Leverage social filtering to enhance viewing experience with Amazon Prime Video

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Leverage social filtering to enhance viewing experience with Amazon Prime Video

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Abstract

The development of technology has changed the way viewers consume video contents. With the rising of streaming services, video contents are gathered in one big platform, making them much more accessible than ever before. However, in the meantime, the ever increasing content choices on streaming services overwhelm and frustrate us, reducing our satisfaction with the experience. In addition, as recently as just a few years ago, television was a communal experience. We would watch TV together, on one shared screen. Now, we are isolated when using video streaming services on personal screens.

This project is aimed to enhance viewing experience on streaming service by providing more precise and relevant movie recommendation based on viewer's social networking, and leveraging video contents as the bridge to develop shared experience and foster greater social engagement.

The outcomes will demonstrate a series of functionalities that allow users to refer to their friend’s viewing activities and reviews as options for movies, open up vivid conversations with friends by easily capturing and sharing memorable scenes from movies, as well as expand social connections based primarily on affinity in movie preferences for greater social engagement and richer viewing experience.

Keywords

Streaming Service, Social Networking, Social Filtering, Movie Recommendation, Interaction Design
Introduction

Background
Watching videos is one of the most popular leisure activities (Statista Research Department, 2015). In the past few years, giant companies have been launching their own streaming services one after another. With more choices of different platforms and more easily-accessed video contents, users are overwhelmed with all these provided options. “When information overload occurs, it is likely that a reduction in decision quality will occur” (Gross, 1964). That is why ratings and reviews, and even word of mouth among friends and families, have come into play, affecting greatly on our decision making. In fact, according to the research, movie recommendation collaborates with social relationship as higher precision than traditional recommendation system (Ha et al., 2012). “A friend’s opinion is more trustworthy than a stranger’s” (Hurt, 2011). We value and trust friend’s opinions more than we think.

The purpose of this thesis is to leverage social networking to organize content library on streaming service, provide a more relevant video recommendation system, and boost greater social engagement and conversations on the platform. Amazon prime video has the potential to become a preferred content platform because so many people already have a relationship with Amazon with its comprehensive and integrated online services (Simon, 2020). Therefore, this project is aiming to promote Amazon prime video by enhancing its overall viewing experience on the platform.

Problem Statement
With the development of mobile technology, lightweight and powerful devices equipped with high-resolution displays and high speed internet are giving people even freer and faster access to all sorts of film and television contents all at once. Exposed under the overloaded platforms and video contents, how do we efficiently and effectively select things that are more aligned with our needs and tastes becomes essential to save our time and efforts, allowing us to put more focus on enjoying the video watching experience itself.
Context

There are three objectives that carry out the project: help viewers find more relevant video contents, stimulate conversations with friends on video contents, and use shared experience in video contents as the bridge to develop compatible and meaningful social connections. The following are three approaches designed to achieve these objectives:

Provide more precise video recommendations based on friend’s viewing activities and reviews.

Recommendation systems are a great way to provide users appropriate and effective suggestions. “Today the majority of the recommendation systems are based on machine learning” (Lebejko, 2018). However, besides that, many of us also like to ask our friends for their opinions on things. Friends’ opinions influence our decision making greatly without one even realizing it. We think their information is reliable because we trust them (WEISS, 2017). Based on this idea, applying social filtering to the recommendation system can benefit user’s overall viewing experience on the platform for friends know each other well and believe in each other’s judgement and taste, and sometimes they just simply want to know what their friends have been watching recently out of curiosity.

Stimulate conversations with friends by sharing memorable moments from videos.

Watching movies and television provides emotional catharsis. These emotions and feelings are valuable but sometimes can be hard to express in words, not to mention sharing with others. Taking an example from communicational applications, stickers and GIFs are dominating the world of digital communication. They help users communicate a variety of emotions, thoughts and phrases, much more than text could
in a single action (Susanto, 2018). Therefore, enable users to make and collect customized clips and snaps from videos they like, and use them as expressions when communicating with friends could help boost conversations, making the experience more visually attractive and engaging.

**Expand social connections based primarily on affinity in video preferences.**

Watching movies and television can even help develop stronger interpersonal relationships, since we get to connect with others when we share viewing experiences. This shared experiences would help create greater feelings of closeness and commitment (Seidman, 2016). Shared memories from videos can also serve as starting points for important conversations. It helps to better find and connect with compatible and meaningful relationships because people who share similar preferences in videos are more likely to share similar values and tastes.
Methods

User Research & Competitive Analysis

Understanding users’ pain points and needs with streaming services could gather valuable insights to help cut to the core of the problems. The following are summarized feedbacks collected from interviewing graduate students that age from 22 to 26 with a habit of using streaming service on a weekly basis.

User Pain Points

• Public rating doesn’t really aligned with everyone’s taste. Sometimes we watched highly rated movies on the platform, but found that we didn’t enjoy it as much.
• As the saying goes, “shared joy is double joy; shared sorrow is half a sorrow.” After watching movies, we oftentimes are eager to discuss and share our thoughts and feelings with others. Yet, when watching movies alone, we have a tendency to swallow our feelings, and miss the opportunity to open up valuable conversions with others.

User Needs

• “I’m curious about what movies my friends have watched recently. It would help me decide what to watch, and I can bring up conversations next time we meet.”
• “When seeing something funny and memorable in a movie, I want to show the image to my friends so that we get to talk about it in a more vivid conversation.”
• “After watching a movie, I want to easily share my feelings with people whom I know would resonate with me. It can help me keep a closer relationship with people I value.”
• “I love this movie so much. I want to make friends with like-minded people who appreciate the same movie as I do. It would make me feel related and that I belong.”
The implementation of competitive analysis is to gain insights into the market. It helps to learn best practices of other applications, and evolve ideas into corresponding, practical functionalities. After examining several entertainment video platforms and social communication applications, the following are potential directions that worth further explorations.

**Competitive Analysis**

**Twitch**
- Realtime chatroom while watching live videos helps increase a sense of participation and togetherness
- Function “Clips” helps quickly capture and share mementos from broadcasts

**Youtube**
- Create customized playlist
- Personal channel page allows easy access to collected videos and subscriptions
- Function “Chats” allows video sharing and chatting with a built-in chatbot help find ‘next’ or ‘related’ videos.

**Line**
- Vast choices for animated stickers and emojis
- Function “Keep” allows to save messages, photos, and videos for easy access
- Function “LINE TODAY” allows easy access to daily news, current events

**Facebook**
- Sidebar chat allows sending messages quickly and easily while remaining browsing activity
- Access gifs from movies and TV shows by searching keywords in Messenger

To sum up, the current platform can make improvement in providing more suitable video contents that are closely aligned with user’s preferences. Moreover, the lack of
convenience in their sharing system makes the interactions among users low and ineffective. If the platform is able to provide a more precise recommendation system with intuitive and entertaining communicational functions, it could help boost the overall viewing experience for users.

**Design Goals**

- Provide more precise video recommendations based on friend’s viewing activities and reviews.
- Stimulate conversations with friends by sharing memorable moments from videos.
- Expand social connections based primarily on affinity in video preferences.

**Design Implementation**

Based on the above research and conclusions, there are five use case scenarios created accordingly to showcase the approaches to the design goals. The purpose is to demonstrate a clear idea of how users engage with the newly created functionalities.

- Use Case Scenario 1: Among Friends
- Use Case Scenario 2: Movie Wall
- Use Case Scenario 3: Friend Circle
- Use Case Scenario 4: Flag, Clip & Snap
- Use Case Scenario 5: Review Prompt
Use Case Scenario 1: Among Friends

Make friend’s viewing activities as options for movies. When users open the application, there is a new category called Among Friends on the homepage. It allows users to browse through movie options based on friends’ viewing activities, such as most recent, top rated, snippets and reviews. This is a more appropriate and precise recommendation because friend’s usually have similar tastes and they trust each other’s opinion (Figure 1, 2).

Figure 1. User flow 1

![User flow 1 diagram]

Figure 2. User interface sequences for user flow 1

![User interface sequences]

Homepage  Among Friends  Snippet prompt
Use Case Scenario 2: Movie Wall

Find movie options tailored by friends uniquely. In Movie Wall, users can find out a person’s recent activities and movie preferences on their individual profile. It allows users to get to know their friends better, and even bring each other closer by developing shared experience (Figure 3, 4).

**Figure 3.** User flow 2

**Figure 4.** User interface sequences for user flow 2
Use Case Scenario 3: Friend Circle

Connect with like-minded people based primarily on affinity in video preferences and mutual followers. When in a movie page, users can tap on reviews by friends to browse through who has watched the movie and their ratings. Users can further tap the plus sign to discover new people based on their commonalities in video preferences and mutual followers. After following a new person, users can see their viewing activities in the Among Friends page. It helps liven up the flow of the content updates (Figure 5, 6).

Figure 5. User flow 3

Figure 6. User interface sequences for user flow 3
Use Case Scenario 4: Flag, Clip & Snap

Generate customized snippets from memorable moments. When seeing memorable moments while watching a movie, users are able to capture those moments with the Flag, Clip & Snap tool. By tapping the clip icon, the Clip box will appear on the timeline. Users can drag the Clip box to their desired start point, and select given time frames to quickly generate a clip. After saving the clip, users can directly drag the clip from the Clip box to Chats box, and instantly share it with friends for a more vivid and engaging conversation (Figure 7, 8).

Figure 7. User flow 4

Figure 8. User interface sequences for user flow 4
Use Case Scenario 5: Review Prompt

Encourage users to leave reviews and share their valuable thoughts and feelings with others. After watching a movie, the review prompt pops up. Users can rate the movie and decide whether or not this movie deserves to be on their Top 20 favorites. Then, users will be brought to their saved moments from the movie, allowing them to do further edits to these snippets. Finally, users can easily message others with these curated snippets right away. This is to help boost the contribution to reviews and social interaction (Figure 9, 10).

Figure 9. User flow 5

Figure 10. User interface sequences for user flow 5
Final Design Breakdown

This section is to give it a closer look at the details of each screen.

Figure 11. Homepage

Figure 12. Among Friends
**Figure 13.** Movie Wall - Selection tab

**Movie Wall**
Friend's individual page. Enable users to see a unique collection of a person. It allows users to get to know their friends better, and relate to each other by developing shared experience.

**Selection tab**
- Recently watched movies
- Top 20 favorite movies

**Figure 14.** Movie Wall - Collection tab

**Movie Wall**

**Collection tab**
- Review history
- Curated snippets
Figure 15. Snippet prompt

Figure 16. Snippet prompt - share
Figure 17. Movie info page

Hugh Jackman stars in this bold and original musical - inspired by the ambition and imagination of P.T. Barnum - celebrating the birth of show business & tells of a visionary who rose from nothing to create a spectacle that became a worldwide sensation.

Movie Info Page
Separate friend's rating from public rating to get a clearer idea of how the movie really is among your friend circle.

Friend's rating vs Public rating
Tap the profile pictures to see the full list of friends who have watched this movie

Figure 18. Friend Circle

The full list of friends who have watched the movie
Tap the plus sign to discover new people
Figure 19. Friend Circle - discover people

Figure 20. Friend Circle - discover people - full info
**Flag, Clip & Snap**

While watching a movie, users can easily generate snippets and share them into the Chat box on the side for a quick, amusing conversation.

- **Tool bar**
  - Flag: Easily mark moments
  - Clip & Snap: Make quick snippets

- Enlarge Chats to full size
- Drag Clip window to desired start point, and choose given time frames to quickly generate a clip

**Figure 21.** Flag, Clip & Snap

**Chats - Collection**

While in Chats, users can access their snippets in Collection

**Figure 22.** Chats - Collection
**Figure 23. Chats**

**Review Prompt**

Encourage users to leave reviews for others.

**Figure 24. Review Prompt - rating**

After finishing the movie, users can give rating and consider whether or not this movie deserves to be in their Top 20.
**Saved Moments**

Allow users to do further edits to the saved moments after finishing the movie.

- **Flag section**
  - Flagged moments can be edited into clips and snaps

- **Clip & Snap section**
  - All the clips and snaps will go to user’s Collection and Movie Wall
  - Tap the eye icon to hide snippets from going public on Movie Wall

**Figure 25.** Review Prompt - saved moments

**Send Message**

Allow users to easily share their thoughts with curated snippets to boost interaction.

- **Choose recipient**
  - all friends, specific friend/group, or keep it to yourself

- **Swipe horizontally**
  - to browse through saved snippets, and choose either single or multiple snippets to share with the message

**Figure 26.** Review Prompt - send message
Design Iterations

There are three main design iterations implemented in this project.

Iteration 1: Bring in Snippets and Reviews for Movie Options

At first, the homepage was merely added a new category called Among Friends. However, one of the essential highlights of the project is using snippets to promote engagement. So, instead of keeping snippets in the private collection and only able to access them in Chats, let friend’s curated snippets and reviews become options for movies can make the browsing list more informative and engaging. This idea was also applied to the Among Friends page. When users tap on the snippets, they are able to save the ones they like, instantly share them with others, and directly watch the movie where these snippets were created from (Figure 27, 28, 29).

Figure 27. Homepage
Figure 28. Among Friends page

Figure 29. Snippet prompt
Iteration 2: Reorganize Movie Wall.

Change tabs from Activity and Top 20 to Selection and Collection. In the Selection tab, it shows friend's recently watched list with the time indicating when it was watched, and the Top 20 favorites. In the Collection tab, it stores friend’s curated snippets and reviews. This reorganization could make contents in the tabs more evenly distributed with clearer grouping hierarchy (Figure 30, 31).

Figure 30. Movie Wall page while in the Selection tab

Figure 31. Movie Wall page while in the Collection tab
Iteration 3: Minor Revisions in Friend Circle

Separate friend’s ratings from public ratings and show them directly under friend’s profile pictures in Friend Circle. Also, when discovering new people, feature public figures for the first two persons. These public figures could be actors, directors, film critics, and so on. Users can follow their favorite stars, allowing themselves to see related movies in their Among Friend page (Figure 32).

Figure 32. Friend Circle
Results

From the above use case scenarios, this project has demonstrated five features — Among Friends, Movie Wall, Friend Circle, Flag, Clip & Snap, and Review Prompt — to benefit users for a more enjoyable viewing experience on the streaming service. They were created to achieve the goals of the project as the following.

First, make friend’s viewing activities as options for movies. It helps to provide a more relevant and precise movie recommendation system that is better aligned with user’s interests and preferences because friends know each other well. They usually have similar tastes, and they trust each other’s opinions. Second, allow users to generate, collect, and share customized snippets from their favorite moments in a movie. It can not only make users more attached to the platform by manipulating the generating tool, but also help stimulate social interactions by developing a more vivid and amusing conversation with curated snippets. It’s the same idea of stickers or gifs that are popularly used among today’s messaging applications. Third, utilize video preferences and mutual followers to let users connect with like-minded people. It can help expand their social circle, and further increase the flow of friend’s viewing activities shown in the Among Friends page, keeping the overall platform more active and engaging.

Stream services have become even more popular especially in this quarantine time, where people are practicing social distancing. We are spending more time at home than ever before. Yet, people need more than that. They need social interaction, and want to stay connected with friends. That’s why several applications, like Netflix Party and Metastream, are coming out, letting people do live chat while watching videos together online. Therefore, making streaming services more sociable is an important factor determining the engagement and satisfaction among users today.
Conclusions

Over the last few years, the rising of streaming services has given people freer and quicker access to vast video contents. Yet, in this competitive digital era, how to distinguish yourself from the market and promote your customer loyalty becomes the crucial topic for these platforms. Streaming services need to seek ways to further satisfy their users for a more engaging and delightful experience.

The goal of this project is to enhance overall viewing experience on Amazon Prime Video. It brings in user’s social networking to organize content library on the platform in order to provide users more relevant and precise video recommendation system. Moreover, to make users more engaged and attached to the experience, it allows users to quickly generate customized snippets from videos, and share them within built-in Chats for a more vivid and amusing conversation, encouraging more social interactions on the platform.

This project has explored and reflected the fact that human are social animals. “Social animals are dependent on trust. And trust comes from a sense of common values and beliefs. We seek commonality, which is why we love social networks” (Myers, 2011). In the light of this, bringing in the concept of social networking into the streaming service and utilizing friend’s viewing activities and reviews as options for movies could make the platform more aligned with the psychological need in human nature.

Aside from general streaming services, the term “live streaming” has become frequently seen on social media nowadays. This new type of social form is a great new way to engage with the audience. It processes stronger companionship than videos or social posts. Taking that into consideration, even thought the features presented in this project can improve the viewing experience, it’s still lacking the feeling of being presence with friends. Since live steaming can bridge that gap, the future possibility for this project could be the concept of virtual cinema. Users can set up a time and watch a movie together online simultaneously with engaging communication tools like snippet
generators or live video chat to provide users an intimate, quality time without the limitation of time and space.

Sources for Imagery

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