

```

1  import pandas as pd
2  import numpy as np
3  from io import StringIO
4  from sklearn.model_selection import train_test_split # type: ignore
5  from sklearn.pipeline import Pipeline
6  from sklearn.compose import ColumnTransformer
7  from sklearn.impute import SimpleImputer
8  from sklearn.preprocessing import StandardScaler, OneHotEncoder
9  from sklearn.ensemble import RandomForestClassifier
10 from sklearn.metrics import accuracy_score
11
12 # Simulated CSV data (if file upload is not possible)
13 csv_data = """
14 Age,Salary,Gender,Department,Left_Company
15 28,50000,Male,Sales,0
16 35,,Female,HR,1
17 40,70000,Male,IT,0
18 29,55000,Female,Sales,1
19 32,52000,Female,IT,0
20 45,80000,Male,HR,1
21 """
22 # Load CSV data into pandas DataFrame
23 data = pd.read_csv(StringIO(csv_data))
24
25 # Split features and target
26 X = data.drop("Left_Company", axis=1)
27 y = data["Left_Company"]
28
29 # Identify numeric and categorical columns
30 numeric_features = X.select_dtypes(include=['int64', 'float64']).columns
31 categorical_features = X.select_dtypes(include=['object']).columns

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30 numeric_features = X.select_dtypes(include=['int64', 'float64']).columns
31 categorical_features = X.select_dtypes(include=['object']).columns
32
33 # Numeric preprocessing
34 numeric_transformer = Pipeline(steps=[
35     ('imputer', SimpleImputer(strategy='mean')),
36     ('scaler', StandardScaler())
37 ])
38
39 # Categorical preprocessing
40 categorical_transformer = Pipeline(steps=[
41     ('imputer', SimpleImputer(strategy='most_frequent')),
42     ('encoder', OneHotEncoder(handle_unknown='ignore'))
43 ])
44
45 # Column transformer
46 preprocessor = ColumnTransformer(transformers=[
47     ('num', numeric_transformer, numeric_features),
48     ('cat', categorical_transformer, categorical_features)
49 ])
50
51 # Final pipeline
52 pipeline = Pipeline(steps=[
53     ('preprocessor', preprocessor),
54     ('classifier', RandomForestClassifier())
55 ])
56
57 # Split data
58 X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.2, random_state=42)
59
60 # Train model
61 pipeline.fit(X_train, y_train)

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PS C:\Users\admin> & C:/Users/admin/AppData/Local/Programs/Python/Python311/python.exe "c:/Users/admin/accuracy = 1.py"  
Accuracy Score: 1.0
```