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# pip install pandas scikit-learn matplotlib

import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.ensemble import RandomForestClassifier
from sklearn.metrics import accuracy_score, classification_report
import matplotlib.pyplot as plt

data = "tested.csv"
df = pd.read_csv(data)
df = df.drop(['PassengerId', 'Name', 'Ticket', 'Cabin', 'Embarked'], axis=1)

df['Sex'] = df['Sex'].map({'male': 0, 'female': 1})
df['Age'].fillna(df['Age'].median(), inplace=True)
df['Fare'].fillna(df['Fare'].median(), inplace=True)
df = pd.get_dummies(df, columns=['Pclass'], drop_first=True)

X = df.drop('Survived', axis=1)
y = df['Survived']
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)

model = RandomForestClassifier(random_state=42)
model.fit(X_train, y_train)

y_pred = model.predict(X_test)
accuracy = accuracy_score(y_test, y_pred)
print("Accuracy:", accuracy)
print("Classification Report:")
print(classification_report(y_test, y_pred))

importance = model.feature_importances_
feature_names = X.columns

plt.barh(feature_names, importance)
plt.xlabel("Feature Importance")
plt.ylabel("Feature")
plt.title("Feature Importance for Titanic Survival Prediction")
plt.show()
```

The code was completed Successfully

Accuracy: 1.0

Classification Report:

	precision	recall	f1-score	support
0	1.00	1.00	1.00	50
1	1.00	1.00	1.00	34
accuracy			1.00	84
macro avg	1.00	1.00	1.00	84
weighted avg	1.00	1.00	1.00	84

