A Project Report on

Movie Recommendation System

Submitted in partial fulfillment of the requirements for the award of the degree of

Bachelor of Engineering

in

Computer Engineering

by

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UNIVERSITY OF MUMBAI

Academic Year 2019-2020

Approval Sheet

This Project Report entitled ***Movie Recommendation System*** Submitted by ***Suraj Shetty (16102007), Akshay Udeg (16102016),Akshay Rathod (16102012)***is approved for the partial fulfillment of the requirement for the award of the degree of ***Bachelor of Engineering*** in ***Computer Engineering*** from ***University of Mumbai***.

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Prof. Sukhada Aloni — Guide

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Place:A.P.Shah Institute of Technology, Thane
Date: 31/10/2019

CERTIFICATE

This is to certify that the project entitled ***Movie Recommendation System*** submitted by ***Suraj Shetty (16102007),Akshay Udeg (16102016),Akshay Rathod (16102012)*** for the partial fulfillment of the requirement for award of a degree ***Bachelor of Engineering*** in ***Computer Engineering.***,to the University of Mumbai,is a bonafide work carried out during academic year 2019-2020.

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Declaration

We declare that this written submission represents our ideas in our own words and where others' ideas or words have been included, We have adequately cited and referenced the original sources. We also declare that We have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea/data/fact/source in our submission. We understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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Abstract

1.With the development of mobile Internet, the TV industry is facing threats and challenges. This is because Big Data is changing the industry. The primary task of TV industry like Netflix is how to take advantage of Big Data technology.

2.For Netflix programs, audience rating is the metrics whether the program is good or not. The more time the audience is watching a particular show,the more popular the show is for the Audience.

3.This paper proposes a movie recommendation system. The system is based on Big Data technology and content based recommendation technique which can automatically push programs to audience according to their interest.

Contents

List of Abbreviations

1.BD : Big data
2.CBL: Content based Learning
3.DF : Demographic Filtering
4.UiP: UiPath

Chapter 1

Introduction

1.1 Introduction

Recommender system are used to provide personalized recommendations according to user profile and previous behavior. Recommender systems are widely used in the Internet Industry. Services like Amazon, Netflix, and YouTube are typical examples of recommender system users. Recommender systems cannot only help the users find their favorite products, but also bring potential profit to online service providers.

1.1.1 The main goal and the solution for the problem

The primary objective is to build an algorithm that can predict similar movies according to user's interest. After building the algorithm we will be making an website to deploy the algorithm on the web and to make the algorithm user friendly.

1.2 Our Approach

1.2.1 Demographic filtering :

They offer generalized recommendations to every user, based on movie popularity and/or genre.

1.2.2 Content based filtering :

They suggest similar items based on a particular item. This system uses item metadata, such as genre, director, description, actors etc. for movies, to make these recommendations.

1.2.3 Uipath

To take run time data into excel sheet so as to recommend latest movies.

Chapter 2

Literature Review

2.1 Literature Review

1. Tv program recommendation system based on big data:
DOI: 10.1109/ICIS.2016.7550923 :
There are errors of program ratings recommendation system, and the program list is affected by human emotion as well. Our Program Recommended system based on Big Data reasonably gives solution to those drawbacks.

To apply Big Data technology into TV programs recommendation, the core work is to use data mining analysis algorithms on the massive database. One of the important things is that the diversity of television programs makes recommendation algorithms different. For example, for news, current affairs and drama series we need to analyze the audience's watching characteristic respectively. Hence, we can analyze the program's features as follows: 1). program ratings, 2).television ratings, 3).program type, 4)program broadcast time.

2.Verma J P, Patel B, Patel A. Big Data Analysis: Recommendation System with Hadoop Framework[C]//Computational Intelligence Communication Technology (CICT), 2015 IEEE International Conference on. IEEE, 2015: 92-97.

The growth of the technology and the big usage of recommendation system in many systems like in learning system, tourism system, and ecommerce system gives focus on the techniques used in those system development. Recommendation systems are defined as a software tool and techniques which providing advice for item to a user. The suggestions are like what music to listen, what online news to read etc. Recommendation system is used for finding the needed information from wider information available on the internet. Recommendation system mainly uses three approaches content based recommendation system, collaborative filtering recommendation system and hybrid recommendation system.

Chapter 3

Content Based Filtering :

3.0.1 What Is Content-Based Filtering ?

When a friend asks you for a movie recommendation or any other recommendations, it's natural to ask what kinds of movies they like. From there, you could think of a few movies that are similar to the things we have watched and liked in the past. This process, of recommending content based on its features, is at the heart of content-based filtering, the technology used behind Netflix recommendation engines.

3.0.2 Why Content Based Filtering ?

Content-Based filtering has a number of advantages, especially in certain circumstances.

1.Results is highly relevant to Our Expectations. Because content-based recommendations rely on characteristics of objects themselves, they are most likely to be highly relevant to a user's interests. This makes them valuable for organizations with massive libraries of a single type of content.

2.Recommendations are transparent. Another advantage is that the process by which any recommendation is generated can be made transparent, which may increase users' trust in their recommendations. With collaborative-filtering, the process is more of a black box–the algorithm and users alike may not really understand why they're seeing the recommendations they are.

3.It's technically easier to implement. Compared to the sophisticated math involved in building a collaborative-filtering system, the data science behind a content-based system is relatively straightforward. The real work, as we've seen is in assigning the attributes in the first place.

Chapter 4

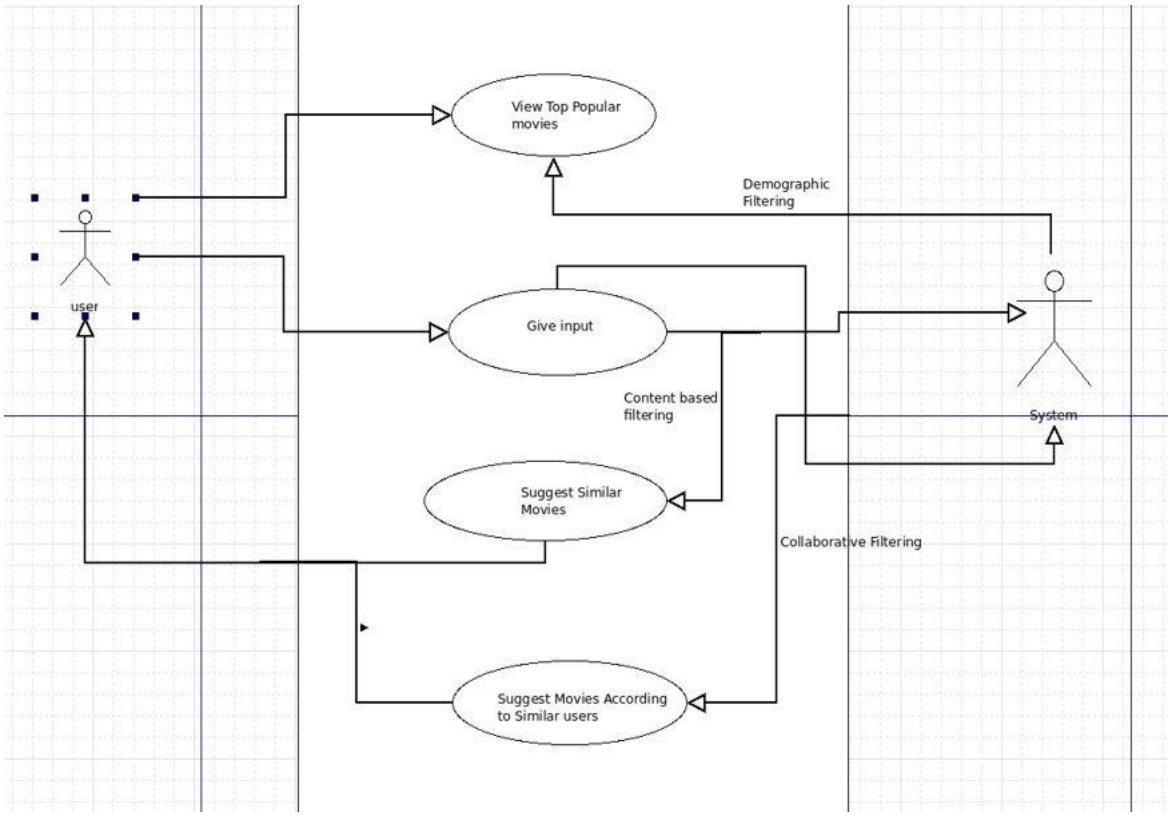
Proposed Concept and Initiation

4.1 Project Concept

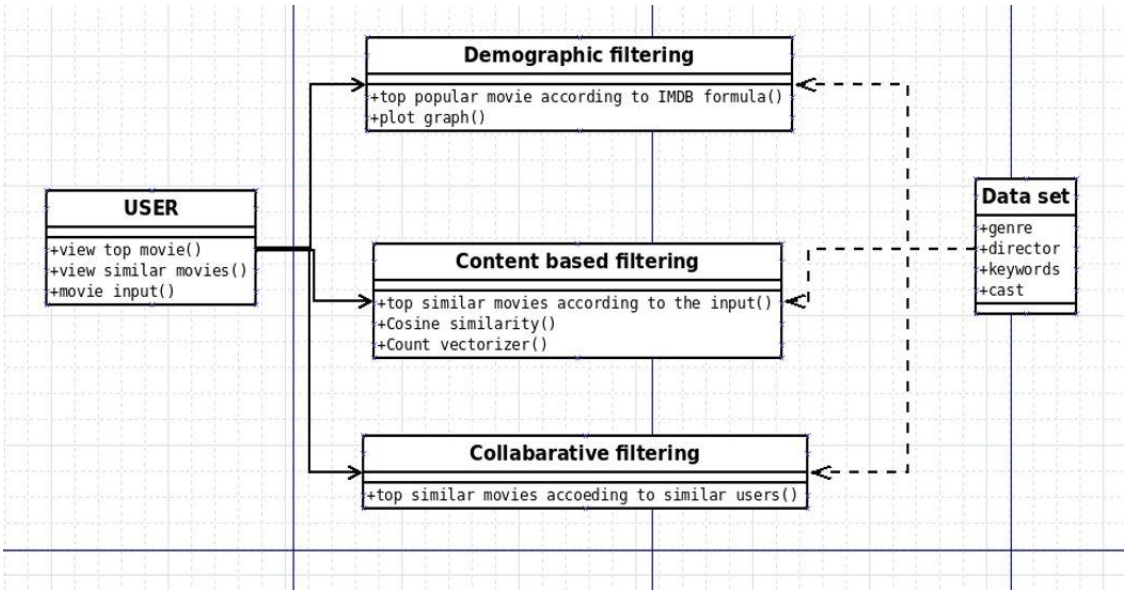
We propose a recommendation system in which at first we will build an system using content based filtering to recommend movies. we will also make use of uipath tool to take run time data into excel sheet to get latest movie dataset and after that we will make a website to make the recommendation system user friendly.

4.2 Project Design

4.2.1 Use case Diagram



4.2.2 Class Diagram



Chapter 5

Result

We have explored both Demographic and content-based filtering for building the recommendation system.In future we will work on techniques to include real time data in our dataset for recommending current movies. Our approach can be further extended to other domains to recommend songs, video, venue, news, books, tourism and e-commerce sites, etc.

Chapter 6

Conclusions and Future Scope

We will be making use of uipath to take real time data into excel sheet for recommendation of recently released movies and after that we will be making an website by using python flask. .

Bibliography

[1] Oh J, Sung Y, Kim J, et al. Time-Dependent User Profiling for TV Recommendation[C]//Cloud and Green Computing (CGC), 2012 Second International Conference on. IEEE, 2012: 783-787.

[2] Verma J P, Patel B, Patel A. Big Data Analysis: Recommendation System with Hadoop Framework[C]//Computational Intelligence Communication Technology (CICT), 2015 IEEE International Conference on. IEEE, 2015: 92- 97.

Appendices

Detailed information, lengthy derivations, raw experimental observations etc. are to be presented in the separate appendices, which shall be numbered in Roman Capitals (e.g. "Appendix I"). Since reference can be drawn to published/unpublished literature in the appendices these should precede the "Literature Cited" section.

Appendix-A: NS2 Download and Installation

1. Install python using the following commands.
sudo apt-get update
sudo apt-get install python
2.Install anaconda from the official website.
https://www.anaconda.com/

Acknowledgement

We have great pleasure in presenting the report on **Movie Recommendation System** We take this opportunity to express our sincere thanks towards our guide **Sukhada Aloni** & Co-Guide **Amol Kalugade** Department of Computer, APSIT thane for providing the technical guidelines and suggestions regarding line of work. We would like to express our gratitude towards his constant encouragement, support and guidance through the development of project.

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Publication

Paper entitled **"Paper Title"** is presented at **"International Conference/Journal Name"** by **"Author Name".**