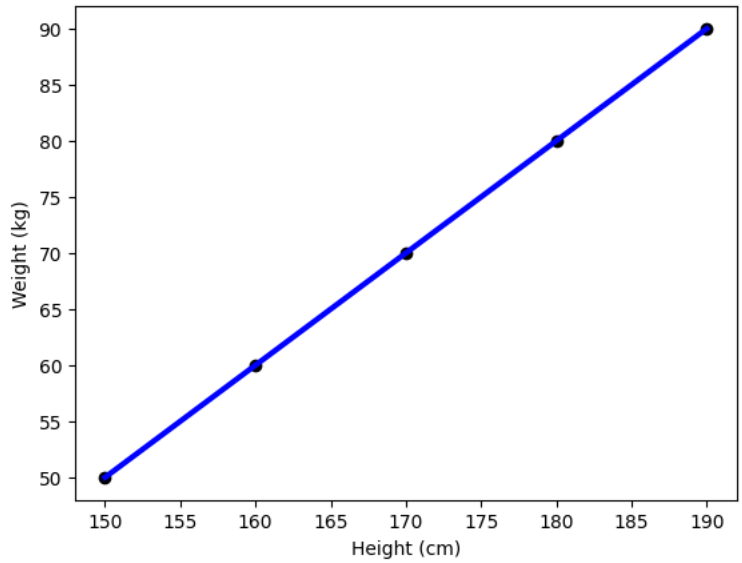
```
from sklearn.datasets import load_iris
from sklearn.tree import DecisionTreeClassifier
from sklearn.model_selection import train_test_split
from sklearn.metrics import accuracy_score
iris = load_iris()
X = iris.data
y = iris.target
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3)
clf = DecisionTreeClassifier()
clf.fit(X_train, y_train)
y_pred = clf.predict(X_test)
accuracy = accuracy_score(y_test, y_pred)
print(f'Accuracy: {accuracy}')
```

```
Accuracy: 0.9777777777777777
```

```
import numpy as np
import matplotlib.pyplot as plt
from sklearn.linear_model import LinearRegression
from sklearn.metrics import mean_squared_error, r2_score
height = np.array([150, 160, 170, 180, 190]).reshape(-1, 1)
weight = np.array([50, 60, 70, 80, 90])
model = LinearRegression()
model.fit(height, weight)
weight_pred = model.predict(height)
print(f"Coefficients: {model.coef_}")
print(f"Intercept: {model.intercept_}")
print(f"Mean squared error: {mean_squared_error(weight, weight_pred)}")
print(f"Coefficient of determination (R^2): {r2_score(weight, weight_pred)}")
plt.scatter(height, weight, color='black')
plt.plot(height, weight_pred, color='blue', linewidth=3)
plt.xlabel('Height (cm)')
plt.ylabel('Weight (kg)')
plt.show()
```

```
Coefficients: [1.]
Intercept: -100.0
Mean squared error: 0.0
Coefficient of determination (R^2): 1.0
```




```
from sklearn.datasets import load_iris
from sklearn.tree import DecisionTreeClassifier
from sklearn.model_selection import train_test_split
from sklearn.metrics import accuracy_score
# Load iris dataset
iris = load_iris()
X = iris.data # features
y = iris.target # labels
# Split the dataset into training and testing sets
X_train, X_test, y_train, y_test = train_test_split(X, y, test_size=0.3)
# Create a Decision Tree Classifier
```

```
clf = DecisionTreeClassifier()
# Train the model
clf.fit(X_train, y_train)
# Make predictions
y_pred = clf.predict(X_test)
# Evaluate the model
accuracy = accuracy_score(y_test, y_pred)
print(f'Accuracy: {accuracy}')
```

```
Accuracy: 0.9555555555555556
```