Book Review & Rating

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ABSTRACT

In this Paper an attempt has been made to collect data from users in the form of rating and reviews for the books which will help us to analyze different things. Collection of this data will enable us to provide recommendations to users based on their favorite genres and it will also help us to provide this data to different book vendors so that they can stock their book stores with the most popular books as this will be known from the reviews and ratings collected from different users for different books. An in-depth study can also tell us the current trend of books liked by users belonging to certain genre.

INTRODUCTION

If you love to read, at some point you will want to share a book you love with others. You may already do this by talking about books with friends. If you want to share your ideas with more people than your circle of friends, the way you do that is by writing a review. By publishing the reviews, you write, you can share your ideas or recommendations about books with other readers around the world.

Recommendation systems are very popular and are used in wide variety of applications. Existing recommendation systems used collaborative filtering method in which a lot of similar users are searched which have a similar taste to that user and then filter out the recommendations accordingly. The initial collaborative approaches use k-Nearest neighbor algorithm which stores all the available cases and classifies the cases based on a similarity measure. It is mostly used to classify a data point based on how its neighbors are classified. These similarities are classified based on the rating data collected in the past from the users. Most recent works of collaborative filtering use Latent factor models. The basic assumption is that there exist an unknown low-dimensional representation of users and books where user-book affinity can be modeled accurately. For example, the rating that a user gives to a book might be assumed to depend on few implicit factors such as the user's taste across various book genres. Although the existing collaborative filtering methods are effective at recommending books to users, but they may lack the flexibility in supporting complex recommendation scenarios [12] [13].

The book lists generated from the users are deployed so that the users can organize and share the books in the corresponding application. These user generated book lists are usually made public by default. This will help the users to browse user generated book lists in an effective way and identifying interesting book lists as each list consist of small subset of all the books and books in each list are manually organized by other users referring that genre. As there are lots of book lists generated by each user, the complexity of each list makes it challenging for the book lists presentation interface to help users to discover the book lists which they might be interested in. So, users must use the browser for the keyword search which will get them the required book which they want to read.

In this I propose a Book review and rating website for readers to discuss their views and opinions about a book. Users will browse their book interests and according to the different book genres and will select their preferred book. After this they can rate and provide a review for the book. This will be made public so that based on their reviews and ratings we can create suggestions and recommendations to the other users.

BACKGROUND

The rise in E-commerce has brought a significant rise in the importance of customer reviews. There are a lot of rating and review sites online and large number of reviews for every product. A lot of users use such websites daily. Users have changed their way of selecting items. According to a recent survey 70 percent of the users use rating filters to filter out the low rated items in searches.

The ability to successfully decide whether a review will be helpful to the users is very important. This will decide which book gets

how much popularity and, on that basis, we can know the amount of production or the amount of book sales. There are 2 main methods to approach this problem. The first one is based on review text content analysis and uses principles of natural language process (NLP method). This method lacks the insights that can be drawn from the relationship between user and book lists. The second one is based on recommender systems which is based on collaborative filtering and focuses on reviewers' point of view. Using user's similarity matrix and applying neighbor's analysis are parts of this method. This method ignores any information from review text content analysis [12] [13].

Looking at previous research done by Robert Huang in 2008, his objective was to study the relationships between different variables associated with individual customer reviews. His motivation to this research was to investigate the following: 1) Whether early written reviews for a book get better feedback than later ones of the same quality 2) How other factors affect the type of feedback a review receives 3) What effect different variables such as review rating and reviewer do. He fitted a least square line between number of reviews and reviewer index for 3 every book. This showed that there is a negative relationship between the two variables in almost every case hence verifies the possibility that earlier posted reviews receive more feedback [15].

In this paper I would like to gather the review and rating data from users for different book genre and then try to analyze 1) The influence of the good reviews on ratings 2) The Influence of reviews and ratings of users on other users. This will be done by collecting data from ratings and reviews of different books.

System

This is a website for collecting reviews and ratings for different books so that it can be used to provide recommendations and will also provide an overview for in depth study of the book sales statistics. The technology stack that is used for implementation is as follows:

i. User Interface: HTML, CSS, JavaScript, jQuery
ii. Styling/Interaction: Bootstrap
iii. Web Framework: Flask (Python)
iv. Database: Postgres
v. Platform: sandbox.cci.drexel.edu

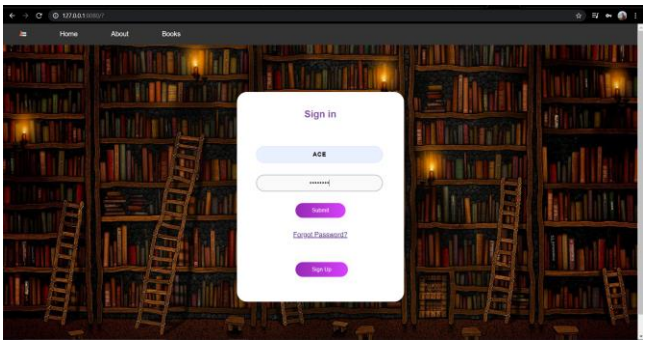

Figure 1: Home Page/ Log in page

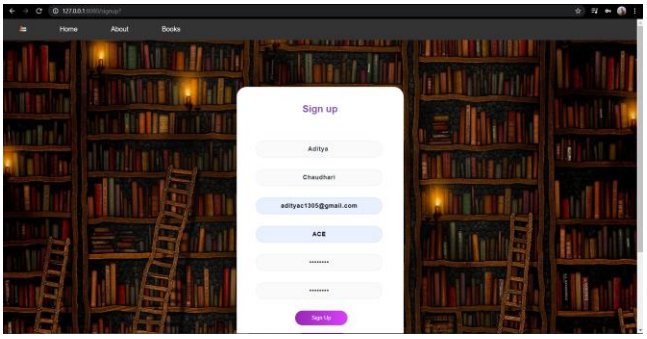

Figure 2: Signup Page

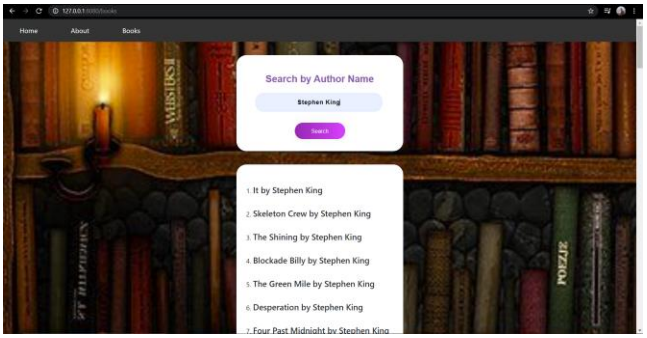

Figure 3: List of Books

Figure 4: Search Page

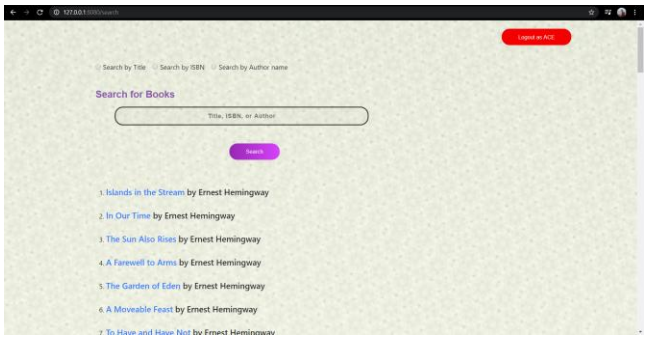

Figure 4.1: Searches

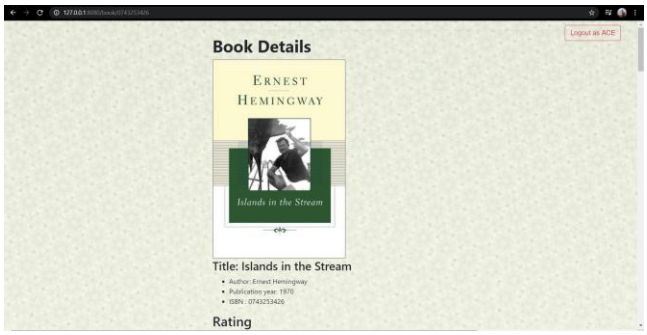

Figure 5: Book Details

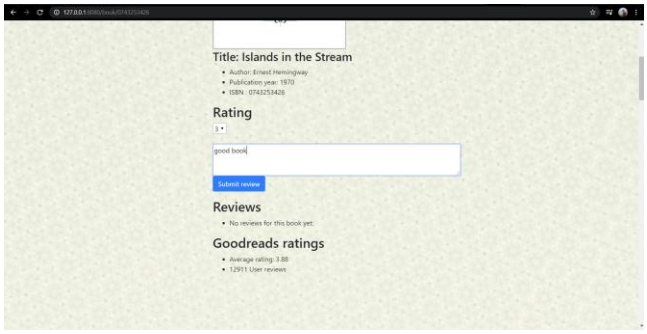

Figure 6: Ratings and Reviews

This website can be accessed from the internet. It requires the user to sign up and then the user can login and search for any of the books based on ISBN number, Author or Book Name to rate and review the book. This information is available to the other users also.

The website has a navigation bar with the following options:

Home - This page contains the login/sign in page by which the user can enter his account and review and rate books. It also contains a signup button if the user does not have an account so that he can create a new account.
About – This page contains information about the founder and displays the uses of this website
Books - This contains all the books to be viewed and searches the books according to the author name and displays them.

All the books are dynamic, so we can store new books as they come in our database and can be available for rating and reviewing by the users.

Please note that I am collecting average rating and Total user reviews from https://www.goodreads.com/book/review_counts.json for the analysis of my website with goodreads.com

Also I am collecting the Images of books from http://covers.openlibrary.org/b/isbn/%7B%7Bisbn%7D%7D-L.jpg where I am passing the isbn number where the user wants to review and rate.

The user can go to the signup page and first will add his credentials and an account will be created for that user (fig 2). Then he can use the username and password and can access his account (fig 1). User can also see the list of books by going in the books tag in the navigation bar and can search the books of an author (fig 3).

After the user enters his account, he can search for the books having an isbn number or belonging to an author or he can search by the book name. Then a link of the book will be provided so that the user can follow that link and access information about the book reviews and ratings by different users (fig 4,4.1). The user can now put his ratings and reviews about that book and submit it (fig 5,6). The user can logout at any time from his account by clicking on the logout button in top right corner.

DISCUSSION

There are a lot of things that can be added to further improve the website. We can add a book recommendation system which shows which books are accessed by the users a lot of times or which are the favorite books. We can also add a feature to buy books online, so the users can buy the books. We can also provide this data to the book vendors and manufacturers so that we get to know about the book sales statistics which will be very useful.

We can also add a module that takes suggestions and feedback from users so that we can improve our website accordingly which will attract more and more users. We can also show the number of books available at different stores. We can also know about the ongoing trend for books belonging to certain genre.

We can also make a notification module which can alert the users on mails if a new book is launched so that they can rate and review it so that we can quickly analyze and predict its sales statistics.

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