

Recommender System based On Face Book Social Network Analysis Using Deep Collaborative Filtering

M. Lavanya¹, K. Suneetha², K. Manasa³

¹Associate Professor, Department of CSE, mlavanyamca.2003@gmail.com

²Associate Professor &HOD, Department of MCA, umasuni.k@gmail.com

³Assistant Professor, Department of MCA, manasa8486@gmail.com
Sree Vidyanikethan Engineering College, Tirupati.

Article Info

Volume 83

Page Number: 5759 - 5763

Publication Issue:

May - June 2020

Abstract

The great well known social network offer simple to use as well as very efficient tools which used to communicate with profile data and users. The new unexplored regions are mostly changed for analysing and interpreting various data. Only a few years ago this type of information was not available or accessible. In addition, the prevalence and evolution of the Internet and the large number of stored values make it average and choose the data displayed to users. The random evolution & proliferation of the various social networks and the internet users make it easy for anyone to access large amounts of information about Internet users. Engines and try to resolve ads on websites that provide content to the user based on your browsing history or past interest search queries. This paper deals a mode to explore how to fabricate a new topic from the networking sites like Facebook. For example, an indication of the data show that Facebook is trying to filters or to one of his friends, it has been provided to with whatever is most important to the user. Tomorrow websites try additional products to sell products by presenting the user based on previous purchases. The exploitation of nature freed as part of this article, which is the verification tools developed. The new unexplored information on what is interesting is that the core of either of these systems.

Article History

Article Received: 19 November 2019

Revised: 27 January 2020

Accepted: 24 February 2020

Publication: 17 May 2020

Keywords: Deep Learning, Collaborative Filtering, Social Network Analysis

I.INTRODUCTION

Only many years ago, the world's largest online platform valuable information, which should be the protection of men do not gather. It is open to the arrival time, officially opened the APIs open to the developed world, the term SDKs correspond to help. quickly, a natural element Facebook applications made social media ecosystem with friends online games and social applications, he invited his friends, where users can interact with the content, what kind of image or at least in a new way. Social agencies have created a new business and some specialized campaigns were aimed to become a viral spread out. This made the global contrivers to record and store new user profiles and access to their own advantage, at least for that service that they want, to share content, and much more. The means of social networks, the data can be

seen from more than one, of whom it is resolved, and the pursuit of a career. Recommendation systems are more predominantly required as the magnitude of internet content users are growing at a faster rate to access the huge available data. Things that matter is the same, whether it is user space is reduced a lot, especially in the care of, and to the use of mobile devices, can not be balanced. The birth, they are themselves too much to the knowledge of the active users in about the social networks, such as the impossibility filtered. Popular cloud-based and try new music video platforms for business users in the movies or musicians. And the mobile web ads, which can be interesting in user systems to present; or else the rate is lower than others. Some examples show various applications based on system recommendation.

However, this contention was built on work hat mechanism and algorithms during social media Web 2.0 version of accessing the data. Here in this paper the main idea is to evaluate the recommendations from the existing system and create a Facebook like social network with the help of new algorithms. This article is bands and musicians suggestion centric. The purpose of the policy process is highly satisfied.

II. BASIC INFORMATION ABOUT SOCIAL NETWORKS AND FACEBOOK

A victory of social network is online platforms to be understood is that the phenomenon has created an unprecedented new supply sources social data. This idea was based on the laws of development of the concepts of new things which turned into the perfect environment using the Internet perception, moral science that exists in social network.

Introduction to the concept of social network

The basic and preliminary structures of social network is elaborates statistics, psychology and sociology. The whole societies with organizations have various responsibilities in the form of actors and links in a social network. The initial online platform must known from the virtual social network in 1960s [1]. The idea behind the publishing tools are blogs and chat rooms may be introduce in the future. If some people may listed their info with their own interests. The very common site is sixdegrees.com introduces six person concepts such as a group of five people interact with another two people. The widespread websites grown in recent years are LInkedIN.com, Twitter.com, and Facebook.com. etc.

Facebook

Last month of 2004, the facebook.com was successfully launched inside the Harvard university, it was only open group for Harvard students introduced by Mark Zukerberg [2,3]. Basically, the facebook also looks like previous social networks, later it plays a vital role in social media. The Facebook hold more than 12 million

users at the end of 2013 [4-7].

Role of Facebook in this article:

Facebook Open Graph and Social Graph: Facebook universal graph was used to connect the social network from both inside and outside. Facebook interconnections were done with Facebook query language (FQL) and Graph API developers.

Facebook Social Graph and Open Graph concepts

The Facebook allows the third party websites to access the facebook login, so that the developer concentrate on the “like” credentials by the teck to improve the popularity of facebook. The social graph must always link with the new social graph with the interconnections of all partner sites.

Facebook platform, Facebook query language (FQL) and Graph API.

There are 2 ways to linked with the Facebook by means of own services interact with applications provided by facebook users API usually allows the developers to fetch the read write data with ID and different set of attributes. The HTTP get request plays a important role to increases all responses i.e., JSON. SDK file of facebook are only way to improve the integration Facebook. Lastly, the API and the amount of data required also shows the important task are elaborated in this article.

III.RELATED WORK

Collaborative Filtering – introduction

The recommendation of one article is only achieved by collaborative with proper filtering. The introduction of successful e-commerce site should be designed by the personalized experience. The only way to increase the online shopping is by means of proper recommendations.

Cluster Models

There are many numbers of clusters are grouped together to improve the user information as soon as possible. Each and every user information may be

segmented to identify as different problem so that the basic clustering concepts works here. The recommendations systems also work in grouping of cluster heads with various algorithms.

Search-based filtering

Content based searching creates new trend ion search engine optimization techniques with the brief effort. The basic examples are the movies directed by the same director but the actor and actress differs shows the various recommendation as well as search results.

Slope One algorithm

The important algorithm is required for the quick observation to solve the very complex problems [8-12].The problem can be demonstrated with an example shown in Figure1.

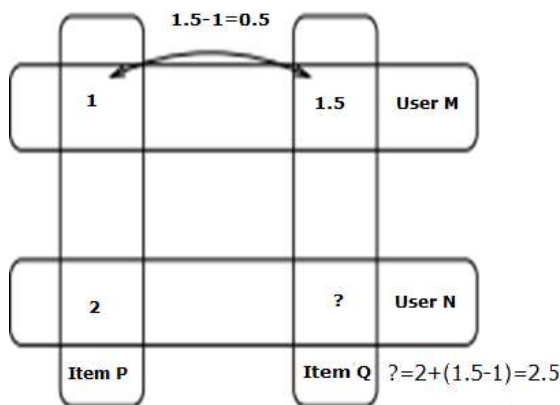
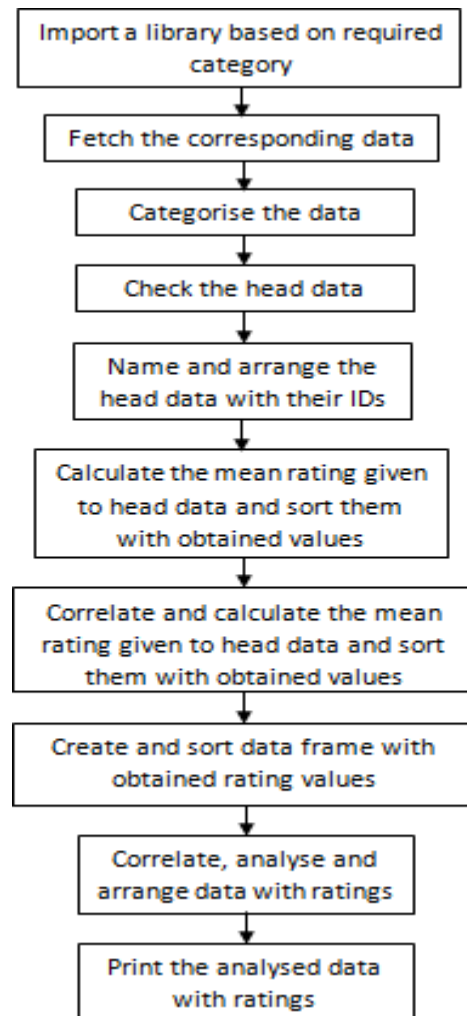


Figure 1: Concept of Slope One

Assume two users M & N with two element P & Q analyze the user preference N with element Q and difference with average qualifications shows weighted average may be used with two basic metrics have grade counts provide rating of each and every pair[13,14].

Design of Algorithm using Python:



IV. USER DATA ANALYSIS

The basic details were taken from the profiles of all users. The histogram information shows the user data for friends of friends.

There are 3 groups of clients:

- ❖ The traditional clients have basically exists in the range of 200 to 600, i.e., around 75% in the client list.
- ❖ The most important list of users are around 1000 friends with the percentage of (15) users.
- ❖ Approximately 5% of all users have Single people there are very small as 100s or very high (1200-1900) friends.

The total number of interest/user is shown in the figure of histogram. The typical characteristic is in the form of exponential to be noted for the log scale presentation in the histogram. Somebody should only have more numbers of profile. The interest count may be

varied from person to person in the level of 72 to 143. The very few individuals have 280 interests which is not counted in the histogram. The lots of musical DJ explains various amount in detail.

Generation of Results in Python Example:

D:\ml-latest-small>python program.py

user_id	movie_id	Rating	timestamp
0	11	4.0	964982703
1	13	4.0	964981247
2	16	4.0	964982224
3	147	5.0	964983815
4	150	5.0	964982931

user_id	movie_id	rating	timestamp	title	genres
0	1	4.0	964982703	12 Monkeys (1995)	Adventure Animation Children Comedy Fantasy
1	5	4.0	847434962	12 Monkeys (1995)	Adventure Animation Children Comedy Fantasy
2	7	4.5	1106635946	12 Monkeys (1995)	Adventure Animation Children Comedy Fantasy
3	15	2.5	1510577970	12 Monkeys (1995)	Adventure Animation Children Comedy Fantasy
4	17	4.5	1305696483	12 Monkeys (1995)	Adventure Animation Children Comedy Fantasy

Table 1. Categories of interest fetched from the 'Music' section

Title	Year	Rating
Gone with the wind	1939	4.0
The empire strikes back	1980	3.6
Back to the future	1985	3.85
Fight club	1999	4.0
Memento	2000	3.6
The dark knight	2008	4.0
Avatar	2009	4.5
Inception	2010	4.5
Spotlight	2015	4.25
Avengers: infinity war	2018	4.5
Avengers: endgame	2019	4.75



Fig 1. Histogram depicting quantity of friends

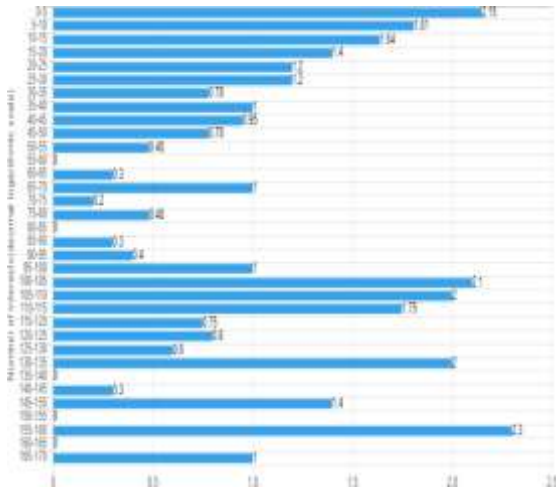


Fig 2. Histogram depicting the quantity of interests

V.CONCLUSION

This paper's intent is to make out the required mechanisms and recommend a few implications to explore a methodology to pick the real data from social platforms like Facebook, particularly the frequency bands and songs also caught by the internet users. The most important information was taken from API, also very famous Facebook Query-Language) to justify the result by means of comparison from Amazon, it gave the product in very reasonable manner. Oryx is one of the important open source system which gives very essential information for selecting the content. The recent development in the area of IoT shows the very important background information that is, wide variety of research have been carry out through this area.

REFERENCES

- [1] CJRory, "BBC News Hackers and hippies: The origins of social networking Technology correspondent," 2011.
- [2] M Ben, "The Accidental Billionaires: The Founding of Facebook, A Tale of Sex, Money, Genius, Betrayal," 2009.
- [3] Dr. K. Suneetha and Mr. M. Sreekanth "Smart Home Monitoring and Automation Energy Efficient System Using IoT Devices", Emerging Research in Data Engineering Systems and Computer Communications pp 627-637, Springer Nature Singapore Pte Ltd. 2020.
- [4] L Daniel, "Anna MacIachlan Slope One Predictors for On-line Rating-Based Collaborative Filtering", 2005.
- [5] Francesco R, Lior.R and B.Shapira, "Newsroom Facebook-Key Facts," <http://newsrom.fb.com>, "Introduction to Recommender Systems Handbook" www.inf.unibz.it/ricci/papers/intro-rec-sys-handbook-b.pdf, 2011.
- [6] R Karthick and M Sundararajan "Design and Implementation of Low Power Testing Using Advanced Razor Based Processor," International Journal of Applied Engineering Research 12 (2017) 6384.
- [7] Ms. K. Suneetha and Dr. M. Usha Rani "A Survey on Improving the Efficiency of PrefixSpan Sequential Pattern Mining Algorithm", International Journal of Conceptions on Computing and Information Technology (IJCCIT), ISSN: 2345 – 9808, Volume 2, issue 3, pp. 1-5, March 2014.
- [8] Karthick, R and Sundararajan, M: "A novel 3D-IC test architecture-a review," Int. Journal of Engineering and Technology, 7 (2018) 582.
- [9] Linden Greg, Smith Brent, and York Jeremy, "Amazon.com Recommendations: Item-to-Item Collaborative Filtering", 2003.
- [10] [http://developers.Facebook.com/docs/vreference/fql/FacebookQueryLanguage\(FQL\)](http://developers.Facebook.com/docs/vreference/fql/FacebookQueryLanguage(FQL))
- [11] <http://hadoop.apache.org>, what is Apache Hadoop?
- [12] <http://research.google.com/archive/gfs.HGobioff,shun-Tak Leung and Sanjay, The Google File System, 2003>.
- [13] <http://research.google.com/archive/mapreduce.html>, Sanjay and J Dean, "MapReduce: Simplified Data Processing on Large Clusters", 2004.
- [14] K.Jakub, K.Mariusz, "facebook user interest exploration and recommendation based on facebook social graph data analysis".