







## Linear Regression

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# Import necessary libraries

import numpy as np

import pandas as pd

from sklearn.model_selection import train_test_split

from sklearn.linear_model import LinearRegression

from sklearn.metrics import mean_squared_error

# Load the dataset

# Replace 'your_dataset.csv' with the path to your file

# Ensure that your dataset has continuous numeric features and target variable

data = pd.read_csv('your_dataset.csv')

# Define the features (X) and target (y) variables

# Replace 'target_column' with the name of your target variable

X = data.drop(columns=['target_column'])

y = data['target_column']

# Split the dataset into training and test sets

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

# Initialize the Linear Regression model

model = LinearRegression()

# Fit the model to the training data

model.fit(X_train, y_train)

# Predict on the test data

y_pred = model.predict(X_test)

# Calculate Mean Squared Error (MSE) and Root Mean Squared Error (RMSE)

mse = mean_squared_error(y_test, y_pred)

rmse = np.sqrt(mse)

# Print the evaluation metrics
```

