Project: Scrape2Predict - E-Commerce Trends

Problem Statement:

In the competitive e-commerce market, predicting the prices of products is a complex task influenced by various factors such as product ratings, reviews, and brand reputation. Many consumers and businesses lack effective tools to predict prices accurately based on these factors. The goal of this project is to scrape e-commerce product data and build a model that predicts product prices based on ratings, helping to understand price trends and making it easier for businesses to set competitive prices.

Solution:

To tackle the problem, we employed a machine learning model to predict product prices using the rating as a feature. The process involved:

- **Data Collection**: Web scraping was used to extract data such as product ratings and prices from e-commerce websites.
- **Data Preprocessing**: The scraped data was cleaned and processed to remove duplicates and handle missing values.
- **Modeling**: A Linear Regression model was built to predict prices based on product ratings.
- **Evaluation**: The model's performance was assessed using metrics like Mean Squared Error (MSE) and visualized with a regression line showing the relationship between ratings and prices.

Graph: Linear Regression - Rating vs Price