

Online E-Commerce Price Tracking For Multi-Brand Products

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Abstract— online shopping is booming in India and E-commerce websites have changed the shopping habits of a common man. Since E-commerce portals are now trending in India and It is growing in every place and customers are showing interest in using these portals effectively. There are so many portals which are unique in their features and the design of website. After analyzing the whole model of E-commerce I found basically same business Models to have evolved over a period of time in this space and each has its own Pros & cons. Rest all business models are same. E-commerce is fast gaining grounds as accepted and used business paradigm; more and more business are implementing web site providing functionality for performing commercial transactions over the web. It is reasonable to say that the process of shopping on the web is becoming common place. So we developed a system which will track all price drop deals from most of the retails and will show on a single page to shop directly from our website.

Keywords—Amazon , Flipkart-model, Ecommerce, Cloud Environment, Open Source;

I. Introduction

E-Commerce in India is one of the fastest growing & emerging economies of the world, having a very huge consumer base & a big mass connected to Internet (approx. 100 million). The E-business trend have been catching up in the country with the increasing rates of local& domestic firms using the E-business model to do business which is very different from the traditional way of doing business in India, it has lead to a interesting trend in the market for the online shopping starting right from ordering food, grocery, vegetables, fruits, taxis, electronics & so on .GC) total enrolment in Science, Medicine, Agriculture and Engineering crossed 6.5 million in 2010.

Electronic commerce, commonly known as E-commerce, is trading in products or services using computer networks, such as the Internet. Electronic commerce draws on technologies such as mobile commerce, electronic funds transfer, supply chain management, Internet marketing, online transaction processioning, electronic data interchange(EDI), inventory management systems, and automated data collection systems. Modern electronic commerce typically use the world wide web for at least one part of the transaction's life cycle, although it may also use other technologies such as mail.

We have selected all Operational e-commerce portals for our project like Flipcart.com, Amazon.com, Snapdeal.com and many more. we would be working with these companies as an Affiliate Partner for their businesses. We would be studying and implementing the strategies that the portal have used to attract Indian masses, so as to give them total online shopping experience, their portal offers a unique strategy to masses to make payment with modes like cash & card payment on delivery, wallet payment, internet banking etc, which helps the masses to avoid the hassle of making payment. By such services provided by different online ecommerce portals, we have developed a Affiliate marketing website through affiliate associate program which are been provided to their affiliate partners.

Affiliate marketing is a type of performance based marketing in which a business rewards one or more affiliates for each visitors or customer brought by the affiliates own marketing efforts. The industry has four players:

- The merchants (also known as 'retailer or 'brands')
- The network (that contain offers for the affiliate to choose from and also takes care of the payments)
- The publishers (also known as 'the affiliate')
- The customer

E-commerce business may employ some or all of the following:

- Online shopping web site for retail sales direct to consumers.
- Providing or participating in online market places, which process third party business-to-consumer or consumer-to0consumer sales.

- Business –to-business buying and selling.
- Gathering and using demographic data through web contacts and social media.
- Business-to-business electronic data interchange.
- Marketing to prospective and established customers by e-mail.
- Engaging in retail for launching new products and services.

Interesting facts about E-commerce portal

India has always been a land of great potential. The socioeconomic condition of the country has improved many folds after independence and India is now emerging as one of the leading countries in the world. Moreover with a population of over 100 crore and a growth rate of 6%, it can be compared to a marketing giant. Hence it can be well judged why online shopping in India is rising at fast pace over the days. As technology is spreading to the remote village and many job opportunities are presenting themselves to the unemployed youth more and more people are gaining awareness and the money to purchase expensive and luxuriant items over the internet.

We have selected three main partners for our project, “Flipkart”, “Amazon”, “Paytm”, and many more. We would analyze and implement their business model into our website through affiliate business program. Since this portal have emerged as online mega store in India, they were successful to attract huge population. Also this portals are giving a customized offering to the masses i.e. rite from the user to have online shopping experience hassle free.

Benefits of using e-commerce portals

or around the globe. Discover amazing new items from exotic places that you perhaps have even heard of before.

Ship your gift directly: When you order online, you can send gifts r even have gift baskets delivered directly to their recipient. This means you can avoid long waits at the post office and you can get your gift delivered faster. Many stores even offer customized card and gift wrapping to go along with your present.

Find items you might not see in stores: since brick and mortar stores are limited on space, merchants usually don’t carry all the items they sell in store. Online, you can find their entire inventory along with many choices of colors, styles and even customization options. Shop on the internet so you can find exactly what you want.

No more waiting in line and pushing through crowds: Malls and retail stores can be chaotic, especially during a big sale or a holiday season. Don’t stress yourself out, just shop from home. You will never have to stand in a long checkout line or weave your way through crowds just to get the items you want. Shop online and you can stay I the comfort of your own home.

The internet never closes: You can shop anytime online 24 hours a day and 7 days a week. So you never have to worry about making time to go to the store. Online shopping is perfect for night owls or anyone who is just to busy to make a trip to the store.

Save time: online shopping save us a huge amount of time. We can buy any of our favorite from our home only and need not visit the malls or any local shops.

Cost effective: The products can be brought at much discounted rate by shopping online. This is because online store offer huge discount and lucrative offers on the purchase of each and every product. This is done to attract more customers from all over the world.

Other facilities: The products are freely shipped and delivered at our doorstep without any extra charge, if you are prime member or plus member to them. Moreover if we find them not suited to our purpose we can return them without purchasing any time. Apart from that if we do purchase these items and find to be defective then we can return them within 10-30 days of the purchased and we will get all the money back.

Shop any store worldwide: never again be limited geographically. Many merchants do not have physical stores in every state, and certainly not in every country. When you shop online, you can browse through stores round the block

II. Literature Review

Today world has seen tremendous changes in technology, networking, advertisers and publisher, all have advanced at such a high pace that traditional and digital channels have converged.

Success of digital marketing is no easy, the internet marketing strategies to handle digital marketing business are generating and qualifying leads through internet, using internet event for promoting product and services, building customer relationship using internet, using or establishing communities and exchanges on internet [1].

Affiliate marketing is an agreement between a merchant and content providers to promote merchants products or services at their websites. Content providers get paid only if the visitors from their website execute a specified action.

Thus, in affiliate marketing, the task of content providers is not only deliver the advertisement, but also to persuade users to convert to customers. Affiliate marketing is therefore sometimes renamed to performance marketing. Affiliate marketing can be divided into two groups, one-to-one affiliate

marketing and one-to-many affiliate marketing. In one-to-one programs, a merchant sign contract with chosen affiliate. The term of the contract are negotiable and do not influence contracts with other affiliates. This type of affiliate program is used for big players at the market that can attract many new buyers to the merchant's website [2].

Affiliate marketing helps online advertiser with four advantages.

- Targeting audience
- Tracking
- Deliverability and flexibility
- Interactivity

Ability of precise targeting in online advertising is incomparable to the traditional media. Ads can be targeted according to language, geography region, time of the day and platform. Google Adwords service has received tremendous acceptance, boosting Google revenue to USD 10.6 billion in 2009 [2].

Today, there are software package available that can track ad performance. In Google Analytics, users can only track web ad performance, but also relate it a broad range of factors, including user location, language or search query. By linking the performance directly to the product and its price, advertisers can optimize their advertising campaign for the best.

Affiliate marketing not only provides the above stated information, but also monitors the activity of the customer after clicking on the ad through a cookie, that is stored on his or her computer. Merchants usually track the customer's activity for several days or weeks and pay the commission to the content providers when sale is executed during this period [2].

Online advertising is much more flexible than traditional advertising campaign results can be seen immediately and the campaign can be changed in case the results do not meet expectation. Since campaign delivery is nonstop.

As we discussed earlier how affiliate marketing works, if we talk about India there many companies that provides affiliate marketing services, some of them are Amazon, Flipkart, Paytm and so on. This services are been run through associate program where user has register to become and affiliate for their business.

Affiliate marketing program for amazon, Flipkart and other companies is a program that allows website owners and bloggers to create links and earn referral fees when customers click through and buy products from amazon, Flipkart1 etc. it's completely free to join and easy to use. By joining this program , consumers are referred to a trusted site where they can immediately purchase product that your

website will advertise. And advertising website earn up to 10% in referral fees [3].

III. Objectives

1. Developing a website that can provide an online shopper with a visualization of offers that are running on different ecommerce websites at a single glance.
2. Show you the deals that have dropped up to 70% or more, which is difficult to find out 8 to 10 million products and they are not visible as there algorithm works according the search result of there users.
3. Also display the deals that are limited in stock and available for curtain hours.
4. Benefit large number of customer by saving there money which they would have spent purchasing the product in MRP from market or online at 20% or 30% discount.
5. Main objective of website is to reduce the monthly expenditure to 60% to 70% which shoppers are unaware off.
6. Growing our business by becoming an affiliate marketing partner to E-commerce business.
7. Display the last three months prices of individual products in real time to the shoppers which gives them the idea what where the previous prices.
8. Benefit small business by increasing their profit margins through your website, which they won't get from distributors directly.

IV. Proposed Work



Fig.4.1. Working Architecture

Proposed work involves multiple use of open source platform and cloud technology, which give us wide scope to know, understand and make use of new technologies to build a website.

1. Website is developed using PHP, bootstrap, CSS, word press.
2. Cloud services will be integrated with the website in order to make it fast, reliable and robust in performance.
3. API's of all ecommerce business will be used , which will give access to all products details ,which further this data will be used by your admin application to post the product deal on Website.
4. Accessed data will be used in two ways, one will be manually sorting the offer on product and posting. Other will be a sorting application build to categories the price discount on product.
5. We are using C-panel for managing your website contains and webserverns in cloud to run website without any down time.
6. We are using two servers, one is Linux server & other is windows server.
7. Apart from website we also build a browser extension to show the real time graph of product price directly on E-commerce website.



Fig.4.2. Real time charts

8. Installing browser extension will enable the graph functionality. Request for data is done using REST protocol. Restful system aim for fast performance and the ability to grow, by re-using components that can be managed and updated without affecting the system as a whole, even while it is running. REST is a way of accessing the web services. REST API is to fetch or give some information from a web service.

1. In your application REST obtain needed information using the URL approach.
2. Every resource is uniquely addressable using a uniform and minimal set of commands typically using HTTP commands of GET, POST, PUT, OR DELETE over internet.



Fig.4.3. Working of REST service Request

3. We will have access data base of Amazon, Flipkart, Paytm, Shopclues and any more.
4. Access to the data is through agreement and guidelines which we need to follow during developing.
5. There is also an another way to access the products details, by directly login to associate website were we have access to image, title, description, and most important affiliate url of product.
6. This product url are unique for all products , were E- commerce companies can track from which website this traffic has been redirected.
7. Being a registered partner, we are provided with access key and secured key which authenticate the user which have access to their data.
8. Access to data makes us possible to promote their product on our website, where in turn we receive a sales commission.

Our website has two ways of posting deals on the website.

One way is manually posting which needs to search deals and generate the link for the product from there associate login account and other way , we have built a system which will have access to ecommerce API's were we run a search for product offer in real time to posted on website directly from our admin panel.

Manually way of posting offers

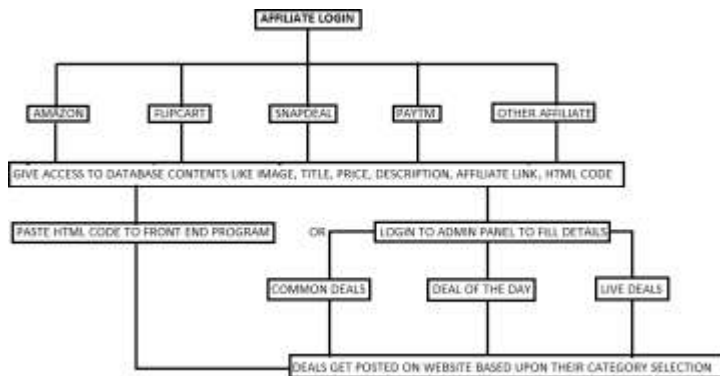


Fig.4.4. Manual posting of deals

1. Above diagram depicts the ways how to search and post the deal manually.
2. In order to generate a link we need to login to associate account (e.g. Amazon associate, Flipcart affiliate etc.), where we have to access all the products details which are live on their portals.
3. We need to copy all the details and fill these details in to you admin panel, where we have made arrangement for posting.
4. We have three categories of post common deals, deal of the day and real time deals.
5. These categories are unique based upon the discount available on the product, out of three categories two categories will be used for product having discount above 70%.
6. Deals of the day category are only for the deals which are active for limit amount of time. This deal will be visible only till stock last.

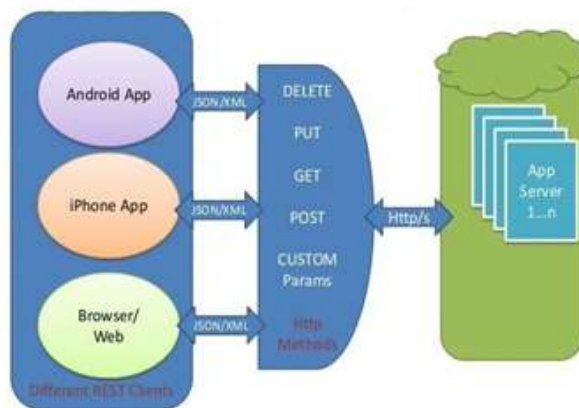


Fig .4.5. Auto system for getting product details in real time

1. Above diagram depicts the way our system request to access the details of products from our partner's database.
2. Accessed details get listed into your admin panel where we can make decision which deal to be posted based upon there the discount. Below fig shows the product listing in admin panel.



Fig .4.6. Admin panel of Auto posting

- Once we have the product details we can post the deals on website based open their category and discount available.

V. Result & Conclusion

Thus through the data available we studied the E-commerce pros & cons and develop a magnificent E-commerce website based on this. Our website will facilitate customers with single view, which will display the different offers currently running over internet. Which make it feasible to shop centrally without need to visit different website portals.

Online shopping is new mantra of this age and the people of India are applying this in their lives to a great extent nowadays. As we progress further the growth rate of online marketing in our country will leap to stars. Thus number of shopping websites also has increased and so has the total number of persons who prefer shopping online. Thus use of our website will be beneficial to huge population which will reduce their unnecessary monthly by 70% by shopping on our website.

Website also has the automation system which will improve the efficiency, performance, data security, system security and delay in communication which will give user a pleasant experience while shopping.

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