms/step - accuracy: 0.9536 - loss: 0.1331 - val_accuracy: 0.9961 - val_loss: 0.0169
Epoch 184/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9550 - loss: 0.1323 - val_accuracy: 0.9936 - val_loss: 0.0214
Epoch 185/400
901/901 ───────────────── 9s 7ms/step - accuracy: 0.9541 - loss: 0.1341 - val_accuracy: 0.9932 - val_loss: 0.0233
Epoch 186/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9529 - loss: 0.1369 - val_accuracy: 0.9949 - val_loss: 0.0209
Epoch 187/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9548 - loss: 0.1271 - val_accuracy: 0.9950 - val_loss: 0.0193
Epoch 188/400
901/901 ───────────────── 9s 6ms/step - accuracy: 0.9531 - loss: 0.1347 - val_accuracy: 0.9958 - val_loss: 0.0168
Epoch 189/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9526 - loss: 0.1374 - val_accuracy: 0.9895 - val_loss: 0.0295
Epoch 190/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9504 - loss: 0.1395 - val_accuracy: 0.9961 - val_loss: 0.0151
Epoch 191/400
901/901 ───────────────── 6s 6ms/step - accuracy: 0.9513 - loss: 0.1375 - val_accuracy: 0.9947 - val_loss: 0.0202
Epoch 192/400
901/901 ───────────────── 7s 7ms/step - accuracy: 0.9541 - loss: 0.1361 - val_accuracy: 0.9957 - val_loss: 0.0175
Epoch 193/400
901/901 ───────────────── 6s 6ms/step - accuracy: 0.9514 - loss: 0.1391 - val_accuracy: 0.9954 - val_loss: 0.0163
Epoch 194/400
901/901 ───────────────── 6s 6ms/step - accuracy: 0.9551 - loss: 0.1272 - val_accuracy: 0.9951 - val_loss: 0.0191
Epoch 195/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9561 - loss: 0.1371 - val_accuracy: 0.9939 - val_loss: 0.0200
Epoch 196/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9546 - loss: 0.1366 - val_accuracy: 0.9956 - val_loss: 0.0172
Epoch 197/400
901/901 ───────────────── 9s 6ms/step - accuracy: 0.9548 - loss: 0.1292 - val_accuracy: 0.9943 - val_loss: 0.0208
Epoch 198/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9575 - loss: 0.1242 - val_accuracy: 0.9956 - val_loss: 0.0181
Epoch 199/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9542 - loss: 0.1312 - val_accuracy: 0.9936 - val_loss: 0.0217
Epoch 200/400
901/901 ───────────────── 9s 6ms/step - accuracy: 0.9547 - loss: 0.1354 - val_accuracy: 0.9965 - val_loss: 0.0162
Epoch 201/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9517 - loss: 0.1412 - val_accuracy: 0.9949 - val_loss: 0.0176
Epoch 202/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9523 - loss: 0.1356 - val_accuracy: 0.9960 - val_loss: 0.0150
Epoch 203/400
901/901 ───────────────── 11s 7ms/step - accuracy: 0.9532 - loss: 0.1330 - val_accuracy: 0.9961 - val_loss: 0.0170
Epoch 204/400
901/901 ───────────────── 11s 8ms/step - accuracy: 0.9566 - loss: 0.1271 - val_accuracy: 0.9906 - val_loss: 0.0305
Epoch 205/400
901/901 ───────────────── 9s 6ms/step - accuracy: 0.9535 - loss: 0.1370 - val_accuracy: 0.9960 - val_loss: 0.0153
Epoch 206/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9557 - loss: 0.1300 - val_accuracy: 0.9951 - val_loss: 0.0172
Epoch 207/400
901/901 ───────────────── 6s 6ms/step - accuracy: 0.9565 - loss: 0.1259 - val_accuracy: 0.9950 - val_loss: 0.0174
Epoch 208/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9505 - loss: 0.1403 - val_accuracy: 0.9951 - val_loss: 0.0175
Epoch 209/400
901/901 ───────────────── 11s 7ms/step - accuracy: 0.9562 - loss: 0.1247 - val_accuracy: 0.9947 - val_loss: 0.0192
Epoch 210/400
901/901 ───────────────── 5s 6ms/step - accuracy: 0.9546 - loss: 0.1353 - val_accuracy: 0.9946 - val_loss: 0.0183
Epoch 211/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9557 - loss: 0.1244 - val_accuracy: 0.9958 - val_loss: 0.0173
Epoch 212/400
901/901 ───────────────── 7s 7ms/step - accuracy: 0.9543 - loss: 0.1298 - val_accuracy: 0.9926 - val_loss: 0.0243
Epoch 213/400
901/901 ───────────────── 6s 6ms/step - accuracy: 0.9578 - loss: 0.1212 - val_accuracy: 0.9949 - val_loss: 0.0197
Epoch 214/400
901/901 ───────────────── 11s 8ms/step - accuracy: 0.9553 - loss: 0.1326 - val_accuracy: 0.9940 - val_loss: 0.0221
Epoch 215/400
901/901 ───────────────── 9s 7ms/step - accuracy: 0.9583 - loss: 0.1165 - val_accuracy: 0.9950 - val_loss: 0.0166
Epoch 216/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9564 - loss: 0.1254 - val_accuracy: 0.9953 - val_loss: 0.0164
Epoch 217/400
901/901 ───────────────── 10s 6ms/step - accuracy: 0.9570 - loss: 0.1215 - val_accuracy: 0.9915 - val_loss: 0.0229
Epoch 218/400
901/901 ───────────────── 7s 7ms/step - accuracy: 0.9585 - loss: 0.1259 - val_accuracy: 0.9960 - val_loss: 0.0151
Epoch 219/400
901/901 ───────────────── 6s 6ms/step - accuracy: 0.9604 - loss: 0.1230 - val_accuracy: 0.9960 - val_loss: 0.0152
Epoch 220/400
901/901 ───────────────── 11s 8ms/step - accuracy: 0.9560 - loss: 0.1286 - val_accuracy: 0.9953 - val_loss: 0.0187
Epoch 221/400
901/901 ───────────────── 10s 7ms/step - accuracy: 0.9554 - loss: 0.1290 - val_accuracy: 0.9972 - val_loss: 0.0148
Epoch 222/400
901/901 ───────────────── 9s 6ms/step - accuracy: 0.9584 - loss: 0.1173 - val_accuracy: 0.9949 - val_loss: 0.0162
Epoch 223/400
901/901 ───────────────── 7s 8ms/step - accuracy: 0.9592 - loss: 0.1254 - val_accuracy: 0.9908 - val_loss: 0.0281
Epoch 224/400
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901/901 ───────────── **5s** 6ms/step - accuracy: 0.9570 - loss: 0.1258 - val_accuracy: 0.9950 - val_loss: 0.0178
Epoch 225/400
901/901 ───────────── **7s** 8ms/step - accuracy: 0.9552 - loss: 0.1331 - val_accuracy: 0.9951 - val_loss: 0.0168
Epoch 226/400
901/901 ───────────── **6s** 6ms/step - accuracy: 0.9568 - loss: 0.1260 - val_accuracy: 0.9939 - val_loss: 0.0198
Epoch 227/400
901/901 ───────────── **12s** 8ms/step - accuracy: 0.9568 - loss: 0.1272 - val_accuracy: 0.9939 - val_loss: 0.0199
Epoch 228/400
901/901 ───────────── **5s** 6ms/step - accuracy: 0.9577 - loss: 0.1186 - val_accuracy: 0.9967 - val_loss: 0.0149
Epoch 229/400
901/901 ───────────── **7s** 8ms/step - accuracy: 0.9580 - loss: 0.1217 - val_accuracy: 0.9969 - val_loss: 0.0141
Epoch 230/400
901/901 ───────────── **9s** 6ms/step - accuracy: 0.9590 - loss: 0.1220 - val_accuracy: 0.9950 - val_loss: 0.0168
Epoch 231/400
901/901 ───────────── **7s** 7ms/step - accuracy: 0.9608 - loss: 0.1106 - val_accuracy: 0.9953 - val_loss: 0.0156
Epoch 232/400
901/901 ───────────── **11s** 8ms/step - accuracy: 0.9603 - loss: 0.1212 - val_accuracy: 0.9951 - val_loss: 0.0182
Epoch 233/400
901/901 ───────────── **9s** 6ms/step - accuracy: 0.9576 - loss: 0.1270 - val_accuracy: 0.9968 - val_loss: 0.0147
Epoch 234/400
901/901 ───────────── **10s** 6ms/step - accuracy: 0.9584 - loss: 0.1197 - val_accuracy: 0.9946 - val_loss: 0.0184
Epoch 235/400
901/901 ───────────── **7s** 8ms/step - accuracy: 0.9591 - loss: 0.1225 - val_accuracy: 0.9956 - val_loss: 0.0170
Epoch 236/400
901/901 ───────────── **6s** 6ms/step - accuracy: 0.9568 - loss: 0.1202 - val_accuracy: 0.9951 - val_loss: 0.0182
Epoch 237/400
901/901 ───────────── **11s** 7ms/step - accuracy: 0.9609 - loss: 0.1162 - val_accuracy: 0.9958 - val_loss: 0.0174
Epoch 238/400
901/901 ───────────── **10s** 8ms/step - accuracy: 0.9564 - loss: 0.1286 - val_accuracy: 0.9963 - val_loss: 0.0139
Epoch 239/400
901/901 ───────────── **9s** 6ms/step - accuracy: 0.9591 - loss: 0.1248 - val_accuracy: 0.9949 - val_loss: 0.0179
Epoch 240/400
901/901 ───────────── **7s** 8ms/step - accuracy: 0.9600 - loss: 0.1183 - val_accuracy: 0.9960 - val_loss: 0.0158
Epoch 241/400
901/901 ───────────── **9s** 6ms/step - accuracy: 0.9594 - loss: 0.1169 - val_accuracy: 0.9957 - val_loss: 0.0158
Epoch 242/400
901/901 ───────────── **7s** 8ms/step - accuracy: 0.9578 - loss: 0.1267 - val_accuracy: 0.9900 - val_loss: 0.0317
Epoch 243/400
901/901 ───────────── **9s** 7ms/step - accuracy: 0.9593 - loss: 0.1199 - val_accuracy: 0.9964 - val_loss: 0.0140
Epoch 244/400
901/901 ───────────── **7s** 7ms/step - accuracy: 0.9598 - loss: 0.1195 - val_accuracy: 0.9914 - val_loss: 0.0247
Epoch 245/400
901/901 ───────────── **6s** 6ms/step - accuracy: 0.9606 - loss: 0.1164 - val_accuracy: 0.9964 - val_loss: 0.0139
Epoch 246/400
901/901 ───────────── **10s** 6ms/step - accuracy: 0.9567 - loss: 0.1230 - val_accuracy: 0.9950 - val_loss: 0.0170
Epoch 247/400
901/901 ───────────── **7s** 8ms/step - accuracy: 0.9601 - loss: 0.1152 - val_accuracy: 0.9960 - val_loss: 0.0156
Epoch 248/400
901/901 ───────────── **9s** 6ms/step - accuracy: 0.9597 - loss: 0.1165 - val_accuracy: 0.9925 - val_loss: 0.0251
Epoch 249/400
901/901 ───────────── **7s** 8ms/step - accuracy: 0.9602 - loss: 0.1134 - val_accuracy: 0.9932 - val_loss: 0.0203
Epoch 250/400
901/901 ───────────── **6s** 6ms/step - accuracy: 0.9587 - loss: 0.1190 - val_accuracy: 0.9957 - val_loss: 0.0151
Epoch 251/400
901/901 ───────────── **10s** 6ms/step - accuracy: 0.9620 - loss: 0.1119 - val_accuracy: 0.9965 - val_loss: 0.0135
Epoch 252/400
901/901 ───────────── **7s** 8ms/step - accuracy: 0.9574 - loss: 0.1215 - val_accuracy: 0.9953 - val_loss: 0.0189
Epoch 253/400
901/901 ───────────── **6s** 6ms/step - accuracy: 0.9577 - loss: 0.1223 - val_accuracy: 0.9963 - val_loss: 0.0158
Epoch 254/400
901/901 ───────────── **12s** 8ms/step - accuracy: 0.9602 - loss: 0.1170 - val_accuracy: 0.9968 - val_loss: 0.0131
Epoch 255/400
901/901 ───────────── **10s** 8ms/step - accuracy: 0.9628 - loss: 0.1115 - val_accuracy: 0.9957 - val_loss: 0.0153
Epoch 256/400
901/901 ───────────── **9s** 7ms/step - accuracy: 0.9624 - loss: 0.1078 - val_accuracy: 0.9965 - val_loss: 0.0141
Epoch 257/400
901/901 ───────────── **10s** 6ms/step - accuracy: 0.9580 - loss: 0.1238 - val_accuracy: 0.9956 - val_loss: 0.0160
Epoch 258/400
901/901 ───────────── **7s** 8ms/step - accuracy: 0.9609 - loss: 0.1174 - val_accuracy: 0.9949 - val_loss: 0.0174
Epoch 259/400
901/901 ───────────── **9s** 6ms/step - accuracy: 0.9613 - loss: 0.1110 - val_accuracy: 0.9958 - val_loss: 0.0178
Epoch 260/400
901/901 ───────────── **10s** 6ms/step - accuracy: 0.9621 - loss: 0.1077 - val_accuracy: 0.9971 - val_loss: 0.0127
Epoch 261/400
901/901 ───────────── **7s** 8ms/step - accuracy: 0.9579 - loss: 0.1188 - val_accuracy: 0.9967 - val_loss: 0.0133
Epoch 262/400
901/901 ───────────── **8s** 6ms/step - accuracy: 0.9600 - loss: 0.1119 - val_accuracy: 0.9954 - val_loss: 0.0160
Epoch 263/400
901/901 ───────────── **7s** 8ms/step - accuracy: 0.9607 - loss: 0.1170 - val_accuracy: 0.9971 - val_loss: 0.0126
Epoch 264/400
901/901 ───────────── **9s** 6ms/step - accuracy: 0.9591 - loss: 0.1160 - val_accuracy: 0.9960 - val_loss: 0.0145
Epoch 265/400
901/901 ───────────── **10s** 6ms/step - accuracy: 0.9595 - loss: 0.1180 - val_accuracy: 0.9960 - val_loss: 0.0161
Epoch 266/400
901/901 ───────────── **10s** 6ms/step - accuracy: 0.9611 - loss: 0.1101 - val_accuracy: 0.9961 - val_loss: 0.0139
Epoch 267/400
901/901 ───────────── **11s** 7ms/step - accuracy: 0.9589 - loss: 0.1147 - val_accuracy: 0.9960 - val_loss: 0.0150
Epoch 268/400
901/901 ───────────── **11s** 8ms/step - accuracy: 0.9641 - loss: 0.1102 - val_accuracy: 0.9965 - val_loss: 0.0135
Epoch 269/400
901/901 ───────────── **8s** 6ms/step - accuracy: 0.9598 - loss: 0.1147 - val_accuracy: 0.9960 - val_loss: 0.0166

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                                8s 6ms/step - accuracy: 0.9598 - loss: 0.1147 - val_accuracy: 0.9966 - val_loss: 0.0136
Epoch 270/400
901/901 ─────────────────── 10s 6ms/step - accuracy: 0.9590 - loss: 0.1175 - val_accuracy: 0.9965 - val_loss: 0.0139
Epoch 271/400
901/901 ─────────────────── 11s 7ms/step - accuracy: 0.9628 - loss: 0.1109 - val_accuracy: 0.9964 - val_loss: 0.0146
Epoch 272/400
901/901 ─────────────────── 6s 7ms/step - accuracy: 0.9619 - loss: 0.1102 - val_accuracy: 0.9964 - val_loss: 0.0141
Epoch 273/400
901/901 ─────────────────── 9s 6ms/step - accuracy: 0.9593 - loss: 0.1149 - val_accuracy: 0.9960 - val_loss: 0.0139
Epoch 274/400
901/901 ─────────────────── 10s 6ms/step - accuracy: 0.9616 - loss: 0.1131 - val_accuracy: 0.9971 - val_loss: 0.0136
Epoch 275/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9621 - loss: 0.1117 - val_accuracy: 0.9964 - val_loss: 0.0145
Epoch 276/400
901/901 ─────────────────── 6s 6ms/step - accuracy: 0.9579 - loss: 0.1165 - val_accuracy: 0.9964 - val_loss: 0.0122
Epoch 277/400
901/901 ─────────────────── 11s 8ms/step - accuracy: 0.9635 - loss: 0.1092 - val_accuracy: 0.9965 - val_loss: 0.0134
Epoch 278/400
901/901 ─────────────────── 6s 6ms/step - accuracy: 0.9618 - loss: 0.1095 - val_accuracy: 0.9957 - val_loss: 0.0154
Epoch 279/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9615 - loss: 0.1177 - val_accuracy: 0.9972 - val_loss: 0.0138
Epoch 280/400
901/901 ─────────────────── 6s 6ms/step - accuracy: 0.9638 - loss: 0.1060 - val_accuracy: 0.9926 - val_loss: 0.0230
Epoch 281/400
901/901 ─────────────────── 10s 6ms/step - accuracy: 0.9597 - loss: 0.1228 - val_accuracy: 0.9965 - val_loss: 0.0139
Epoch 282/400
901/901 ─────────────────── 12s 8ms/step - accuracy: 0.9599 - loss: 0.1150 - val_accuracy: 0.9949 - val_loss: 0.0168
Epoch 283/400
901/901 ─────────────────── 6s 7ms/step - accuracy: 0.9598 - loss: 0.1191 - val_accuracy: 0.9969 - val_loss: 0.0123
Epoch 284/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9600 - loss: 0.1182 - val_accuracy: 0.9954 - val_loss: 0.0168
Epoch 285/400
901/901 ─────────────────── 9s 6ms/step - accuracy: 0.9593 - loss: 0.1195 - val_accuracy: 0.9956 - val_loss: 0.0158
Epoch 286/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9646 - loss: 0.0995 - val_accuracy: 0.9956 - val_loss: 0.0165
Epoch 287/400
901/901 ─────────────────── 6s 7ms/step - accuracy: 0.9635 - loss: 0.1058 - val_accuracy: 0.9938 - val_loss: 0.0189
Epoch 288/400
901/901 ─────────────────── 10s 6ms/step - accuracy: 0.9651 - loss: 0.1054 - val_accuracy: 0.9957 - val_loss: 0.0142
Epoch 289/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9619 - loss: 0.1085 - val_accuracy: 0.9964 - val_loss: 0.0136
Epoch 290/400
901/901 ─────────────────── 8s 6ms/step - accuracy: 0.9632 - loss: 0.1135 - val_accuracy: 0.9968 - val_loss: 0.0121
Epoch 291/400
901/901 ─────────────────── 10s 6ms/step - accuracy: 0.9641 - loss: 0.1070 - val_accuracy: 0.9971 - val_loss: 0.0124
Epoch 292/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9626 - loss: 0.1096 - val_accuracy: 0.9963 - val_loss: 0.0139
Epoch 293/400
901/901 ─────────────────── 9s 6ms/step - accuracy: 0.9621 - loss: 0.1110 - val_accuracy: 0.9961 - val_loss: 0.0138
Epoch 294/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9620 - loss: 0.1103 - val_accuracy: 0.9965 - val_loss: 0.0128
Epoch 295/400
901/901 ─────────────────── 9s 7ms/step - accuracy: 0.9616 - loss: 0.1160 - val_accuracy: 0.9950 - val_loss: 0.0183
Epoch 296/400
901/901 ─────────────────── 7s 7ms/step - accuracy: 0.9583 - loss: 0.1166 - val_accuracy: 0.9969 - val_loss: 0.0132
Epoch 297/400
901/901 ─────────────────── 11s 8ms/step - accuracy: 0.9656 - loss: 0.1066 - val_accuracy: 0.9953 - val_loss: 0.0146
Epoch 298/400
901/901 ─────────────────── 6s 6ms/step - accuracy: 0.9620 - loss: 0.1111 - val_accuracy: 0.9954 - val_loss: 0.0153
Epoch 299/400
901/901 ─────────────────── 6s 7ms/step - accuracy: 0.9614 - loss: 0.1103 - val_accuracy: 0.9968 - val_loss: 0.0132
Epoch 300/400
901/901 ─────────────────── 7s 7ms/step - accuracy: 0.9669 - loss: 0.0951 - val_accuracy: 0.9960 - val_loss: 0.0172
Epoch 301/400
901/901 ─────────────────── 6s 6ms/step - accuracy: 0.9600 - loss: 0.1139 - val_accuracy: 0.9958 - val_loss: 0.0168
Epoch 302/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9635 - loss: 0.1033 - val_accuracy: 0.9960 - val_loss: 0.0157
Epoch 303/400
901/901 ─────────────────── 6s 6ms/step - accuracy: 0.9664 - loss: 0.0984 - val_accuracy: 0.9965 - val_loss: 0.0145
Epoch 304/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9624 - loss: 0.1048 - val_accuracy: 0.9968 - val_loss: 0.0137
Epoch 305/400
901/901 ─────────────────── 6s 6ms/step - accuracy: 0.9654 - loss: 0.1022 - val_accuracy: 0.9976 - val_loss: 0.0115
Epoch 306/400
901/901 ─────────────────── 11s 7ms/step - accuracy: 0.9622 - loss: 0.1088 - val_accuracy: 0.9967 - val_loss: 0.0136
Epoch 307/400
901/901 ─────────────────── 6s 6ms/step - accuracy: 0.9605 - loss: 0.1112 - val_accuracy: 0.9965 - val_loss: 0.0143
Epoch 308/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9609 - loss: 0.1164 - val_accuracy: 0.9950 - val_loss: 0.0169
Epoch 309/400
901/901 ─────────────────── 6s 6ms/step - accuracy: 0.9638 - loss: 0.1111 - val_accuracy: 0.9976 - val_loss: 0.0114
Epoch 310/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9639 - loss: 0.0980 - val_accuracy: 0.9969 - val_loss: 0.0122
Epoch 311/400
901/901 ─────────────────── 6s 6ms/step - accuracy: 0.9605 - loss: 0.1187 - val_accuracy: 0.9951 - val_loss: 0.0166
Epoch 312/400
901/901 ─────────────────── 7s 8ms/step - accuracy: 0.9622 - loss: 0.1023 - val_accuracy: 0.9951 - val_loss: 0.0160
Epoch 313/400
901/901 ─────────────────── 6s 7ms/step - accuracy: 0.9656 - loss: 0.1038 - val_accuracy: 0.9960 - val_loss: 0.0166
Epoch 314/400
901/901 ─────────────────── 11s 7ms/step - accuracy: 0.9619 - loss: 0.1102 - val_accuracy: 0.9965 - val_loss: 0.0127
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Epoch 315/400
901/901 ──────────────── 11s 8ms/step - accuracy: 0.9626 - loss: 0.1097 - val_accuracy: 0.9968 - val_loss: 0.0116
Epoch 316/400
901/901 ──────────────── 9s 6ms/step - accuracy: 0.9642 - loss: 0.1027 - val_accuracy: 0.9956 - val_loss: 0.0163
Epoch 317/400
901/901 ──────────────── 10s 6ms/step - accuracy: 0.9658 - loss: 0.1048 - val_accuracy: 0.9971 - val_loss: 0.0133
Epoch 318/400
901/901 ──────────────── 11s 7ms/step - accuracy: 0.9646 - loss: 0.1028 - val_accuracy: 0.9969 - val_loss: 0.0127
Epoch 319/400
901/901 ──────────────── 6s 6ms/step - accuracy: 0.9628 - loss: 0.1044 - val_accuracy: 0.9971 - val_loss: 0.0119
Epoch 320/400
901/901 ──────────────── 10s 6ms/step - accuracy: 0.9651 - loss: 0.1092 - val_accuracy: 0.9958 - val_loss: 0.0145
Epoch 321/400
901/901 ──────────────── 7s 8ms/step - accuracy: 0.9655 - loss: 0.1041 - val_accuracy: 0.9974 - val_loss: 0.0108
Epoch 322/400
901/901 ──────────────── 9s 6ms/step - accuracy: 0.9668 - loss: 0.0942 - val_accuracy: 0.9968 - val_loss: 0.0120
Epoch 323/400
901/901 ──────────────── 7s 8ms/step - accuracy: 0.9637 - loss: 0.1068 - val_accuracy: 0.9978 - val_loss: 0.0099
Epoch 324/400
901/901 ──────────────── 9s 7ms/step - accuracy: 0.9662 - loss: 0.0998 - val_accuracy: 0.9967 - val_loss: 0.0124
Epoch 325/400
901/901 ──────────────── 7s 8ms/step - accuracy: 0.9651 - loss: 0.1030 - val_accuracy: 0.9961 - val_loss: 0.0145
Epoch 326/400
901/901 ──────────────── 11s 8ms/step - accuracy: 0.9637 - loss: 0.1025 - val_accuracy: 0.9939 - val_loss: 0.0194
Epoch 327/400
901/901 ──────────────── 6s 6ms/step - accuracy: 0.9642 - loss: 0.1058 - val_accuracy: 0.9967 - val_loss: 0.0124
Epoch 328/400
901/901 ──────────────── 11s 7ms/step - accuracy: 0.9628 - loss: 0.1070 - val_accuracy: 0.9929 - val_loss: 0.0226
Epoch 329/400
901/901 ──────────────── 10s 8ms/step - accuracy: 0.9668 - loss: 0.0941 - val_accuracy: 0.9974 - val_loss: 0.0120
Epoch 330/400
901/901 ──────────────── 6s 6ms/step - accuracy: 0.9596 - loss: 0.1145 - val_accuracy: 0.9958 - val_loss: 0.0142
Epoch 331/400
901/901 ──────────────── 12s 8ms/step - accuracy: 0.9609 - loss: 0.1098 - val_accuracy: 0.9969 - val_loss: 0.0119
Epoch 332/400
901/901 ──────────────── 6s 6ms/step - accuracy: 0.9657 - loss: 0.1011 - val_accuracy: 0.9949 - val_loss: 0.0183
Epoch 333/400
901/901 ──────────────── 8s 8ms/step - accuracy: 0.9651 - loss: 0.1022 - val_accuracy: 0.9961 - val_loss: 0.0130
Epoch 334/400
901/901 ──────────────── 6s 6ms/step - accuracy: 0.9647 - loss: 0.1075 - val_accuracy: 0.9961 - val_loss: 0.0134
Epoch 335/400
901/901 ──────────────── 7s 7ms/step - accuracy: 0.9647 - loss: 0.1019 - val_accuracy: 0.9971 - val_loss: 0.0117
Epoch 336/400
901/901 ──────────────── 9s 6ms/step - accuracy: 0.9675 - loss: 0.0949 - val_accuracy: 0.9974 - val_loss: 0.0103
Epoch 337/400
901/901 ──────────────── 10s 6ms/step - accuracy: 0.9629 - loss: 0.1087 - val_accuracy: 0.9965 - val_loss: 0.0113
Epoch 338/400
901/901 ──────────────── 7s 8ms/step - accuracy: 0.9627 - loss: 0.1091 - val_accuracy: 0.9953 - val_loss: 0.0167
Epoch 339/400
901/901 ──────────────── 9s 6ms/step - accuracy: 0.9638 - loss: 0.1003 - val_accuracy: 0.9963 - val_loss: 0.0141
Epoch 340/400
901/901 ──────────────── 7s 8ms/step - accuracy: 0.9677 - loss: 0.0952 - val_accuracy: 0.9967 - val_loss: 0.0108
Epoch 341/400
901/901 ──────────────── 6s 6ms/step - accuracy: 0.9661 - loss: 0.1033 - val_accuracy: 0.9974 - val_loss: 0.0117
Epoch 342/400
901/901 ──────────────── 11s 7ms/step - accuracy: 0.9661 - loss: 0.1011 - val_accuracy: 0.9972 - val_loss: 0.0127
Epoch 343/400
901/901 ──────────────── 11s 8ms/step - accuracy: 0.9648 - loss: 0.0997 - val_accuracy: 0.9974 - val_loss: 0.0118
Epoch 344/400
901/901 ──────────────── 9s 7ms/step - accuracy: 0.9665 - loss: 0.0995 - val_accuracy: 0.9968 - val_loss: 0.0107
Epoch 345/400
901/901 ──────────────── 7s 8ms/step - accuracy: 0.9637 - loss: 0.0993 - val_accuracy: 0.9972 - val_loss: 0.0125
Epoch 346/400
901/901 ──────────────── 11s 8ms/step - accuracy: 0.9631 - loss: 0.1053 - val_accuracy: 0.9972 - val_loss: 0.0121
Epoch 347/400
901/901 ──────────────── 9s 6ms/step - accuracy: 0.9629 - loss: 0.1080 - val_accuracy: 0.9964 - val_loss: 0.0141
Epoch 348/400
901/901 ──────────────── 7s 8ms/step - accuracy: 0.9632 - loss: 0.1077 - val_accuracy: 0.9963 - val_loss: 0.0131
Epoch 349/400
901/901 ──────────────── 6s 6ms/step - accuracy: 0.9656 - loss: 0.1034 - val_accuracy: 0.9965 - val_loss: 0.0152
Epoch 350/400
901/901 ──────────────── 7s 8ms/step - accuracy: 0.9663 - loss: 0.1002 - val_accuracy: 0.9971 - val_loss: 0.0125
Epoch 351/400
901/901 ──────────────── 9s 6ms/step - accuracy: 0.9649 - loss: 0.1057 - val_accuracy: 0.9965 - val_loss: 0.0136
Epoch 352/400
901/901 ──────────────── 11s 7ms/step - accuracy: 0.9664 - loss: 0.0964 - val_accuracy: 0.9954 - val_loss: 0.0146
Epoch 353/400
901/901 ──────────────── 7s 8ms/step - accuracy: 0.9642 - loss: 0.1042 - val_accuracy: 0.9975 - val_loss: 0.0106
Epoch 354/400
901/901 ──────────────── 6s 6ms/step - accuracy: 0.9642 - loss: 0.1032 - val_accuracy: 0.9967 - val_loss: 0.0119
Epoch 355/400
901/901 ──────────────── 12s 8ms/step - accuracy: 0.9654 - loss: 0.0980 - val_accuracy: 0.9969 - val_loss: 0.0123
Epoch 356/400
901/901 ──────────────── 10s 7ms/step - accuracy: 0.9664 - loss: 0.0985 - val_accuracy: 0.9965 - val_loss: 0.0121
Epoch 357/400
901/901 ──────────────── 6s 7ms/step - accuracy: 0.9668 - loss: 0.1028 - val_accuracy: 0.9972 - val_loss: 0.0122
Epoch 358/400
901/901 ──────────────── 11s 8ms/step - accuracy: 0.9639 - loss: 0.1016 - val_accuracy: 0.9971 - val_loss: 0.0106
Epoch 359/400
901/901 ──────────────── 6s 6ms/step - accuracy: 0.9674 - loss: 0.0982 - val_accuracy: 0.9974 - val_loss: 0.0117
Epoch 360/400
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Epoch 360/400
901/901 ───────────── 11s 7ms/step - accuracy: 0.9653 - loss: 0.0980 - val_accuracy: 0.9969 - val_loss: 0.0109
Epoch 361/400
901/901 ───────────── 6s 7ms/step - accuracy: 0.9677 - loss: 0.0954 - val_accuracy: 0.9965 - val_loss: 0.0136
Epoch 362/400
901/901 ───────────── 10s 7ms/step - accuracy: 0.9688 - loss: 0.0967 - val_accuracy: 0.9974 - val_loss: 0.0102
Epoch 363/400
901/901 ───────────── 8s 8ms/step - accuracy: 0.9669 - loss: 0.0946 - val_accuracy: 0.9969 - val_loss: 0.0118
Epoch 364/400
901/901 ───────────── 8s 6ms/step - accuracy: 0.9663 - loss: 0.0959 - val_accuracy: 0.9967 - val_loss: 0.0110
Epoch 365/400
901/901 ───────────── 7s 8ms/step - accuracy: 0.9699 - loss: 0.0918 - val_accuracy: 0.9976 - val_loss: 0.0106
Epoch 366/400
901/901 ───────────── 6s 6ms/step - accuracy: 0.9663 - loss: 0.0996 - val_accuracy: 0.9972 - val_loss: 0.0103
Epoch 367/400
901/901 ───────────── 8s 8ms/step - accuracy: 0.9689 - loss: 0.0950 - val_accuracy: 0.9956 - val_loss: 0.0144
Epoch 368/400
901/901 ───────────── 8s 6ms/step - accuracy: 0.9673 - loss: 0.0969 - val_accuracy: 0.9969 - val_loss: 0.0115
Epoch 369/400
901/901 ───────────── 7s 8ms/step - accuracy: 0.9661 - loss: 0.1021 - val_accuracy: 0.9960 - val_loss: 0.0131
Epoch 370/400
901/901 ───────────── 9s 7ms/step - accuracy: 0.9643 - loss: 0.1089 - val_accuracy: 0.9963 - val_loss: 0.0126
Epoch 371/400
901/901 ───────────── 7s 8ms/step - accuracy: 0.9677 - loss: 0.1013 - val_accuracy: 0.9968 - val_loss: 0.0117
Epoch 372/400
901/901 ───────────── 11s 8ms/step - accuracy: 0.9653 - loss: 0.1044 - val_accuracy: 0.9975 - val_loss: 0.0110
Epoch 373/400
901/901 ───────────── 6s 6ms/step - accuracy: 0.9666 - loss: 0.1004 - val_accuracy: 0.9972 - val_loss: 0.0114
Epoch 374/400
901/901 ───────────── 7s 8ms/step - accuracy: 0.9665 - loss: 0.0987 - val_accuracy: 0.9956 - val_loss: 0.0136
Epoch 375/400
901/901 ───────────── 9s 6ms/step - accuracy: 0.9668 - loss: 0.1004 - val_accuracy: 0.9974 - val_loss: 0.0107
Epoch 376/400
901/901 ───────────── 10s 6ms/step - accuracy: 0.9670 - loss: 0.0969 - val_accuracy: 0.9961 - val_loss: 0.0131
Epoch 377/400
901/901 ───────────── 11s 7ms/step - accuracy: 0.9664 - loss: 0.1014 - val_accuracy: 0.9950 - val_loss: 0.0186
Epoch 378/400
901/901 ───────────── 6s 6ms/step - accuracy: 0.9644 - loss: 0.1057 - val_accuracy: 0.9976 - val_loss: 0.0111
Epoch 379/400
901/901 ───────────── 10s 6ms/step - accuracy: 0.9672 - loss: 0.0926 - val_accuracy: 0.9965 - val_loss: 0.0124
Epoch 380/400
901/901 ───────────── 10s 7ms/step - accuracy: 0.9669 - loss: 0.1014 - val_accuracy: 0.9974 - val_loss: 0.0093
Epoch 381/400
901/901 ───────────── 11s 7ms/step - accuracy: 0.9692 - loss: 0.0882 - val_accuracy: 0.9978 - val_loss: 0.0099
Epoch 382/400
901/901 ───────────── 11s 8ms/step - accuracy: 0.9667 - loss: 0.1002 - val_accuracy: 0.9936 - val_loss: 0.0194
Epoch 383/400
901/901 ───────────── 9s 6ms/step - accuracy: 0.9675 - loss: 0.0940 - val_accuracy: 0.9964 - val_loss: 0.0124
Epoch 384/400
901/901 ───────────── 7s 8ms/step - accuracy: 0.9676 - loss: 0.0962 - val_accuracy: 0.9971 - val_loss: 0.0117
Epoch 385/400
901/901 ───────────── 9s 7ms/step - accuracy: 0.9642 - loss: 0.0999 - val_accuracy: 0.9981 - val_loss: 0.0099
Epoch 386/400
901/901 ───────────── 10s 6ms/step - accuracy: 0.9690 - loss: 0.0945 - val_accuracy: 0.9971 - val_loss: 0.0126
Epoch 387/400
901/901 ───────────── 10s 7ms/step - accuracy: 0.9704 - loss: 0.0876 - val_accuracy: 0.9969 - val_loss: 0.0124
Epoch 388/400
901/901 ───────────── 8s 8ms/step - accuracy: 0.9637 - loss: 0.1055 - val_accuracy: 0.9971 - val_loss: 0.0105
Epoch 389/400
901/901 ───────────── 9s 7ms/step - accuracy: 0.9691 - loss: 0.0913 - val_accuracy: 0.9976 - val_loss: 0.0099
Epoch 390/400
901/901 ───────────── 10s 7ms/step - accuracy: 0.9683 - loss: 0.0951 - val_accuracy: 0.9968 - val_loss: 0.0130
Epoch 391/400
901/901 ───────────── 8s 8ms/step - accuracy: 0.9676 - loss: 0.1003 - val_accuracy: 0.9972 - val_loss: 0.0120
Epoch 392/400
901/901 ───────────── 9s 7ms/step - accuracy: 0.9683 - loss: 0.0936 - val_accuracy: 0.9974 - val_loss: 0.0113
Epoch 393/400
901/901 ───────────── 10s 7ms/step - accuracy: 0.9716 - loss: 0.0864 - val_accuracy: 0.9967 - val_loss: 0.0123
Epoch 394/400
901/901 ───────────── 11s 7ms/step - accuracy: 0.9677 - loss: 0.0959 - val_accuracy: 0.9957 - val_loss: 0.0132
Epoch 395/400
901/901 ───────────── 6s 7ms/step - accuracy: 0.9625 - loss: 0.1062 - val_accuracy: 0.9975 - val_loss: 0.0102
Epoch 396/400
901/901 ───────────── 10s 7ms/step - accuracy: 0.9675 - loss: 0.0987 - val_accuracy: 0.9972 - val_loss: 0.0113
Epoch 397/400
901/901 ───────────── 8s 8ms/step - accuracy: 0.9699 - loss: 0.0913 - val_accuracy: 0.9963 - val_loss: 0.0123
Epoch 398/400
901/901 ───────────── 8s 6ms/step - accuracy: 0.9644 - loss: 0.0990 - val_accuracy: 0.9972 - val_loss: 0.0126
Epoch 399/400
901/901 ───────────── 7s 8ms/step - accuracy: 0.9691 - loss: 0.0886 - val_accuracy: 0.9965 - val_loss: 0.0120
Epoch 400/400
901/901 ───────────── 10s 7ms/step - accuracy: 0.9718 - loss: 0.0827 - val_accuracy: 0.9958 - val_loss: 0.0125
226/226 ───────────── 1s 3ms/step - accuracy: 0.9965 - loss: 0.0115
Test Accuracy: 1.00
```

Model Accuracy
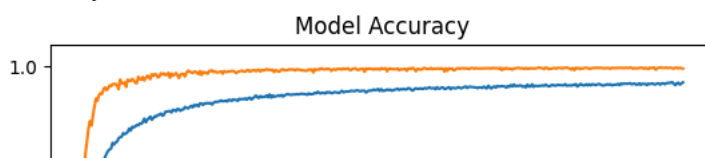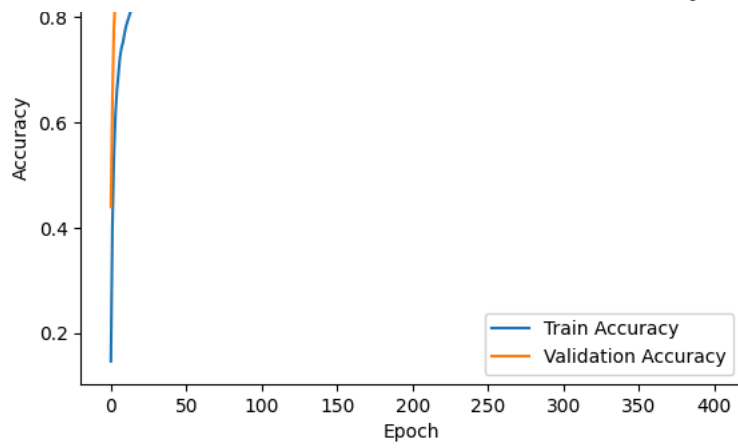
WARNING:absl:You are saving your model as an HDF5 file via `model.save()` or `keras.saving.save_model(model)`. This file format is
Model saved to /content/drive/MyDrive/train test