

Online Shopping Comparison on E-Commerce Sites Using Web Scrapping Approach

Aravind Kumar M, Muthu Selvam M, Logeshkanna V
B.E CSE UG Students
(SRM Valliammai Engineering College, Kattankalathur)

ABSTRACT

Price comparison websites are becoming more popular since the e-commerce revolution. E-commerce websites have become one of the most important and highly demandable sources for buying any kinds of products. To overcome the problems faced by the online shoppers or customers multiple and different shopping comparison sites are developed nowadays. Our proposed system is based on the user's expectations and their reviews. The consumer can clearly able to know the exact price of the product searched in the various e-commerce sites. The proposed system can be a simple and effective way to know the exact price and offers provided by the various e-commerce sites.

Keyword: - data mining, e-commerce, online shopping, web mining, django

I Introduction

In the most competitive world, e-commerce plays a vital role in the online shoppers or the online customers. With the increase in the number of user's in the online shopping there is a dramatic increase in the online products too. Now e-commerce serves for the customers and attracts many products through online. Due to the increase in the online shoppers the e-commerce sites are increased frequently. These e-commerce sites confuse the online customers to choose to buy single products. The proposed system provides the simple solution for the users who are in dilemma. The proposed solution helps online users to grab the best deal for the products from various e-commerce sites. This system will save the user's time and money.

II EXISTING SYSTEM

The existing systems are developed by various methods such as:

1) Integrating API's

Integrating API refers to how to or more applications can be connected to each other via their API's to perform some operations as a joint function.

2) Web Scrapping

Web Scrapping is a technique employed to extract large amounts of data from websites whereby the data is extracted and saved to a local file in your computer or to a database in table (spreadsheet) format.

3) Crowd Sourcing

Crowdsourcing is a sourcing model in which a person obtains information and services, including ideas, from a huge, relatively open and often drastically-evolving group of internet users.

4) On demand quoting

On demand quoting refers to requesting the particular websites to provide their data.

5) Adding Data's manually

It includes adding the data's manually by typing the various data's in the rows or columns.

III PROPOSED SYSTEM

The proposed system is developed by the following technologies such as:

1) Web Crawler:

The first thing required is to gather huge volumes of data from multiple e-commerce sites. It is highly not possible for the collection of data manually. So the best method is creation of web crawler that will float through the e-commerce sites to fetch the URL. The fetched URL's are then sent to the scrapper for scrapping process.

2) Web Scrapper:

Web Scrapping is used to extract HTML data from URL's from a various websites. The data's are scrapped from the various websites to show the price comparison for the searched products.

3) MySQL Database

MySQL is an open source Relational Database Management System (RDBMS) that uses Structured Query Language (SQL). SQL is the most popular language for adding, accessing and managing content in a database. The application is used for a wide range of purposes, including data warehousing, e-commerce, and logging applications. In this system MySQL is used to store the user's information.

4) Django Web Framework:

Django is a python web framework. Comparison of E-commerce products using web mining is product and price comparison website which is created using Django framework. Products that are been requested by user are queried in MySQL database. Django is a collection of Python libs allowing you to quickly and efficiently create a quality Web application, and is suitable for both frontend and backend.

IV SYSTEM ARCHITECTURE

Figure 1 describes system architecture and the working procedure of the proposed system in detail. The front end system provides a graphical user interface (GUI) in the form of website where client can interact with the system and the backend consists of web crawling and scrapping techniques to extract the information about the products from different e-commerce websites. The extracted information about the products from the e-commerce sites are stored in MySQL database. Client requests for the products they want to buy from main website and the product is being searched from the local database. Products information is displayed on main web page of the website so that the consumer or user can see prices of required product at one place present on different E-commerce sites. User can add products of same the category to compare with other products. User may also analyze the product for its features and specifications.

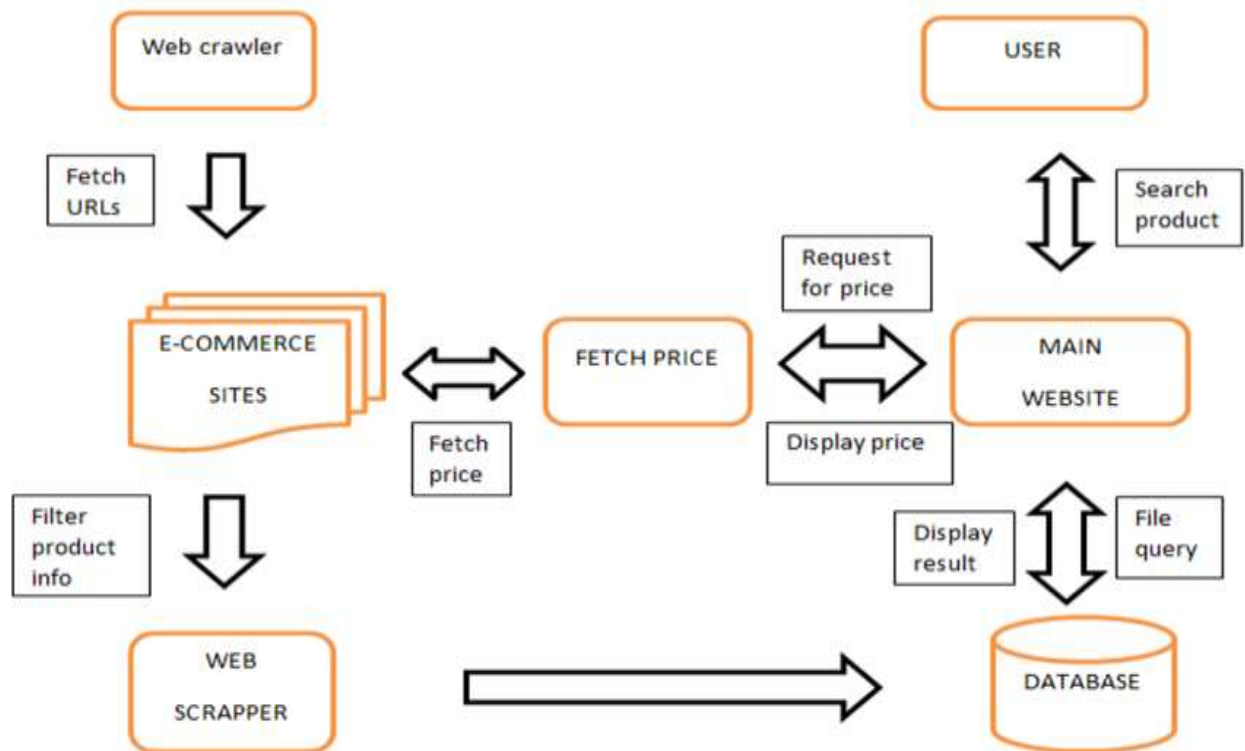


Figure 1 SYSTEM ARCHITECTURE

IV IMPLEMENTATION

Working of the proposed system is as follows: The web crawlers and web scrapping are the two important techniques that are used to design the backend of the system. Web scrapping is used to extract information and display it on destination terminal. Web Crawlers are essential to navigate to the destination terminal before the scrapping process starts. The scrapping process starts once the crawler matches with the correct page with keyword searched. The web crawler checks for frequent updates and grasps the information from the various websites. The crawler carries the information of the updates provided and makes sufficient modification in the local database. Web scrapping consists of two processes: 1) to load the desired webpage to the destination and 2) to parse HTML information of the page. In this system Scrapping is done using python which provides efficient set of libraries to manage these tasks. "Requests" is used to load the URL and "Beautiful soup" libraries are used to parse the web page. The data's are stored in the MySQL database after scrapping the information of the products from various e-commerce sites. Using python library functions the data is scrapped and stored in database. The front end consists of Main website of the proposed system. The client searches for the required product in search of various brands of products. The website is designed using Django framework which is written in python. The output is displayed on the main website based on the products the client searches. The client can then compare prices of products that are available on e-commerce websites. A soon as client selects on best deal according to them; they can able to know the exact price of the products. Another feature provided is, clients or user can compare products that belong to same category so as to differentiate specifications and features and choose accordingly.

V RESULT

The price comparison for various products of multiple e-commerce sites are displayed in a single place. The user can able to analyze and compare the features of various products with one another and come to an exact conclusion. The web mining plays an essential role in fetching the exact information about the searched products using the web crawlers and the web scrapper to provide the exact information of the products from the various e-commerce sites.

VI CONCLUSION

This proposed system is a web app system which provides the user or the online shoppers for the price comparison for the various products that are available in the various e-commerce sites. It provides the decision making ability for the client or user to buy a searched product from a various e-commerce sites. The proposed system highlights the users or the online shoppers to buy the cheapest products from the best deal provided from various e-commerce sites and analyze the features of the products searched. The system has the ability to compare the features of the various products with one another. The system will surely save buyers efforts and valuable time. Finally, this system will help the online shoppers to provide the exact price of the products in various e-commerce sites and to know the best deal from the leading sites.

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