

Streamline: User Research Report

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Table of Contents

Executive Summary	3
Background	5
Problem Statement	5
Goal	5
Research Questions	6
Secondary Research	6
Target Audience	8
Methods	9
Screening Criteria	9
Participants	9
Research Methods Used	10
Results	12
Study Findings	12
Recommendations	12
The Big Idea	13
Implemented Solutions	13
Conclusion	15
Next Steps	15
References	16
Appendixes	17
Appendix A: Research Goals, Questions, and Secondary Research	17
Appendix B: User Profiles	22
Appendix C: Interview Protocol	22
Appendix D: Field Observation Protocol	24
Appendix E: Diary Study Protocol	26
Appendix F: User Research Plan	27
Appendix G: Pilot Study	30
Appendix H: Ideation Exercise	33
Appendix I: Persona & Scenario	35
Appendix J: Product Idea Elevator Pitch	36

Executive Summary

The Streamline User Research Study explored the challenges users face when discovering content across multiple streaming platforms and identified ways to improve this experience. With an overwhelming number of options available, users often find it difficult and time-consuming to select movies or shows that align with their preferences. The study aimed to understand the factors influencing content selection and propose solutions to simplify and enhance the process.

Six participants, aged 18–55, who actively use multiple streaming services, took part in the research. Data was collected through structured interviews and a two-week diary study. The interviews provided insights into participants' habits, frustrations, and preferences, while the diary study captured real-time data on their content discovery behaviors. This combination of methods helped create a comprehensive understanding of user needs and experiences.

The research revealed five core issues. Users expressed a need for transparency in recommendations, wanting to understand why certain content was suggested. Many desired mood-based categories to help them quickly find content that matched their emotional state. Social connectivity was another important factor, as users valued the ability to see what friends and family were watching. Trending content from social media and online communities also influenced their decisions. Finally, participants emphasized the need for a simplified search tool that works across platforms, reducing the time and effort required to find suitable content.

Based on these findings, the study proposed several innovative features that were implemented into the product design. A universal search function was created to provide up-to-date information about content availability and cost across platforms. Mood-based categories were introduced to offer personalized options based on how users were feeling. Integrated social

media features allowed users to connect with friends, share recommendations, and explore trending content. Additionally, transparent recommendation tooltips were developed to provide context for suggestions, increasing trust and usability.

The study culminated in the design of Streamline, a centralized platform that simplifies the content discovery experience. By addressing key user frustrations and leveraging personalized recommendations, social connectivity, and universal search, Streamline aims to transform the way users navigate streaming platforms. Future steps include usability testing and collaborating with streaming services to refine and launch the product. This research has laid a strong foundation for creating a seamless and enjoyable experience for streaming platform users.

Background

Our user research study is founded upon users and how they discover content on streaming services. We researched how users do this using a variety of secondary sources. Using our secondary sources, we found that the reasons that users choose content vary, from individual personalities and conscientiousness to the discoverability of individual platforms. We identified a main problem statement and formed appropriate research questions that we kept in mind as we conducted our secondary research.

Problem Statement

Users who consistently view content on streaming platforms are overwhelmed by the number of options available to them. This problem arises from the variety of content across multiple streaming services, which makes the selection process both time consuming and difficult. The core issue of the problem is that the amount of available content is overwhelming, and users are looking to find content that fits their needs and tastes on a personal level.

Goal

The goal of our research was to identify the factors that influence users' movie and TV show selection process. We also looked to discover how the content discovery experience can be improved in order to better meet the needs of users.

Research Questions

We formed our research questions based on the problem statement and the goal of our study. We identified what mattered the most when it came to content discovery and how users behave. Our research aimed to answer these several key questions:

1. How do users currently search for new TV shows and movies across different streaming services?
2. What factors do users consider when selecting a movie to watch?
3. What are the common frustrations that users experience when searching for content across multiple platforms?
4. Which features or tools do users find most helpful when discovering new content?

We conducted secondary research based on these questions on three articles and created an annotated bibliography, highlighting what insights we gained from the articles and how they answer our research questions.

Secondary Research

Our first article we reviewed was about the understanding of video streaming viewing behaviors across different content providers. Yan et al. (2018) examined user behavior across six video streaming platforms. They identified both similarities and differences in users' viewing patterns. The study found that users increase their viewing in the evening and after work hours. They also found that younger audiences use mobile devices more than a TV. The study also highlighted how users switch between platforms based on the type of content and the features that the platform has, seeking a better experience or more relevant content. The study also outlined that users gravitate to popular sites when seeking a new streaming platform.

The second study was about how personality influences movie preferences and recommendations. In this study, Golbeck and Norris (2013) investigated the role of personality traits in movie preferences and how they interact with recommendation systems. They particularly measured the conscientiousness trait within users, using the Big Five Personality Test. Their study showed that users with high conscientiousness tended to have a more favorable view of recommendation systems. This suggests that personalized recommendations tailored to personality traits could enhance user satisfaction. This finding was valuable for the development of a recommendation system that better aligns with user preferences and improves their discovery experience.

Our next article of our research explored how streaming platforms manage content discoverability. McKelvey and Hunt (2019) defined “discoverability” as the relationship between users, content creators, and algorithms that affects how content is presented and recommended. The authors proposed a framework focusing on three aspects: the platform interface (surrounds), recommendation algorithms (vectors), and user interactions (experiences). They concluded that improving discoverability involves optimising the way content is presented. They also concluded that refining algorithms to suggest more relevant content offers more control over content discovery. The findings of this study suggest that platforms can streamline content discovery by offering less yet higher quality suggestions. This aspect would help users avoid being overwhelmed by too many choices.

The last article we examined during our secondary research was about the challenge of personalized recommendations in multi-platform environments. Deng et al. (2013) conducted research that revealed the problem of a “cold start”, where users enter a new platform and have no data for the system to generate recommendations for. They proposed a cross-platform user

modeling approach that integrates user preferences from multiple platforms. This offers a more comprehensive and effective recommendation system. This research highlights the potential for improving content discovery by creating a unified and personalized experience across different streaming services.

Target Audience

The target users for our proposed product are defined by demographic characteristics, behaviors, and technology use patterns. Our target audience includes individuals aged 18 - 55, with a high school diploma or higher. These users are avid streaming watchers who subscribe to multiple streaming services and are motivated to stay up-to-date with the latest shows and movies. Our users are particularly interested in discovering new content and have prior experience using different streaming platforms, both on mobile devices and TVs. These users rely on the internet or their social circle in order to explore new shows and movies, which underlines the need for more effective content discovery solutions.

Methods

The data collection for the research study consisted of two research methods: an interview and a two-week diary study. Six participants were included in the research study, all meeting the screener requirement stated below.

Screening Criteria

Based on the demographics of our target audience, we can lay the groundwork for what would become a simple survey to help identify those who participate in the two types of research later on in the project. The main goal of the screener survey was to help identify which possible participants would be categorized as avid watchers. Avid watchers are defined as users who watch more than 3 hours a week and users who also subscribe and or have access to multiple streaming services.

Participants

Six participants were used in this research study. They consisted of friends and family, and no monetary incentives were given for their participation. Each participant met the expectations needed to meet our target demographics and passed the screener criteria stated above. Each user participated in the two research methods used in the project, which started at the end of October 2024 and lasted for two weeks.

Research Methods Used

The study used two types of research methods: an interview with each participant and a two-week diary study right after. The research aimed to determine the habits or patterns users take to discover content on multiple streaming services. The interview gave us a sample experience of the users' habits, frustrations, and presences; more details are below.

Interview

As stated before, each participant was interviewed to gather information on their view habits, content discovery methods, and any frustration they are having with streaming services. As the process continues, the first step in all methods is to collect consent to document their response for an audio transcript for future research. After consent was given, building a rapport with the participant was necessary to help create a comfortable environment where the users could freely express themselves without concern or judgment. To accomplish this goal, simple questions were presented to the users. From asking for some information about them to what they watched last and how they discovered it. Not only does it accomplish the first goal of building a relationship, but it also helps bridge into the main section of the interview.

The main section was built around answering the research goals stated earlier. Those goals were key to understanding how users interacted with discovery content across multiple streaming platforms. The main questions highlighted what influenced users to choose a particular movie and what tools or features they used to find a movie. Also, any particular frustrations or satisfactions they felt when using said streaming platforms. The big question encapsulated the user's overview habits. Whether it is the tools or features stated before or any

frustration found during the process, the information given will help create the framework to build a better product to match the needs of the users.

After the big questions were asked, a cooling-off and wrap-up section was included to ask the user about their experience dealing with the overview of streaming and ask any follow-up questions. Afterward, the participant was thanked for their time and participation, concluding the interview.

Diary Study

The second research method used was an incident report-style diary study. The goal was to uncover a more in-depth depiction of users' viewing habits across two weeks. The diary study lets us see how users' viewing habits change based on the day, the week, or the day of the week. To achieve this goal, the same interview participants were given the task of completing a survey five times within two weeks. The survey was to be completed when the user found a new show or movie to watch.

The questions asked within the survey were intended to capture how they discovered new content, what influenced the user's decision to choose the movie or show, any frustration they encountered in their discovery process, and any other comments or concerns they felt. Asking these questions helped improve how they interacted in their interview. While the interview was fantastic at capturing their overall experience towards content discovery across multiple streaming platforms, the diary study captures how they felt at a particular point in time. The mind can alter memories, causing inaccurate data, thus having the user report their experience as soon as they encounter a new show or movie. The diary study proved an effective tool to capture data over time.

Results

After our interviews and diary studies, we gathered five key issues and needs that were apparent across all of our users. We built upon these items by converting them into design ideas that would help address these problems within our product. After that, we implemented them into our product in a way that's usable to all users.

Study Findings

Our key issues and needs from our users are listed below:

- Users want to understand why the service is recommending something
- Users want mood-based categories to fit how they're feeling in the moment
- Users value what is popular online and in social media
- Users want to watch what their friends and family are watching
- Users find it hard to find content across multiple platforms.

Recommendations

From these key issues and needs we brainstormed design ideas that could be implemented into our product in order to address them.

Our first key design idea was to implement a tooltip feature (ex. "Why am I seeing this?") to tell the user why something is being recommended to them (i.e. "You're seeing this because you recently watched ____"). Another design idea we had was to have mood-based categories such as "Feel good", "Intense", "Dramatic", "Chill", etc., so that users can choose movies based on how they're feeling in the moment.

One of the main design ideas we came up with was to have a social media integration that allows users to connect with friends and family and see what they're watching. We had ideas to include adding friends, viewing their favorites list, viewing their watch history, recommendations, etc. We also thought of having a section in the social media feature that shows what's trending across users and platforms.

Another key design idea we came up with was to provide a comprehensive search feature that would search all platforms. This search feature would be important in providing accurate information about content and where to find certain content.

After identifying the kind of design features we'd possibly be implementing, we were able to centralize the "Big Idea" of our product.

The Big Idea

This technology is a centralized recommendation service that streamlines the users' content discovery experience. Its goal is to bring streaming content together across platforms, making it easier to find content to watch and connect with others.

Implemented Solutions

We narrowed down our design ideas and decided which ones we'd be implementing into the product. We expanded on each design idea to make it more detailed and include more features.

Our implemented solutions are as follows:

1. Universal search
 - a. Our search will always have up-to-date information on each movie and show including where to watch it.

- b. The search results will be based on genres and moods that the user typically engages with as well as past searches.

2. Integrated social media

- a. The social media aspect fosters connection and collaboration among users. This feature will allow users to create profiles where they can interact with friends and family, follow each other's activities, and share recommendations.

3. Mood-based categories

- a. Categories offer a personalized and intuitive way for users to discover content that aligns with their current emotional states or preferences. This feature helps users quickly find shows or movies that match their mood without extensive searching.

Conclusion

The user research study revealed significant insights into the challenges and preferences of streaming service users when discovering new content. Our findings highlighted key user needs, such as better content discoverability, personalized recommendations, and improved transparency in suggestion systems. These insights informed the development of several innovative features, including mood-based categories, transparent recommendation tooltips, social media integration, and a universal search functionality.

The implementation of these features aligns with the overarching goal of our product, Streamline, which seeks to simplify and enhance the content discovery experience across multiple streaming platforms. By addressing user frustrations and leveraging secondary research insights, we have laid a strong foundation for a solution that meets the needs of a diverse audience.

Next Steps

To refine and validate our solutions, we created prototypes of the product to conduct usability tests. These tests aim to identify areas for improvement and confirm the effectiveness of the proposed features. Based on the results, we will refine the platform further, incorporating additional features as needed. Additionally, we plan to explore technical requirements and establish partnerships with streaming platforms to ensure seamless integration.

Once the technical development is complete, our next step will be to promote Streamline to our target audience, highlighting its time-saving capabilities and enhanced content discovery experience. This will drive engagement and enable us to gather user feedback post-launch, which will be essential for monitoring satisfaction and continuously improving the platform.

References

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Appendixes

Appendix A: Research Goals, Questions, and Secondary Research

Part 1: Problem Statement Research Goal and Research Questions

The 5 W's

- Who is affected by the problem?
 - Viewers of streaming services.
- What is the problem?
 - The process of discovering new shows and movies is time-consuming and difficult because there are too many options and too many different streaming services.
- Where does the problem occur?
 - This problem occurs on streaming platforms and services where users are faced with many choices
- When does the problem occur?
 - This problem occurs when viewers are looking for new shows or movies to watch on streaming platforms.
- Why does the problem occur?
 - This problem occurs because of the overwhelming amount of content available on streaming platforms. This makes it challenging for viewers to navigate and find shows that suit their tastes and preferences.

Problem Statement

The process of finding a new show to watch can take a long time and there are too many options. This means that people have a hard time finding new content they like. There's an opportunity to make finding new shows quicker and easier and improve customer satisfaction on each streaming service.

Research Goal

Identify the factors that influence the movie selection process and how to improve their overall content discovery experience on streaming platforms.

Research Questions

1. How do users currently search for new TV shows and movies across different streaming services?
 - a. What factors do users consider when they're choosing a movie to watch?
2. What are the most common frustrations users experience when searching for content across multiple platforms?

3. Which features or tools do users find most helpful when discovering new content?

Part 2: Secondary Research (with annotated bibliography)

Article 1: On the Understanding of Video Streaming Viewing Behaviors Across Different Content Providers

Yan, H., Lin, T. H., Gao, C., Li, Y., & Jin, D. (2018). On the understanding of video streaming viewing behaviors across different content providers. *IEEE Transactions on Network and Service Management*, 15(1), 444-457.

<https://ieeexplore.ieee.org/abstract/document/8267107>

- The authors highlighted similarities and differences in user behavior across the six platforms. While they conceptually share many of the same characteristics, the differences they do offer reflect how the platforms' typical user behavior differs.
 - **Similarities**
 - An increase in watching is typically found in the evening, particularly after regular working hours (6:00 p.m.).
 - All six platforms have an increase in mobile usage in the evening hours. As the authors note, the IQiyi app provides a better mobile experience among its users and has shown a higher mobile device viewing rate compared to the other five platforms.
 - Movies, dramas, and variety shows are typically watched more on mobile devices, as the authors relate this type of behavior to the general young to mid-age audience base.
 - **Differences**
 - Different platforms have different traffic peaks. As the authors note, the reason for the difference depends on the various video styles.
 - While traffic increases in the evening hours, each platform's evening traffic is not normalizing. Platforms that cater to movies, dramas, and variety shows perform better than their counterparts.
 - Similarly, platforms that favor more news or user-generated video perform better in the morning and day periods.
 - The percentage of mobile usage compared to computer usage aggressively differs between each platform. As the authors point out, IQiyi (IQI) device breakdown comprises 46.4% mobile devices, while Kankan (KK) is only 14.8%. The authors attribute this type of behavior based on the video categories catering towards a younger audience
- The authors define a loyal customer to a platform as someone who watches over 50% of their view on a single platform. Below is the relationship between the six platforms and their loyal customer base. As noted, the types of videos found on each platform help

retain customers' interest. As an example, the authors pointed out that sites like Youku (YK) and Sohu (SH) are more involved in user-generated videos, while the other platforms favor higher-quality production in their video categories.

TABLE V
FRACTION OF LOYAL SUBSCRIBERS FOR EACH CP

CP	YK	IQI	SH	KK	LE	TC
Fraction of loyal subscribers	41.2%	65.1%	49.5%	71.4%	62.3%	68.3%

Source: Yan, H., Lin, T. H., Gao, C., Li, Y., & Jin, D. (2018).

- The authors point out users' tendency to gravitate to a more popular site when seeking a new streaming platform. As the authors mentioned, user-changing platforms are inevitable, as many platforms offer features that others don't, whether it be a better mobile experience, types of videos offered, the size of their movie collection, or any other platform feature. Users base their needs upon switching between streaming platforms more likely to occur in the evening because "they have more time to switch [streaming platforms] for their liked videos at home after work" (p. 454).

Article 2: Personality, movie preferences, and recommendations

Golbeck, J., & Norris, E. (2013, August). Personality, movie preferences, and recommendations. In *Proceedings of the 2013 IEEE/ACM International Conference on Advances in Social Networks Analysis and Mining* (pp. 1414-1415).

https://dl.acm.org/doi/pdf/10.1145/2492517.2492572?casa_token=TGQFDv7CPBEAAAAA:EUaCKLXY28m5rf5YEleoaE5tZiWRn6XTkvwVoIXICFBdiuoSIb8A1YR4ScGtOSvO0SKJlb6eQH49lZA

- In this article, Golbeck and Norris investigate how personality traits influence people's movie preferences and how they interact with recommendation systems. They aimed to answer the questions of how personality traits affect users' movie preferences and their attitudes towards recommendation systems. The main idea of this study is that it's important to consider individual differences in personality when developing a recommendation system. That way, we can create a more personalized and effective user experience.
- In their research, they administered the [Big Five Personality Test](#) to 73 Netflix users to test their personality traits, in this case openness to experience, conscientiousness, extraversion, agreeableness, and neuroticism. They then analyzed the users' viewing and rating histories and surveyed their opinions on the Netflix recommendation system.
- There were a few key findings from this study. For one, they found that users with high levels of conscientiousness, which is one of the traits from the Big Five Personality Test, tend to have a more favorable opinion of recommender systems and tend to agree with

them more. This trait didn't correlate with movie genre preferences, but it did influence how people feel about recommender systems. Overall, it found that personality is a factor to consider when developing a recommendation system.

- Below is a table from the study showing how these Big Five traits affect how users feel about certain elements of Netflix's recommendation system.

	Extra.	Agree.	Consc.	Neuro.	Open.
How often do you look over some of the movies that Netflix recommends?	0.06	0.03	0.27	-0.14	0.10
How often do you add recommended movies to your queue?	0.19	0.00	0.24	0.04	0.00
What percentage of movies in your queue were recommended by Netflix?	0.11	0.10	0.25	-0.08	-0.16
How helpful do you think the recommender system is?	0.15	0.15	0.32	-0.07	-0.20
How much do you trust the recommender system?	-0.06	0.13	0.24	-0.13	-0.24

- This study can inform our decisions regarding our product in multiple ways. The first one is personalization. People have different personalities and preferences and there should be a way to integrate personality traits into a recommendation system. It could enhance user satisfaction. Another thing to keep in mind would be that recommender systems might need to offer different types of recommendations based on personality traits. For example, people with lower conscientiousness could do better with spontaneous recommendations rather than more in depth long term recommendations. As a whole, understanding personality traits such as conscientiousness can help in designing better evaluations and improving recommendation accuracy, especially for different personality traits.

Article 3: Discoverability: Toward a Definition of Content Discovery Through Platforms:

Which features or tools do users find most helpful when discovering new content?

McKelvey, F., & Hunt, R. (2019). Discoverability: Toward a Definition of Content Discovery Through Platforms. *Social Media + Society*, 5(1).

<https://doi.org/10.1177/2056305118819188>

- The article explores how content discovery platforms like Netflix and Spotify manage user engagement through what the authors describe as “discoverability.” They define discoverability as the process by which platforms coordinate the relationship between users, content creators, and algorithms to make content more or less visible. The authors propose a framework for studying discoverability that focuses on three main aspects:
 - Surrounds: The design and layout of the platform interface that arranges content in a way that guides users choices.
 - Vectors: The pathways/algorithms that connect users with content, often through recommendations based on previous interactions.
 - Experiences: The outcomes that result from interaction with surrounds and vectors, like binge-watching and exploring recommended content.

- They found that content discovery is heavily shaped by how platforms guide users through interfaces, algorithms, and recommendations. In the article an example of this is Netflix, which emphasizes promoting its own content, in comparison to Youtube, which relies on its recommendation engine for 70% of the viewing time on the platform.
 - Key Findings:
 - The way content is presented influences what users are likely to watch.
 - Platforms that rely on algorithms to recommend content can lead users down rabbit holes that they may not have chosen intentionally.
 - Autoplay and endless scrolling are designed to keep users engaged without them having to make many decisions, leading to prolonged content consumption (“gorking out”).
 - Platforms use various tools to keep users engaged as long as possible to maximize ad revenue or subscription value.
- To address the challenges of content overload when finding new shows, we can guide the design of a content discovery product.
 - Optimize surrounds: Streamline the presentation of options by showing fewer, higher quality suggestions rather than overwhelming users with a large volume of choices. By using visually clear, personalized categories we can help users narrow their focus.
 - Refine vectors: By personalizing algorithms to suggest content based on user preferences while avoiding being overly repetitive, we can offer a balance of new and familiar content to maintain engagement.
 - Improve experiences: We can give the users tools to take control of their viewing experience, like filters and options to refine recommendations. For example, an option to “discover something new” would lead users to personalized suggestions.

Article 4: Personalized Video Recommendation Based On Cross-Platform User Modeling

Deng, Z., Sang, J., & Xu, C. (2013, July). Personalized video recommendation based on cross-platform user modeling. In 2013 IEEE International Conference on Multimedia and Expo (ICME) (pp. 1-6). IEEE.

<https://ieeexplore.ieee.org/abstract/document/6607513>

- The authors propose a problem where users in multiple platforms must start from scratch for the platform's system to create a personalized recommendation list accordingly. The authors state it is "a cold-start" for new users entering a new streaming platform. "Personalized service is based on user modeling, which requires abundant data to understand user interest exactly. Currently, most of the user modeling strategies are based on a single platform" (p .1).
- The authors present a solution for users who encounter this cold start. Through a single source, in this case, Google+, a user can incorporate their interests and hobbies; thus, that

same information can enrich the recommendation system found on YouTube. According to the authors' research, enhancing a user's recommendation is more effective from their registration information rather than their comments on a video.

Appendix B: User Profiles

Demographics

- Age: 18-55
- Gender: Any
- Education: High school diploma+

Behaviors

- Avid watchers, those with multiple subscriptions
- People who want to keep up with the latest shows and movies
- People who want something new

Technology Use and Experience

- Have experience using multiple streaming platforms, both on a mobile device and on a TV
- Use the web in order to look for new shows/movies

Appendix C: Interview Protocol

Introduction:

- Hi, my name is _____. I'm conducting this interview for the development of a new movie and TV show recommendation service.
- What's your name? Can you tell me a little bit about yourself?
- I'm looking to learn more about how people find new media to watch and I think you'd be a great resource for this.
- There are no right or wrong answers here, I just want to know how you do things.
- Do you consent to this interview? You can revoke your consent at any point during this interview.
- Your responses are confidential and will not be shared with anyone. There's no pressure to answer any question you're not comfortable with.
- Do you mind if I record this interview for future reference?

Warm-Up:

- Can you tell me about the last movie or show you watched?
- How did you find out about it?

Body of the Session:

- **What streaming services do you subscribe to?**
 - Can you describe what factors influenced your decision to choose (streaming service)?
 - **If user mentions more than one streaming service**
 - What led you to choose (other streaming service)?
 - Are there any particular features you like or dislike about (streaming service)? Why?
- **Can you walk me through the steps you take in order to find something new to watch?**
 - Do you typically find new shows or movies this way? Why?
 - What aspects or characteristics of (streaming service) recommendations influences your decision to choose a specific show or movie?
- **How satisfied are you with (streaming service)'s current recommendations?**
 - Can you describe how closely (streaming service) recommendations represent your personal taste? Why?
 - Have you been surprised or disappointed by a recommendation? Why?
- **Can you describe a time when it was difficult to find a new show or movie?**
 - What was the most frustrating part of the process?
 - How long did it take you to find it before settling on a show or movie?

Cooling off:

- We've covered a lot today but before we finish, I'd like to ask.
- How would you describe your experience with finding new content across streaming services?
- **Possible bounce back question to something interesting the interviewee said.**
 - You mentioned _____, can you tell me more about it?
- If you could change one thing about your experience with streaming services, what would it be?
- Is there anything else you would like to share that we haven't covered?
-

Wrap-Up:

- Thank you so much for sharing your thoughts and experience today. I really appreciate your time and the valuable insights you've provided.

Appendix D: Field Observation Protocol

Introduction/Warm Up

- **Introduction**
 - Hi, my name is [name]. Today, I'll be observing how you find new shows and movies using streaming services.
 - My role is to learn more about how people discover new content on streaming platforms.
 - I'm interested in how users interact with streaming services' recommendations and find new content to watch.
 - First, there's no right or wrong way to do this. Just go about your routine.
 - It would be helpful if you could talk aloud and narrate your thoughts, but it doesn't have to be a deep explanation—just simple commentary.
- **Consent**
 - Before we begin, would you mind if I recorded this session? It will ensure that I accurately capture everything we discuss.
 - Also, signing this consent form gives us consent to record the observation.
 - All the information we receive today will remain confidential, and we can stop the observation at any time.
- **Warm-Up**
 - Which streaming services do you usually watch?
 - Do you have any favorites?
 - How often do you use (streaming services) to watch shows or movies?
 - Do you usually end up liking what your chosen streaming service recommends to you?

Main Observation Period

Focus:

- Discovery Path: What tools does the user rely on? (Search bar, recommendations, categories, etc)
- Behavior:
 - How long does it take to make a decision?
 - How often do they switch between sections?
 - Do they revisit previously considered content?
- Interactions:
 - How does the user navigate?
 - Any difficulties using discovery tools?
 - Frustration, excitement, confusion responses
- Content type: What genres are they gravitating towards? How relevant are the suggestions?

- Key Questions:
 - Are you looking for something specific or just browsing?
 - What made you click on that title?

Things to watch for during observation:

- **Patterns in Discovering New Content.**
 - How does the user go about finding new shows/movies to watch?
 - Does the user rely on these provided features or tools?
 - What does the user search for when looking for content? (**ie. actor, genre, or keyword**)
 - Does the user use any outside resources such as Google or other people's recommendations?
- **Recommendations**
 - How much influence does the streaming service have on the content the user watches?
 - Does the user look satisfied with the recommendations?
- **Cross-Platform Behavior**
 - Notable features the user found easy to use.
 - Are discovery patterns similar or different from other streaming service?
 - Note that when the user switches to another streaming service.
- **Frustrations**
 - Are there any struggles from the user in finding new content?
 - Difficulty in finding new content to watch or overwhelmed with choices?
- **Common themes**
 - Frustrations with the UI
 - Success or failure in finding new content
 - How often do users use specific tools

Wrap Up

- **Follow-Up Questions**
 - I noticed you hesitated when deciding on a show or movie to watch. Can you tell me about your decision-making process at that moment?
 - What factors caused you to change to another streaming service?
- **Pre-Planned Questions**
 - Do you typically find new shows or movies this way? Why?
 - Did the recommendations portray your taste accurately? Why?
 - What influenced your decision to watch that particular show/movie?
 - Was there anything you found frustrating during this observation? Could you describe them to me?
- **Conclude**

- Thank you so much for participating in our study. Your feedback is incredibly helpful and will improve our understanding of user content discovery.

Appendix E: Diary Study Protocol

Research Duration:

At least once a day, 5 days a week, for 2 weeks (non-consecutive)

Diary Entries:

1. What streaming service did you use?
2. What movie or show did you choose?
3. Why did you choose it?
4. What features of the platform helped you make this choice?
 - a. Search bar
 - b. Genre
 - c. Most popular section
 - d. Featured film
 - e. Recommended for you
 - f. Other (Please specify:) _____
5. What issues, if any, did you encounter while finding this movie or show?
6. Did you use other resources outside of the platform to help make this decision?
 - a. Google
 - b. Social media
 - c. Recommendation from friends/family
 - d. Awards

Appendix F: User Research Plan

Introduction:

Our research project aims to understand how users discover new content across various streaming services. It seeks to identify pain points and opportunities to improve the user experience. This research will accomplish these objectives by answering several key questions:

- What factors influence the user's decision-making?
- What tools or features on streaming services enhance the user's content discovery?
- What challenges do users experience?

By gaining insight into users' preferences, behaviors, and frustrations while navigating multiple streaming platforms, this study seeks to propose improvements to the overall content discovery experience.

Background (Secondary Research):

Our secondary research includes articles that delve into streaming viewing behaviors across different platforms, how personality influences movie preferences, and the discoverability of content on these services. As Yan et al. (2018) noted, users often switch between streaming services, driven by each offer's unique perks and drawbacks.

These insights, crucial for our project, shed light on how users can better discover new content. The 'cold start' problem, a significant hurdle for new users, can be overcome by a new user model that facilitates personalized recommendations (Dang et al. (2013)). These tailored systems, especially when they account for individual personality traits, can significantly influence how users interact with content (Golbeck & Norris (2013)).

Incorporating these ideas can lay a strong foundation for enhancing the content discovery experience. User profiles should reflect personal tastes and preferences from registration to the tools and features available to ensure a smoother and more satisfying discovery journey.

Research Goals and Questions:

Research Goal

Identify the factors that influence the movie selection process and how to improve their overall content discovery experience on streaming platforms.

Research Questions

1. How do users currently search for new TV shows and movies across different streaming services?
 - a. What factors do users consider when they're choosing a movie to watch?
2. What are the most common frustrations users experience when searching for content across multiple platforms?
3. Which features or tools do users find most helpful when discovering new content?

Research Methods:

The first research method will be semi-structured interviews to better understand the users' attitudes and experiences about content discovery through multiple streaming services. Afterwards, a diary study will be conducted to gain insights into the user's day-to-day experience with streaming services.

Interviews

A semi-structured interview will collect insights on their content discovery experiences. The interview questions will focus on key ideas from the research goals:

- The user's decision-making patterns in content discovery.
- Understanding how effective tools or features are in their respective streaming service
- Frustrations experienced by users when searching for new content.

An interview will last around 30 minutes, with follow-up questions displacing the actual time. Each interview will be audio recorded for better data analysis, and verbal consent will be presented at the session's start.

Diary Study

A diary study will take place over two weeks. Participants only have to record five entries into the online form. The day-to-day experience can differ depending on the user's situation, as view patterns can change depending on the time of day or the weekend. The users will document their experience in content discovery. Typical questions will include:

- What streaming service
- What movie or show did they choose to watch and why?
- Any frustrations and any other comments or thoughts the user encountered during their experience.

Entries should be completed after the user finds new content to watch. The data analyzed through this method can help improve how people interact with streaming services throughout the week and better evaluate what improvements can be made to content discovery systems.

Participants:

- Participants aged 18-55 are avid watchers of streaming services' content.
- Avid watchers are users who watch more than 3-4 hours a week and more than two movies during the same period.
- Participants who subscribe to or have access to multiple streaming services and frequently switch between them in search of new movies or shows to watch.
- Have experience using various formats of streaming services, such as mobile devices and TVs.

Recruitment & Incentives:

We will recruit participants from our friends and family by asking them if they want to join the study. We aim to have at least five people in the study who can capture the user profile requirements. This approach not only makes it easier to find participants but also encourages honest feedback in a comfortable setting. There are not any plans currently to offer incentives to the participants.

Proposed Schedule:

Activity	Estimated Time	Proposed Date(s)
Development Screener Survey	1 day	Oct. 18-20
Recruit 5+ Participants	1 hour	Oct. 22-23
Conduct Interviews	1 week	Nov. 25-27
Conduct Diary Study	2 weeks	Oct. 29-30
Analyze Data and Compile Findings	1 week	Oct. 30
Create User Research Affinity Diagram	1 week	Nov. 5-6
Develop User Persona	2 days	Nov. 8-10
Develop User Scenario	2 days	Nov. 10
Develop Usability Testing Protocol	2 days	Nov. 15-17
Create Prototype	2 weeks	Dec 6-8
Conduct Usability Testing	1 week	Dec. 8

Prepare Final Report	1 week	Dec. 12
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Appendix G: Pilot Study

Updated Interview Protocol

Introduction:

- Hi, my name is _____. I'm conducting this interview to gain insight for the development of a new movie and TV show recommendation product.
- I'm looking to learn more about how people find new media to watch and I think you'd be a great resource for this.
- What's your name? Can you tell me a little bit about yourself?
- Do you consent to this interview? You can revoke your consent and end this interview at any time.
- Your responses are confidential and will not be shared with anyone. There's no pressure to answer any question you're not comfortable with.
- There are no right or wrong answers here, I just want to know how you do things.
- Do you mind if I record this interview for future reference?

Warm-Up:

- Can you tell me about the last movie or show you watched?
- How did you find out about it?

Body of the Session:

- **What streaming service(s) do you subscribe to?**
 - What factors influenced your decision to choose this/these streaming service(s)?
 - **If user mentions more than one streaming service**
 - What made you want to subscribe to these other services?
 - Are there any particular features you like or dislike about the streaming services you have? Why?
- **Can you walk me through the steps you take to find something new to watch?**
 - Do you typically find new shows or movies this way? Why?
 - Does your streaming service's recommendations influence what you decide to watch? How?
- **How satisfied are you with (streaming service)'s current recommendations?**
 - Can you describe how closely (streaming service) recommendations represent your personal taste? Why?

- Have you ever been disappointed by a recommendation? Why?
- Have you ever ended up liking a recommendation you didn't think you would? Why?
- **Can you describe a time when it was difficult to find a new show or movie?**
 - What was the most frustrating part about it?
 - How long did it take you to find it before settling on a show or movie?

Cooling off:

- We've covered a lot today but before we finish, I'd like to ask a couple more questions.
- How would you describe your experience with finding new content across streaming services?
- **Possible bounce back question to something interesting the interviewee said.**
 - You mentioned _____, can you tell me more about it?
- If you could change one thing about your experience with streaming services, what would it be?
- Is there anything else you would like to share that we haven't covered?

Wrap-Up:

- Thank you so much for sharing your thoughts and experience today. I really appreciate your time and the valuable insights you've provided.

Updated Diary Study

Research Goal

Identify the factors that influence the movie selection process and how to improve their overall content discovery experience on streaming platforms.

Plan

Incident diaries, doing an entry after discovering a new movie to watch.

Research Duration:

At least once a day, 5 days a week (non-consecutive), for 2 weeks

Diary Entries:

What information will you be asking participants to enter in their diary? (Create a form that participants will be using for the diary entries)

1. What movie or show did you choose, and which platform did you use to watch it?

2. Why did you choose it? (Select all that apply)
 - a. Recommended by the platform
 - b. I've been following the series
 - c. High ratings/reviews
 - d. Saw a trailer/promo
 - e. Recommendation from friends/family
 - f. Other (please specify): _____
3. What features of the platform helped you make this choice?
 - a. Search bar
 - b. Genre/category browsing
 - c. Most popular/trending section
 - d. Featured film
 - e. "Recommended for you" section
 - f. Ads or previews (autoplay trailers)
 - g. Other (Please specify:) _____
4. How effective were these features in helping you make your choice? (Scale of 1-5)
5. What issues, if any, did you encounter while finding this movie or show?
6. Did you use other resources outside of the platform to help make this decision? (Select all that apply)
 - a. Google (reviews, articles, etc.)
 - b. Social media (Twitter, Reddit, Instagram, etc.)
 - c. Recommendation from friends/family
 - d. Awards or critical acclaim
 - e. Trailer or promo outside the platform
 - f. Other (Please specify:) _____

Diary Study Tool:

A Google Form.

<https://forms.gle/ybGbungHmFBB22KfA>

Appendix H: Ideation Exercise

Key Issues

- Want to understand why the service is recommending something.
- Wanting mood based categories.
- Wanting to watch what other friends and family are watching.
- Valuing what is popular online.
- It's hard to find content across multiple platforms.

Key Design Ideas

- Tooltip feature (“Why am I seeing this?”) telling the user why something is being recommended to them
 - i.e. “You’re seeing this because you recently watched a horror movie”
- Mood based categories such as “Feel Good”, “Intense”, “Tense”, “Dramatic” “Thriller”, “Chill”, “Easy Watching”
 - Feel good is a category of content that make people feel happy and optimistic
- A social media integration that allows users to connect with friends and see what others are watching.
 - Feature where you can add friends, view their favorites list, view their watch history, view their recommendations, etc.
 - A section of the social media feature that shows what’s trending across all users and platforms
- Provide a comprehensive search feature that searches all platforms and provides accurate information on where to find the content you’re looking for.

Big Idea

This technology is about a centralized recommendation service that streamlines the users’ content discovery. Its goal is to bring streaming content together across platforms, making it easier to find new things to watch and connect with others.

Features

- Universal search
 - Will always have up-to-date information on each movie/show – where to watch it and if it costs extra.
 - Search results will be based on genres and moods that the user typically engages with as well as past search results.
- Integrated social media
 - Create an account to access all the features of the site, create a profile and follow friends and family to connect.
 - Trending across platforms feature will pull data from connected streaming services and create a trending category based on what’s popular on specific platforms
 - Track users watch history and favorite content to recommend content based on past activity of followers.
 - Ability to follow/add friends and family to view profiles and view their favorites and recommended content as well as watch history if the user allows it.

- Transparent recommendation tooltips
 - Feature designed to give context behind recommendations they receive within the app. Examples include: “We think you’ll like this because you recently watched ____” and “You enjoyed ____ films recently, so we recommend these new releases in the same genre.”
- Mood-based categories
 - Creates categories based on moods and themes that can make content discovery easier.
 - Categories should be accessible from the homepage and easy to sort through. (Large icons and/or background images)

Appendix I: Persona & Scenario

<p>PERSONA</p>	<p>Jordan Rivers</p>	
<p>BIO</p>	<p>Jordan work life is anything but relaxing. From constant back-to-back meetings to solving critical problems, Jordan is the one you call. While he enjoys his hectic job, he values his free time even more. Jordan wants to unwind from all the stress, relax, and regain the energy for another day of work. For his past time, he is an avid movie fan. He loves keeping up with trendy shows and finding classic movies, but there is a limited amount of time before he needs to rest for another crazy day at work. He values his free time and wants to make the most out of it.</p>	
<p>Goals and Motivations</p>	<p>Challenges</p>	
<ul style="list-style-type: none"> • Wants to relax after a long day at work and not put any more effort into finding something to watch. • He finds solace in watching a movie and relaxing on the couch. He can unwind from the stress at work and watch a film. • Prefers to watch new content. • Would appreciate a personalized recommendation list that matches their taste. 	<ul style="list-style-type: none"> • He feels like he spends too much time looking for something to watch. • He is annoyed by recommendations that don't match his taste. • He hates scrolling endlessly and sometimes not finding anything to watch. • Frustrated by having to search across multiple platforms for something to watch. 	
<p>Tasks</p>	<ul style="list-style-type: none"> • He searches on our site that compiles all streaming services' content to see what's popular on each platform. • He browses his recommended categories to discover content that matches his current mood. • He discovers new content based on what his friends and family are watching. • He follows others to view their favorite content, see what they are watching, which helps him discover new content. 	

Jordan Rivers just got home from a long day at work and wants to watch a movie. He wants a movie that matches his taste and is easy to find. Jordan values his free time and sees watching movies as his way of unwinding and de-stressing. He prefers to find new content to watch but is upset by the time it takes to find something appealing. The recommendations from streaming services rarely match his tastes. Jordan scrolls through various streaming platforms in search of the perfect movie. He browses so many platforms and still can't find something to watch. In a state of defeat, he watches Infinity War for the seventh time.

One day he decides to try something new and use a new application. They tout that this platform combines all content across every streaming service, and they help people quickly find a movie or show that matches their mood and interests. Jordan's primary goal is to find something that matches his taste before the night ends, so he logs into the content discovery platform and immediately selects the mood filter Relaxing. He notices that some of the top recommendations are movies his friends recently watched. He's interested in some highly-recommended movies that are trending among his friends thanks to the integrated social feature. He decides to check out Finding Nemo and reads a brief description while a clip of the movie plays, a tooltip in the corner tells him that it's being recommended to him because a lot of his friends are watching it. Satisfied with his choice, he clicks the play button and is redirected to Disney+ to watch.

Appendix J: Product Idea Elevator Pitch

Domain and Research:

- Start by stating the problem.
 - Takes too long to find something across multiple streaming platforms
 - There needs to be a quicker way.
- Cover secondary research
- Understand user's content discovery patterns
 - Changing streaming platforms is inevitable.
- Struggle with a cold start when switching platforms
 - Cold start starting fresh with no profile for recommendations to build off of.
- Techniques to build a better profile
 - Registration that asks for personalities
 - Makes profiles more enhanced by asking personal questions.
 - Better starting place for recommendations to be generated.
- The site layout is important in influencing what a user chooses to watch
 - Priorities sites own content over the rest.
- State the goal
 - Identify the factors influencing the movie selection process and how to improve their content discovery experience on streaming platforms.
- Go through the research questions.
 - How do users search for new TV shows and movies across different streaming services?
 - What factors do users consider when choosing a movie to watch?
 - What are the most common frustrations users experience when searching for content across multiple platforms?
 - Which features or tools do users find most helpful when discovering new content?
- Introduce the two research methods

- Interview
 - Why they choose that movie
 - Find users' discovery patterns
 - Search bar
 - Categories
 - Gene Lists.
 - Mention endless scrolling.
 - Frustrations
 - Recommendations don't match my taste, and I don't know why.
 - Inaccurate information when a show is available.
 - Time-consuming to find something on multiple streaming services
 - Satisfaction
 - Likes the diverse content across the platforms
 - Recommendations match their taste most of the time
- Diary Study
 - Find users' discovery patterns throughout the week.
 - Frustrations
 - Satisfaction
 - Mention how outside sources
 - Recommended by family and friends with huge deciding factors
 - Inside resources were big into using recommendations for you to find their movies and shows.
- Bring it all together
 - Affinity Diagram
 - Green Labels
 - How people discover and decide on new movies and shows
 - The challenges people face when discovering new movies and shows

Product Idea

Streamline revolutionizes how you discover and enjoy streaming content across multiple services. Streamline is the ultimate streaming discovery tool that makes it easier than ever to find your next favorite movie or show.

Streamline has a universal search feature that allows you to find any movie or show across all streaming platforms along with where to watch it—no more need to scroll each one of your streaming services separately.

You'll also get personalized recommendations tailored to your taste, along with why you're seeing each recommendation. Our mood-based categories can also let you find the perfect content for how you're feeling in the moment.

Streamline also connects you with your friends and family. You can follow them, see what they're watching, share and get recommendations, and more.

No matter what you're looking to watch next, Streamline brings everything together in one seamless platform. It's the ultimate way to discover, share, and enjoy content.

Our Target Market

Our research reveals that our target audience spans streaming service users of all ages who are frustrated with the time-consuming and overwhelming process of discovering content across multiple platforms. Current streaming services overwhelm users with an abundance of choices, paired with poorly personalized algorithms and a focus on promoting new platform exclusives, often results in poor recommendations.

Our Solution

Introducing **Streamline**, a unified platform designed to simplify and personalize your streaming experience. With **Streamline**, users can:

- Eliminate the need to constantly switch between apps.
- Search, compare, and discover content across all their favorite subscriptions in one place.
- Enjoy smarter, personalized recommendations based on their personality, tastes, and preferences.

Our platform provides transparency, allowing users to see *why* content is recommended to them and tailoring suggestions to match their mood or align with what their friends are watching.

The Opportunity

The global streaming subscriber base is projected to reach 1.6 billion by 2025. However, streaming platforms face significant challenges:

- **48% of users** cancel services when they can't find something to watch, leading to massive revenue losses (Harris Poll survey).
- **41% of viewers** don't have a specific program in mind when they start browsing, yet **81% expect a personalized experience.** (Harris Poll survey)

There's a clear gap between user expectations and current offerings:

- **62% of users** find recommendations unhelpful.
 - **47% of users** report feeling overwhelmed by the sheer number of options.
-

Our Mission

Streamline bridges this gap by delivering the personalized, seamless experience users crave. We streamline the journey from browsing to watching, ensuring users spend less time searching and more time enjoying content tailored to their interests.