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[1] ✓ 13s

```
import pandas as pd
from sklearn.model_selection import train_test_split
from sklearn.tree import DecisionTreeClassifier
from sklearn.metrics import accuracy_score
from sklearn.preprocessing import LabelEncoder
```

[36] ✓ 11s

```
from google.colab import files
uploaded = files.upload()
```

Choose files SuperMarket Analysis.csv

SuperMarket Analysis.csv(text/csv) - 26051 bytes, last modified: 13/12/2025 - 100% done

Saving SuperMarket Analysis.csv to SuperMarket Analysis.csv

[44] ✓ 0s

```
data = pd.read_csv("SuperMarket Analysis.csv")
```

[45] ✓ 0s

```
label = LabelEncoder()

for col in data.columns:
    if data[col].dtype == "object":
        data[col] = label.fit_transform(data[col])
```

Release notes

popular accelerators. CPU runtime costs were increased slightly to match costs. Enjoy savings on:

- GPUs (A100, L4, T4) up to 13% cost reduction
- TPUs (V28, V5E1, V6E1) up to 10% cost reduction

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  - jupyter-client 6.1.12 -> 7.4.9
  - jupyter-console 6.1.0 -> 6.6.3
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  - kagglehub 0.3.12 -> 0.3.13
  - Markdown 3.8.2 -> 3.9
  - mcp 1.13.1 -> 1.16.0
  - narwhals 2.2.0 -> 2.7.0
  - openai 1.101.0 -> 1.109.1
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Variables Terminal

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[53] ✓ 0s

```
-X = data.drop("city", axis=1)
-y = data["city"]
+X = data.drop("City", axis=1)
+y = data["City"]

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

[48] ✓ 1s

```
from sklearn.ensemble import RandomForestRegressor
from sklearn.metrics import r2_score

# Initialize and train the RandomForestRegressor model
model_rf = RandomForestRegressor(n_estimators=100, random_state=42) # Using 100 trees
model_rf.fit(X_train, y_train)
```

```
RandomForestRegressor
RandomForestRegressor(random_state=42)
```

[49] ✓ 0s

```
# Make predictions on the test set
y_pred_rf = model_rf.predict(X_test)

# Evaluate the model using R2 score
r2_rf = r2_score(y_test, y_pred_rf)
print(f"R2 Score for RandomForestRegressor: {r2_rf}")
```

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[49] ✓ 0s

```
# Make predictions on the test set
y_pred_rf = model_rf.predict(X_test)

# Evaluate the model using R2 score
r2_rf = r2_score(y_test, y_pred_rf)
print(f"R2 Score for RandomForestRegressor: {r2_rf}")
```

```
R2 Score for RandomForestRegressor: -0.19489395258587372
```

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