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In [ ]: import pandas as pd
import numpy as np
from sklearn import svm
from sklearn import metrics
import matplotlib.pyplot as plt
import seaborn as sns; sns.set(font_scale=1.2)
import tensorflow as tf
```

```
In [ ]: (X_train, y_train), (X_test, y_test) = tf.keras.datasets.mnist.load_data()

X_train = X_train.reshape(60000, 784)
X_test = X_test.reshape(10000, 784)

X_train = X_train[:5000, :]
y_train = y_train[:5000]
X_test = X_test[:100, :]
y_test = y_test[:100]

model = svm.SVC()
model.fit(X_train, y_train)

y_pred = model.predict(X_test)

indexToCompare = 6

title = 'True: ' + str(y_test[indexToCompare]) + ', Prediction: ' + str(y_pred[indexToCompare])

plt.title(title)
plt.imshow(X_test[indexToCompare].reshape(28,28), cmap='gray')
plt.grid(None)
plt.axis('off')
plt.show()
```

True: 4, Prediction: 4



