**Analysis of TripAdvisor Data with the help of Selenium and Python**

A Practical Tutorial on Scraping and Analyzing TripAdvisor Data using Selenium and Python

A picture containing diagram, text, screenshot, design

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*Photo from* [*https://scrapfly.io/blog/how-to-scrape-tripadvisor*](https://scrapfly.io/blog/how-to-scrape-tripadvisor)

Web scraping is a powerful method for extracting data from websites. TripAdvisor, with its extensive traveler reviews and ratings, offers valuable insights into customer preferences. However, manual extraction and analysis from TripAdvisor can be time-consuming.

This tutorial focuses on using automation and programming with Python and Selenium, a web scraping tool, to efficiently scrape and analyze TripAdvisor data. It also covers the use of Python libraries like Pandas and Matplotlib to clean, structure, and visualize the scraped data. Additionally, the tutorial explains how to perform sentiment analysis on the collected reviews, providing further insights into customer opinions and preferences.

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**Installing and setting up Selenium**

To get started, you need to install the Selenium library. Open your command prompt or terminal and run the following command:



Selenium requires a WebDriver to interact with web browsers. The WebDriver acts as a bridge between your Python code and the browser. The most commonly used WebDriver is for Chrome, called ChromeDriver. If you don’t have the driver installed on your computer, you can download it from [here](https://sites.google.com/a/chromium.org/chromedriver/downloads).

Then, you can use the following command in your python script so that Selenium can locate it:



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**TripAdvisor dataset – What do we need to extract and how??**

In this tutorial, you will learn how to scrape data for all the reviews of 'Coffee & Tea' and 'Bars & Pubs' establishments in Thessaloniki from the TripAdvisor website. For each review, you will extract the following data:

1. Business Reviewed: The name of the establishment that was reviewed.
2. Reviewer Username: The username of the reviewer who left the review.
3. Review Date: The date when the review was posted.
4. Visit Date: The date of the reviewer's visit to the establishment.
5. Review Title: The title or heading of the review.
6. Review Text: The main content of the review.
7. Review Rating: The rating given by the reviewer to the establishment.

To extract the data, we'll be using Python and the Selenium library. Make sure you have Python and Selenium installed and the appropriate WebDriver for your browser.

You will use this [url](https://www.tripadvisor.com/Restaurants-g189473-Thessaloniki_Thessaloniki_Region_Central_Macedonia.html) to extract the information needed. To verify that the setup is working correctly, you can execute the following script:

A close-up of a computer screen

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Then, the actions that should take place are the following:

1. Click the "show more" element in the page.
2. Find and click checkboxes for "Coffee & Tea," "Bars & Pubs," and unclick "Restaurants"
3. Find and iterate over all business elements on the current page.
4. Open the business page in a new window or tab.
5. Iterate over all pages of reviews for the current business and extract review information mentioned above. Click the "show more" elements in the page to retrieve the extended review text.
6. Close the current window and switch back to the previous one.
7. Repeat steps 4-6 for the next business element.
8. Find and click the "Next" page link if available.

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**TripAdvisor dataset – Web scraping process**

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**Data Preprocessing**

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**Data – Final Format**

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**Data Analysis**

Below, we have produced some interesting visualizations to get a better understanding of the data:

***Question 1****:*

***Question 2****:*

***Question 3****:*

***Question 4****:*

***Question 5****:*

***Question 6****:*

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**Insightful conclusions**

*I hope you find this tutorial useful. Please let us know if you have any thoughts or concerns.*

*Thanks for reading!*