

# Recommendations System Applications

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**Abstract:** The proposed paper is based on the concept of recommendation. Recommendation has wide application in today's world. From personalised news suggestion to products and services suggested to the user are all based on recommendation this paper focuses on the different area in which recommendation is applied. The different technique which are used to implement the recommendation are also studied in detail. The paper also includes a survey which compares two famous e-commerce websites that is Amazon and Flip kart. These e-commerce websites are compared based on different parameters the most important of which is semantics.

**Keywords:** Amazon; Flip kart; recommendation; Applications.

## I. INTRODUCTION

Recommendation has wide application in personalised news recommendation, movie recommendation, image recommendation, web page recommendation, product and services recommendation, books recommendation, food or restaurant recommendation, channel recommendation, video recommendation, friend recommendation, etc [1].

The different techniques which are available for implementation are collaborative recommendation, content based recommendation, hybrid recommendation, etc.

## II. AIM AND SCOPE

The aim of the proposed method is to study different recommendation system which are applied in various field. The scope of the paper describes the different fields in which recommendation system can be effectively applied. It also deals with different methods which are implemented to achieve recommendations.

### A. Collaborative recommendations

Collaborative recommendation is made possible by combining information from other likeminded users or similar products. Collaborative filtering recommendation can be broadly classified into user based or item based.

In user based recommendation is given by considering the likeminded users options and suggesting the similar products which are used by the likeminded users [2]. In item based recommendation similar items which has some properties to the item considered is considered.

### B. Content based recommendation

In this type of recommendation the content of the product or services is analysed to recommend similar products [3]. The product or service parameters are analysed to find similar products from the database and are recommended. Content.

### C. Hybrid recommendation

This recommendation types combines both the previous techniques this technique widely used in many applications where recommendation is required. Recommendation with hybrid method is much more effective [4].

## III. LITERATURE SURVEY

Recommendation has wide application in suggesting food restaurants to the users. The website zomato suggests users restaurant based on the previously viewed data and food preferences. Food restaurant are recommended to the users based on the query submitted by them. The query which is submitted is used to match with restaurants having similar parameters. Once the parameters are matched the various restaurants are suggested to the users [5]. Along with the suggestion, few restaurants are recommended based on similar restaurants and restaurants searched by the like minded users.

Recommendation can also be applied for suggesting books and movies. Websites like Netflix suggests movie to the users by who are registered members by searching for movies that are watched by the like minded users [6]. Other method for suggesting movies by considering the properties of the movies, properties can be director, actors, genre of the movie, etc. The system suggests users with movies which are having similar actors, directors or of similar genre. Recommendation in books is applied in various websites such as goodreads.com and ebook.com.

These two websites follow only item based collaborative recommendation. Registers users are suggested with books from the same genre. These websites does not take into account of the similarities of the like minded users.

A social network is one of the best examples of recommendation. With progress in social network recommendation and integration of various networks with

Facebook such as twitter and Amazon products and friends are suggested to the users by merging the information from the two domains [7]. The person who was surfing for shoes on Amazon is likely to be suggested different pages on face book which are company pages of shoes brands. Even the friend recommendation part in face book is a classic example of recommendation. Facebook forms dynamic clusters of friends with similar properties.

If a users has many friends from the same cluster, other users who are not in the friend list of the users are suggested to him as recommended friends under “you may also know” category.

In china many online and dynamic cable operator suggests users with channels to subscribe based on the users interaction with system, if the users are interested in watching sports channels ,that particular users will subscribe for sports channels. If there are other sports channels which are new and users are not aware of it. It can be suggested by the cable operator as recommendation of channels to the users.

The above same logic is applied for suggesting channels for youtube users [8]. In Youtube the users who subscribe for entertainment channels will be recommended with entertainment channels. Image recommendation is one more application where recommendation cab be effectively applied. Image recommendation has wide application in e-commerce websites and search engines.

Image recommendation is implemented by either considering the information around the image that is by collaborative filtering or by analysing the content of the image that is content based filtering.

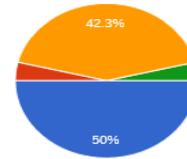
Personalised news recommendation is one of the best examples of recommendation. Most of the news papers are available in the electronic format [9]. The news which are provided online to different users is implemented by using combination of collaborative and content based recommendation. The users are suggested with news either from the same type of news that are available or from that the like minded users were following [10].

A search engines which provide web pages on recommendation are more popular than the one which doesn't take recommendation into consideration. Domain specific search engine are more effective than normal search engines. All theses is implemented with recommendation system. Based on the like minded users surfing pattern with are stored in the system for every users for each session is used to recommend [11][12].

**IV. SURVEY**

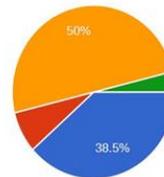
The survey includes 5 e-commerce websites, they are Amazon, eBay, Paytm, Flipkart and Snapdeal. The competitive analyses are presented in the form of graphs.

Among the e-commerce websites which is better in terms of recommendation of products



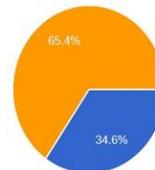
Amazon	13	50%
Snapdeal	1	3.8%
Flipkart	11	42.3%
Paytm	1	3.8%
eBay	0	0%

Which of the e-commerce websites is better based on accuracy of products recommended



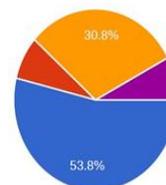
Amazon	10	38.5%
Snapdeal	2	7.7%
Flipkart	13	50%
Paytm	1	3.8%
eBay	0	0%

Among the e-commerce websites which is better in terms of speed of recommendation



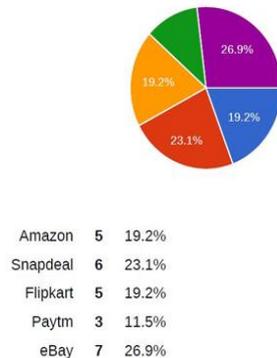
Amazon	9	34.6%
Snapdeal	0	0%
Flipkart	17	65.4%
Paytm	0	0%
eBay	0	0%

Which of the e-commerce websites is better in terms of number of products recommended

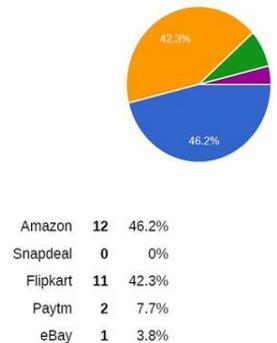


Amazon	14	53.8%
Snapdeal	2	7.7%
Flipkart	8	30.8%
Paytm	0	0%
eBay	2	7.7%

Among the e-commerce websites which is better in terms of irrelevant recommendation



Among the e-commerce websites which is better in terms of accuracy in results even if the search words are not accurate



Based on the survey it is found the e-commerce websites amazon and flipkart has almost the same ratings for different parameters considered. They are better in terms of speed, recommendation, suggestion of associated product and variety of recommended product is more.

### V. CONCLUSION

The proposed paper includes study which is related to recommendation system. It covers various applications of recommendation and its effectiveness. It includes a survey conducted by masters students on various e-commerce websites on different parameters such as semantics, accuracy, speed of recommendations, irrelevant recommendation, suggestion of associated product and variety in recommended of product. It is concluded that Amazon and Flipkart have better recommendation than other e-commerce websites based on above parameters.

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