

```
import numpy as np
import tensorflow as tf

X = np.array([[0, 0],
              [0, 1],
              [1, 0],
              [1, 1]])

y = np.array([[0],
              [1],
              [1],
              [0]])

model = tf.keras.Sequential([
    tf.keras.layers.Dense(2, activation='sigmoid', input_shape=(2,), name='hidden_layer'),
    tf.keras.layers.Dense(1, activation='sigmoid', name='output_layer')
])

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

history = model.fit(X, y, epochs=3000)

predictions = model.predict(X)
for i in range(len(X)):
    print(f"{X[i]} XOR = ", round(predictions[i][0]))

1/1 [=====] - 0s 21ms/step
[0 0] XOR = 0
[0 1] XOR = 1
[1 0] XOR = 1
[1 1] XOR = 0
```

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