CPEN321
Media Recommendation Engine

Requirements, Vision, and Scope

Product Vision Statement

Motivation/Opportunity

The Media Recommendation Engine will be a web-based application which will seek to offer media suggestions to consumers based on their search queries, search history, and personal profile. While most alternatives only support one type of media and merely reference reviews directly, MRE will encompass multiple forms of media and aim to analyze and provide information in such a way as to help the user decide on a piece of media as quickly as possible.

Problem Statement

The problem of	Finding a subjectively interesting piece of media to consume
affects	Anyone who consumes entertainment media
The impact of which is	Losing time which could be allocated to other tasks of the day or viewing media
A successful solution would be	A web application that returns media suggestions and provide information on that media in a refined manner.

Product Position Statement

For	All entertainment media consumers
Who	Are looking for their next piece of interesting media to consume
Our System	Is web-based and all software
That	Recommends interesting media based on user profiles
Unlike	Other web applications which merely congregate reviews
Our Product	Supports multiple types of media, analyzes gathered information, and presents it in a consumable manner.

Users

Our user base will consists of anyone that enjoys consuming various forms of media, including but not limited to games, movies, and books. Our product will aim to provide users who use our service with recommendations for new content to consume. The MRE will be easy for users of any degree of computer experience to use as results can be generated off a single search query.

Feature List

The main feature our product will need to provide is the recommendation system. This system will take a user's interests and searches into account and return give the user a personalized list of recommended media. To go alongside the recommendation system, our product will also provide an infographic page for each of piece of media. This will include trailers, summaries/synopses, user and critic reviews, and related content. We also plan to implement a friend/follow system, where a user can view what content a person with mutual interests has been consuming. Users will also be able to create tags for content, allowing for other users to filter content for specific tags.

Constraints

Our product will rely on the development of a website, which will require the use of HTML, CSS, JavaScript, and the MEAN backend stack. We will also need to use a web crawler and various APIs from established review websites such as IMDb, Rotten Tomatoes, and MetaCritic.

Scope and Limitations

The features we are including are the ones listed in our Feature List.

Assumptions and Dependencies

We will need to draw information and data such as ratings, cast, trailers, and screenshots from websites to populate our infographics. User generated reviews for our infographics will rely on user testimonies from social media sites such as Twitter and Facebook. We will assume the information from accredited sources such as IMDb will be accurate. However, for user generated reviews, we will need to be careful when drawing conclusions from the statements presented.

Use Cases

Use Case 1: Creating a New Account

1) User clicks on the “Register” button on the homepage.
2) System prompt user to sign up with Google+, Facebook, or with their email.
   2.a) If user selects Google+ or Facebook, the user links their accounts to the website.
   2.b) If user signs up with their email, the user enters their email and a new password.
3) System prompts user to confirm their account creation method via permissions check for social media accounts, or email confirmation.
4) System then prompts user to provide preferences for their media type.

    Use Case 1.1: User provides initial preferences

    1) User clicks the desired media type(s).
    2) For each media type, system presents a list of genres for those media type(s).
    3) User clicks on the genres they like before clicking the “next” button.
    4) System display a list of titles generated by the genres that they selected.
    5) User clicks on the media they like before clicking the “finish” button.
    6) System adds preferences to user’s profile.

    Use Case 1.2: User skips providing initial preferences

    1) User clicks on media of choice.
    2) System presents a list of trending media.
    3) System provides no recommendations due to lack of preferences.
    4) User has the option to browse the trending media OR they can go back and set their preferences.

Use Case 2: Logging into to an Account

1) User presses the login button on the menu bar.
2) System displays a login window on the same page.
3) User enters their email and password OR uses “Login with Facebook” OR “Login with Google”.
4) System verifies and logs the user in.

Use Case 3: Changing user preferences/follows

1) User logins to their account.
2) User clicks on their username.
3) System presents the default profile preferences tab.
4) System presents the user’s most recent ratings.

    Use Case 3.1: Clearing all preferences

    1) User clicks “clear all preferences” button.
    2) System removes user ratings for all media types from their profile.

    Use Case 3.2: Clearing Preferences for a Media Type

1) User clicks on a media type
2) System presents the user's most recent ratings for that media type.
3) User clicks "clear preferences" button.
4) System removes user ratings for that media type from their profile.

Use Case 3.3: Editing Preferences

1) Use clicks on the "rate up" "rate down", "rate neutral", or "delete preference" next to the recent rating.
2) System changes the user rating for that piece of media on their profile.

Use Case 3.4: Unfollowing Users

1) User clicks the "following" tab.
2) System presents a list of followed users.
3) User clicks the corresponding "unfollow" buttons next to followed users.
4) System removes that user from the follow list.

Use Case 4: Editing User Account Settings

1) User logins to their account.
2) User clicks on their username.
3) System presents the account profile page.
4) User clicks the account settings tab.
5) System presents the account settings page.

Use Case 4.1: Changing password

1) User clicks "change password" button.
2) User enters old password and a new password.
3) System updates the user's password.

Use Case 4.2: Changing email

1) User clicks "change email" button.
2) User enters a new email.
3) System updates the user's email.

Use Case 4.3 Deleting account

1) User clicks "delete account" button.
2) System displays warning message for deleting the account.
3) User confirms their intent to delete the account.
4) System removes the user account from the database.

Use Case 5: Looking for Popular/Trending Media

1) User visits the site.
2) System presents home page displaying overall popular/trending media.
3) User clicks on a media type tab.

4) User can see popular/trending items for that specific media type scrolling at the top of the page.

Use Case 6: Finding a Recommendation

1) User logs into their account.
2) System presents the main dashboard with recommended titles on all media types based on user preferences.
3) User can click on a specific media tab.
4) System presents that media type's dashboard with recommended titles based on user preferences.

Use Case 7: Searching A Specific Title

1) User searches up a title they would like to obtain more information about.
2) System returns titles that match the search query based off keywords.
3) User selects the title that they intended to search.
4) System displays information about the title that the user selected such as rating, reviews, and trailers.

Use Case 8: Following Other Users

1) User can select whether their profile will be public or private to other users.
2) User can follow other users on the website.
3) System will display what items the user's followers have enjoyed consuming.
4) System will also display items that the user has liked to the user's followers.

Non-Functional Requirements

Performance Requirements

We will need to make sure that our web application runs on reliable and fast web hosting. Users will find more enjoyment in using our application.

Security Requirements

We will need to establish a secure user account system to ensure user information is kept private. Logging in through either Facebook or Google plus will allow users to speed up the signup process and allow us not to have to store passwords.

Software Quality Attributes

Our algorithms for media recommendation will need to be accurate, meaning that the suggestions given will be inline with what the user enjoys consuming.