

## RECOMMEND ME: PLATFORM TO SHARE YOUR RECOMMENDATIONS

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### ABSTRACT

“A suggestion or proposal for the best course of action, primarily one made by an authorised body, is referred to as a recommendation.” In our everyday life, people always ask and give recommendations. They are continually recommending something they enjoy, it could be a movie they watched last night, or it could be a book they have read in the past month. However, there isn't any dedicated or specific site where users can recommend such things or can see everyone else's recommendations. Recommend.me is a web application to view, add, and share your recommendations with your friends or followers. These recommendations could be anything from "My favorite books", "Top 10 courses on Machine Learning" or "Top Tech channels on YouTube" etc. Users have the freedom of adding any recommendations they like and they can easily share the link of the recommendation to anyone.

**Keywords:** Recommendations, Web Application, Suggestion, Proposal.

### I. INTRODUCTION

Recommending or suggesting someone something has been the nature of human beings. Be it anything, books, courses, movies, tv shows, humans tend to recommend something that they have enjoyed or greatly benefited from, but there is no proper platform that provides users to make their list of recommendations, and a way to share those recommendations with their friends at ease. Moreover, when we recommend someone something, we tend to forget or be unable to recall what was the best. For example, if someone asks you to recommend good novels to read, you must first recall all of the good novels you have read in the past before recommending them to your friend; however, you may overlook some good novels because you were unable to recall them at the time of giving the recommendation. To evade this, users can use the provided platform Recommend.me and can create multiple lists of their favorite recommendations beforehand and can share the link of recommendation directly with their friends. Additionally, To provide the best experience possible, users are provided a feed that is algorithmically filtered utilizing recommendation systems such as content-based filtering and collaborative filtering. Users can upvote and share the recommendation they like. They can also add other users' recommendations in their bucket, search through all the recommendations uploaded by other users either by title or tags.

### II. EXISTING SYSTEM

Though there is no platform that allows you to create, browse, or share a list of recommendations, there are a couple that tries to accomplish something similar.

#### 1. Wirecutter

Wirecutters test and review thousands of goods thoroughly to help find users exactly what they need. They recommend high-quality products.

#### Limitations:

- No recommendation system
- Users cannot create their recommendation
- Limited products to recommend

#### 2. Reddit

Reddit is a forum and social media website where users vote on content that is socially approved and promoted.

#### Limitations:

- Not a dedicated platform to post your recommendations
- Targeted at making different communities and subreddits

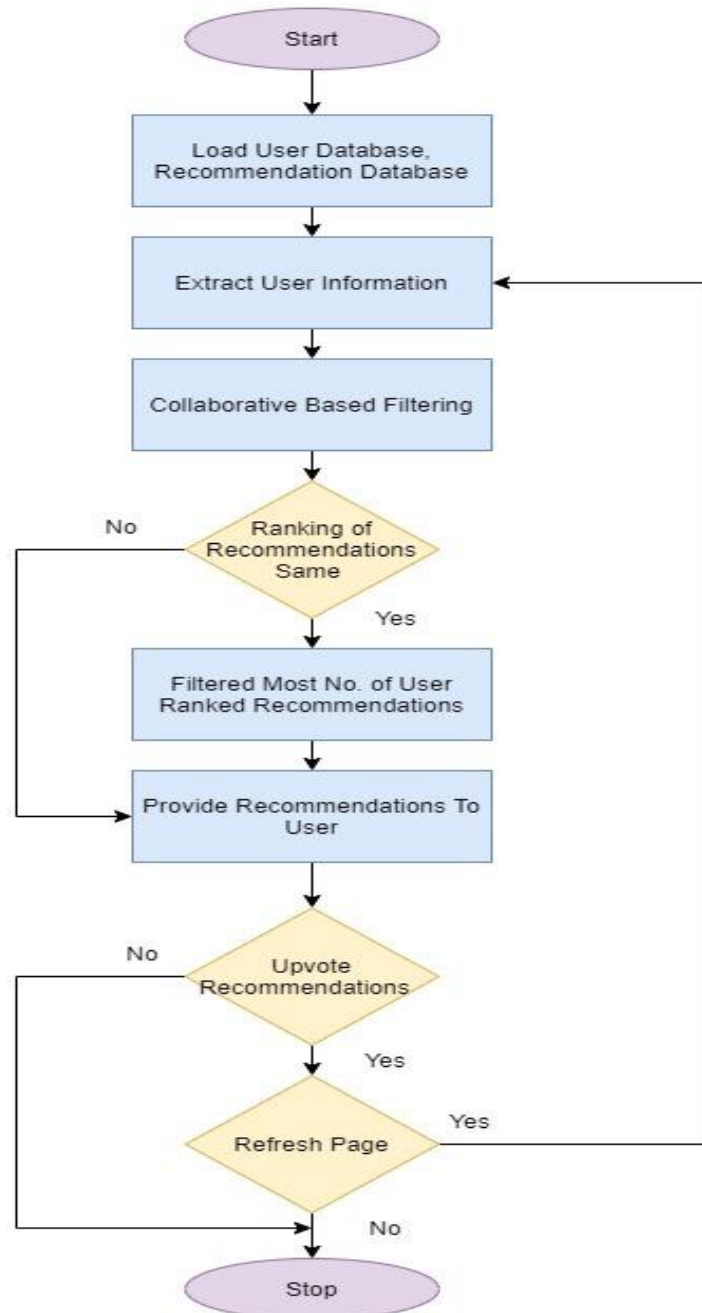
### 3. TopCorn

Topcorn recognizes your movie preferences and makes recommendations based on them.

#### Limitations:

- Recommends only movies
- Users can not recommend
- Limited use case

### III. PROPOSED SYSTEM



**Fig 1:** Proposed System of Recommend.me

The flowchart states:

As soon as the user visits the website the session starts and the unique id of the user is extracted from the cookie if the cookie doesn't exist, redirect the user to the login page. From the extracted unique id user is fetched from the database and the home feed is displayed using collaborative and content-based filtering. This

filtering techniques takes contents, tags, which recommendation users have upvoted, saved, shared into the account. Each user will have their own unique, customized feed according to their liking.

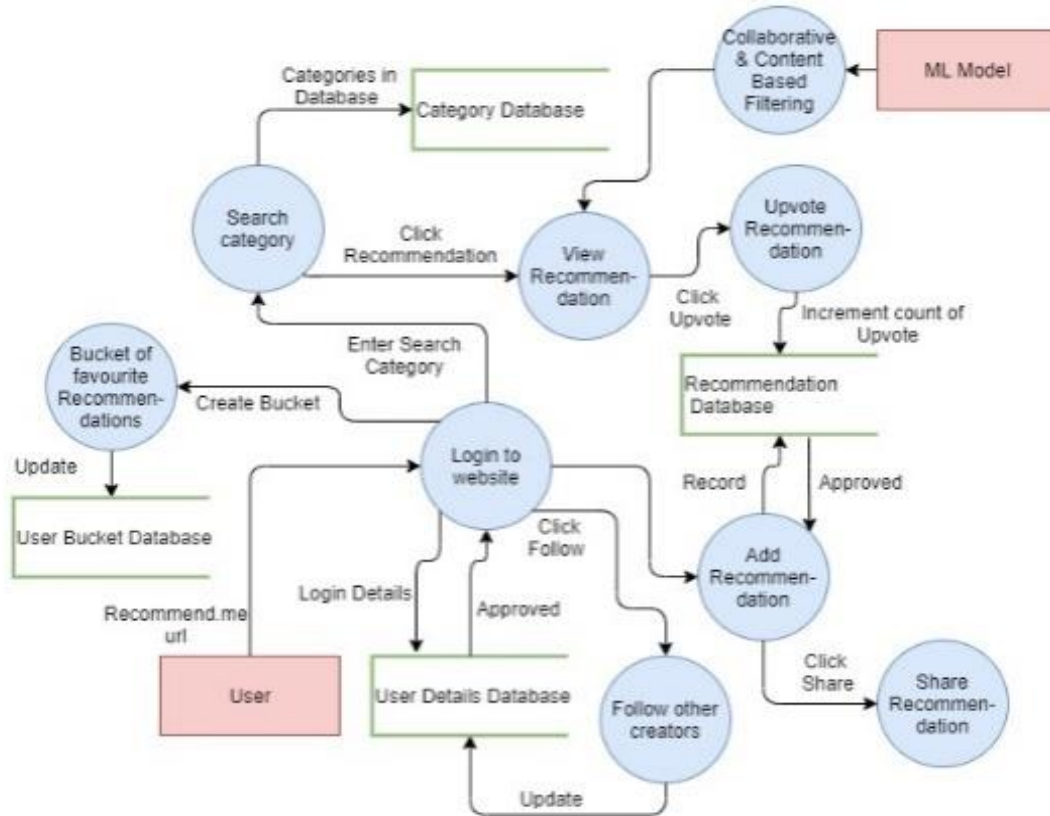


Fig 2: Data flow Diagram

This is the Data Flow Diagram for Recommend.me system. First user login to the website using credentials, the system checks the credentials using the database. User can search recommendations according to categories or tags the recommendations will be retrieved from the category database, user can also create a bucket of their favorite recommendations after recommendation marked as favorite it will be added to the database, whenever user create new recommendation it will be added to the recommendation database, whenever user follow other creators the creator will be added to the user database. There is a machine learning model which provides recommendations to the user by performing collaborative and content-based filtering

#### IV. IMPLEMENTATION

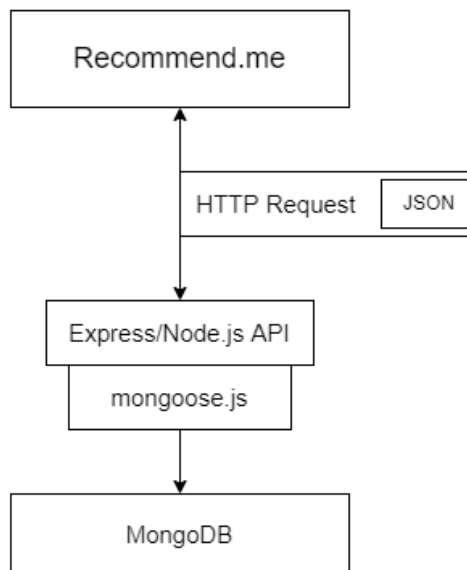
Recommend.me uses React JS for its frontend UI library. React is a JavaScript front-end toolkit for building user interfaces with UI components. React is free and open-source maintained by Facebook and other open-source developers. React makes it easy to create complex web applications and handles the UI rendering efficiently. Recommend.me is a single-page application which means everything is rendered on the client side so whenever you visit a new page on the website, the website will not reload as React is client-side rendering application everything will happen at the client-side i.e. on a browser such as fetching data, building a page with HTML, CSS, and JS and hence it provides a smooth user experience. The web page will not come from the server which happens in the traditional frameworks such as PHP, Ruby on Rails, etc. React will create the requested page on the fly at the client-side and therefore we do not see any loading on the website. In Recommend.me every UI element is a component. Header, Footer, Button, etc. everything is an individual independent component which can be reused on the multiple pages. This lowers code duplication by allowing it to be reused several times on the multiple web pages, promotes team collaboration, and increases scalability. Additionally, for the backend Recommend.me uses technologies such as Node.js, Express.js, Mongoose, and MongoDB. Express.js is a node.js framework that makes it easy to write backend API. Mongoose is a library for the MongoDB database which allows us to create relations, and query data easily and efficiently from the MongoDB database. Following is the example of the user document on MongoDB.

```

{
  "_id" : ObjectId("614dd6bdf4386900049ad294"),
  "userId" : "102868147774937939400",
  "displayName" : "Prashant Channe",
  "firstName" : "Prashant",
  "lastName" : "Channe",
  "image" : "https://avatars.dicebear.com/api/initials/PC.svg",
  "loginMethod" : "Google",
  "userName" : "prashantchane12",
  "createdAt" : ISODate("2021-09-24T13:46:37.383Z"),
  "updatedAt" : ISODate("2022-04-13T10:29:43.445Z"),
  "followers" : [
    ObjectId("614dd843f4386900049ad2dc"),
    ObjectId("61e55737fdcdcd000433db6a")
  ],
  "followings" : [
    ObjectId("614dd843f4386900049ad2dc"),
    ObjectId("614dd90af4386900049ad304")
  ],
  "recommendations" : [
    ObjectId("614dd71df4386900049ad2ac"),
    ObjectId("614dd818f4386900049ad2d2")
  ],
  "upvotedRecommendations" : [
    ObjectId("614dd818f4386900049ad2d2")
  ],
  "bucket" : [
    ObjectId("614dd95ef4386900049ad31c")
  ],
  "__v" : 42
}

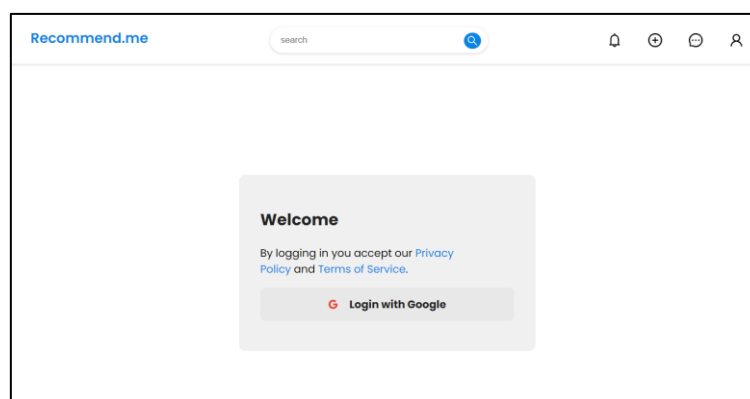
```

As shown in the below figure, for example, to fetch the user details or the user recommendations list, Recommend.me will first send the HTTP GET request to the API endpoint with appropriate headers, occasionally body which might contain JSON data. Then the code written inside the controller of that API endpoint will execute which contains the instruction to fetch the data from the MongoDB database and return the data to the user.



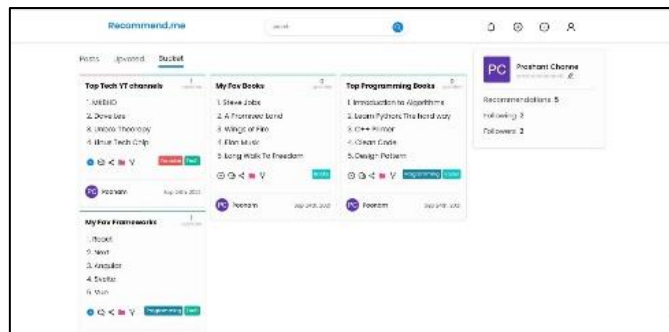
**V. RESULT**

**Authentication:**



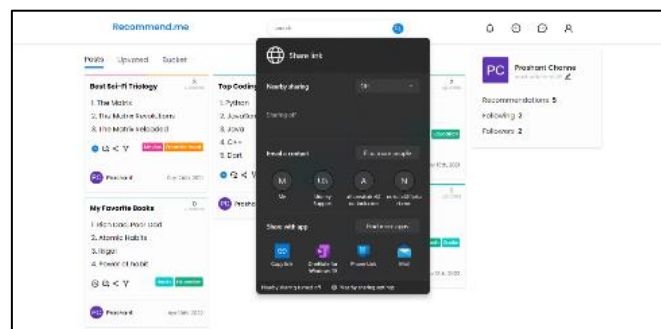
Before being able to create a list of recommendations user is authenticated using Google login. No need to fill out lengthy forms for a signup, users just have to log in or signup with their google account and they can explore all the features of the app.

**Bucket:**



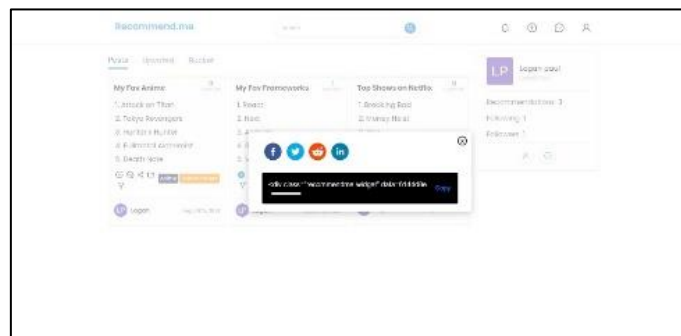
Users of the platform can create a bucket of their favorite recommendation. If the user likes someone's recommendation on the platform then he or she can add that list of recommendation into their personal bucket or save the recommendation to checkout later. This feature is same as adding a item in wish list in an ecommerce website.

**Share:**



Anyone can visit the website and share the list of recommendation with their friends by clicking on share icon without having to log in. Sharing a list gives the opportunity to other users to visit the website.

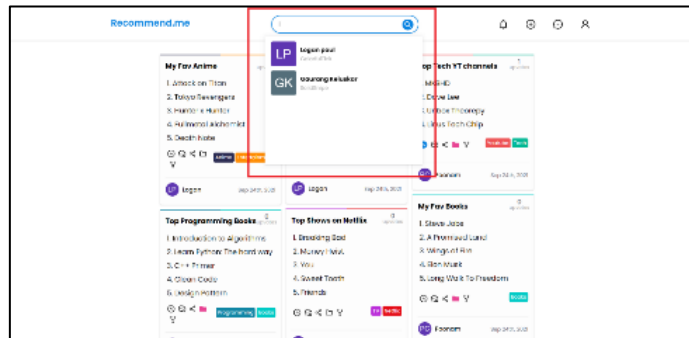
**Widget or Embedding HTML:**



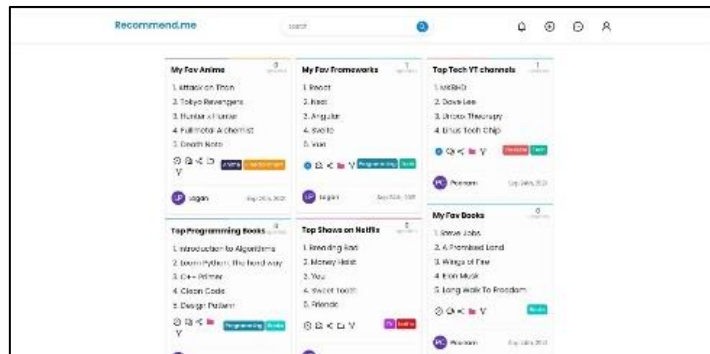
Anyone can create a widget of any recommendation. This is same as embedding a YouTube video in your website. This feature allows users to embed the widget or the recommendation card to your personal website. User will be provided **div, script and link** tags which they can paste it into their website and the same recommendation list will be shown on their website.

**Search:**

Anyone on the platform can search the user by their display name on the user name. This gives a user the ability to search their friends on the platform and follow them to keep them updated.

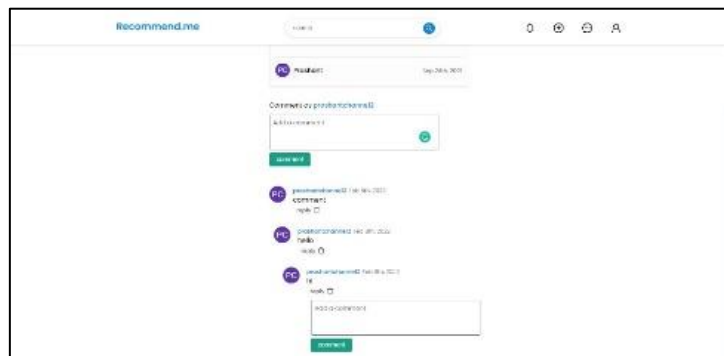


**Timeline:**



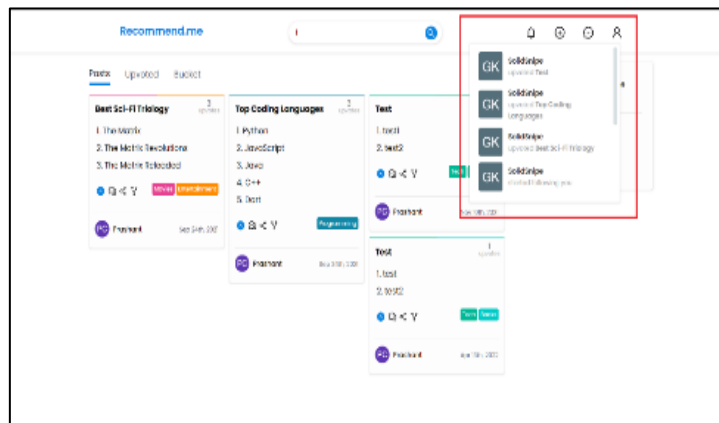
Each user has their curated Timeline which shows the recommendations of other users based on the type of content and users they follow.

**Comments:**



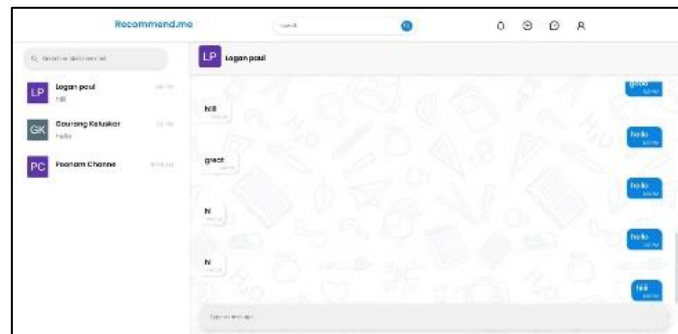
Comments are nested to keep the long nested discussion on the recommendation list.

**Notification:**



Users of the platform receives notification whenever someone follow them, upvotes the their list of recommendation, add a comments to their post.

Chat:



Recommend.me also provides a Real-time chat feature to communicate with other users on the website.

## VI. CONCLUSION

Recommend.me achieves the purpose by offering a platform for creating a personal list of recommendations that can be shared with the world. Since it is a web-based application, it is accessible to everyone using any configuration and operating system from anywhere in the world. Furthermore, because of its scalable tech stack, it will scale as the user base grows.

In the future, there can be features such as real-time chat to communicate with other users, a feature for creating a community on different categories such as community for programming where users will post recommendations on programming topics, API for developers to create apps on top of Recommend.me, and mobile application for android and IOS.

## VII. REFERENCES

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