CS6750 – Assignment M3

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Abstract—The search functionality in Amazon Prime Video is pretty basic and can be improved to fit needs and serve users better. Amazon Prime Video service is an online platform streaming shows and movies. This service can be accessed from various devices such as laptops, smartphones, smart television, and handheld tablets like the iPad. For this discussion, I would like to concentrate on the Amazon Prime Videos smartphone version's search feature. I want to talk about redesigning this search to allow the user to quickly and accurately search for the desired content.

1 BRAINSTORMING PLAN

I have taken the first individual approach and later included group sessions for my brainstorming approach. Brainstorming was performed in at least one-hour sessions multiple times throughout the day last week to get the best possible ideas. This schedule has helped me get ideas based on Amazon Prime Videos applications' usage in different contexts and conditions and allowed me to focus on improving the search feature in the Amazon Prime Videos application. As there are many ways the search feature can be improved, the brainstorming has been broken down into specific sections. The sections include implementing better voice-based search, providing better sorting features, providing better filtering features on the search results, and improving the search algorithm to provide better results based on the user's preferences. Four days into the brainstorming plan and ideas were discussed with the group, and the user interface and designer were consulted to see if the ideas were feasible. The brainstorming plan's goal is to come up with at least ten ideas that met all standards.

2 BRAINSTORMING EXECUTION

The brainstorming was initiated to develop at least ten effective and feasible ideas to improve the Amazon Prime Videos' search functionality. Both individual and group sessions were effective and were successfully executed. Most of

the ideas were found in the sorting and filtering features and improving the search algorithm sections. Below are the ideas that were found

- Adding a feature that allows sorting based on the recency of the show or movie
- Adding a feature that allows filtering based on the language
- Prepopulating the search screen with shows and movies that the user might like. These recommendations would be based on advanced machine learning algorithms that consider user's likes and dislikes, the genre, language, and watching history.
- Providing sorting features that allow the shows to be listed according to the ratings, view count, popularity, and year released
- Improving the search results' indexing position based on user's tastes and preferences and guessing the appropriate results more accurately.
- Separating the search results into categories such as movies, shows, Amazon originals, and documentaries.
- Integrating a smart voice-based search feature into the search bar and making it prominent would make the users choose voice search over text inputs.
- Adding radio buttons that would allow the user to suggest the search that they are looking for show/movie title, actor name, director name, or genre
- Adding the "Explore" option on the search page would allow the user to go to specific areas instead of search for one title or show.
- Adding categories on the search results page allows the user to choose from various options like movies, TV shows, a genre like comedy, kids, action, adventure, etc. This will allow the user to drill down on the search results.

3 SELECTION CRITERIA

All the ideas generated from executing brainstorming were great and had a high possibility of improving the Amazon Prime Video's search feature. Out of all the ideas, I would like to choose the top three most effective ideas to move forward with the prototyping. This selection of the top three ideas is based on the user types observed in the data inventory from the M2 assignment. These improvements are suggested to make the user experience and user satisfaction better. The user types identified for this task are individuals from the 18-45 age band and

both male and female. Our users are technologically knowledgeable and expect the interfaces to be intuitive, and smarter reduce the interaction with the interface and focus more on the task. Our selection criteria are based on improving the search features to best serve the application's maximum user base. The ideas that will be chosen will try to satisfy the criteria that were identified from the user needs from the data inventory in the assignment M2; users want the search to become more intuitive, provide smarter search results, and reduce the interaction of the user with the interface but also provide the best experience possible.

The ideas that fall into the category chosen and how they satisfy the user needs

- The addition of a sorting feature would allow the results to be sorted by recency, popularity, view count, and ratings. This idea would resonate with the user needs for the interface to be intuitive.
- Addition of features to filter the search results based on the year released, language, genre, content type, and included with Prime or not. This idea would satisfy the user needs for the interface to have reduced interaction as the appropriate results are available quickly and with reduced interactions.
- The addition of a voice search assistant to the search box would implement smart features and machine learning into the search. This idea resonates with the user needs for the interface to be smart and reduced interaction with the interface.

4 PROTOTYPE 1: TEXTUAL

One of the finalized ideas to improve the search interface of the Amazon Prime Videos is implementing smart voice-assisted search. Textual prototyping is chosen because implementing a voice-based search feature can be best described in the text. The current search interface shows a simple search bar with a magnifying glass icon and text that reads "Actor, title or genre," suggesting the user can search based on all three options. I would like to modify that search bar and introduce a mic button placed to the right edge of the search box colored in prominent green to attract the user. I would also change the suggested text in the box to a scrolling text that would add "Search smart using voice." The idea is for the user to press on the Mic icon, and a smart assistant will pop up on the screen, dimming everything else in the background. This assistant will show a simple

vertical bar graph at the bottom of the screen and a helpful text at the middle of the screen that reads, "Say what would you like to search?". This interface will suggest to the user that the interface is expecting voice keywords. As the user talks, the interface would display the vertical bars in different sizes, similar to how sound waves are represented. As the user says the keywords, the voice assistant would translate the voice to words and display what it understood right below the graphical display. This would let the user see if the voice assistant understood them correctly and correct search is being requested.

As soon as the user stops talking, the interface would understand that the voice command has ended and show appropriate results based on the indexing and search functionalities. Features would be provided for the user to select the voice inputs entered to edit the keywords using keyboard-based inputs if there was something else that the user would like to add. The search results page would also keep showing the mic at the bottom of the page with faded gray that would suggest the user can click on that icon and redo the search if needed. The search results would be based on the advanced machine learning algorithms, user preferences, and other ideas identified in the brainstorming exercise.

The user needs to be specified in the user types section of the M2 assignment are based on the survey results and other needfinding executions implemented. Implementing a smart voice-assisted search satisfies the user needs from the assignment M2 that would require the interface to be smart, intelligent and reduce the user interaction with the interface. When the interface provides easy ways to enter the search keywords that would eliminate the need for keyboard typing and spelling mistakes, the user interacts less with the interface. When the interface provides better search results based on the voice inputs and advanced underlying algorithms, the interface becomes much intelligent and smarter, satisfying the requirements from the M2 assignment.

The user types that were finalized from the assignment M2 that suggest most of the Amazon Prime Videos userbase is 18-45, both male and female and technologically knowledgeable, and appreciates reduced interaction with the interface and increased focus on the task are appropriately met by implementing this idea of the smart voice-based search feature. The prototype meshes well with the audience of this task as it meets all the requirements gathered from the needfinding executions.

5 PROTOTYPE 2 - WIREFRAME

As the interface that I am trying to redesign is a mobile application, I would like to choose wireframe prototyping to showcase the search's filtering options.

Figure 1—Wireframe prototype. "Filter By" feature.

I've used my Apple iPad and Pencil to draw the wireframe because of the editing options it provides. This wireframe represents the idea of implementing a new "Filter By" feature for the Amazon Prime Videos mobile application's search results page. After the user provides search keywords into the search bar through keyboard or voice inputs, the application searches for relevant shows and movies available and displays the results on a new page. From the 4.6 user subtasks of the data inventory section of assignment M2, it is evident that the user would like to filter the search results to find the video they are looking for quickly and easily. Above wireframe from *Figure 1-* Wireframe prototype. The "Filter By" feature represents how an additional filtration option can be displayed on the search results page. There will be a retractable menu on the left side of the search results

page. When clicked upon, a menu would appear to show the "Filter By" options to the user. The options that would be included in this menu are:

5.1 Year released

When the user selects this option, the screen will be faded, and a new pop-up menu will be loaded with scrollable years starting from the current year till the last year based on the search results. When the user selects a certain year, shows and movies from only that year will be displayed in the search result, allowing them to drill down.

5.2 Language

When the user selects this option, the screen will be faded, and a new pop-up menu will be loaded that displays different languages pulled from all the search results. When the user selects on certain language, only results from that language will be displayed in the search results.

5.3 Genre

When the user selects this option, the screen will be faded, and a new pop-up menu will be loaded that would show all the different genres that the results are from. The application would pull all the genres from the search results and then display them in this menu, which would filter out the genres only from the search results and not all the genres available.

5.4 Free to me

Amazon Prime Videos has both free and paid content. There are occasions when the user only wants to look at the videos included with their Prime membership, and at times they want to only search for paid videos. In any case, the user would use this option to filter on the "Free to me" option that would give them two options: Included with Prime, Paid. When selected, only appropriate results will be displayed on the search page.

5.5 Content-Type

There are different types of videos on the application. At times the user searching for a video is sure about the type of the video and would like to filter the search based on the video type. This option would allow the user to filter based on the

type of video from Movies, TV shows, Documentaries, Short films, Clips, and Interviews.

The requirements gathered from the M2 assignment suggest that the user is looking for the options to filter down and drill down on the search results that allow them to only look at a certain group of results. By introducing the "Filter By" option, we will be providing the user what they are looking for. This idea will mesh with the audience described in the user types in M2 as these users are looking for a better interface with an intuitive and smart interface. Scrolling through thousands of search results, the user will filter out all the videos that they are not looking for, allowing them to quickly find the videos they want.
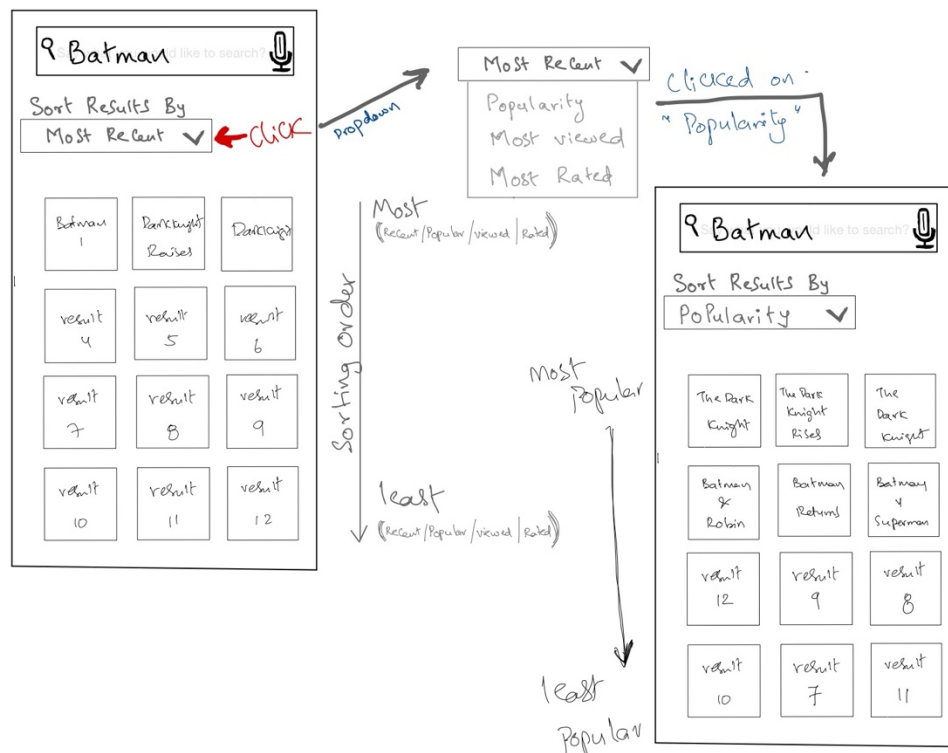
6 PROTOTYPE 3 – CARDS

Figure 2—Card prototype. "Sort Results By" feature.

The idea to add an improved sorting feature to the search results page can be accurately displayed and prototyped using Cards. Cards prototyping allows simulating the user interaction with the interface. As the sorting feature has

multiple options and different screens that would load as per the user interactions, cards can best display the interactions.

After the user enters the search keyword either through keyboard input or voice-based input, the application would search the video content and display the results on a new page. As per the needfinding and data inventory, this search results page is not intuitive and doesn't allow the user to find the appropriate video quickly and easily. Implementing the third idea to add a "Sort Results By" option would allow the user to sort the results based on various criteria that would make it easier for them to find what they want. On the search results page, a small menu will be displayed that would read "Sort Results By" and when that would default to the most recent videos. Different sorting options that would be provided include recency, popularity, most viewed, and most rated.

From *Figure 2* - Card prototype. "Sort Results By" feature, the user searches for "Batman," and the search results display results that are not sorted and don't display the user's wants. The user clicks on the drop-down on the "Sort Results By" and selects the popularity sorting option. The search results are sorted by most popular to least popular videos from top to bottom of the screen. The results are sorted based on popularity, and the user can now see the movie they are looking for; in this case, "The Dark Knight" comes in the first index.

From the needfinding and the data inventory, it is evident that the user is looking for a simpler interface that is intuitive and smart enough to provide results with the least interaction. By providing the sorting options, users don't have to scroll through hundreds of results but can sort the results and find the videos they are looking for with the least interaction with the interface. This idea meets all the requirements from the data inventory. The prototype also agrees with the audience that is identified from the data inventory. As the greatest number of userbase users is used to sort the search results in different websites, this prototype provides similar interactions that the user is well aware of.

7 APPENDICES

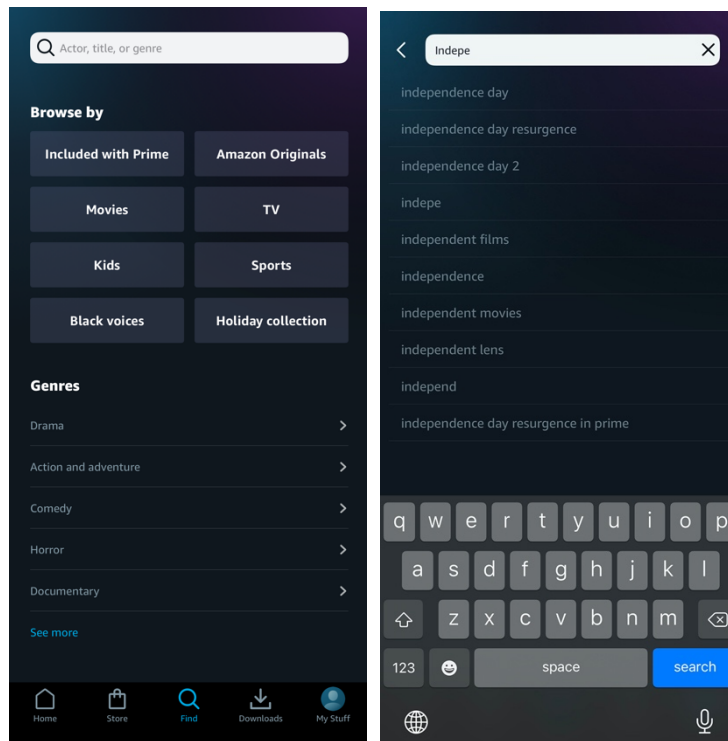## 7.1 Current search feature on Amazon Prime Videos mobile application

Figure 3—Current search in "Prime Video" mobile application.