

```
import pandas as pd

import numpy as np

import matplotlib.pyplot as plt

from sklearn.linear_model import LinearRegression

from sklearn.model_selection import train_test_split

# Load the dataset

df = pd.read_csv('ice_cream_sales.csv')

# Display the first few rows of the dataset

print(df.head())

# Features (independent variable)

X = df[['Temperature']]

# Target (dependent variable)

y = df['Sales']

# Split the 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 a linear regression model

model = LinearRegression()

# Train the model

model.fit(X_train, y_train)
```

```
# Predict on the test set
y_pred = model.predict(X_test)

# Calculate the R-squared value
r_squared = model.score(X_test, y_test)
print(f'R-squared: {r_squared:.2f}')

# Plot all data points and the regression line
plt.scatter(X, y, color='blue', label='All Data Points') # Plot all data points
plt.plot(X_test, y_pred, color='red', label='Regression Line') # Plot the regression line
plt.xlabel('Temperature')
plt.ylabel('Sales')
plt.title('Ice Cream Sales vs Temperature')
plt.legend()
plt.show()

Predict_sales = model.predict([[33]])

print(Predict_sales)
```