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import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.linear_model import LogisticRegression
from sklearn.metrics import accuracy_score, classification_report
# Step 1: Load and preprocess the data
data = pd.read_csv('loan_data.csv') # Replace with your loan dataset file
# Perform any necessary data preprocessing, such as handling missing values,
# encoding categorical variables, scaling numerical features, etc.
# Separate the features (X) and the target variable (y)
X = data.drop('Loan_Status', axis=1)
y = data['Loan_Status']
# Step 2: Split the data 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)
# Step 3: Train a logistic regression model
model = LogisticRegression()
model.fit(X_train, y_train)
# Step 4: Make predictions on the test set
y pred = model.predict(X test)
# Step 5: Evaluate the model
accuracy = accuracy_score(y_test, y_pred)
classification_report = classification_report(y_test, y_pred)
print('Accuracy:', accuracy)
print('Classification Report:\n', classification_report)
```

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# Step 6: Predict the status of a new loan application
# Prepare the input for a new loan application as a pandas DataFrame
new_application = pd.DataFrame({
    'Feature1': [value1],
    'Feature2': [value2],
    # Add more features based on your dataset
})

# Make a prediction using the trained model
new_application_status = model.predict(new_application)
print('New Application Status:', new_application_status)
```