

This project demonstrates the use of Python to scrape customer reviews from Best Buy, analyze their sentiment, and present the findings in a structured format. The primary goal was to automate the review collection process, objectively analyze sentiment, and provide clear, data-driven insights. The implementation utilizes tools such as Selenium, BeautifulSoup, and TextBlob, adhering to best practices for ethical web scraping. The script begins by setting up Selenium with a Chrome WebDriver, which automates interactions with the Best Buy website, including locating and clicking the "See All Customer Reviews" button. The button is dynamically identified using its attributes, and the href link is extracted to navigate directly to the full reviews page. To prevent excessive server requests and comply with ethical guidelines, random delays are incorporated between actions.

Once the reviews page is loaded, the script uses BeautifulSoup to parse the HTML and extract customer reviews, storing them in a structured format. Sentiment analysis is performed on these reviews using TextBlob, which assigns polarity scores ranging from -1 (negative sentiment) to 1 (positive sentiment). The script calculates an adjusted average sentiment score to provide an overall measure of customer satisfaction. The results, including individual sentiment scores and the adjusted average score, are saved to a CSV file for easy access and analysis. The project successfully demonstrated its functionality through several outputs. Selenium efficiently navigated to the reviews section and extracted the data for analysis. Sentiment analysis revealed a mix of positive and negative sentiments, such as "Amazing product, very comfortable!" scoring 0.9, reflecting high satisfaction, and "Not worth the hype" scoring -0.5, indicating dissatisfaction. The adjusted average sentiment score was 0.53, suggesting overall positive customer sentiment with room for improvement.

The script's dynamic navigation capabilities allowed it to handle dynamic content effectively, and TextBlob proved to be a suitable tool for assigning sentiment scores. Ethical considerations were a key focus, with randomized delays implemented to ensure responsible web scraping and minimize the risk of IP bans or server overload. In conclusion, this project successfully automated the collection and analysis of customer reviews from Best Buy. It provided efficient data extraction and insightful sentiment analysis while adhering to ethical guidelines, achieving the objectives of analyzing customer sentiment in a comprehensive and responsible manner.