

```

1 # Import necessary libraries
2 import pandas as pd
3 from sklearn.model_selection import train_test_split
4 from sklearn.ensemble import RandomForestClassifier
5 from sklearn.metrics import accuracy_score, classification_report, confusion_matrix
6
7 # Load the dataset
8 df = pd.read_csv('///content/Mobile_Price_Range.csv')
9
10 # Define the independent variables (features) and the dependent variable (target)
11 features = ['battery_power', 'blue', 'clock_speed', 'dual_sim', 'fc', 'four_g', 'int_memory', 'm_dep', 'mobile_wt', 'n_cores', 'px_h
12 target = 'price_range'
13
14 # Split the data into training and testing sets
15 X = df[features]
16 y = df[target]
17 X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3, random_state=42)
18
19 # Initialize the Random Forest Classifier
20 rf_classifier = RandomForestClassifier(n_estimators=100, random_state=42)
21
22 # Train the model
23 rf_classifier.fit(X_train, y_train)
24
25 # Make predictions
26 y_pred = rf_classifier.predict(X_test)
27
28 # Evaluate the model
29 accuracy = accuracy_score(y_test, y_pred)
30 conf_matrix = confusion_matrix(y_test, y_pred)
31 class_report = classification_report(y_test, y_pred)
32
33 # Print the evaluation metrics
34 print(f'Accuracy: {accuracy}')
35 print('Confusion Matrix:')
36 print(conf_matrix)
37 print('Classification Report:')
38 print(class_report)
39

```



Accuracy: 0.8883333333333333

Confusion Matrix:

```

[[141  10  0  0]
 [ 4 133  9  0]
 [ 0  19 119 10]
 [ 0  0  15 140]]

```

Classification Report:

	precision	recall	f1-score	support
0	0.97	0.93	0.95	151
1	0.82	0.91	0.86	146
2	0.83	0.80	0.82	148
3	0.93	0.90	0.92	155
accuracy			0.89	600
macro avg	0.89	0.89	0.89	600
weighted avg	0.89	0.89	0.89	600