Web/data scrapping

Web scraping uses intelligence automation methods to get thousands or even millions of data sets in a smaller amount of time.

There are various tools and programming languages that can be used for web scraping, such as Python, BeautifulSoup, and Scrapy.

However, it's important to note that web scraping can be a legally and ethically sensitive area. Some websites may have terms of service or privacy policies that prohibit or restrict web scraping, and scraping data that is not publicly available or that is protected by copyright or other legal protections may be illegal. Therefore, it's important to exercise caution and follow best practices when engaging in web scraping.

There are many different ways to perform web scraping to obtain data from websites. These include using online services, particular API's or even creating your code for web scraping from scratch.

Web scraping requires two parts, namely the **crawler** and the **scraper**. The crawler is an artificial intelligence algorithm that browses the web to search for the particular data required by following the links across the internet. The scraper, on the other hand, is a specific tool created to extract data from the website. The design of the scraper can vary greatly according to the complexity and scope of the project so that it can quickly and accurately extract the data.

Web Scrapers can be divided on the basis of many different criteria, including Self-built or Pre-built Web Scrapers, Browser extension or Software Web Scrapers, and Cloud or Local Web Scrapers.

You can have **Self-built Web Scrapers** but that requires advanced knowledge of programming. And if you want more features in your Web Scraper, then you need even more knowledge. On the other hand, pre-built **Web Scrapers** are previously created scrapers that you can download and run easily. These also have more advanced options that you can customize.
Browser extensions Web Scrapers are extensions that can be added to your browser. These are easy to run as they are integrated with your browser, but at the same time, they are also limited because of this. Any advanced features that are outside the scope of your browser are impossible to run on Browser extension Web Scrapers. But **Software Web Scrapers** don't have these limitations as they can be downloaded and installed on your computer. These are more complex than Browser web scrapers, but they also have advanced features that are not limited by the scope of your browser.
Cloud Web Scrapers run on the cloud, which is an off-site server mostly provided by the company that you buy the scraper from. These allow your computer to focus on other tasks as the computer resources are not required to scrape data from websites. **Local Web Scrapers**, on the other hand, run on your computer using local resources. So, if the Web scrapers require

more CPU or RAM, then your computer will become slow and not be able to perform other tasks.

What is Web Scraping used for?

1. Price Monitoring
Web Scraping can be used by companies to scrap the product data for their products and competing products as well to see how it impacts their pricing strategies. Companies can use this data to fix the optimal pricing for their products so that they can obtain maximum revenue.

2. Market Research
Web scraping can be used for market research by companies. High-quality web scraped data obtained in large volumes can be very helpful for companies in analyzing consumer trends and understanding which direction the company should move in the future.

3. News Monitoring
Web scraping news sites can provide detailed reports on the current news to a company. This is even more essential for companies that are frequently in the news or that depend on daily news for their day-to-day functioning. After all, news reports can make or break a company in a single day!

4. Sentiment Analysis
If companies want to understand the general sentiment for their products among their consumers, then Sentiment Analysis is a must. Companies can use web scraping to collect data from social media websites such as Facebook and Twitter as to what the general sentiment about their products is. This will help them in creating products that people desire and moving ahead of their competition.

5. Email Marketing
Companies can also use Web scraping for email marketing. They can collect Email ID’s from various sites using web scraping and then send bulk promotional and marketing Emails to all the people owning these Email ID’s.