# Import necessary libraries

import numpy as np

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

from sklearn.linear\_model import LinearRegression

from sklearn.metrics import mean\_squared\_error

# Sample dataset (years of experience vs salary)

data = {

    'Years of Experience': [1, 2, 3, 4, 5, 6, 7, 8, 9, 10],

    'Salary': [50000, 55000, 60000, 65000, 70000, 75000, 80000, 85000, 90000, 95000]

}

# Convert data to numpy arrays

X = np.array(data['Years of Experience']).reshape(-1, 1)

y = np.array(data['Salary'])

# Split data into training and testing sets

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

# Create and train the linear regression model

model = LinearRegression()

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

# Make predictions using the model

predictions = model.predict(X\_test)

# Calculate the Mean Squared Error (MSE)

mse = mean\_squared\_error(y\_test, predictions)

print(f'Mean Squared Error (MSE): {mse}')

# Use the model to make a salary prediction

years\_of\_experience = 7

predicted\_salary = model.predict(np.array([[years\_of\_experience]]))

print(f'Predicted salary for {years\_of\_experience} years of experience: ${predicted\_salary[0]:.2f}')

**OUTPUT:**Predicted salary for 7 years of experience: $80000.00