```
import numpy as np
from sklearn.model_selection import train_test_split
from sklearn.metrics import accuracy_score, precision_score, recall_score, f1_score
from tensorflow.keras.models import Sequential
from tensorflow.keras.layers import Dense, SimpleRNN

from sklearn.datasets import make_classification
X, y = make_classification(n_samples=10000, n_features=20, n_classes=2, weights=[0.9, 0.1], random_state=42)


X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)


model = Sequential([
    SimpleRNN(units=64, input_shape=(X_train.shape[1], 1)),
    Dense(1, activation='sigmoid')
])


model.compile(optimizer='adam', loss='binary_crossentropy', metrics=['accuracy'])


X_train = X_train.reshape(X_train.shape[0], X_train.shape[1], 1)
X_test = X_test.reshape(X_test.shape[0], X_test.shape[1], 1)

model.fit(X_train, y_train, epochs=10, batch_size=32, validation_data=(X_test, y_test))




precision = precision_score(y_test, y_pred)
recall = recall_score(y_test, y_pred)
f1 = f1_score(y_test, y_pred)

print("Accuracy:", accuracy)
print("Precision:", precision)
print("Recall:", recall)
print("F1 Score:", f1)
```

```
Epoch 1/10
250/250 [==============================] - 10s 20ms/step - loss: 0.2094 - accuracy: 0.9202 - val_loss: 0.1533 - val_accuracy: 0.9356
Epoch 2/10
250/250 [==============================] - 3s 13ms/step - loss: 0.1757 - accuracy: 0.9286 - val_loss: 0.1858 - val_accuracy: 0.9170
Epoch 3/10
250/250 [==============================] - 5s 18ms/step - loss: 0.1700 - accuracy: 0.9330 - val_loss: 0.1423 - val_accuracy: 0.9300
Epoch 4/10
250/250 [==============================] - 5s 19ms/step - loss: 0.1654 - accuracy: 0.9351 - val_loss: 0.1331 - val_accuracy: 0.9410
Epoch 5/10
250/250 [==============================] - 3s 11ms/step - loss: 0.1621 - accuracy: 0.9355 - val_loss: 0.1644 - val_accuracy: 0.9240
Epoch 6/10
250/250 [==============================] - 3s 11ms/step - loss: 0.1608 - accuracy: 0.9367 - val_loss: 0.1477 - val_accuracy: 0.9415
Epoch 7/10
250/250 [==============================] - 2s 8ms/step - loss: 0.1576 - accuracy: 0.9383 - val_loss: 0.1326 - val_accuracy: 0.9410
Epoch 8/10
250/250 [==============================] - 1s 5ms/step - loss: 0.1537 - accuracy: 0.9423 - val_loss: 0.1412 - val_accuracy: 0.9395
Epoch 9/10
250/250 [==============================] - 1s 5ms/step - loss: 0.1558 - accuracy: 0.9402 - val_loss: 0.1446 - val_accuracy: 0.9400
Epoch 10/10
250/250 [==============================] - 2s 7ms/step - loss: 0.1552 - accuracy: 0.9408 - val_loss: 0.1328 - val_accuracy: 0.9465
---------------------------------------------------------------------------
NameError                                 Traceback (most recent call last)
<ipython-input-1-cf09217942c6> in <cell line: 33>()
     31
     32
---> 33 precision = precision_score(y_test, y_pred)
     34 recall = recall_score(y_test, y_pred)
     35 f1 = f1_score(y_test, y_pred)

NameError: name 'y_pred' is not defined
```