# Install required packages

!pip install -q pandas scikit-learn

# Import necessary libraries

import pandas as pd

from sklearn.ensemble import RandomForestRegressor

from sklearn.model\_selection import train\_test\_split

from google.colab import files

import io

# Upload dataset

print("Upload your CSV file (e.g., Housing.csv)")

uploaded = files.upload()

file\_name = list(uploaded.keys())[0]

df = pd.read\_csv(io.BytesIO(uploaded[file\_name]))

# Encode categorical columns if present

for col in df.select\_dtypes(include='object').columns:

df[col] = df[col].astype('category').cat.codes

# Set target column

target = 'price'

X = df.drop(columns=target)

y = df[target]

# Train/test split

X\_train, X\_test, y\_train, y\_test = train\_test\_split(X, y, test\_size=0.2, random\_state=42)

# Train Random Forest model

model = RandomForestRegressor(random\_state=42)

model.fit(X\_train, y\_train)

# --- Predict with custom input at run time ---

print("\nEnter values for the following features:")

user\_input = []

for col in X.columns:

val = float(input(f"{col}: "))

user\_input.append(val)

# Create DataFrame for prediction

input\_df = pd.DataFrame([user\_input], columns=X.columns)

# Make prediction

prediction = model.predict(input\_df)[0]

print(f"\n✅ Predicted Price: ${prediction:,.2f}")