WWW.IJRPR.COM

International Journal of Research Publication and Reviews

Journal homepage: www.ijrpr.com ISSN 2582-7421

E- commerce price comparison using web crawling

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ABSTRACT :

E-commerce is the strongest and fastest- growing platform in the modern world. Consumers tend to occasionally purchase goods via websites. Currently, it is possible to compare prices for the same product across multiple websites. However, our suggested system goes one step further and acts as a smart web spider for all e-commerce websites, searching the entire website to identify the most affordable yet high-quality products in real time. Additionally, this guarantees the unification of all e-commerce websites into a single, meticulously filtered system. It can also operate as an active agent in the system and provide insightful recommendations based on the needs of the user..

KEYWORDS-WebSearch Engine,Web Crawlers,Online Comparison,Price Comparison,E-Commerce Web Site.

I.INTRODUCTION

The study found that fruit quality and value played the most important role in consumer confidence. applied Least Squares analysis to examine the mediating effects of corporate social responsibility (CSR),product identity and corporate reputation on consumers' intention to purchase organic vegetables. The results showed that product identity contributes to consumers' intention to buy organic vegetables. According to questionnaires and structural equation modeling data analysis of dried fruit-loving consumers, the results showed that from a socio- demographic point of view[1].

Due to the explosion of orders and the imbalance between supply and demand, intervened supply chains have come to a near standstill, leading to inefficie marketing and distribution and an unsatisfactory shopping experience. As a result, this situation discourages consumers from shopping online and causes constant anxiety and complaints. That's why it's important to understand consumer preferences when buying farm fresh produce online[2].

Comfort level created a logit regression model and found that from the point of view of business, the effects of affordable prices, logistics quality and logistics speed are significantly related to \consumer satisfaction. In addition, if merchants frequently change prices (both increasing and decreasing prices), this will negatively affect consumer satisfaction. After the content of an agricultural product was viewed by Snownlp's keyword extraction, weighting and sentiment analysis, the study found that consumers care more about logistics, packaging, taste, quality, delivery, size, price, service. after-sales and taste functions offered by fresh e- commerce providers, but relatively less satisfied with customer service and delivery[3].

"OLS+ Robust Standard Error" stepwise regression to examine total number of reviews, review length, and number of bad reviews for lamb using review visualization. They suggested that companies should take reasonable measures to encourage consumers to write reviews with more pictures and words. used question naires and multiple response analysis to show that higher income, higher education and younger consumers are more likely to purchase farm fresh products online, especially when purchasing products from MISS FRESHand Boxed Horse Fresh platforms[4].

The quality of logistics services is directly related to the shopping experience of female customers and emphasized that the quality of logistics services must be improved for fresh online shopping. In conclusion, it can be concluded that the shopping experience of females. clients need to be improved. consumer preference for choosing fresh agricultural products is currently one of the hottest research topics. However, in the study of agricultural products, most of them focused on research objects such as fruits or meat, while the study of fresh vegetables, which require high preservation and appearance, is still a big gap[5].

LITERATURE SURVEY :

According to Josep Domenech.et al.,2019 The aim of this work is to propose an intelligent system that automatically monitors the commitment of companies to e-commerce by analyzing online data obtained from company websites. The design of the proposed system combines web-based content mining and scraping techniques with Big Data learning methods. Companies' websites are scraped to remove more than 150 features related to e-commerce implementation[6].

According to Salvatore Carta.et al.,2018 E-commerce is becoming an increasingly important means of selling goods to the mass market. This has led to a growing interest in algorithms and techniques that can predict the future prices of products, as they allow us to define intelligent systems that can improve the quality of life by recommending cheaper products and services. The combined use of time series, reputation and sentiment analysis is clearly an important approach to this research topic[7].

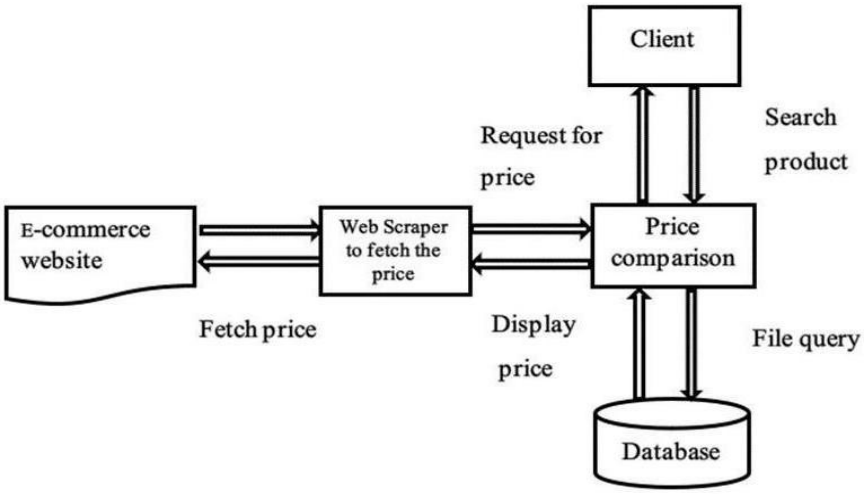
According to Mohamed Zaim Shahrel.et al.,2021 The world has been shocked by the outbreak of COVID-19. The World Health Organization (WHO) has urged people to stay indoors to avoid the risk of infection. Consequently, more and more people started shopping online, which greatly increased the number of e- commerce users. After some time, users noticed that some irresponsible online merchants deceive customers by raising the prices of products before and during the sale, and then applying large discounts(8)...

According to Vinay Kumar.et al.,2022 Web scraping is a way of extracting large amounts of information from websites and processing that information as needed, such as storing it in a local file on your computer or in a database in tabular or tabular format. With the advancement of technology, the demand for online shopping sites has increased, making online shopping an option for everyone as it is easy and saves time(9)..

According to Vikash Kumar Mishra.et al.,2023 Some companies, such as Twitter and others, provide an application programming interface (API) to retrieve data. If the API is not available, we have to look for other websites to get the data in a structured format. The main way to get information from a web page is web capture. The basic idea behind web capture is to collect data from a website and convert it into a format that can be used for analysis[10].

ARCHITECTURE DIAGRAM :

A structure diagram is a visual illustration of the excessive-level structure of a system, showcasing key components, relationships, and the way they interact to achieve the gadget's goals. It is a crucial tool in system layout and software engineering, aiding in the conversation and know-how of the overall device architecture.



Explanation:

- **User Interface (UI):** This is where users interact with the system. They input their desired product or category for price comparison and view the results.
- **Frontend Application**: The frontend application is responsible for rendering the user interface and handling user interactions. It communicates with the backend to fetch and display data.
- **Backend Application**: The backend application serves as the intermediarybetween the frontend and the various components responsible for web crawling and data processing.
- **Web Crawling Module**: This component is responsible for crawling e-commerce websites to extract product information such as prices, descriptions, and availability. It uses web crawling techniques and tools like Scrapy or Beautiful Soul to navigate websites and extract relevant data.
- **Data Processing Module**: Once the data is crawled from various e-commerce websites, it needs to be processed and normalized for comparison. This module cleans, structures, and stores the data in a database for easy retrieval and analysis.
- **Database:** The database stores all the crawled and processed data. It may use a relational database management system (RDBMS) like MySQL or a NoSQL database like MongoDB, depending on the requirements of the project.
- **Price Comparison Algorithm**: This component compares the prices of the same or similar products across different e-commerce websites. It may take intoaccount factors like shipping costs, discounts, and taxes to provide accuratecomparisons.

EXISTING SYSTEM :

The majority of products in today's real- time world are purchased online. Products abound on the internet, and there are well- known websites that are regularly visited by users. The actual issue, though, comes when the products' prices diverge. There isundoubtedly a little margin of error in a product's price over time; not every website offers the same price for the same

item. Customers who just visit one websiteand don't browse other websites are sometimes duped.

PROPOSED SYSTEM :

The price comparison website helps customers locate the best deal for their desired product. It evaluates product prices in real time, making it simpler for users to compare and buy from websites that provide the lowest prices. They will also be aware of websites that are appropriate for the product, which helps them save a lot of money.

RESULTS & DISCUSSION :

FIG.1HOME PAGE

HOME PAGE: The Home Page serves as the gateway to the website, offering users a snapshot of what to expect. It features a clean layout with intuitive navigation options, ensuring that visitors can easily find what they're looking for. Highlighted sections may include new arrivals, popular products, and special promotions, enticing users to explore further.

FIG.2 SEARCH PAGE

SEARCH PAGE: The Search Page is designed to streamline the user's search experience. It features a search bar prominently at the center, accompanied by filters and sorting options to narrow down results. Thumbnails of relevant products or content are displayed in an organized grid format, allowing users to quickly scan and select the most suitable options based on their query.

FIG.3PRODUCT DETAILS

PRODUCT DETAILS: The Product Details page provides comprehensive information about a specific item. It includes high-resolution images, detailed descriptions, specifications, and customer reviews. Additional features such as product videos, sizing charts, and related products may also be included to enhance the user's understanding and facilitate informed purchase decisions.

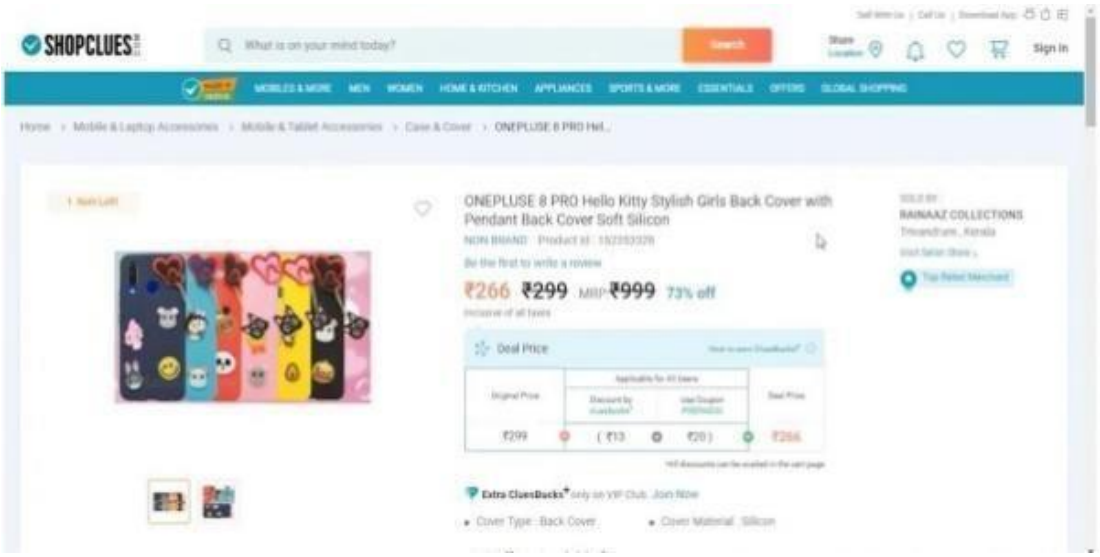


FIG.4 PRICE AND OTHER DETAILS PRICE AND OTHER DETAILS:

This section displays the pricing information for the selected product along with any available discounts, promotions, and shipping options. It also provides details on product availability, estimated delivery dates, and return policies, ensuring transparency and building trust with potential buyers.

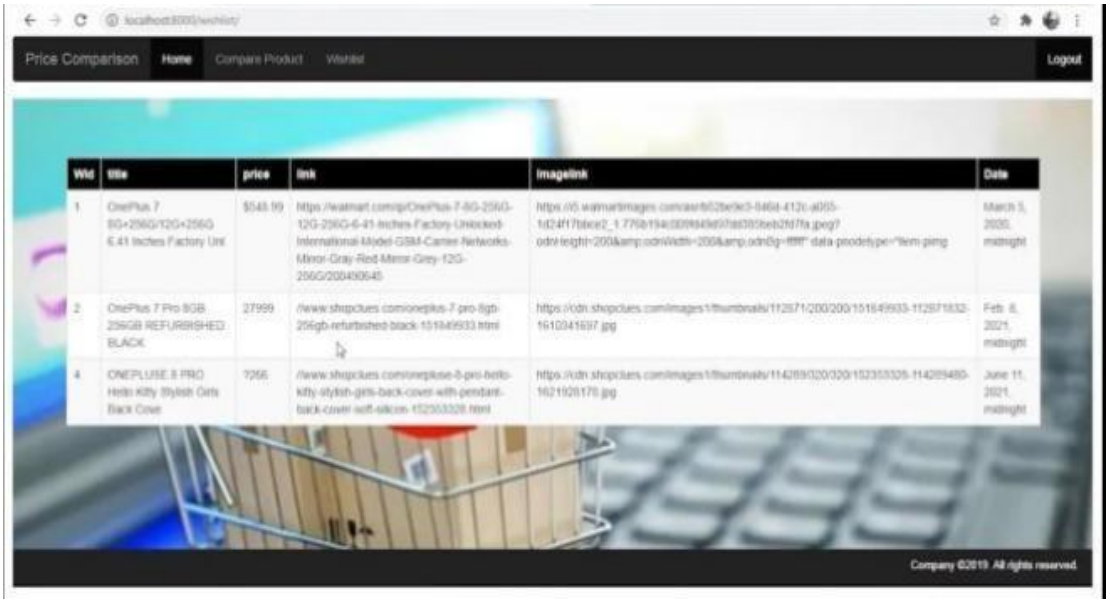


FIG.5 PRODUCT DESCRIPTION PRODUCT DESCRIPTION:

The Product Description offers a detailed overview of the item's features, benefits, and uses. It is written in an engaging and informative manner, highlighting keyselling points and addressing potential customer questions or concerns. Rich multimedia elements such as images, infographics, and testimonials may beincorporated to enhance the presentationand appeal to the target audience.

Visit Site Amazon

FIG.6 AMAZON RESULT

AMAZON RESULT: The Amazon Result page showcases a list of products relevant to the user's search query, ranked based on relevance, customer ratings, and popularity. Each listing includes a product image, title, price, and brief description, with options to view additional details, compare products, and read reviews. Sponsored listings and recommended **products may also be displayed to encourage further exploration and increase sales opportunities.**

Visit Site Flip kart

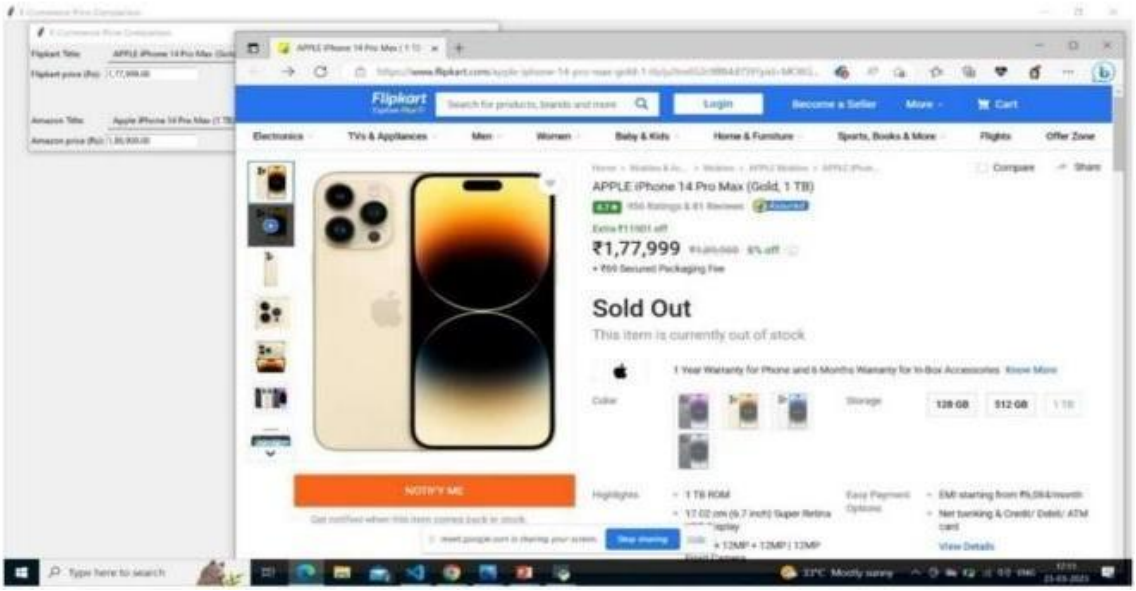


FIG.7FLIPKART DETAILS

FLIPKART DETAILS: The Flipkart Details page offers a similar layout to other e-commerce platforms, featuring a comprehensive overview of the product along with user reviews, ratings, and sellerinformation. It may also include specialoffers, bundle deals, and related items to encourage upselling and cross-selling. The user-friendly interface and secure payment options make it easy for customers to complete their purchase with confidence.

V.CONCLUSION :

In conclusion, developing an e-commerce price comparison tool through web crawling requires strategic planning and meticulous execution.
Utilizing frameworks like Scrapy in Python facilitates the process of gathering data from various e-commerce websites. It's crucial to focus on user-friendly interfaces, accurate data processing, and efficient price comparison algorithms. Additionally, maintaining regular updates and adhering to ethical practices are essential for ensuring the tool's reliability and user satisfaction.

REFERENCE :

1. Vikash Kumar Mishra, Bosco Paul Alapatt, Aaditya Aggarwal, Divya Khemani, 2023, E-Commerce Data Analytics Using Web Scraping, Mathematics and Computer Science Volume 1, 425-434, 2023.
2. Vinay Kumar Sriperambuduri, V Sireesha, Nagaratna P Hegde , 2022, A Best Price Web Scraping Application for E-commerce Websites International Conference on Information and Management Engineering, 559-566, 2022.
3. Mohamed Zaim Shahrel, Sofianita Mutalib, Shuzlina Abdul-Rahman 2021, PriceCop-Price Monitor and Prediction Using Linear Regression and LSVM-ABC Methods for E-commerce Platform,International Journal of Information Engineering & Electronic Business 13 (1), 2021.
4. Zhang Huanyu, Luo Jiahao, Gong Jiamin, Fan Yuchen and Chen Jiaxin. Investigating online shopping habits of fresh agricultural consumers[J]. Anhui Agricultural Science Bulletin Journal, 2021; 27(2): 135–137.
5. Magdalini Soureli, Constantine Lymperopoulos and Ioannis E. Chaniotakis. 2020, 15(2): 152–163; An exploratory model of consumer purchase intentions for own-brand frozenvegetables. Journal of Food Products Marketing[J].
6. Li Yuechun. Online reviews as a lens through which to view consumer satisfaction with fresh fruit[J]. Heilongjiang Bayi Agricultural University Journal, 32(05) (2020): 108–113.
7. Yi Yichen, Shi Yanxin, 2020, Research on improving the logistics service quality of fresh online stores in a normal epidemic situation[J].
8. Desamparados Blazquez, Josep Domenech, Jose A Gil, Ana Pont 2019, Monitoring e-commerce adoption from online data,Knowledge and Information Systems 60 (1), 227-245, 2019.
9. Determinants of Consumer Purchase Intentions for Organic Vegetables: Some Insights from Malaysia, Norazah Mohd Suki [J]. Journal of Food Marketing, 2018,24(4), 392–412.
10. Salvatore Carta, Andrea Medda, Alessio Pili, Diego Reforgiato Recupero, Roberto Saia 2018, Forecasting e- commerce products prices by combining an autoregressive integrated moving average (ARIMA) model and google trends data,Future Internet 11 (1), 5, 2018.