Source code

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# Import libraries

import pandas as pd

from sklearn.model_selection import train_test_split

from sklearn.preprocessing import LabelEncoder

from sklearn.linear_model import LogisticRegression

from sklearn.metrics import classification_report, confusion_matrix,
accuracy_score

# Load dataset

df = pd.read_csv('customer_churn.csv')  # Replace with your file path

# Basic preprocessing

.drop(['customerID'], axis=1, inplace=True)

df['TotalCharges'] = pd.to_numeric(df['TotalCharges'], errors='coerce')

df.dropna(inplace=True)

# Encode categorical columnsdf

label_encoders = {}

for column in df.select_dtypes(include=['object']).columns:

 lable = LabelEncoder()

 df[column] = le.fit_transform(df[column])

label_encoders[column] = le

# Split data

X = df.drop('Churn', axis=1)

y = df['Churn']
```

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

# Train model

model = LogisticRegression(max_iter=1000)

model.fit(X_train, y_train)

# Predict and evaluate

y_pred = model.predict(X_test)

print("Confusion Matrix:\n", confusion_matrix(y_test, y_pred))

print("Classification Report:\n", classification_report(y_test, y_pred))

print("Accuracy Score:", accuracy_score(y_test, y_pred))
```

Output Screenshot