```
import pandas as pd
from sklearn.datasets import load_iris
from sklearn.model_selection import train_test_split
from sklearn.preprocessing import OneHotEncoder
import tensorflow as tf
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense
# Load the Iris dataset
iris = load_iris()
X = iris.data
y = iris.target.reshape(-1, 1)
# One-hot encoding the labels
encoder = OneHotEncoder()
y = encoder.fit_transform(y).toarray()
# Splitting the dataset into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
# Building the neural network
model = Sequential()
model.add(Dense(10, input_shape=(X_train.shape[1],), activation='relu'))
model.add(Dense(10, activation='relu'))
model.add(Dense(y.shape[1], activation='softmax'))
# Compiling the model
model.compile(optimizer='adam', loss='categorical_crossentropy', metrics=['accuracy'])
# Training the model
model.fit(X_train, y_train, epochs=50, batch_size=5, verbose=1)
# Evaluating the model
loss, accuracy = model.evaluate(X_test, y_test)
print(f'Accuracy: {accuracy}')
```

```
/usr/local/lib/python3.10/dist-packages/keras/src/layers/core/dense.py:87: UserWarning: Do not pass an `input_shape`/`input_dim`
  super().__init__(activity_regularizer=activity_regularizer, **kwargs)
Epoch 1/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 2s 2ms/step - accuracy: 0.3391 - loss: 1.4111
Epoch 2/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.4769 - loss: 0.9441
Epoch 3/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.7308 - loss: 0.8614
Epoch 4/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.6729 - loss: 0.7969
Epoch 5/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.7453 - loss: 0.7345
Epoch 6/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.8221 - loss: 0.6806
Epoch 7/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.8398 - loss: 0.6313
Epoch 8/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.8724 - loss: 0.6009
Epoch 9/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.8139 - loss: 0.5282
Epoch 10/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.8949 - loss: 0.5211
Epoch 11/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.8173 - loss: 0.5199
Epoch 12/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.8303 - loss: 0.4546
Epoch 13/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.9135 - loss: 0.4855
Epoch 14/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.9158 - loss: 0.4416
Epoch 15/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.9461 - loss: 0.4507
Epoch 16/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.9042 - loss: 0.4199
Epoch 17/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.9512 - loss: 0.4044
Epoch 18/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.9558 - loss: 0.3805
Epoch 19/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.9809 - loss: 0.3840
Epoch 20/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.9776 - loss: 0.3426
Epoch 21/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.9630 - loss: 0.3421
Epoch 22/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.9727 - loss: 0.3381
Epoch 23/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.9698 - loss: 0.3240
Epoch 24/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.9792 - loss: 0.3201
Epoch 25/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.9718 - loss: 0.3145
Epoch 26/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 2ms/step - accuracy: 0.9736 - loss: 0.3152
Epoch 27/50
24/24 ━━━━━━━━━━━━━━━━━━━━ 0s 1ms/step - accuracy: 0.9434 - loss: 0.2957
Epoch 28/50
```