

```

# Load necessary libraries
import pandas as pd
from sklearn.model_selection import train_test_split

# Load the dataset
file_path = 'Downloads/heart disease.csv'
df = pd.read_csv(file_path, encoding='UTF-8-SIG')

# Display the head of the dataframe to understand its structure
print(df.head())
print(df.info())
# Split the data into training and test sets
X = df.drop('target', axis=1)
y = df['target']

# 80% training and 20% test
X_train, X_test, y_train, y_test = train_test_split(X, y,
test_size=0.2, random_state=42)

print('Training set size:', X_train.shape)
print('Test set size:', X_test.shape)

```

| | age | sex | cp | trestbps | chol | fbs | restecg | thalach | exang | oldpeak |
|---|-----|-----|----|----------|------|-----|---------|---------|-------|---------|
| 0 | 63 | 1 | 3 | 145 | 233 | 1 | 0 | 150 | 0 | 2.3 |
| 1 | 37 | 1 | 2 | 130 | 250 | 0 | 1 | 187 | 0 | 3.5 |
| 2 | 41 | 0 | 1 | 130 | 204 | 0 | 0 | 172 | 0 | 1.4 |
| 3 | 56 | 1 | 1 | 120 | 236 | 0 | 1 | 178 | 0 | 0.8 |
| 4 | 57 | 0 | 0 | 120 | 354 | 0 | 1 | 163 | 1 | 0.6 |

| | ca | thal | target |
|---|----|------|--------|
| 0 | 0 | 1 | 1 |
| 1 | 0 | 2 | 1 |
| 2 | 0 | 2 | 1 |
| 3 | 0 | 2 | 1 |
| 4 | 0 | 2 | 1 |

```

<class 'pandas.core.frame.DataFrame'>
RangeIndex: 303 entries, 0 to 302
Data columns (total 14 columns):
#   Column      Non-Null Count  Dtype
---  -
0   age         303 non-null    int64
1   sex         303 non-null    int64
2   cp          303 non-null    int64

```

| | | | | |
|----|----------|-----|----------|---------|
| 3 | trestbps | 303 | non-null | int64 |
| 4 | chol | 303 | non-null | int64 |
| 5 | fbs | 303 | non-null | int64 |
| 6 | restecg | 303 | non-null | int64 |
| 7 | thalach | 303 | non-null | int64 |
| 8 | exang | 303 | non-null | int64 |
| 9 | oldpeak | 303 | non-null | float64 |
| 10 | slope | 303 | non-null | int64 |
| 11 | ca | 303 | non-null | int64 |
| 12 | thal | 303 | non-null | int64 |
| 13 | target | 303 | non-null | int64 |

dtypes: float64(1), int64(13)

memory usage: 33.3 KB

None

Training set size: (242, 13)

Test set size: (61, 13)