COMP3511/9511 Human Computer Interaction

Assignment 1

Summer Session, 2021

User Interface Critique Concepts

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1.“INTERFACE”

I choose Netflix(https://www.netflix.com/au/) in my assignment 1. Netflix provides a great deal of TV programs and movies to users and also create original collections. Even though Netflix has a relatively high subscription cost, it is still one of the most popular content streaming services. Until October 2020, Netflix has over 195 million paid subscriptions globally, and there are about 73 million users located in the USA.

Three goals of netflix.com/au: In October, 2011, the co-founder and CEO Reed Hastings of Netflix expressed four visions of future, which are,
1)Becoming the best global entertainment distribution service,
2)Licensing entertainment content around the world,
3)Creating markets that are accessible to film makers,
4)Helping content creators around the world to find a global audience.[1]

From my point of view, the first vision is the most generous goal of Netflix; and the second one is the goal about licensing more entertainment content and access more market globally; and the third and the forth vision is about the goal of creating more job opportunities for film makers and content creators, helping them get more global audience or markets.

According to the visions and goals, the purpose that Netflix have to serve is providing entertainment(movies, TV shows, documentaries, etc.) distribution globally and creating a better environment for entertainment.

2.“USERS”

#	users	description
1	The elderly people TV fans(primary)	As they have been retired and may feel lonely, not into exercise like the young. So they have more time to watch TV. So they constitute the majority of the audience. We need to take the elderly people’s special need into consideration(e.g. Bigger, clearer icon)
2	The kids TV fans(primary)	They watch entertainment content for fun, relax or study. They are into entertainment at their age, so they constitute the majority of the audience of multiple types of entertainment and they are easily get “educated” to be royal audience. But they also get misled easily, so the recommendation content for them better be censored carefully.
3	The Lecturer who using videos on Netflix as a teaching resource for his or her students	The Lecturer is using this streaming service indirectly as the Lecturer is not watching the content for himself, he is using Netflix as a tool for teaching.
4	Government (tertiary)	Government wants to know what is the focus of people, and Netflix also means a tax revenue to government. It needs the media to support their policy. The ordinary people need the media as a supervisory role to the government. Government also hope some meaningful entertainment content can educate users, helping the development of the whole society.
5	competitors in the entertainment market (Tertiary)	e.g. Hulu, Disney Plus, YouTube. They do not use this interface.

3.“TASKS”

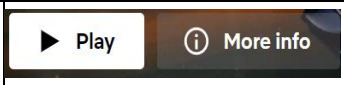
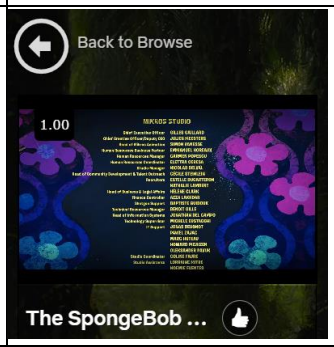
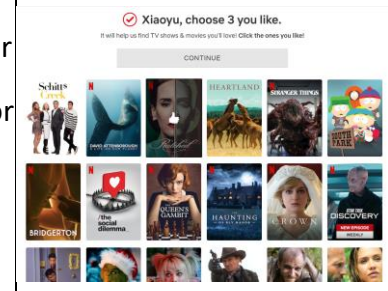
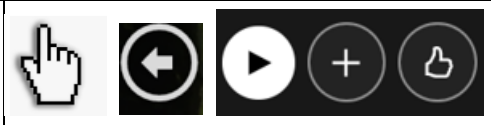
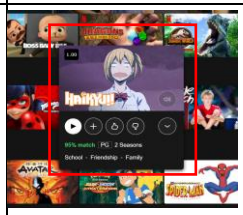
user	task
competitors or alternative way for entertainment in the same market, e.g. Hulu, Disney Plus, YouTube	They want to know what techniques, algorithms, business strategy and focus Netflix is currently utilizing and what trend in current or future TV shows according to the rating of each product on Netflix. So they will investigate what Netflix is doing, which product in Netflix is the most popular, compare what Netflix has with what they have, and consider about next business strategy. They may review the auditing report or announcement of Netflix, Inc. They want to occupy the market share which belongs to Netflix. Market share will affect revenue and profit of the platform, so they care about what Netflix is doing what Netflix' interface looks like. Netflix don't involve advertisements, but it has a subscription fee. So better service and user experience can make users choose Netflix, and therefore increase the market shares.
Kids users (the kids group)	They use Netflix interface directly, so they are primary stakeholders. They watch entertainment content for fun, relax or study. The kids want to adore someone. The people they adore can be idols, animation roles, movie stars, reality TV show stars or anyone they are interested. They are into entertainment.so they constitute the majority of the audience of multiple types of entertainment and they are easily get "educated" to be royal audience. But they also get misled easily, so the recommendation content for them better censored carefully. As Netflix is a global company, and different country has different legal framework and censorship of the media, Netflix needs to take law into consideration, incase against law in different countries result in penalty and ban.

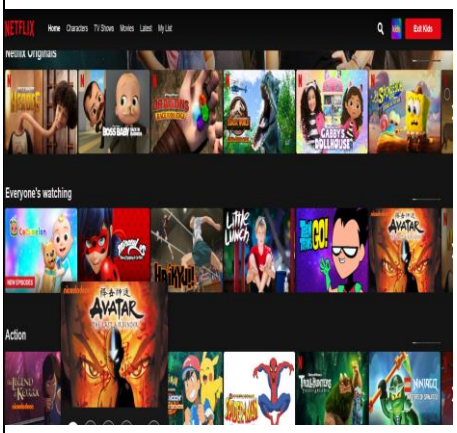
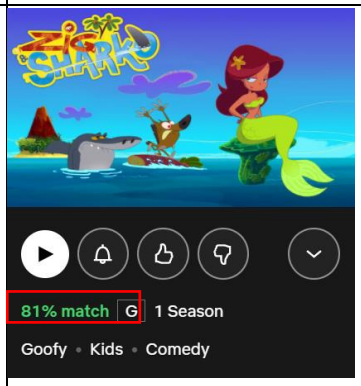
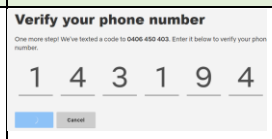
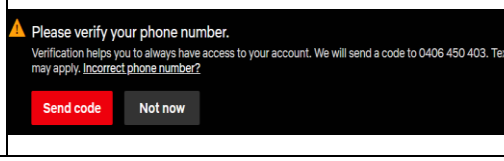
I choose these users as they are different types of stakeholders. Sometimes their goals are overlapped and sometimes they have different goals. We need to design and develop the interface for achieving most goals of users(except the competitors) and Netflix, considering the different legal framework and censorship of the media in each country. Netflix cannot achieve all goals of all users, considering obey the law, cost, society values, etc. So Netflix needs to trade off among different goals of users(except the competitors) and Netflix itself to achieve the best result and balance.

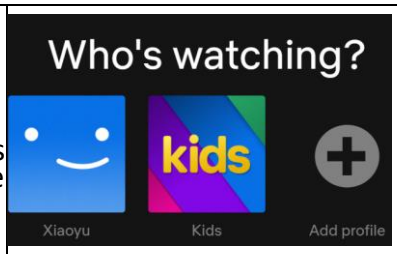
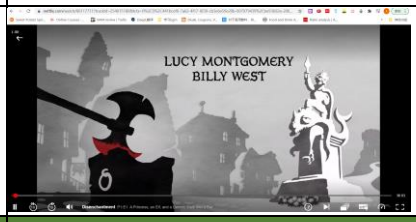
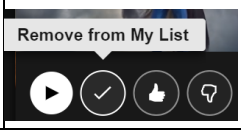
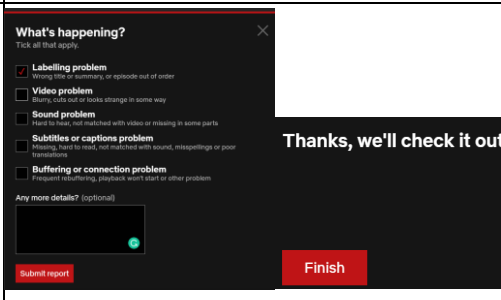
For example, the kids user group and the competitors are two kinds of users and they have different tasks. The kid are primary users and Netflix should think about child's welfare. Nevertheless both of them play important role to Netflix from different aspects. Therefore Netflix next business strategy, how to adapt the interface of the streaming service or content will be affected. If Netflix place kids in the first place, they should create their origin product 'safer' for kids, as even though there is kids model in Netflix, kids can easily switch it to adult model without the supervision of adults. However entertainment with violence, pornography can attract more audience in most case, which means Netflix can be more competitive in the market and gain more market share. So there exist a contradiction. Netflix need to think about the overall tasks/function of different types of users, and therefore can design a better interface and finally achieve Netflix's goal.

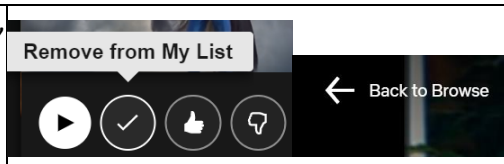
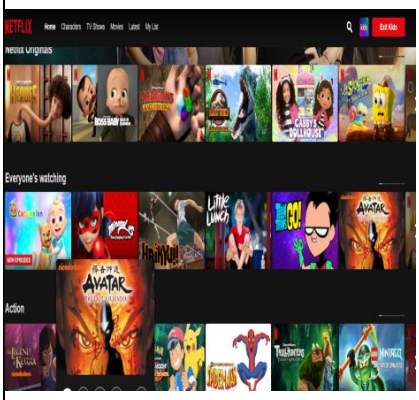
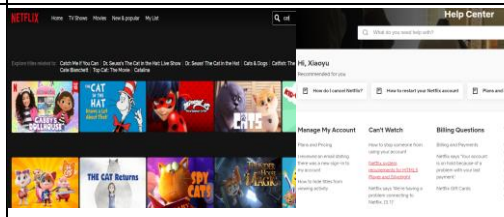
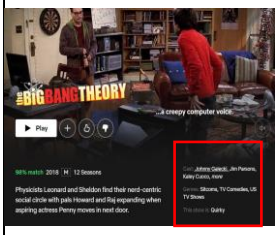
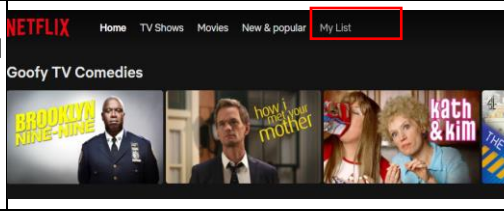
4."ANALYSIS"

Design Principles					
Reference	*Severity*	*+/-*	*Principle*	*Description*	*Sketch/Screenshot*

1	-	+	Visibility	The button from left to right represent “play”; “add to my list”; “I like this”; “not for me”; episodes & information” respectively. Icon is clear. The thumb icon matches the real world. Use green font color for match percentage. Background color is black and font color is black.	
2	-	+	visibility	The button from left to right represent “play”; “more information”	
3	-	+	feedback	After press like or dislike button, the button’s color will be light. And Netflix pay attention on user’s response, Netflix always show like/dislike option for users to choose. It will help Netflix do a better recommendation job for users and make user like to use Netflix more and more.	
4	-	+	feedback	Once subscribing the service, Netflix offers options for users to choose their preferable language and categories of tv shows, it also give some example for users to choose. After choosing the content the user like, the system will give a feedback.	
5	-	+	Affordance	All option is in a light circle or a button, which is very obvious to click. And the cursor will become a little hand when hover on the button.	
6	-	+	Affordance	Once the cursor hover on certain content, there will be a small window pop up and then a clip play immediately.	
7	-	+	Consistency	Always using similar thing to achieve same task, function, element, operation, and the location of item is in	Look at the screenshot from above Issue Issue 7 will discuss in detail in critiques
8	2	-	visibility	The gap(padding) between content and content is too narrow	
User Experience Goals					

Reference	*Severity*	*+/-*	*Principle*	*Description*	*Sketch/Screenshot*
8	2	-	Frustrating, Boring, Annoying	The gap(padding) between content and content is too narrow	
9	-	+	Aesthetically Pleasing, Helpful	The main interface of Netflix looks like a book shelving. There is no other complex design in it. The designer just place each video in the grid. The background color is black, the font color is white, and just some keywords is using green or red color. This is enough and can make users focus on the content better.	
10	-	+	Rewarding, Satisfying, Helpful, Motivating, pleasing	After users make rating behavior, there will be a matching score according to the user's rating, therefore users will be encouraged to rate more content in order to let Netflix recommend what user like correctly.	
10	3	-	Frustrating, Annoying	The algorithm of "match" sometimes result in wrong match score, user sometimes found the match of his favorite TV show is lower than the one he don't like.	
Usability Goals					
Reference	*Severity*	*+/-*	*Principle*	*Description*	*Sketch/Screenshot*
11	-	+	safety	Once subscription, send verification code to users' phone number to verify users' identity	 

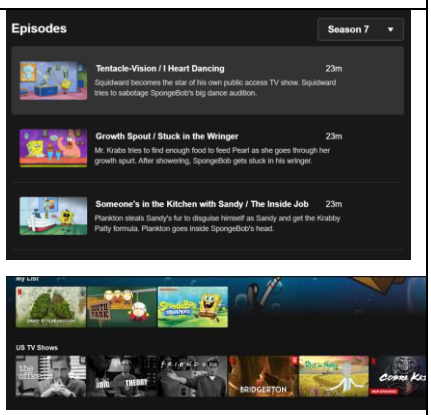
12	3	-	Safety	Netflix provide a kids model for users to choose, where consist of content appropriate for kids. However, if the kids use cookies log into the Netflix, the kids still can access the adult content, which is not suitable for them, so this model seems problematic.	
1,2,3,4,5,6,7	-	+	Effectiveness, Efficiency, Utility, Learnability, Memorability	Visibility can improve theses principle	Please see the image in the issue 1,2,3,4,5,6,7
23	2	-	Utility	There is no mini player(YouTube has this function) for video, there is only full window in the browse to look	
Heuristics					
Reference	*Severity*	*+/-*	*Principle*	*Description*	*Sketch/Screenshot*
13	2	-	Match between system and real world	The button from left to right represent “play”; “add to my list”; “I like this”; “not for me”; episodes & information” respectively. There is a magnifying glass in the search bar. These icons match the item in the reality, which helps visibility, Effectiveness, learnability, Memorability, Efficiency, etc. the remove button is , does not match the real world	 
14	-	+	Help users recognise, diagnose and recover from errors	When users feel something wrong with the video, they can report what happen. Netflix provide the case for users to choose, which helps users recognise, diagnose and recover from errors. Then once submit the report, there is a feedback.	
15	-	+	Visibility of System Status	When loading the video, there is a loading percentage shown in the middle of the screen to show users how much the video has been loaded.	

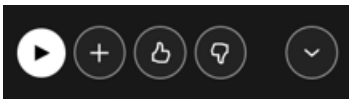
16	-	+	User Control and Freedom	Users can add any video into “My List”, and remove the video added Users can choose he like the video or dislike the video. Users can back to browse if he doesn’t want to watch the show anymore.	
17			Aesthetic and minimalist design	The main interface of Netflix looks like a book shelving. There is no other complex design in it. The designer just place each video in the grid. The background color is black, the font color is white, and just some keywords is using green or red color. This is enough and can make users focus on the content better.	
18	-	+	Help and Documentation	Once search a word, e.g. ”cat”, there will be a bunch of content containing the word ”cat”, it helps users to find what they are looking for. Help center for users.	
19	2	-	Help and Documentation	Each item of the cast, genres of each TV show can be clicked and then get other related content. But there is no character’s name.	
7	-	+	Consistency and Standards	Please see issue 7	Please see issue 7
20	-	+	Error Prevention	Netflix inform what form of content should be input in the sign in interface	
21	-	+	Recognition rather than recall	When a user has no idea what to watch, Netflix list a bunch of TV shows in the grid according to different categories. User only need to recognize which is their prefer content instead of recall what tv show he or she wants to have a look.	
22	3	-	Flexibility and Efficiency of Use	“Old” Netflix users can also use the “My list” to watch his favorite content or saved collection directly. Both old and new users can review the content shelving to look up.	

4. CRITIQUE on 8 ISSUES

1). Design Principles

issue	critique
1,2	The definition of Visibility is "The more visible functions are, the more likely it is that users will be able to know what to do next."[2] Positive: Background color is black and font/ icon color is black, which is very clear and visible for most users. It matches the reality in order to help users to identify each function of the icons. The button from left to right under the video represent "play"; "add to my list"; "like"; "dislike"; "unfold the episodes & information" respectively, they are clear and tidy. The thumb icon matches the real world, is easy for users to understand and choose. Use green obvious font color for "the match score".
1	Positive: More visible, more easy for users to operate in the interface, for example , the simple thumb up or down button encourage users to rate the content means more ratings, therefore Netflix can provide a better recommendation for users. The recommendation will be customized better according to certain algorithms. Recommendation of Netflix can make the system more effective and efficient, can help users find what they are interested in more easily (achieve their goal). visibility improves User Experience Goals and many other principles and goals.
Negative	The font color can not be changed, some visual impaired person may feel other color are more visible to them, or some user don't like this color setting. (for example, maybe someone prefer back font and white background)
Solution	Add a function of changing the background color and font color/size, and provide color scheme for users to choose. Because different people has different best color for visibility.

issue	critique	
7	Positive: Consistency refers to in the interfaces, users is always using the similar operations/ action/ element to achieve a similar task, users should not encounter the situation that different words/ actions/ element represents a same thing or achieve a same task.{Sharp, 2019 #28} Consistency reduce the amount of content for learning therefore it increase the learnability and make users achieve a bunch of user experiences goal(Satisfying, Enjoyable, Fun, Helpful, Motivating, Aesthetically pleasing). It can make the interface tidier, which means it also achieve the Aesthetic and minimalist design via reducing unnecessary content(use different thing to represent the same thing/ operation will increase unnecessary content). Visual consistency Each episode is in the same shape of element; Each TV show is in the same shape of grid; All icons for the same function in different pages and operation for achieve a task are the same;	

7	Positive: Functional consistency Use similar icon, action, way to achieve similar control and functions throughout the interface. It increases the predictability of the product. Predictability leads to users feeling safe and secure.	
7	Positive: On the right side, it is about search/ account management. On the left side, it is about the different categories. The location of element is accordance with the design convention and most users' expectation.	
Negative	I think Netflix does a very good job in this aspect and no need of solution.	

2). User Experience Goals

issue	critique
10	Issue 10 results in some undesirable emotions. User experience goal result in have wanted and unwanted emotions, we should reduce unwanted aspects and improve wanted aspects. Positive: After users rating the TV show, Netflix will give a matching score to users. Users can pick TV shows according to this score. This process can be regarded as a reward, users are encouraged to rate more content in order to let Netflix recommend what user like. The match system is helpful if it work effectively, and users will feel Satisfying, Motivating, Rewarding or other positive feelings.
Negative	The algorithm of "match" sometimes doesn't work at all, Netflix better introduce a better algorithm. As "match" is subjective thing, sometimes user found the match of his favorite TV show is lower than the one he don't like. Only choosing thumb up or down for "like" or "dislike" can not improve the "match" algorithm. Users often found the rating is wrong.
Solution	Improve the algorithm of "match" with latest AI, DL techniques. Change the thumb icon to be rating number between 0-5 for users to select, it is better than dislike or like.

3). Usability Goals

issue	critique
12	Safety refers to protecting the user against dangerous situation or unwanted environment. Netflix provide a kids model for users to choose, where only have content appropriate for kids.it is better for their mental health.
Negative	However, if the kids use parents' cookies to login the Netflix, they still can access the adult content, which is not suitable for them, so this model seems problematic.
Solution	Add a function for family with kids, that every time users enter into the unlocked(adult) model needs a password and for a setting period (for example: 2 minutes) it will log out automatically.

4). Heuristics

issue	critique
17	The definition of Aesthetic and Minimalist Design is that, the interface should not involve with unrelated information or unnecessary content. ALL extra unnecessary information competes with the relevant units of information, reducing the principle of visibility. Positive: The main interface of Netflix looks like a book shelving. There is no other complex design in it. And there is no unnecessary information. The designer just place each video in the grid. The background color is black, the font color is white, and just some keywords is using green or red color. This is enough and can make users focus on the content better and there is no undesired distractors.

Negative	The gap(padding) is too small between each content, visual impaired people can not see difference.
Solution	Make the gap larger can make different item listed more clearly.

issue	critique
19	Help and Documentation refers to the interface should provide necessary and enough help and documentation which are convenient to search and utilize. There should be no unneeded content(the content should be written according to "Aesthetic and Minimalist Design"), and the contend should focus on the user's task, list clearly and easy to learn. The actor's name , genres of each TV show can be clicked and then get other related content.
Negative	There is no character's name in the list. So Tv fans have no idea who the actor play without watching the full video.
Solution	List the actor's name and his or her role's name in the list

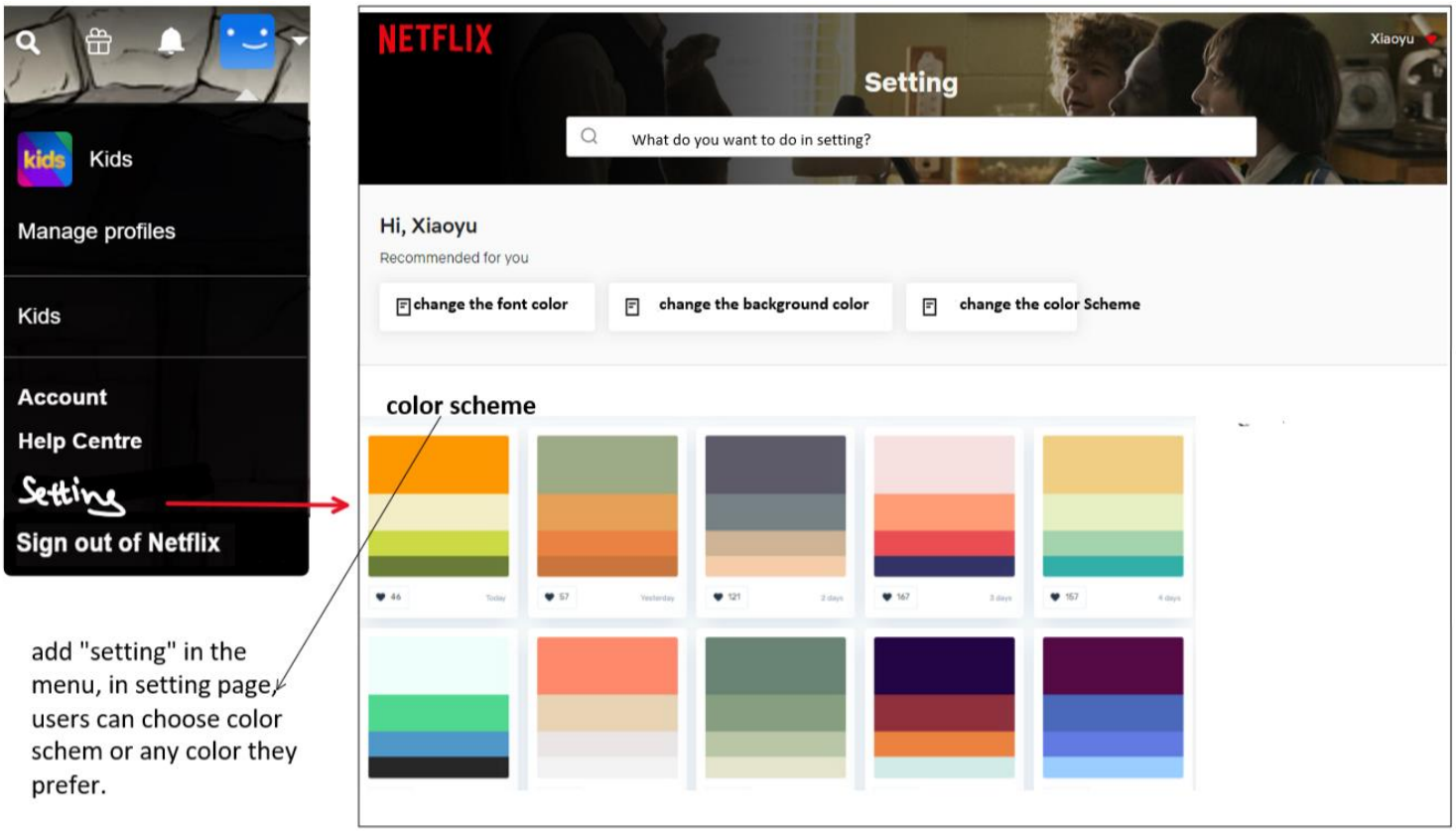
issue	critique
22	Flexibility and Efficiency of Use: provide multiple paths/ actions to fresh users and the experienced users. The experienced users can accelerate the speed of action. Positive: Both old and new users can review the content shelving to look up what they want. Experienced Netflix users can use the "My list" to watch his saved collection directly.
Negative	Users can not create list to classify different type of TV shows , only one Mylist is not enough
Solution	Add a function that users can name the list and able to create multiple lists for classification function.

issue	critique
23	Utility represents the extent to which the product provides the right kind of functionality so that users can do what they want to do. Positive: some user open Netflix just for watching shows, so one more button for mini player/small window is unnecessary
Negative	Some user like to doing other things and glanced at the mini player (listening to the plot) simultaneously, these people need mini player.
Solution	Add mini play like what YouTube make.

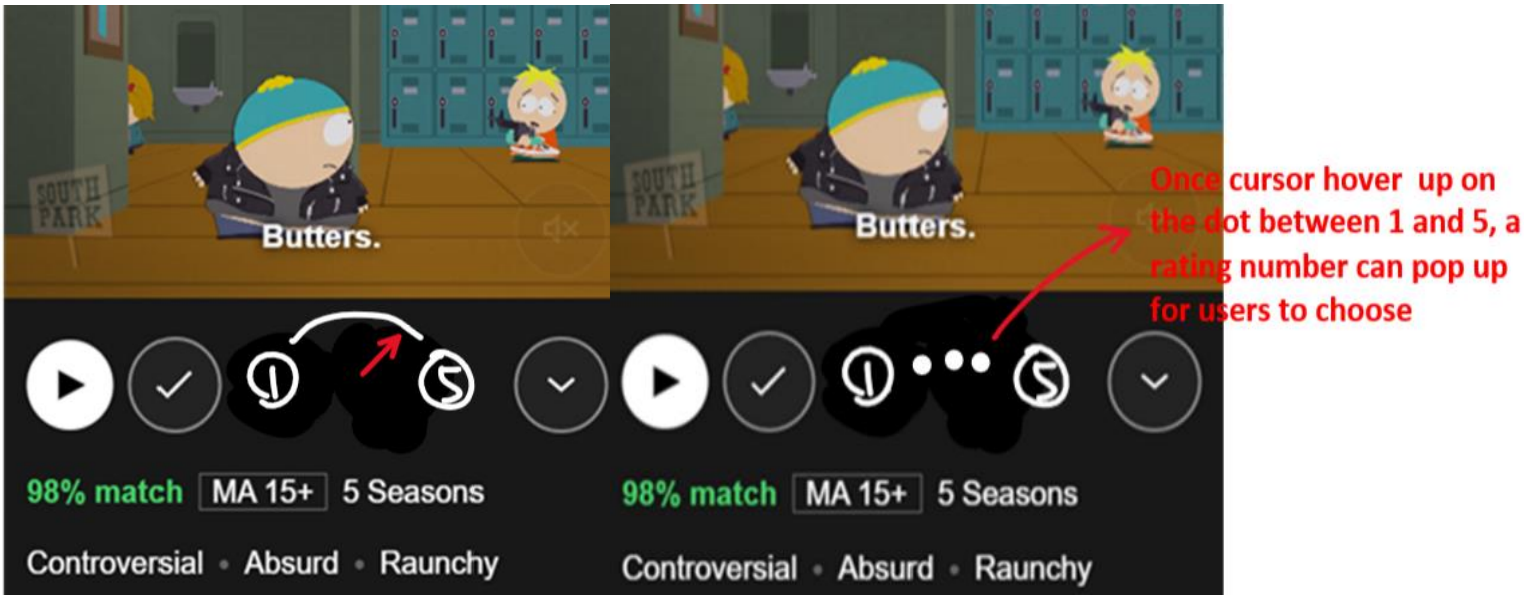
5 "SKETCH SOLUTIONS"

Increase the padding between each content:

Issue 1,2: different color scheme interface can be more customized for different people, and improve visibility.

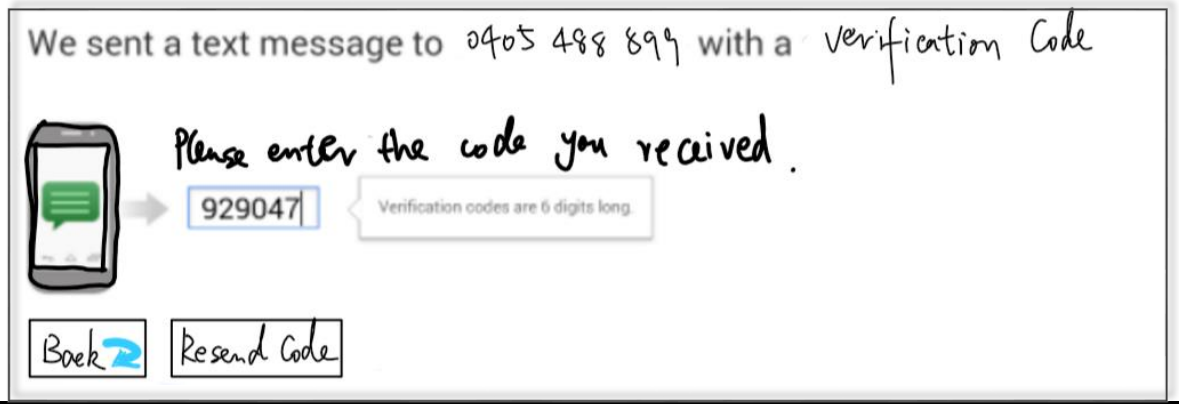


Issue 10: Improve the algorithm of "match" with latest AI, DL techniques. Change the thumb icon (dislike or like) to be rating number between 0-5 for users to select or a dashboard to choose.

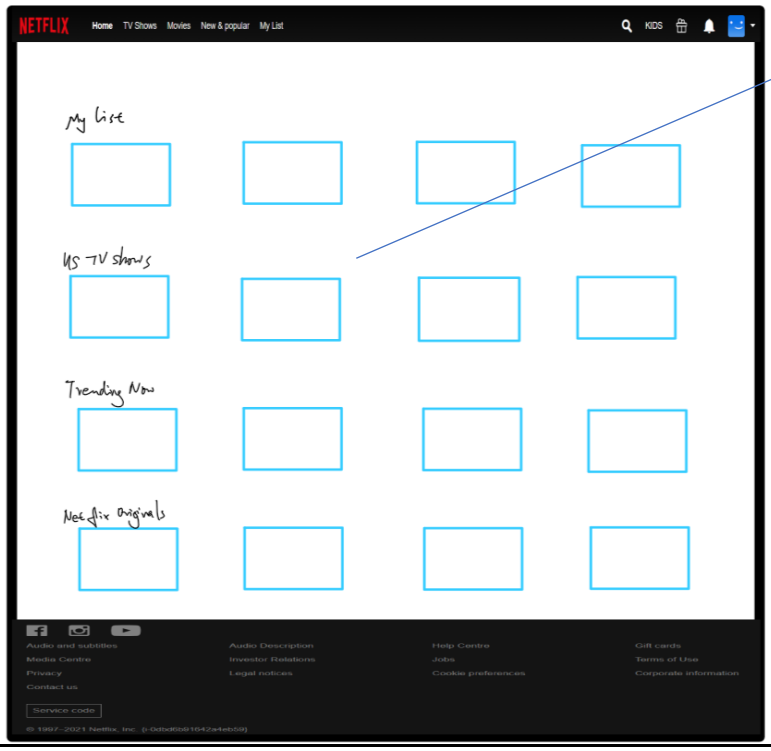


Issue 12: need a verification code received in registered phone to login the adult model. So parents outside the home can receive the message that someone is looking the content in his account. In this way safety is improved.

Once click on the unlocked account, this the screenshot is my name, one more window pop up ask to input the verification code which is sent to the registered phone number



Issue 17:



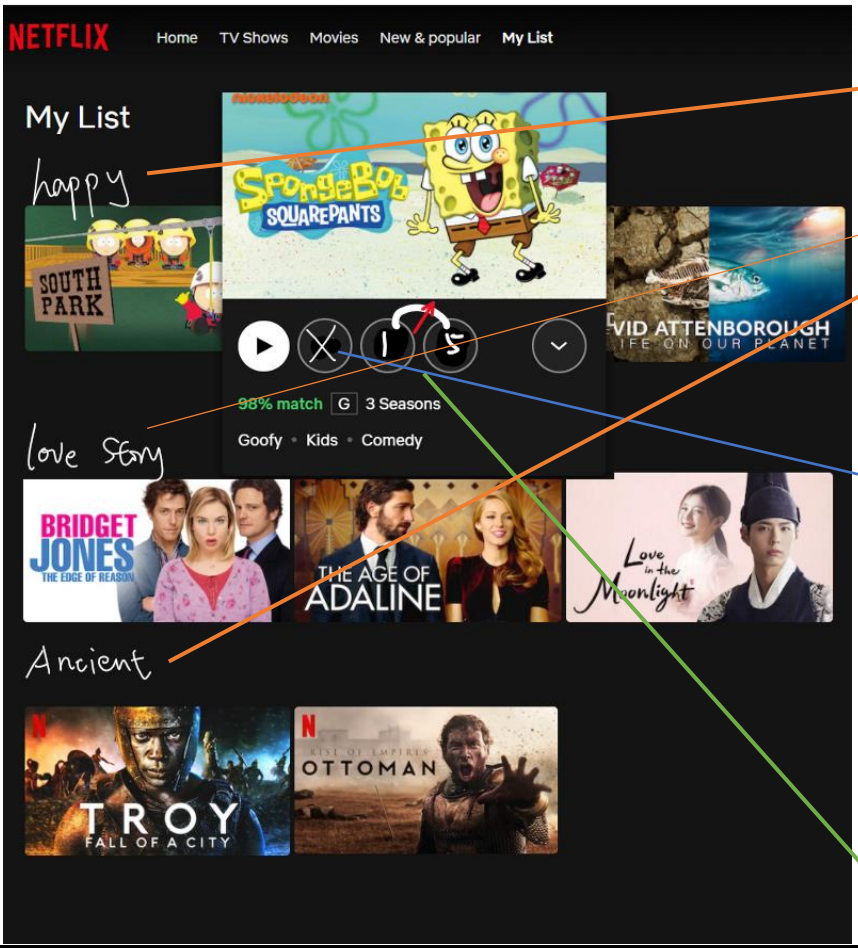
The gap can be changed according to users' preferability in setting page.

Now different Tv show is clearer increase visibility, it is more Aesthetically pleasing, and it still has Aesthetic and minimalist design.

Issue 19:

List the role's name on the left side of the actor's name. And both of them are clickable, there should be a webpage like Wikipedia or a link to Wikipedia for description of the role, so description may arose user's interest for this TV show. Therefore attract more audience for the TV show, increasing Netflix profit and create a better environment for entertainment.

Issue 13, 22:

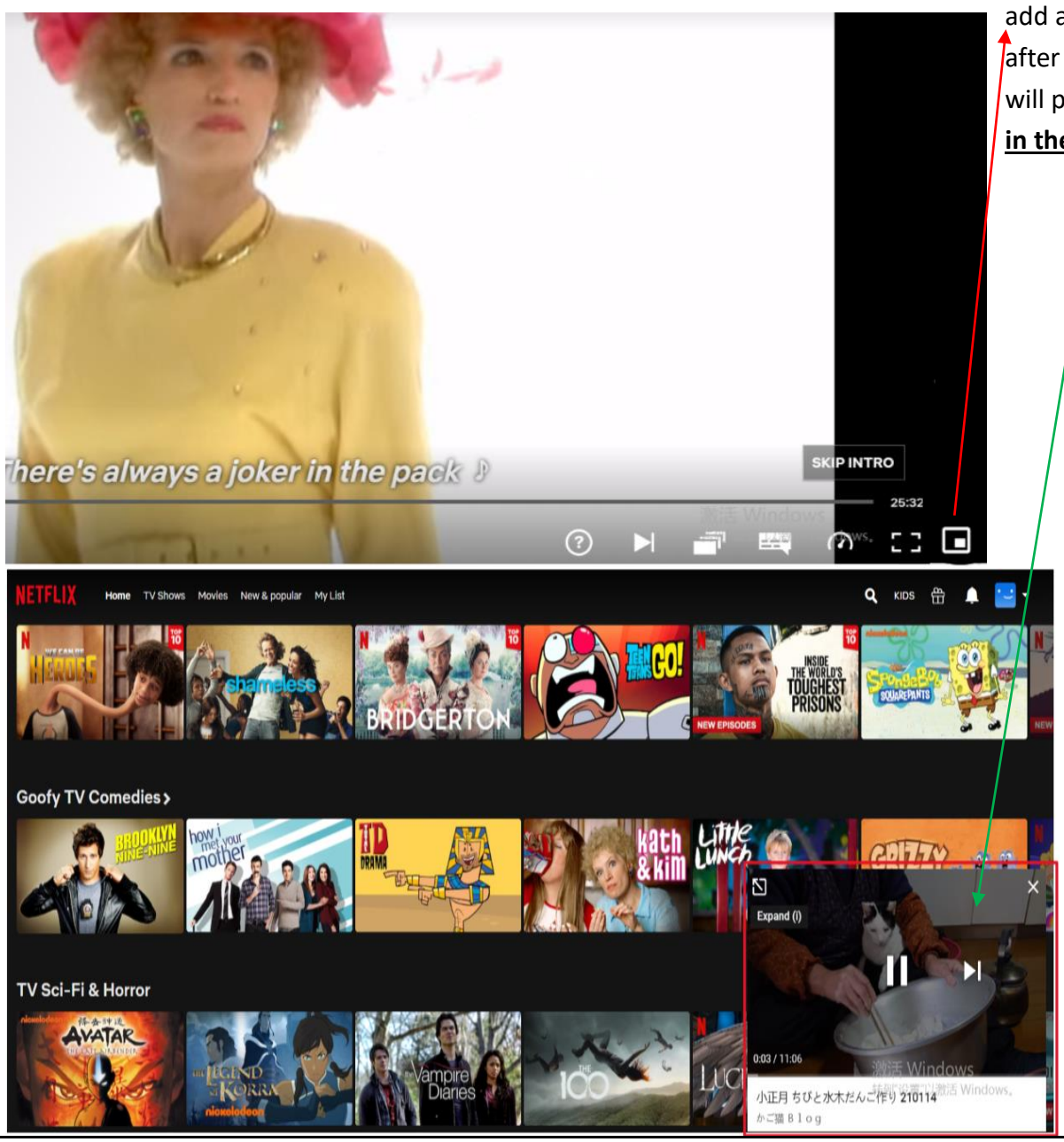


The name of the list can be edited,
And when cursor hover on the video in the list,
The video pops up for users to choose or edit.

for issue 13: the remove button changed from to , which is more appropriate (match the real world)

for rating

Issue 23:



add a button for mini player, after click it the mini player will placed in **the right bottom in the browser**.

Reference:

[1] B. Farfan. "Mission Statements of Technology Companies." thebalancesmb.com/tech-companies-mission-statements-4068549 (accessed 11 Jan, 2021).

[2] H. Sharp, Y. Rogers, and J. Preece, "Interaction design : beyond human-computer interaction," (in English), 2019. [Online]. Available: https://proxy.library.cornell.edu/sso/skillport?context=146076.