

# PRICE COMPARISON WEBSITE

Rachana Jaiswal

Department of Computer Science and Engineering, College of Engineering & Technology, Akola

## Abstract

*Web mining is a data mining application that helps extract information from a given web service. E-commerce websites today have become one of the most important sources for purchasing all kinds of products. Many strategies have been developed to analyze customer behavior to attract more business and public participation. With so many ecommerce websites available it is difficult for users to choose the best product they want among these websites. Comparison of E-commerce products allows users to compare prices and find the product they want at a lower price. Users can also select multiple products of the same category to compare its features. Finding the best deals on ecommerce websites for webmasters uses web crawling methods to download detailed information. In this way, the proposed program aims to provide a solution for online customers to buy products at a better price and save their valuable time, effort and money. Electric commerce contains online product purchases/sales based on the browser/server system. This paper focuses on the benefits of integrated marketing as a tool to increase business profitability. This paper is an attempt to compare prices for products from many E-commerce sites and show a limited number of products from all available e-commerce sites. So as to help buyers to buy products from online stores like Flipkart, snapdeal, etc. anywhere online using an android device. It also solves the problem of internal memory of the android devices.*

## Keywords:

*Web mining, E-commerce, World Wide Web*

## 1. INTRODUCTION

This product price comparison website will help to compare prices from various e-commerce websites. This pricing site is very useful for regular online shoppers to check prices from different online stores in one place, where the product is at an affordable price. Any two classes of static websites are analyzed for pricing information. To find pricing information, the system visits the website based on

user searches and downloads the html search page for that. A specific website when compares prices from both websites are returned is displayed on our website in the form of price comparisons. The proposed solution helps online users find the best transactions for their product across multiple ecommerce websites on a single web interface. This will save users time, money and efforts to find prices for the same product on different ecommerce websites. The proposed system uses web scraping process to extract data from ecommerce web pages and web search to product links. This will also allow users to analyze prices and select products from the same category to compare its features. E-commerce usually refers to global business trading on an online environment browser / server mode, customer acquisition in online shopping, online transactions between vendors and electronic payments and business transactions. E-commerce has been into boom over the past few years. In order to be successful, an e-commerce website needs to be attractive and keep updating, as extended customer relationships will lead to increased profits. An E-commerce website is one type of web application where many web systems provides transaction service and reliable storage functions. Transaction involves use of multiple database functions as well other third-party interactions. Most working people do not have time to buy groceries at home. As consumers, they have the right to choose which store offers the best price certain products they are interested in. However, assessing the value given in shopping websites each time is time consuming and because of the limited time they have, they can't compare prices and end up buying a particular product at a higher price. Normal attitude for customers today, they see Tesco as the most affordable product provider. Yet, the fact is, not all Tesco products are offered cheaply. Occasionally, the small local shop offers cheaper prices. Another problem that occurs on the seller / seller side, to promote their products or if there is a continuous promotion, they will usually print and distribute it to customers. It is very expensive as they have to produce many copies and if there is an error in the printed page, they should correct every copy, time consuming, so that customers will not get confused. Also, catalogs or pamphlets provided to customers often end up being discarded carelessly and leads to pollution. So, by having a catalog published online, vendors will be able to save cost and support a green campaign as well.

## 2. BACKGROUND

Every buyer looks for the best deals and discounts before buying any product. Today before buying anything buyers do an online survey of online products. One of the major factors that lead to the purchase of any product is cost or price. Buyers often compare prices before purchasing any product. But since it is very difficult to visit each website to compare prices, there is need of automated solution for this process. The price comparison website proposed here collects information on product prices from various websites and presents them to users. Users can then choose to purchase from the best options available. Even Ecommerce marketers can use this pricing website to learn from their competitors and develop new strategies accordingly to attract new customers and stay ahead of their competitors. This product price comparison website will help to compare prices from various e-commerce websites. This pricing site is very useful for regular online shoppers to check prices from different online stores in one place, where the product is at an affordable price, and any two classes of static websites are analyzed for pricing information. To find pricing information, the system visits the website based on user searches and downloads the html search page for that.

### Methodology

The diagram describes the structure of the system and its detailed operating procedure. The front-end system provides a graphical user interface (GUI) in the form of a website where customers interact with the system while the backend contains web crawling and extraction techniques to extract product information from various e-commerce websites. Extracted information for ecommerce products is stored on the MongoDB website. Client requests for the required product on the main website and query are displayed on the local website. Product Information is displayed on the main web page. The client can see the required product prices in one available location for different E-commerce firms.

Another feature is provided on the website that analyzes products. The user can add similar products to the category for comparison. The user can also analyze the product with its specifications. The backend system contains two important web crawling and web scrapping techniques. Web scrapping is a method used to extract information in a human readable format and display it in a repository. But before dismissing the output, Web Crawlers are responsible for navigating to the point where the searcher arrives at the right page and aligns the products, the removal process

begins. Crawler periodically downloads information from commerce websites to check for updates. When updates are found the searchers carry those updates and make the necessary changes to the site. Web scrapping actually consists of two functions: first is loading the desired web page and second is analyzing the HTML details of the page to get the targeted information. "Applications" are used to upload URL and "Beautiful soup" library is used for forwarding web pages. After extracting product information from various e-commerce websites, the data is stored on the MongoDB website. Using pymongo communication data is deleted and stored on the website. The front page contains the Main website. The client searches for the required product in the search bar and the query is directed to a local site called MongoDB. The website is built using Django web framework written in python.

The connection is made between the Python web framework and MongoDB using Mongoengine which is a python-document-mapper that works with MongoDB. Required results are retrieved and displayed on the Main website. The client can then compare the prices of products available on e-commerce websites. As soon as the client chooses the best purchase according to it, it will be redirected to the original e-commerce website. Another feature provided is that, Customers can compare products in the same category to classify information and choose accordingly.

## 3. COMPONENTS USED IN PROPOSED SYSTEM

**3.1 Web Crawler:** The system works with a price comparison engine and it is required to collect a large amount of data from different ecommerce websites. It is not possible to directly collect data from websites. So, the best way is to create a web browser that will navigate to these commerce websites. Downloaded URLs are sent to the scrapper for further processing.

**3.2 Web Scrapper:** Web Scrapping is used to extract HTML data from URLs and use it for personal purposes. Since this is a price comparison website, data is deleted from most e-commerce websites. In this program, Scrapping is done using python libraries as applications and a good soup4. BeautifulSoup4 is a python library used to separate html pages. By using these, product information from various e-commerce sites is discarded and stored on the website.

**3.3 MongoDB:** MongoDB is classified as a NoSQL website which is a document-focused site. Since the system handles large amounts of random data, it is convenient to use mongodb as

a website. Data extracted from scraper is stored in the MongoDB database.

## RESULT AND DISCUSSION

**3.4 Django Web Framework:** Django is a python web-based framework. Comparison of online products by using web mining is a product comparison site and prices generated using the Django framework. The products requested by the user are queried on the mongodb website using a mapper Mongo engine-related object. A computer program available as virtual customer assistant to assist with navigation as well answering common, customer-friendly question satisfaction and saves the cost of having a support team small question. Various papers have emphasized that the chat boot is well trained using NLP to respond in a long and complex manner questions and should have a simple

Comparison of E-commerce products using web mining is web-based program that will help users make decisions while purchasing products online. This website will help users to analyze the prices available on various e-commerce shopping websites so that they know the cheapest price of the product with the best deal. The website will also have a place to compare products with all its details under the same category. This will save consumers' efforts and valuable time. Ultimately, this will include strategies, excellent offers and deals from all major online stores and will help consumers shop online. Online Shopping Platform enables the user to find the best price available for a product online easily. As there are many e-commerce websites available thousands of products, our system uses a powerful web discard technology and statistics to get the best product price. A consistent application is helpful user to avoid unnecessary trauma to pass different websites while looking for the best price available. It is required in compiling search results from different forums at in one place; it is incredibly easy to use this court. An integrated notification system in our system the application provides the most relevant point of access again allows the user to track the prices of their favorite's products. Notification system communicates with user about inflation whenever possible. Online Shopping Platform not only determines the best product price but also allows for improved personal purchases experience by proposing different products to the users who use them in Personalized Recommendations program. Statistics tracks user purchase history and provides a detailed analysis that helps the user at their end purchase budget and checks their shopping habits. Navigating on multiple platforms while shopping. The internet is often inaudible and time consuming. So, in navigation of our app is easily done by Chabot developed using machine learning algorithms. It helps user roaming the platform and provides a smooth user experience while shopping. So, our system able to reduce time and effort in finding the best price by product from various websites. When it comes to compare product prices, product recommendations and product price tracking, with a large number of features available in our system, becomes a one-stop solution for always online shopper.

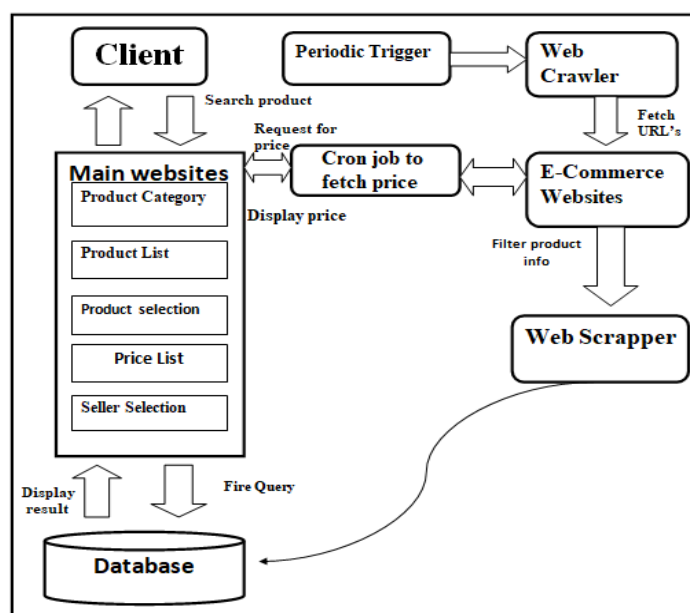


Figure 1: System Architecture

visual interface for interaction. This system was introduced by Google in December, 2002 which was intended to provide a common ground for products online for different retailers. The user can enter a search query and look or individual products, browse, and see products for sale. It includes various products offered online in various purchases sites are then calculated based on affiliation, including your search terms and other Google activity. Users can access product information from resellers updated on always with Google Shopping.

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