

Introducing changes to Snapchat

Exploring, evaluating and designing
features for existing users

Under the guidance of **Prof. Girish Dalvi**

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Project Approval

The Project Titled "Introducing changes to Snapchat: Exploring, evaluating and designing features for existing users" by Pabboju Vaishnavi is approved for partial fulfillment of the requirement for the degree of 'Master of Design' in Interaction Design at Industrial Design Centre, Indian Institute of Technology, Bombay.

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Declaration

I declare that this written document represents my ideas in my own words and where others' ideas or words have been included, I have adequately cited and referenced the original sources.

I also declare that I have adhered to all principles of academic honesty and integrity and have not misrepresented or fabricated or falsified any idea, data, fact or source in my submission.

I understand that any violation of the above will be cause for disciplinary action by the Institute and can also evoke penal action from the sources which have thus not been properly cited or from whom proper permission has not been taken when needed.

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Abstract

Snapchat, as a media and messenger platform, offers many unconventional features through its design that inculcates irresponsible behavior. It facilitates a digital environment where users can easily accumulate trash data, provides them with false sense of confidence to share intimate information and imagery, and has lack of safety measures in place to keep user-behavior in check.

In this project, Snapchat is explored and evaluated using heuristics to understand its visual language, the features it provides and how they all contribute to the user-culture it breeds. Based on the findings, new features, akin to cautious check-points to reduce feature-related abuse and invoke responsible user-behavior, were designed and tested out through various approaches such as user-testing with use-case scenarios and focus groups. Existing users of the platform were asked to partake in the evaluation process because, them seeing a possible future with these new changes in place and not leaving the platform for another application was one of the aims of this project. The nature of inquiry was qualitative, to better understand the nuances within the users

feedback about the platform, existing features in place, and the new features designed.

This project led to the conclusion that technological problems can no longer be solved at technological level. Changing tools or platforms doesn't necessarily change the outlook users have, and its important to address the behavior and decisions made by user at an instinctual and emotional level. The changes designed were also subjected to gender-related biases, and in turn effected the level of acceptance received by the users. The findings also pointed out how simply educating the users about possible negative consequences doesn't lead to change in actions, rather proper motivations in place are required to do so, motivations that are within and out of the technological realm.

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Objective

The objective of this design project is to understand Snapchat as an application, examine its visual language, its features, evaluate its screen design and introduce new changes to it in-order to reduce the prevailing issues on the platform, such as feature related misuse, and make users more cautious about how they act on and engage with the platform.

Scope

Snapchat is incredibly convoluted in its structure, with multiple features and sections, its not entirely feasible or necessary to redesign the entire application, considering the timeframe of this project.

The scope of this project focuses mainly on improving certain UI elements and designs that can make the application more convenient and efficient to use. The project also aims at designing new features for the application that might be beneficial to its young user-base.

The changes are mainly targeted towards existing and avid users of the platform.

Motivation

Previous research indicated how young adults favor Snapchat as the platform for risky and irresponsible behavior. A direct correlation between the platform and the nature of the engagement was observed. Snapchat's unique features dictate a certain kind of behavior in its users and their actions.

The motivation to work on this platform stems from the curiosity to explore whether changing the platform might impact user actions and reasoning.

It also provides with an opportunity to experiment with interfaces and UI tools, to design features that can enhance existing design choices, and also to learn how user requirements can be addressed and delivered.

1. Introduction

Technology-mediated communication has become an everyday part of majority of Indian lives. In this day and age where most people own a personal mobile phone, phone calls and texting has infiltrated the daily routines of many. Giant tech companies have perpetuated this trend and profited off of it by deploying several social media and messaging platforms online.

Snapchat being one of such applications, has been available to the public since 2011. From the very beginning, Snapchat stood out for its unique design choices and features. It's primary purpose was "snapping and sharing" of photos and videos rather than the normal text based communication. It provided with "face filters" and "view-once only" settings which made it extremely popular among younger audience. It incentivized the users to use Snapchat everyday by giving them "streaks", a fire emoji attached with the number of days users have been continuously sending each-other snaps. Once the "streak" is broken, it is reverted back to zero. Snapchat also provides unlimited data storage for users "Memories" (pictures and videos taken and saved through Snapchat). But most importantly, and uniquely,

Snapchat notifies its users when someone takes a screenshot of the snap or the chat, replays a snap, or saves their snaps or texts in the chat.

But Snapchat, with all its uniqueness, also had immense issues with the way it was being used and with the way it was dictating and impacting its young and impressionable users. Snapchat became the hotspot for saving media files due to its unlimited storage facility, and all the ephemeral features made it easier for indulging in unsafe behaviors such as sexting.

But the damage was not only behavioral, but also psychological in nature. Many reports suggested and studies conducted correlated Snapchat's face filters with the increased wave of body dysmorphia occurring within young adults and teenagers, even termed as "Snapchat dysmorphia".

But this project does not attempt to understand these behavioral and psychological issues stemming from this application. The sole purpose of this project is to examine, evaluate and redesign Snapchat from an interface design perspective. This project aims at adding UI improvements to the application, while also working on new features that can make Snapchat a better platform, with a more responsible user-base.

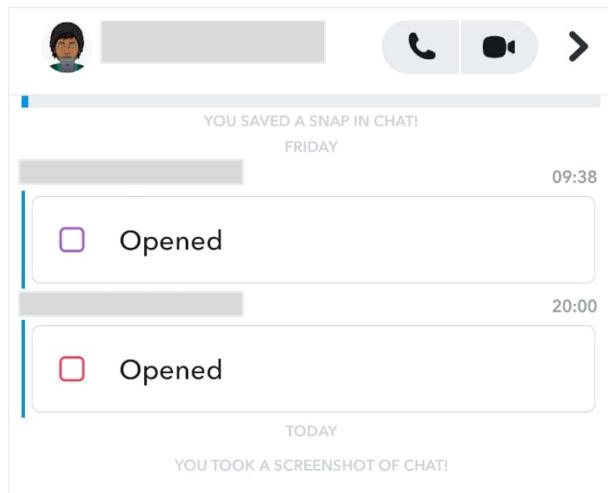


fig. Snapchat notifies when someone takes a screenshot of the chat

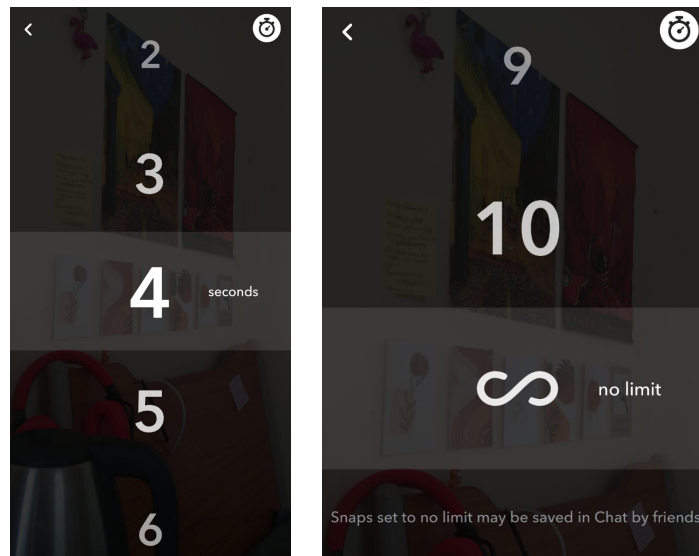


fig. Snap timer settings

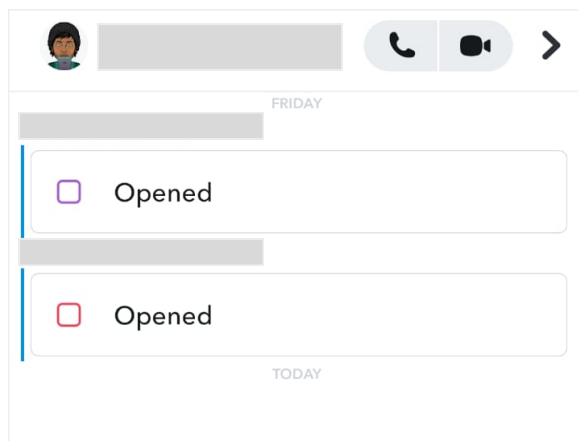


fig. Once opened, snaps cannot be viewed again

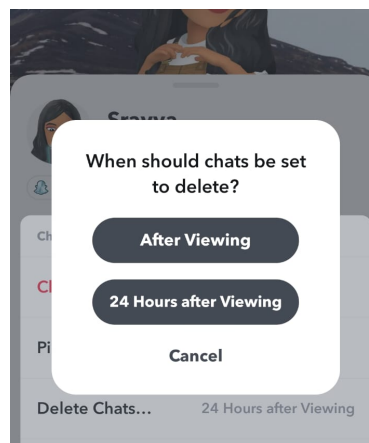


fig. Chat viewing settings

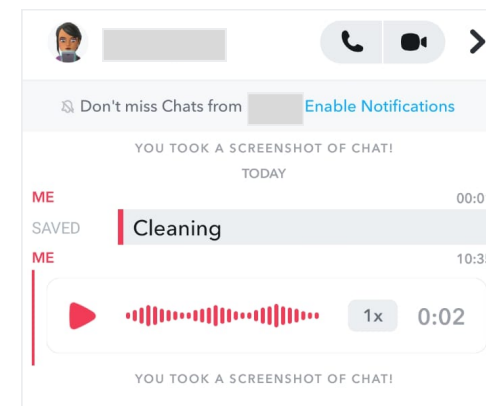


fig. Snapchat notifies when someone saves a text in the chat



fig. Snapchat notifies when someone replays a snap

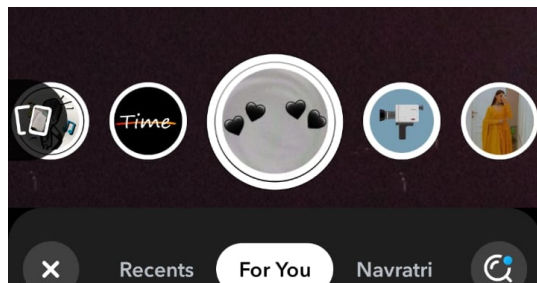


fig. Face filters provided while taking a “Snap”

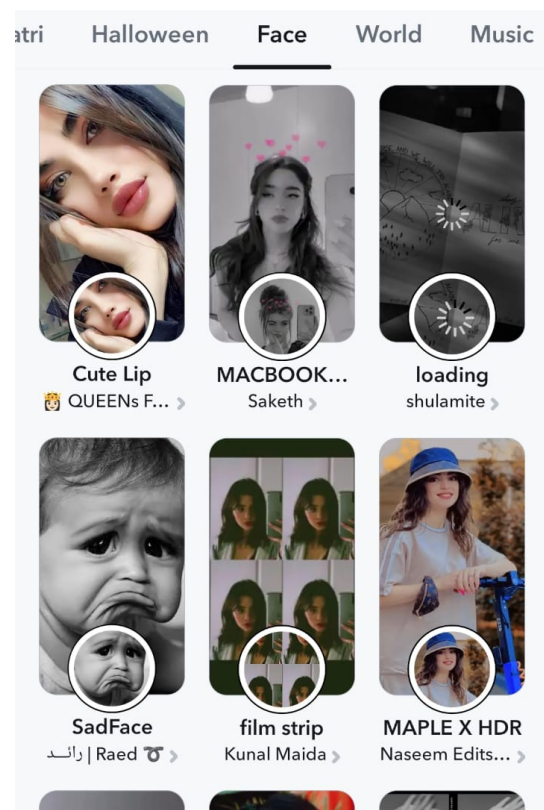


fig. “Browse” option providing endless Face filters

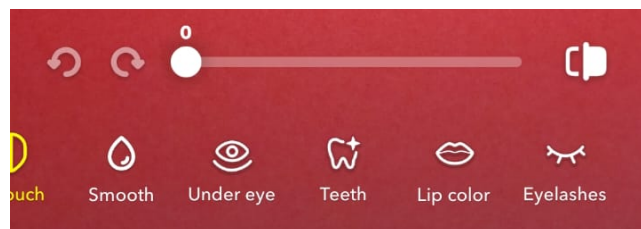
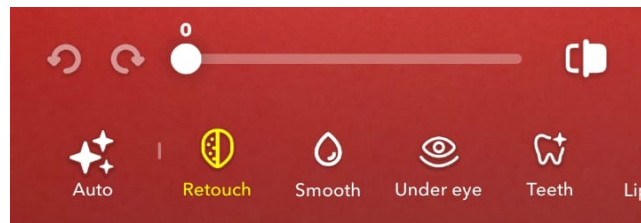


fig. Selfie settings

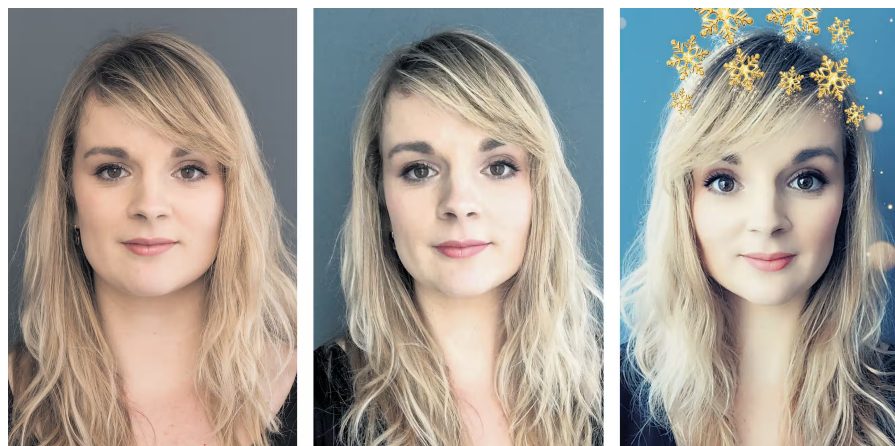


fig. How Snapchat “beautifies” facial features through its filters. [Image source.](#)

2. Previous Research

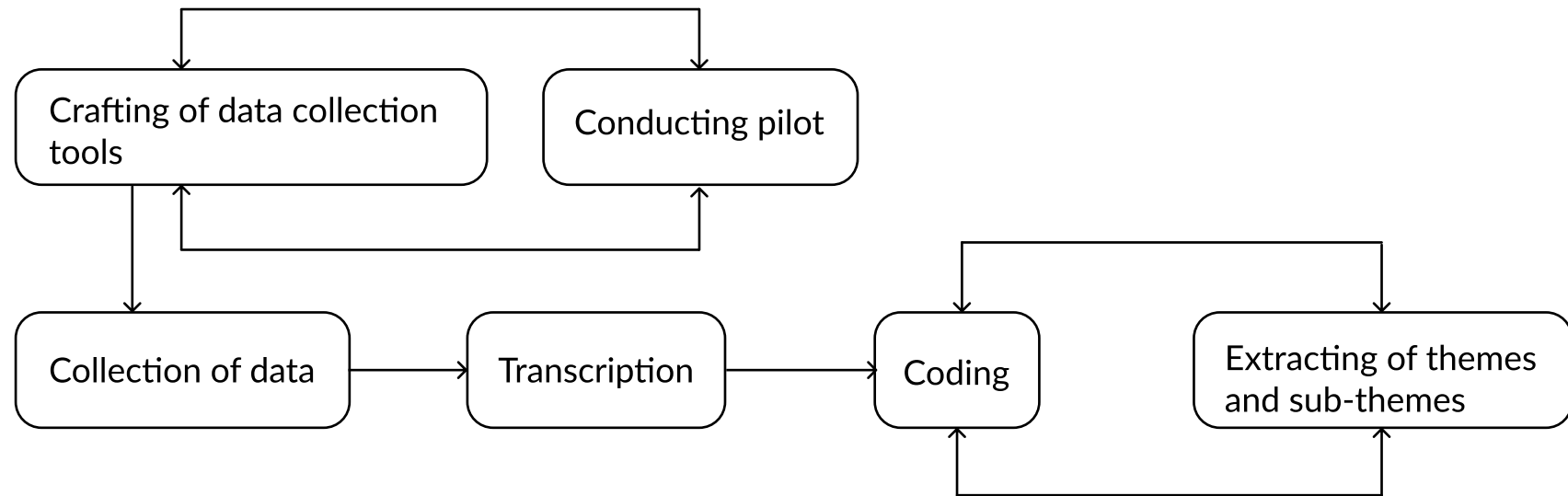
The primary focus of this research was to connect with young adults of India, get a sense of their online presence and motives behind their online actions, better understand the reasoning and the decision-making behind befriending strangers online, engaging in risky sexual behavior and the type of platforms involved in these engagements. To do so, we conducted a qualitative study with a sample size of 5 and the age range of 18 - 25 years. For the sake of scoping down, risky sexual behavior was confined to exchanging of intimate messages and or media in the form of images or videos. Thematic analysis was attempted at analyzing the raw data obtained by structured interviews. The study lasted for 6 weeks and ended with few major tentative findings.

2.1 Understanding the field and its users

Extensive review of existing literature was done to understand the notions and nuisances of the risky behaviors exhibited and the unwanted situations one might face in these online spaces. Few of the summarized learnings and findings were:

- Majority of existing studies and interventions were for either very young user-base or for teenagers.
- Lack of proper sex-ed and awareness regarding the dangers of online spaces greatly contributed to the risky and inappropriate behavior exhibited by young Indians.
- Most of the solutions boil down to Abstinence-based approaches such as parental control, online activity surveillance, constant monitoring of browser history.
- How different applications, their features and UI impact the decision-making of its users and how that might encourage certain behaviors have not been widely explored.
- Certain studies suggested that such restrictive interventions will hinder the users freedom to freely explore the digital spaces that have the potential to benefit them greatly.
- Older users need a different approach, such as Resilience-based mechanisms so that they can self-regulate their behavior online and conduct themselves safely and healthily.

2.2 Research Process



2.3 Research Findings

All-male group chats and performativity: High frequency of exchange, normalcy and indifference was shown in regards to sexually explicit content within all-male group chats. Unwelcomed or not, such content was normalized amongst these group chats and due to the constant exposure towards such content, a sense of indifference was observably developed over time. The existence of such content exchange reportedly exclusive to male chats indicates that men have an inclination/concern/investment towards show-casing their sexual preferences to their all male social circles.

Subjective labeling and parameters: Although labels such as “stranger” and “friend” are universally used, the data proved how subjective it is to each participant, where subjective parameters such as duration of familiarity, legitimacy of presence, frequency of conversations, and number of commonalities were considered before using and shifting the labels. The definitions not only conflicted amongst the participants, but also with my own personal perceptions.

The taboo tool: Snapchat was reportedly the most favored tool for sexually explicit exchanges.

Most of the reasons boiled down to the built-in features providing the users with a false sense of security and control over the contents and the flow of the conversation. So, even if a causation was not found, the correlation between the platform and the nature of exchange was irrefutable.

“For the followers” tendencies: Most participants, although, where not social media influencers, still engaged in sharing of personal information for various reasons, such as “to let people know”, “so that people can view it whenever”, etc. The tendencies are quite subconscious, but individual participants do act like micro-influencers within their own social media circles which leads to normalization of sharing of and being aware of others personal information.

Voicing concerns: Reportedly, individuals do not tend to voice their concerns aloud when they feel like their friends are exhibiting risky behaviors online. They keep their concerns to themselves and don’t engage in much dialogue when it comes to each others online presence. But, since awareness regarding online safety is learnt through various second-hand experiences in most participant cases, the lack of communication not only contradicts their behavior, but prevents participants from safe decision-making.

Blurred boundaries: Due to social media platforms and messaging applications, the boundaries between the people who the participants knew in real life, physically and people they only knew virtually were severely blurred. A sense was given that, since these platforms place everyone the users “add”, “follows” or “befriends” on the same equal playing field, the differences are erased between virtual strangers, virtual friends and actual friends.

For this specific project, three main findings were taken into consideration, which are:

- The taboo tool
- Voicing concerns
- Blurred boundaries

3. Literature Review

3.1 Snapchat's impact on inter-personal relations

Snapchat being the first of its kind to launch many new features around ephemeral design made it the center of many studies exploring and discussing its impact on inter-personal relationships and on the ability to communicate or rather hyper-communicate.

Certain studies cited that Snapchat has provided to be quite a useful tool for youngsters to stay in touch with each other and have more emotionally charged conversations easily. Since Snapchat allows people to add text to the pictures they send, it reportedly adds the facial expression to match the words, regardless of it being authentic or not. And due to the messages being deleted automatically after a short period of time, sharing extremely private conversations was also made easy for the users, which on down side also had major negative implications as well. This specific feature of Snapchat, at the same time, was reportedly used to engage in deviant behavior. Cyberbullying was reportedly made easy by Snapchat because it leaves no trace. Snapchat made sharing of intimate images "safer" as well, but this too came with many loopholes

and downfalls. No matter what the timer to an image was set, screenshotting it was possible, which, apparently lead to fights about trust and "why would you screenshot that?" as reported in some studies.

The application was also seen as more "personal" from the other available options. Since it involves a lot of image sharing, users reportedly picked who they wanted to engage with. Snapchatting was considered a milestone in close friendships.

The "streak" feature also added a certain level of importance to friendships, higher number indicating daily engagement, regardless of the quality of engagement that was taking place. But reportedly, it also lead to a lot of negative emotions such as jealousy and insecurity amongst friends.

Studies also cited how users feel like Snapchat is a good way to make new relationships and cure boredom, but also that it lead to physical isolation in social gatherings.

3.2 Technology and communication

Majorly, we categorize forms of communications into 4 types. Visual, verbal, written and non-verbal. While visual, verbal and written forms of communication have found their counter-part in technologically mediated communication as images, videos, text messages, emails, etc, non-verbal communication and cues have been side-lined. Technology encapsulating gestures, body language, tone and pitch, eye-contact, facial expressions, etc, are severely lacking as compared to other available forms online. Modern day people are so used to communicating and interacting online that, subtle communication indicators which are non-verbal in nature have been less and less emphasized.

In fact, studies have been done on understanding the impact of current state of CMC on an individual's ability to decode non-verbal cues. While active users (users who post content online) overestimated their decoding skills, passive users (users who consumed content online) decoded non-verbal cues more accurately. So, its not just "being online" that might in some way effect our communication skills, but the way in which we interact with these online spaces play a much bigger role. In a way, we can assume that watching people makes one susceptible to more subtle communication cues, and the internet with its vast

amount of platforms, has no limit for such content. But this is was one study proving one finding derived from a fraction of the online user-base.

4. Evaluation of Snapchat

4.1 Heuristics Evaluation

Using Jakob Nielsen's 10 principles for Interaction Design, Snapchat's UI was evaluated screen-by-screen. The 10 principles are:

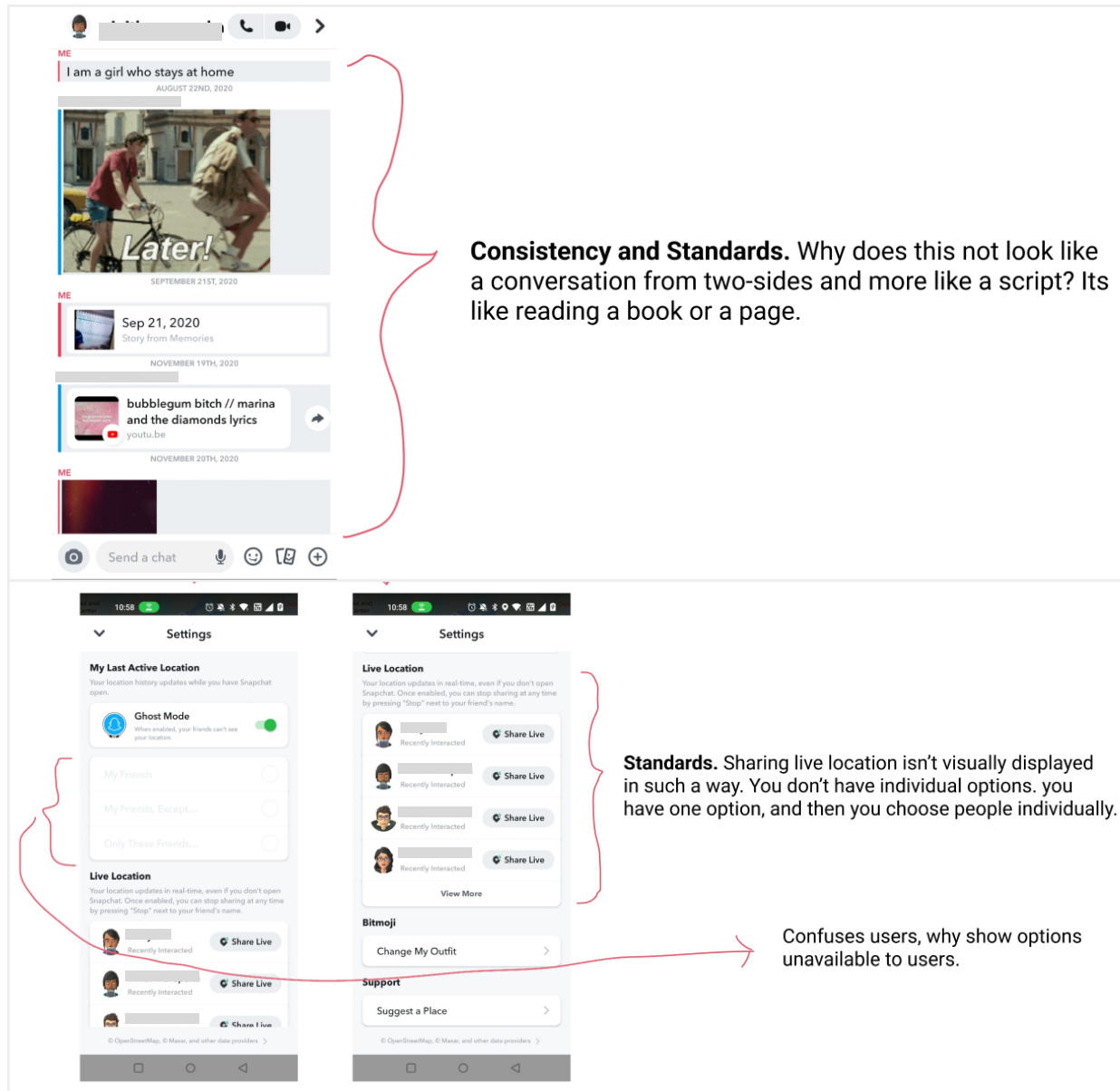
1. Visibility of System Status
2. Match between Real world and System
3. User control and Freedom
4. Consistency and Standards
5. Error Prevention
6. Recognition rather than Recall
7. Flexibility and Efficiency of use
8. Aesthetics and Minimalistic Design
9. Help users recognize, diagnose and recover from users
10. Help and Documentation

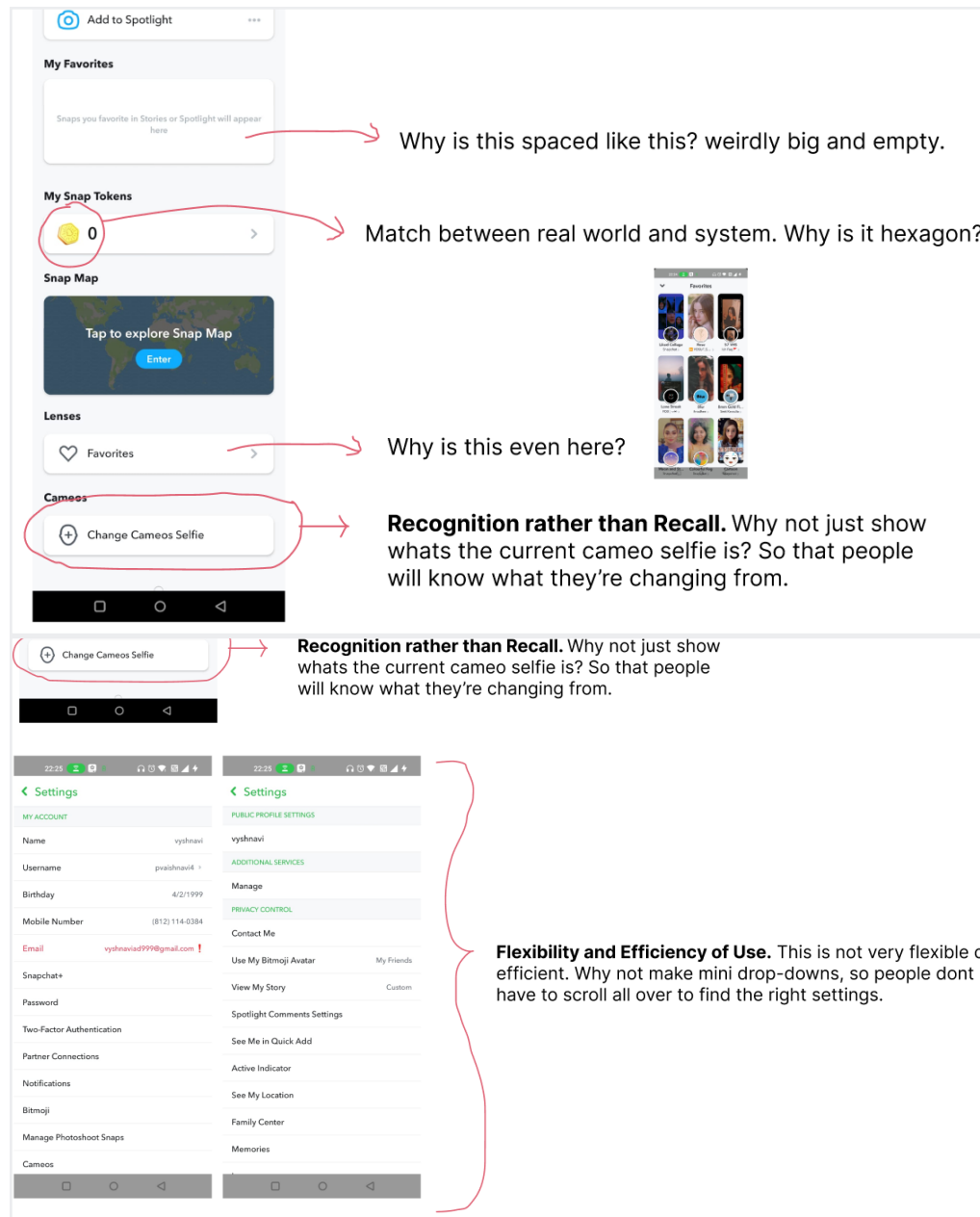
While Snapchat's UI followed certain principles such as **Visibility of System Status**, it failed to fulfil certain principles in numerous screen designs. List of Principles that Snapchat's UI failed to follow at certain points are:

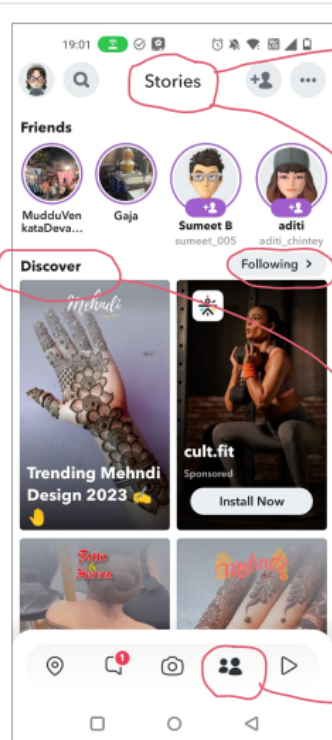
- Consistency and Standards

- User Control and Freedom
- Match between Real world and System
- Recognition rather than Recall
- Flexibility and Efficiency of use
- Help and Documentation

fig. Screenshots from the evaluation





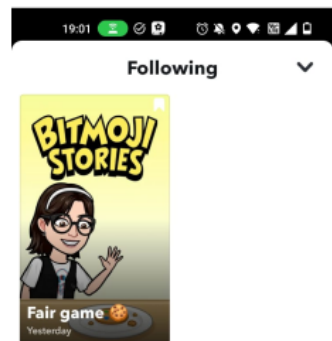


As a user, I don't know the difference between stories and spotlights.
how are they different from each other?

Match between real world and system. In no way is stories, discover and the icon mean the same thing. It should be a magnifying glass as an icon?

This part is just designed very awkwardly.

Flexibility and Efficiency of use. Why are the channels I actually care about hidden? that's not very efficient.



Although, using Heuristics proved to be helpful in dissecting the UI and how it can be further improved upon, there were certain screens and design choices that didn't necessarily fit into or fell under any specific principle. So ruling those choices as user-friendly or not was either instinctual or impossible. It felt like there was a need for new principles which could accurately criticize the newer design choices and elements which are currently in use.

4.2 FTU Evaluation

Snapchat is complex and doesn't majorly follow industry standards when it comes to the design choices it makes, or so was understood after the Heuristics. But the confusion lied in whether Snapchat's unique design sets it apart in an efficient manner or whether it needed to be standardized for the sake of user comfort.

Hence, to better understand how Snapchat's UI impacts first-time users, FTU evaluation was conducted with a sample size of 4. 8 simple and basic tasks were designed for the first-time users to perform. Their actions and time taken to complete those tasks were recorded and pondered upon.

Tasks given to the users were:

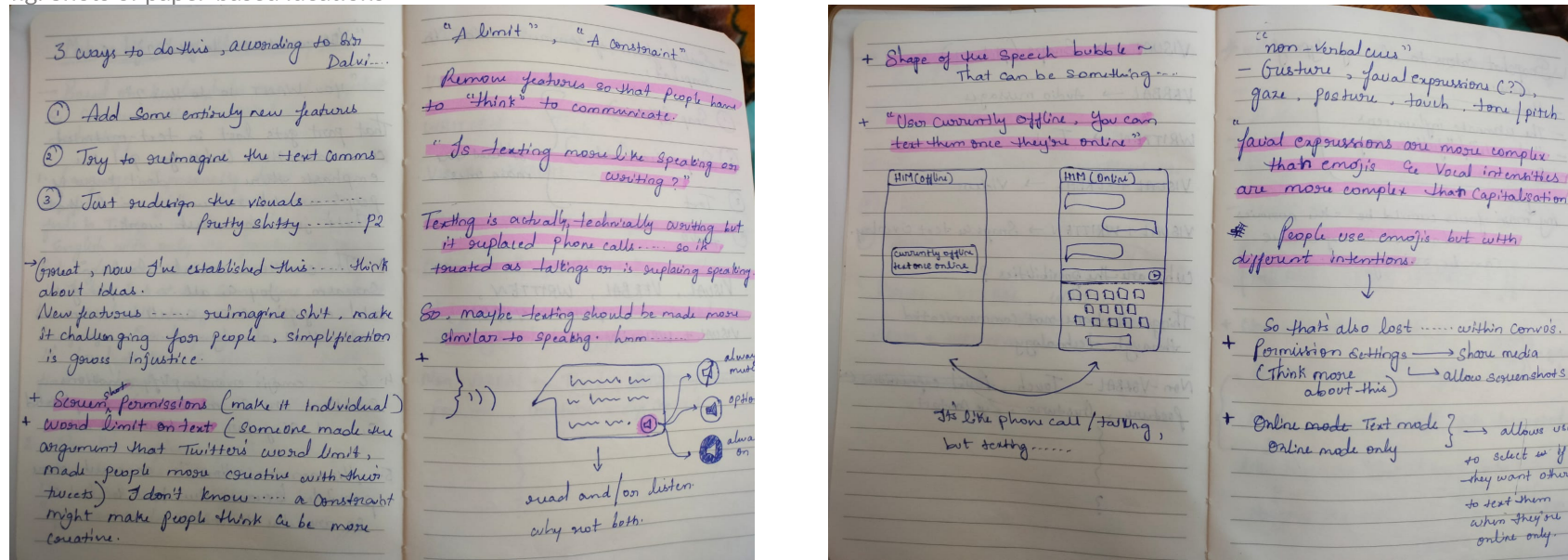
1. Go to the Snap gallery and look for photos from 2020.
2. Create a group-chat with three participants.
3. Favorite a face filter and then find the filter in Favorites.
4. Send a message to a friend and save that message in chat.
5. Send a photo from the phone gallery to a friend through Snapchat.
6. Block a friend.
7. Without opening Snaps sent to you, send a text to that friend.
8. Look for "Safety Snapshots" in Safety Center.

This method was soon after abandoned during the ideation part, because Snapchat, although, has unique features, terminology and iconography, most users quickly get used to the space after some time. It's uniqueness does not pose challenge to its users, and since the objective is to improve the existing design, the application needed to be evaluated from an existing user's perspective rather than a first-time user's perspective.

5. Design Explorations

After finishing the exploration and the evaluation of Snapchat, every redesign opportunity, new feature to add and UI elements to re-arrange where noted down and expanded upon.

fig. Shots of paper-based ideations



Give any user enough control, so that they can keep themselves safe if they want or need. The choice should exist.

+ Block words that ~~may be~~ people "crazy" → "Phew!"

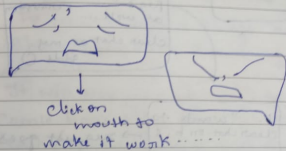
the receiver won't receive anything.

but the sender would get a message like "couldn't deliver"

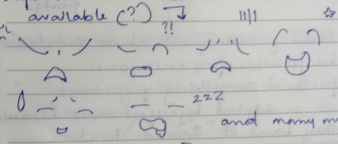
don't know if it's inappropriate of speech on something...

this is not a clever idea because there are several ways around it...

+ Speech bubbles ^{that} actually speak. gives them an expression.



expressions available (?)



(Visual & Verbal)

+ clear chat 2-way option. needs the other party's permission but it clears the chat on both sides.

Existing forms of communication in Snapchat:

- 1 Snap (Picture)
- 2 Snap video (video)
- 3 Text
- 4 Audio

at least the main ones...

VISUAL, VERBAL, WRITTEN, VISUAL + VERBAL, VISUAL + WRITTEN.

VISUAL → Snaps (pictures)

VERBAL → Audio messages

WRITTEN → Text

VISUAL + VERBAL → Videos

VISUAL + WRITTEN → Snaps & text overlay

What are the possibilities?

Things that are not communicated through technology

Non-VERBAL - Touch, ~~facial expressions~~ posture, Gesture, Eye Contact

?

+ Segregation of Snap buddies

contacts non-contacts

+ Blank Screen → Sometimes you don't want to clear chat because you lose media or some important attachments.

makes it blank on both sides. (needs revision)

also, clear chat only clears yours. if you don't want the other to still have it then... what?

• Control & freedom

• Emotionless & Expression

+ Snap preview (so you'll know what you're sending with timer on, means how long one can see...)

1 → 2

Preview 3 seconds

to see exactly how long that is... sometimes people can underestimate seconds on time in general.

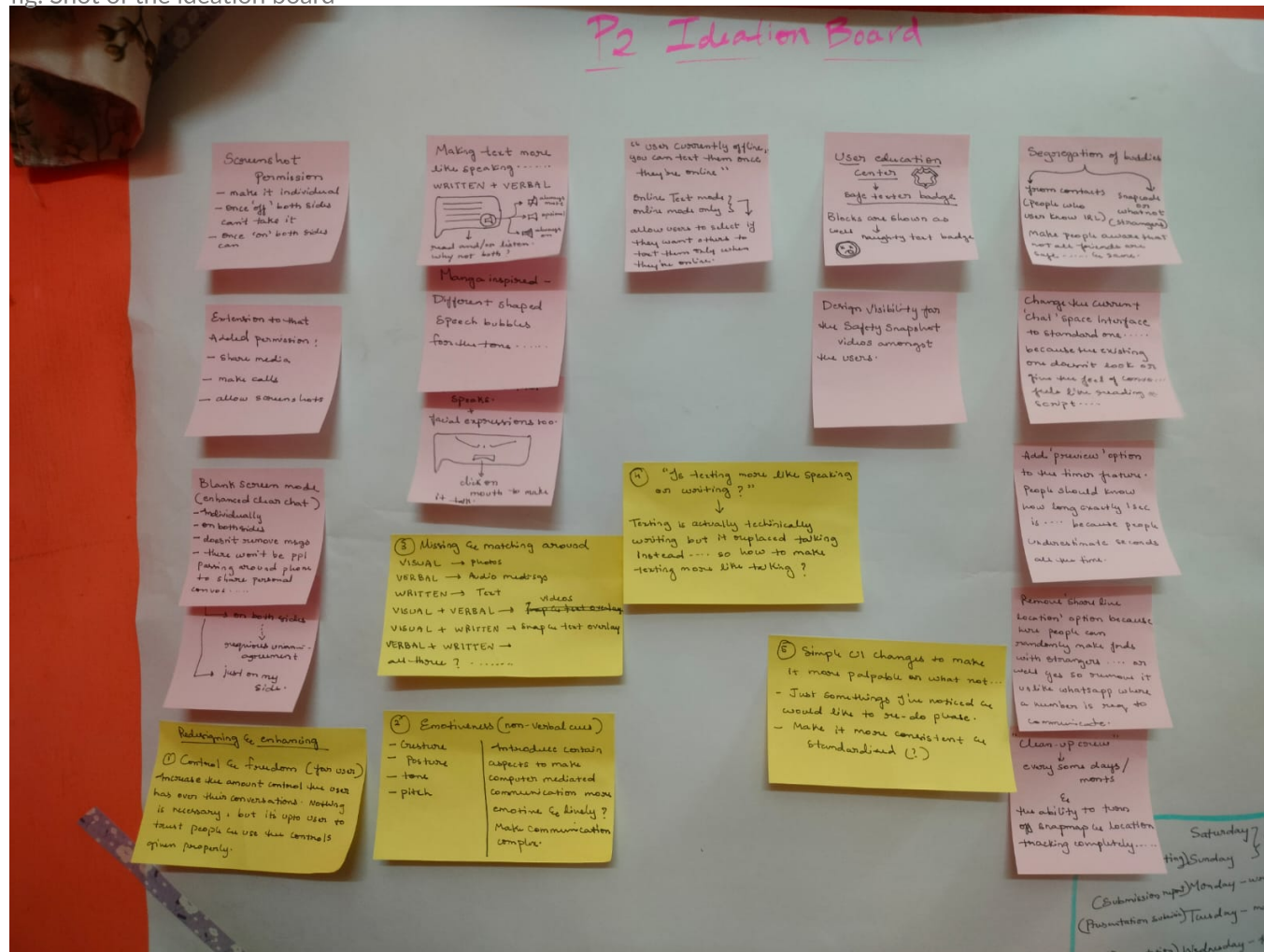
+ Everything "cleanup crew is here" asks you whether you'd like to delete Snaps you rarely visit. Helps climate some way so that's a good thing.

+ Change chat UI

+ Snapmap disabled → no longer has everything you do every option...

Once the ideas were noted down, they were then segregated and arranged according to concept/theme and combined to make new ideas and explorations, or to further develop the existing ideas.

fig. Shot of the ideation board

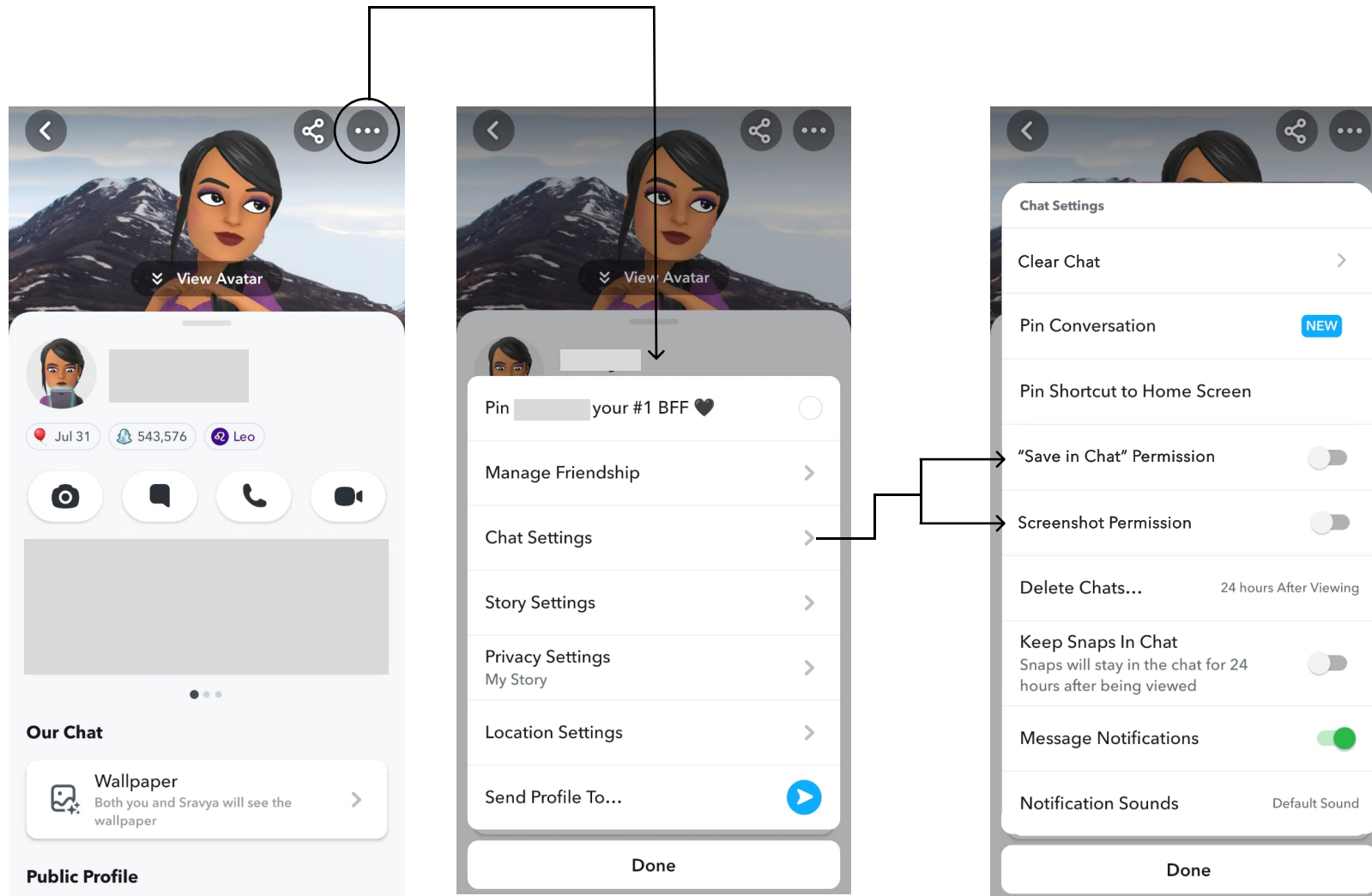


Concepts or themes around which the ideas were developed:

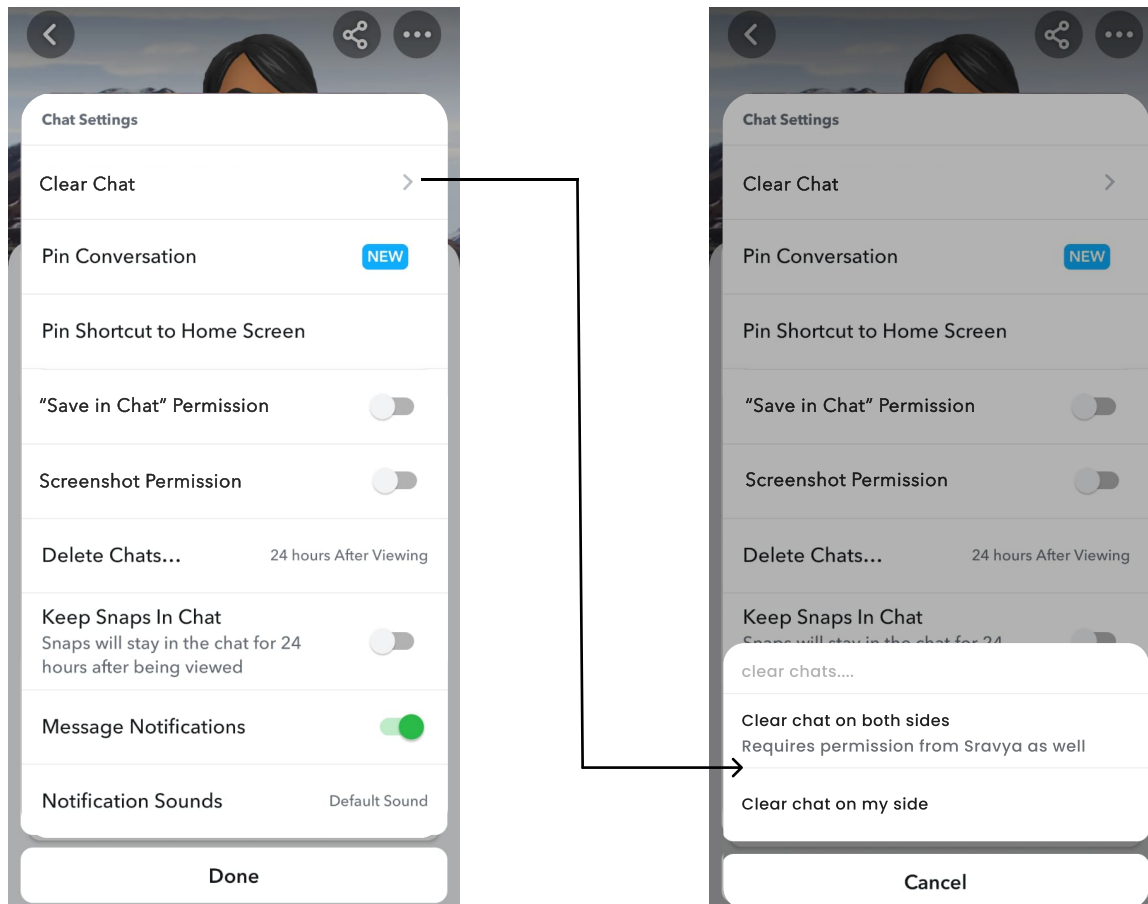
- User control
- User awareness
- Reimagining communication

5.1 User control

The user might have the desire to share intimate information or media about themselves, something that cannot be controlled or changed externally. What a tool like Snapchat can offer is an opportunity or control for the user to choose who they trust and to what extent. By adding the “screenshot permission” and “save in chat” permission, the user can at least, to a certain level, safeguard their interactions online.



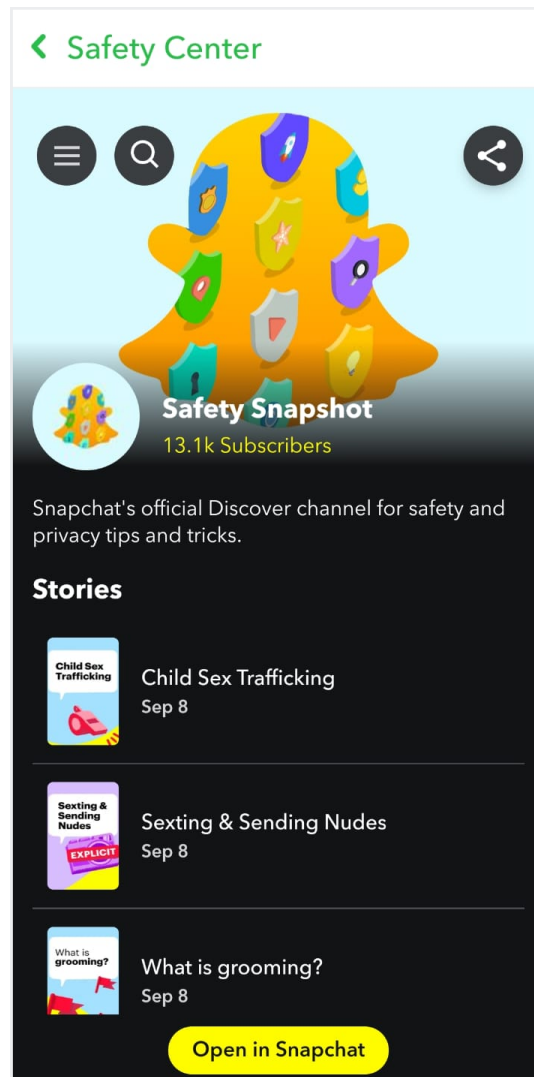
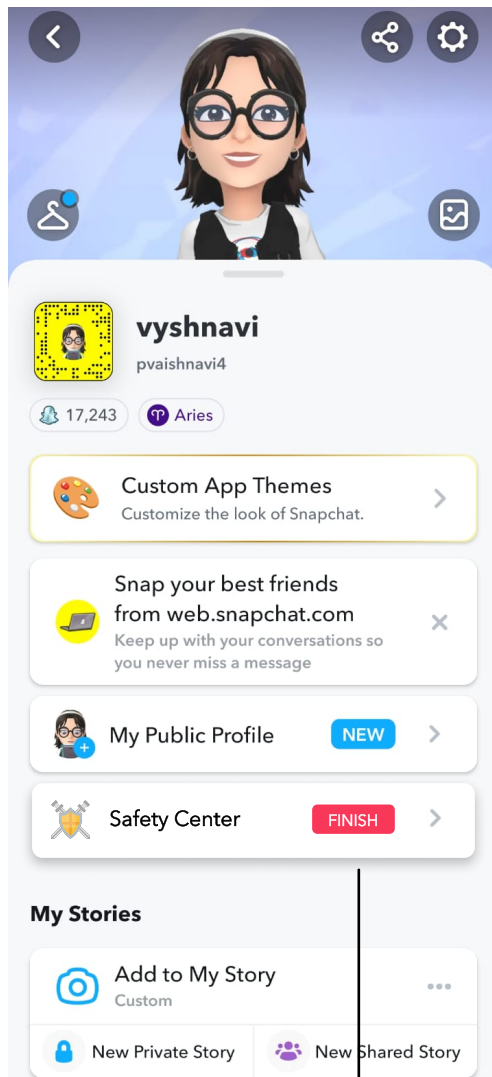
In general, “Clear chat” option is one-sided. In this scenario, the user has to trust the other party to also purge their conversations. But with this option, chats can be cleared from both sides when one initiates the request, and the other party only has to accept it. In this mechanism, the trust is placed on the tool to complete the task and not solely on the users.



5.2 User Awareness

Although Snapchat has something equivalent of an awareness channel, its so deeply hidden away that most avid users were unaware of its existence. It should be more easily accessible to users. Here, the proposed idea is to make it a section within the user profile.

Making the section mandatory might not be fruitful and might drive the users away, but recognizing the users who do take the time to educate themselves might benefit everyone. By providing a “Smart Badge” for completing the session in user profile, users are made aware about which of their Snap buddies believe and care about safe practices and properly conducting themselves online.



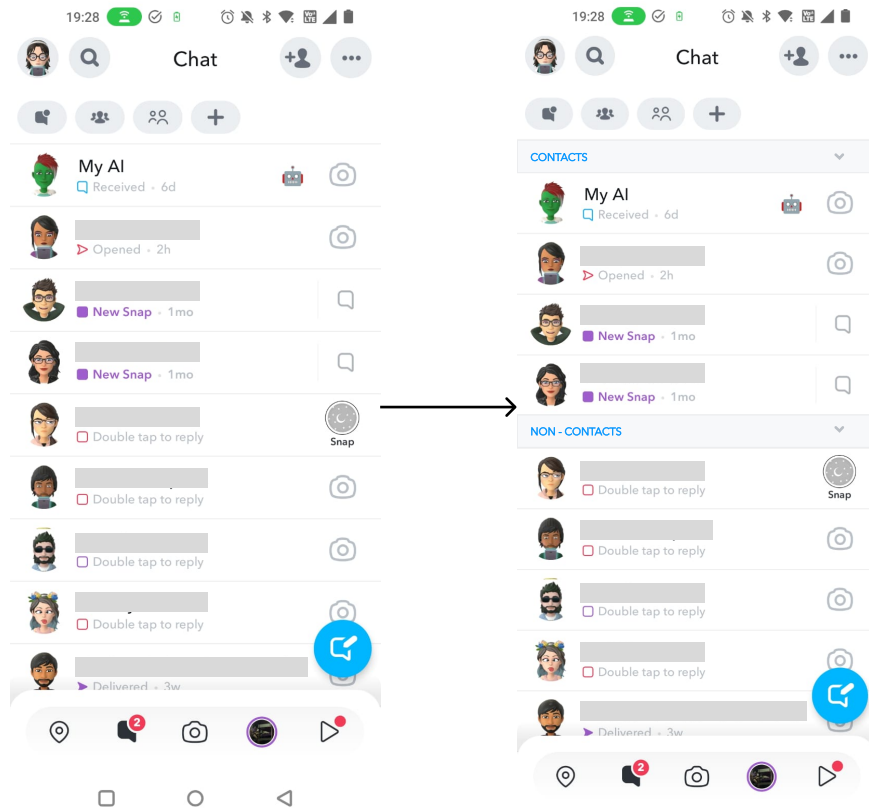
Just as Snapchat displays a user's Snapscore (no. of Snaps they have sent and received), displaying the number of times the user has been blocked can also make people conscious of who they are engaging with. The Block Badge is displayed after the user has been blocked certain number of times. When the user gets unblocked the number goes down. This way, the user's profile is not banned off the platform, but it depends on others whether they'd like to engage with the platform delinquents or not.



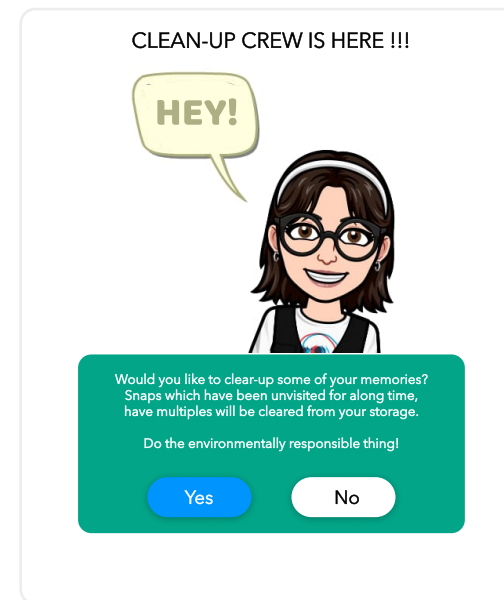
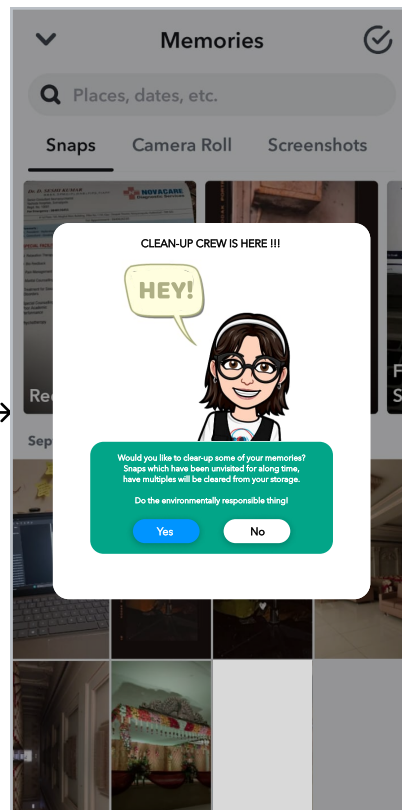
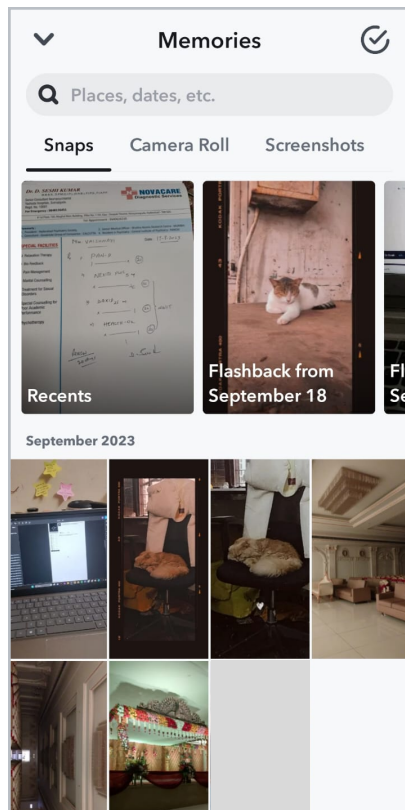
"The Block Badge"



One of the realizations from previous research was how online platforms blur the boundaries between people whom you consider friends offline and whom you only know online. The interface is designed such that everyone is categorized in the same box. So segregation of Snap buddies based on contacts and non-contacts might act like a little reminder for users, reminding them that they're engaging with people whom they know very little about.



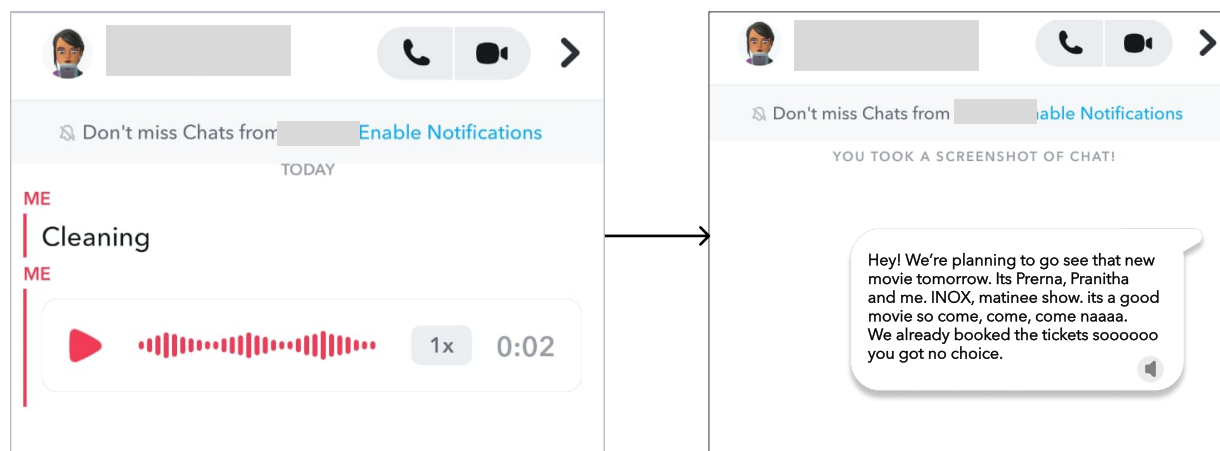
Snapchat providing unlimited data storage is one of the many reasons as to why people use this application. But the side-effects on the environment is completely ignored here. So, a little reminder every few months urging the users to delete unvisited media and duplicates might make users more environmentally conscious.

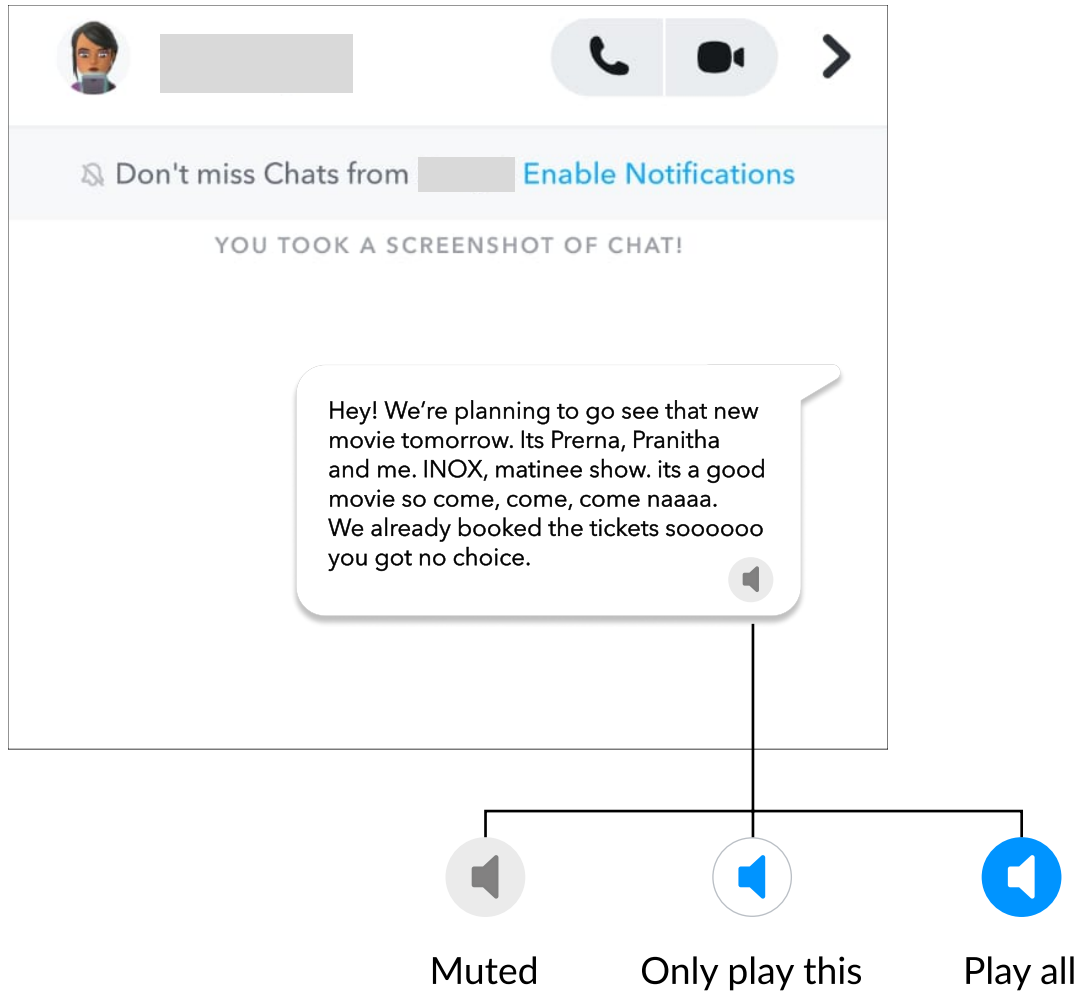


5.3 Reimagined features

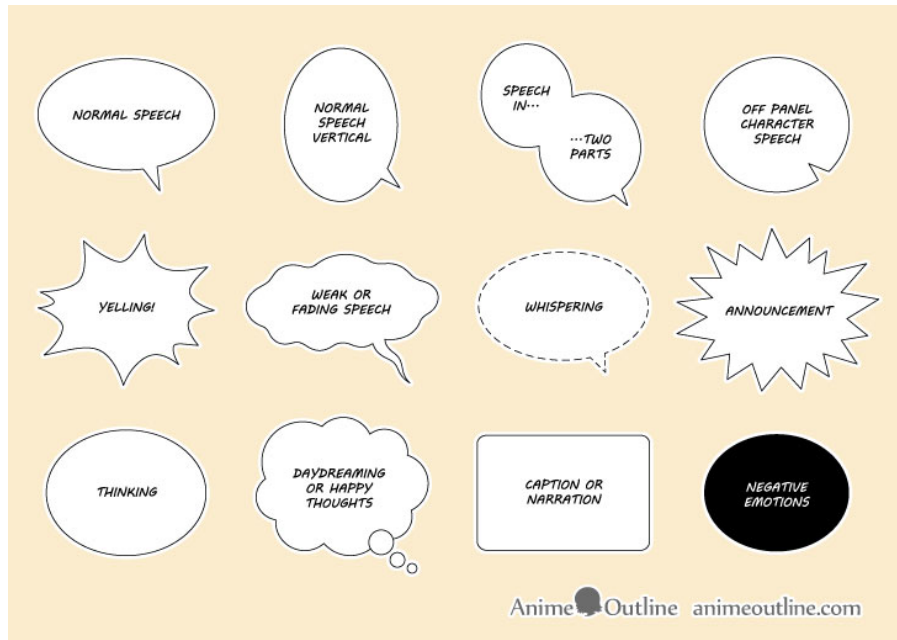
While going down the rabbit-hole of types of communications, I found the four major ones; Visual, Verbal, Written and Non-Verbal. I tried to mix and match different forms of communications to come-up with new features to add to online texting platforms, in this case, Snapchat.

Here is one exploration that tries to combine the Written and Verbal forms of communication. Instead of either a written text message or a playable audio message, this feature converts the audio into written format that can be played or read. This way its easier to keep track of audio formats of conversations and user need not play every message to see which conversations were recorded in which file.

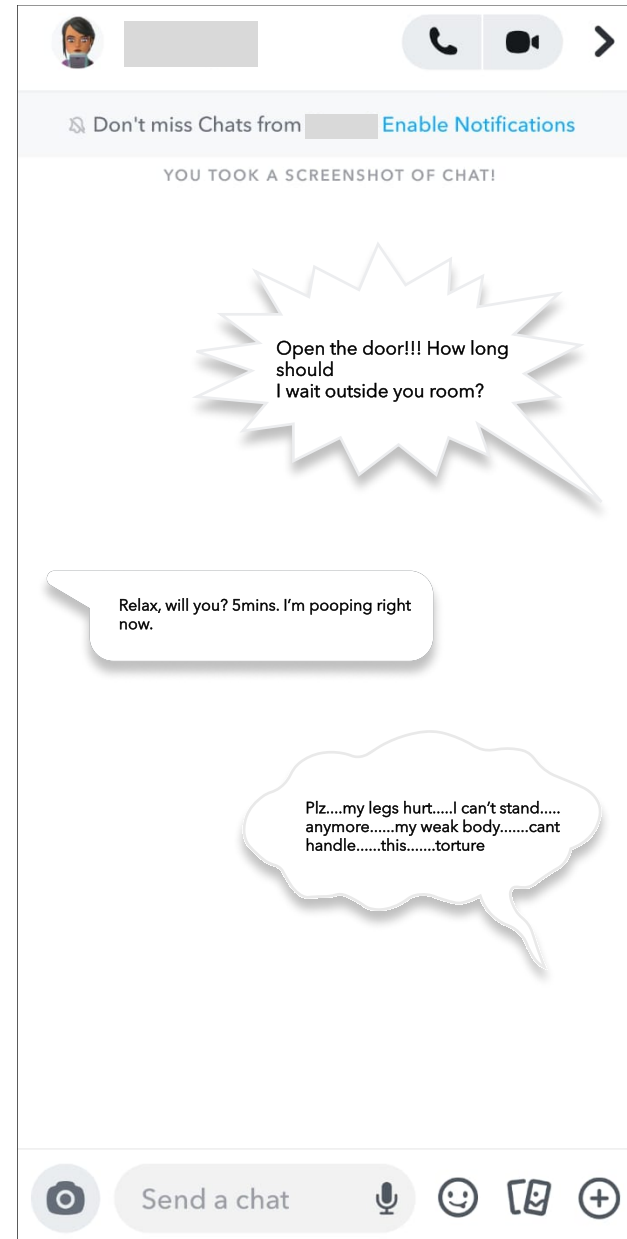




One way artists introduce tone to character dialogues is by various designs of speech bubbles in Mangas and Comic strips. So, by introducing various designs for speech bubbles, it might help users to express their tone with more nuance in CMCs.



[Image source](#)



6. Prototyping

6.1 Filtration of ideas before prototyping

Once ideas were generated, filtration process started, where some of them were prototyped for further testing, and some were discarded. Out of the three concepts within the explorations, user control and user awareness were taken forward, while explorations under reimagining communication were filtered out. Reason being, the goal of the project was to make the platform more efficient, and the users more cautious and responsible with their presence on it. Reimagining new ways of communication didn't fit the overall objective of the project, and hence were not further developed.

6.2 Creating prototypes

The ideas were prototyped into working screens using Adobe XD. Each idea was prototyped individual to other, and only the screens required for testing out the idea were designed. Care was taken to make sure that the Snapchat's visual language remained consistent throughout these screens.

Before creating prototypes, evaluation plan was laid out for testing each of these design changes and features. User-testing with use case scenarios were imagined first, and then accordingly, for testing purposes, the screens were prototyped.

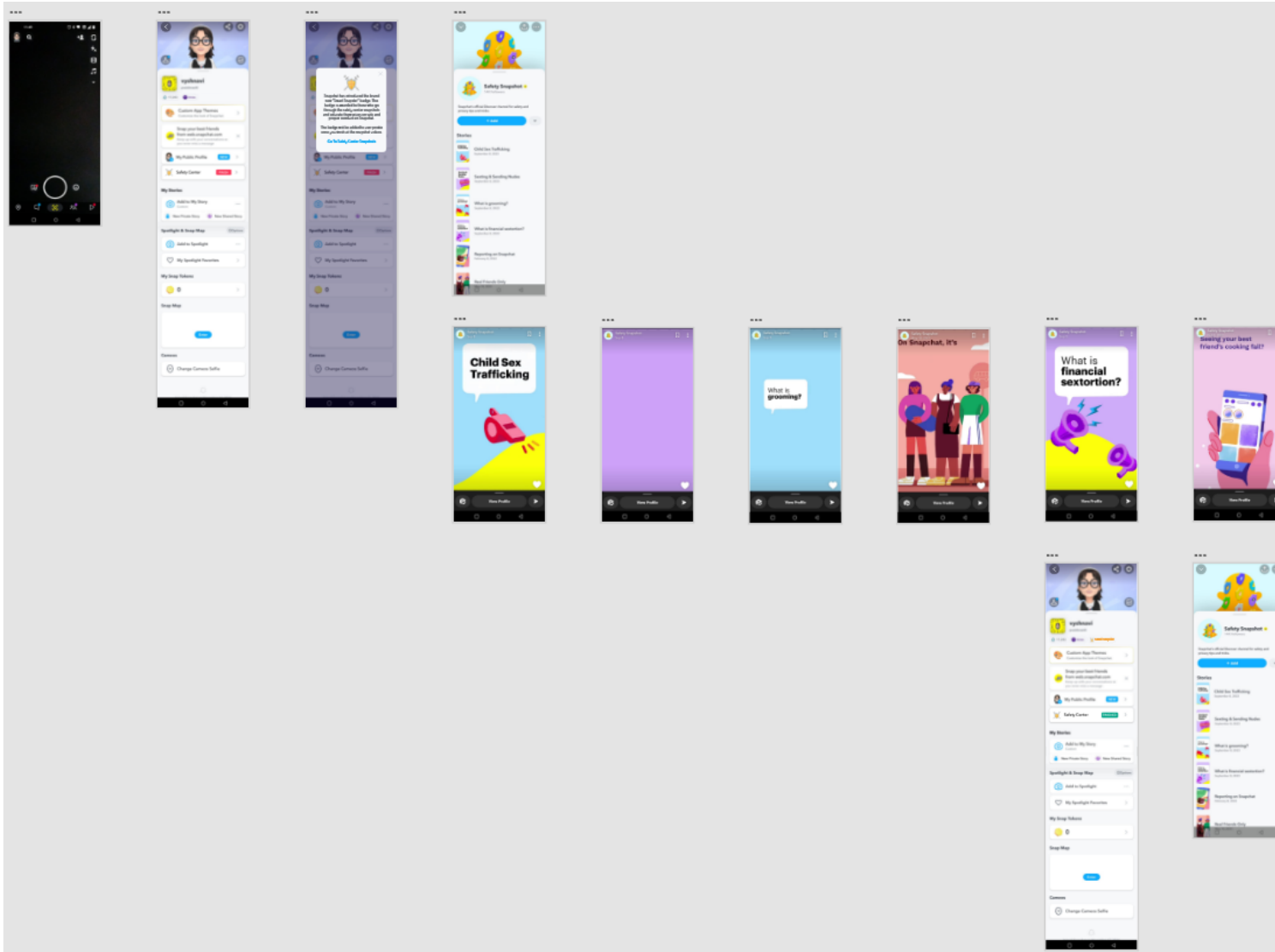


fig. Designing of screens in Adobe XD workspace

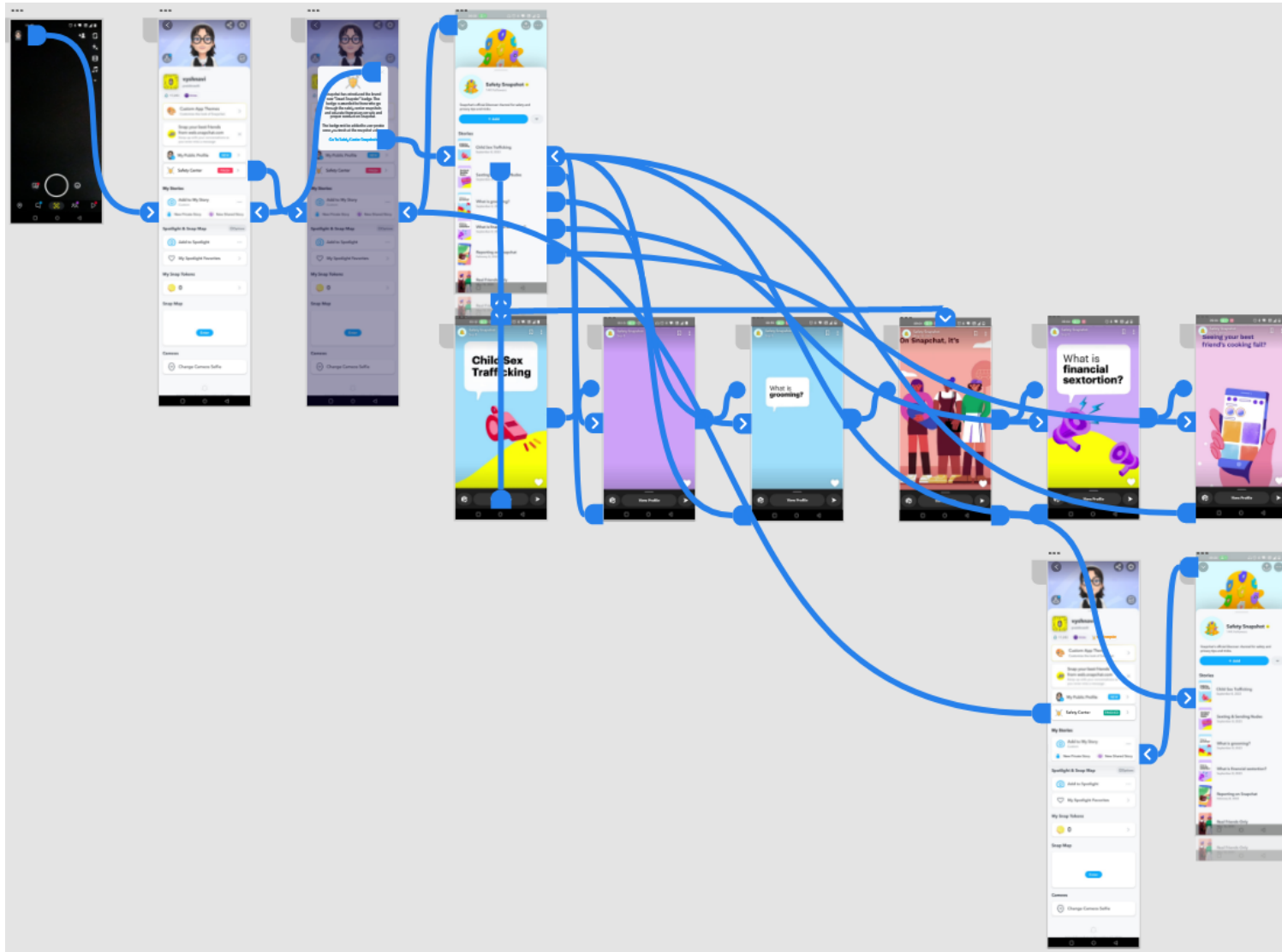
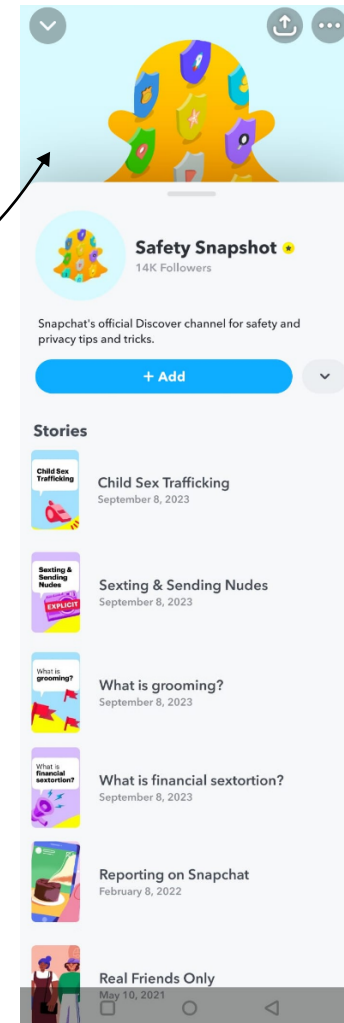
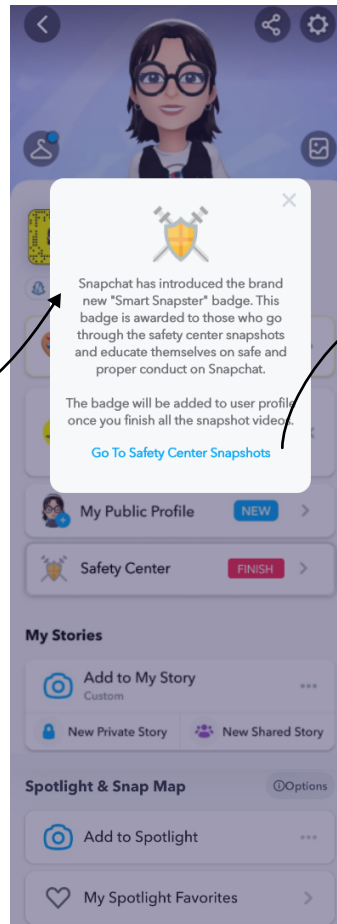
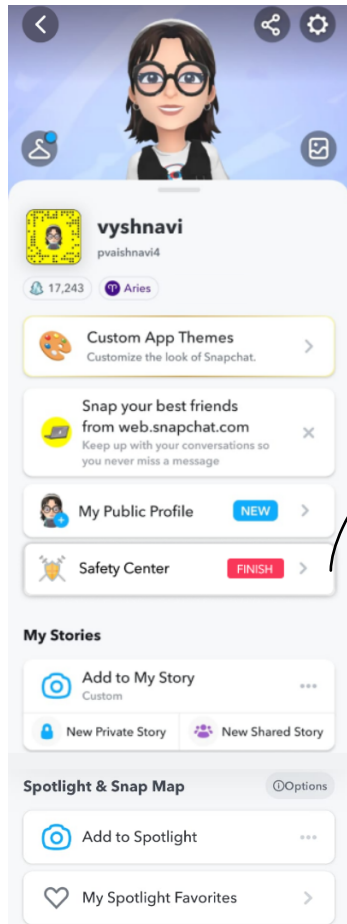
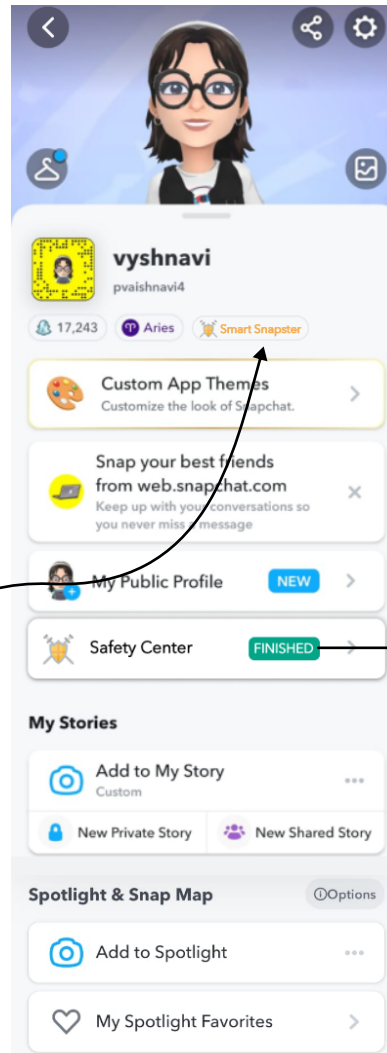
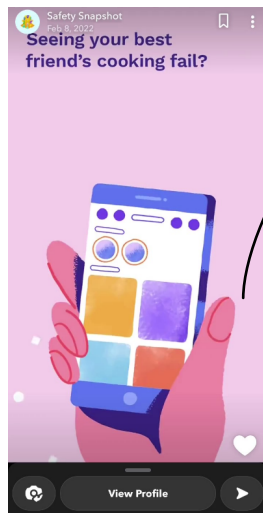
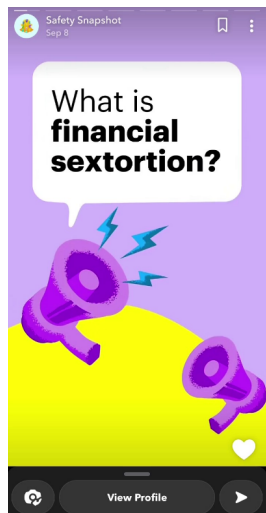
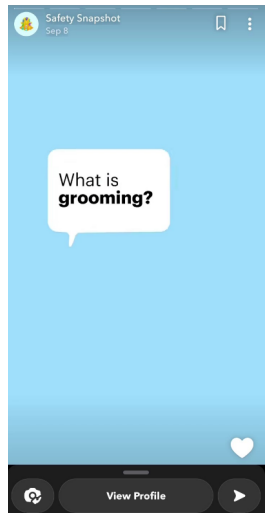


fig. Creating working prototypes using Adobe XD

6.3 New additional features

1. **Safety Center and Smart Snapster Badge:** Snapchat has a “channel” within the Safety Center called Safety Snapshot, which contains videos on safety tricks and tips for its users. But these videos are deeply hidden away inside the settings, and users hardly ever come across these videos. To increase the visibility, the safety center is added as a side quest to user’s profile and after finishing all the videos, the user is awarded a badge that is displayed upon their profile for everyone else to see.

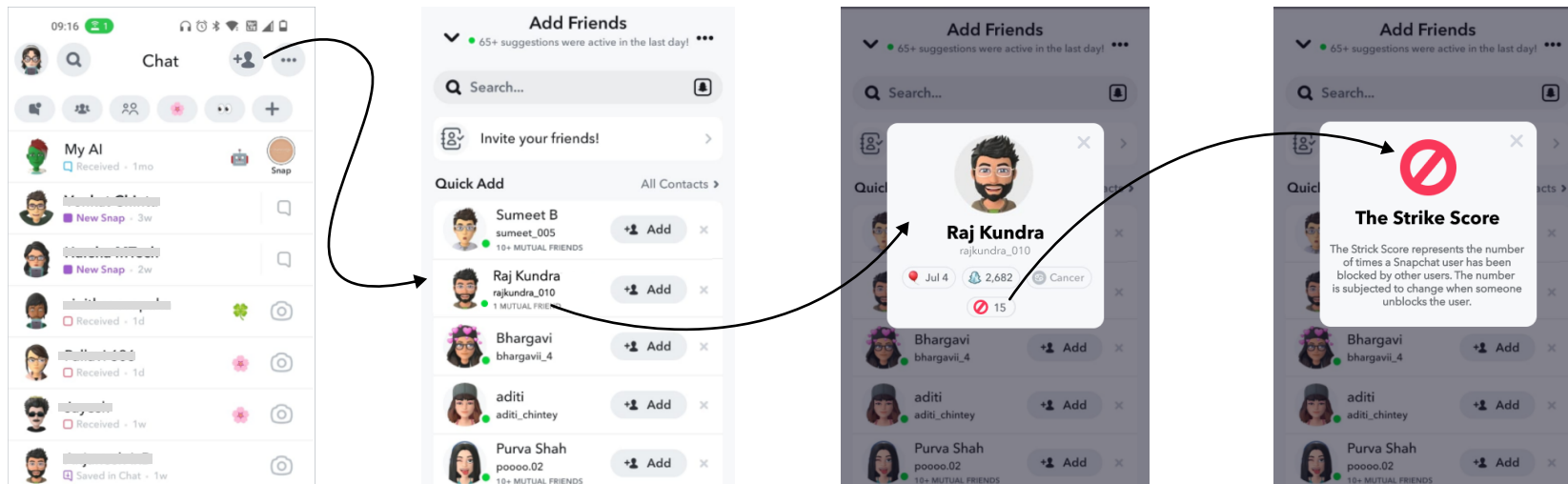


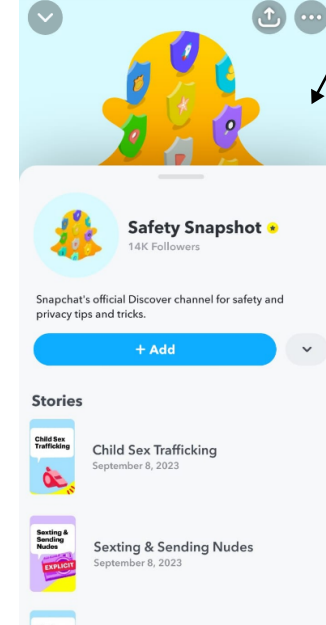
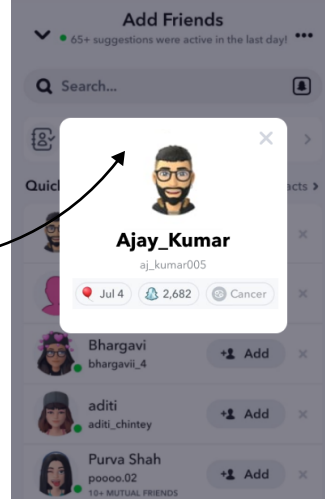
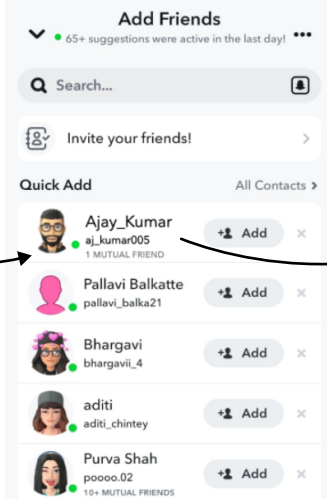
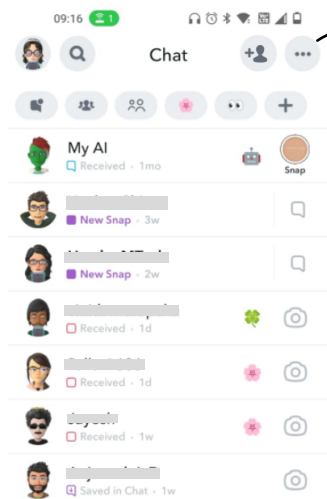
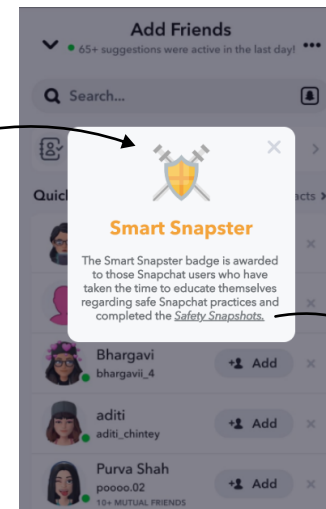
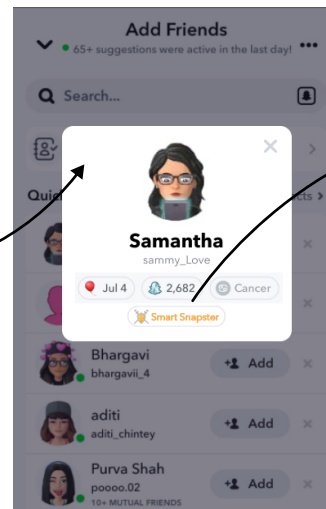
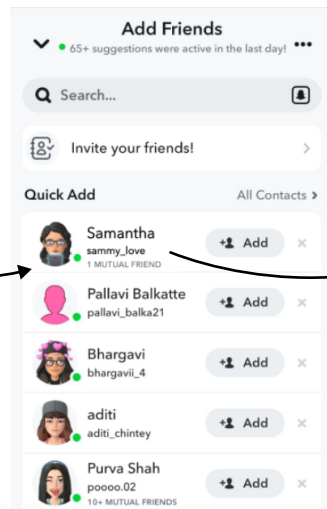
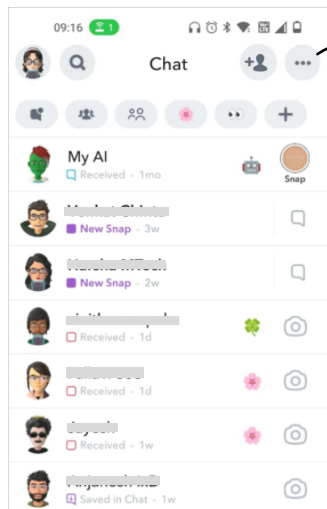


Once the user finishes watching all the videos, they are awarded the “Smart Snapster” badge.

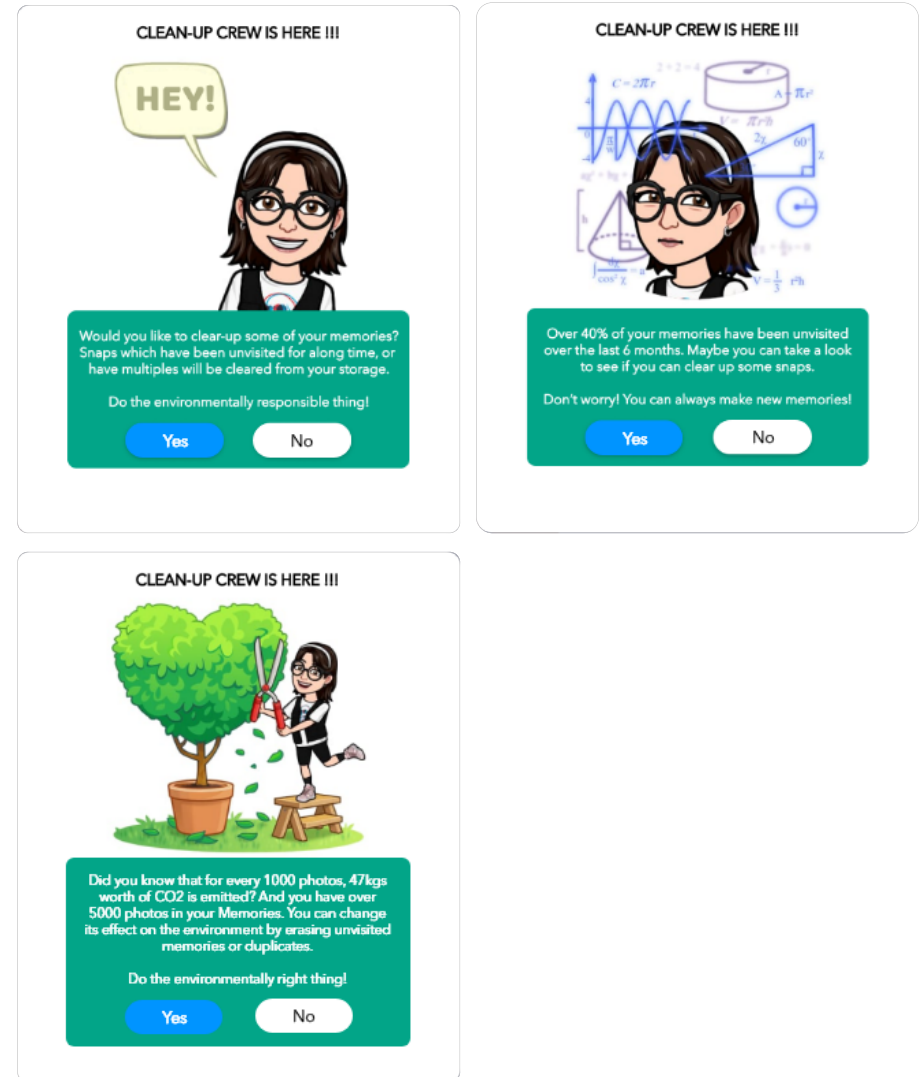
“Finish” in red turns to “Finished” in green, indicating the completion. If any new videos are added to the safety center, it reverts back finish in red.

2. **Add Friends, user profiles and badges:** Here, the effect of adding badges to user profiles are tested out. The “Strike Score” and “Smart Snapster” badges are added to different profiles in “Add Friends” list. “Strike Score” representing number of times a user has been blocked, is supposed to act as a digital red flag for other users on platform, and the Smart Snapster badge given to user after finishing the safety snapshots are supposed to act as the digital green flag, and also help in spreading awareness about the presence the safety center.

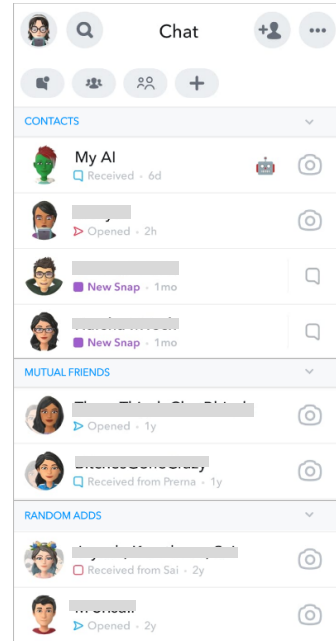
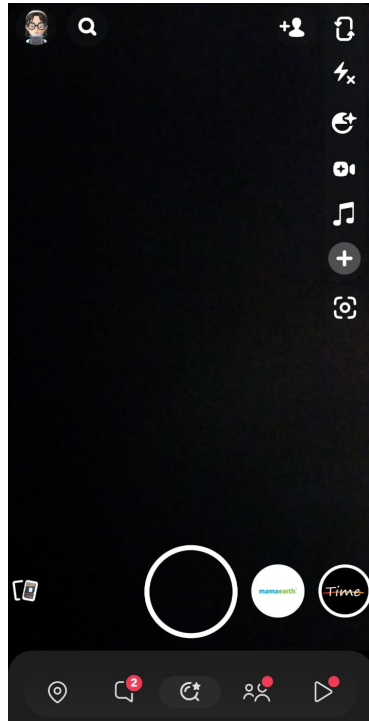




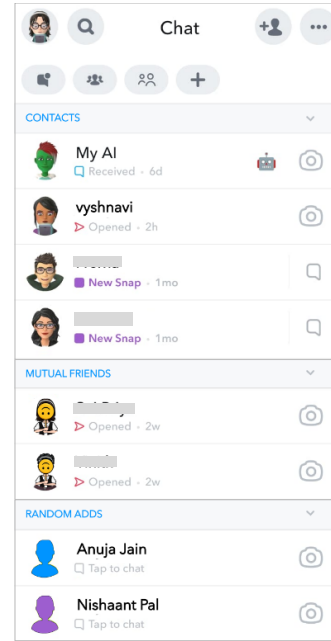
3. **Clean-up crew pop-up reminder:** One of the primary reasons many use Snapchat is for its unlimited data storage. Snapchat lets users store any media files taken and saved through Snapchat in “Memories”, equivalent to that of a regular gallery application. Trash data stored in servers can create abundant amounts of carbon emission each year, and users, especially in this case, store large amounts of unwanted data. In order to educate and make people conscious of how they use this unlimited storage given to them, a pop-up reminder was crafted that reminds user to clear unvisited and/or duplicate memories from Snapchat every few months. Three different messages were prototyped to see which kind of information might make people more responsible of their actions.



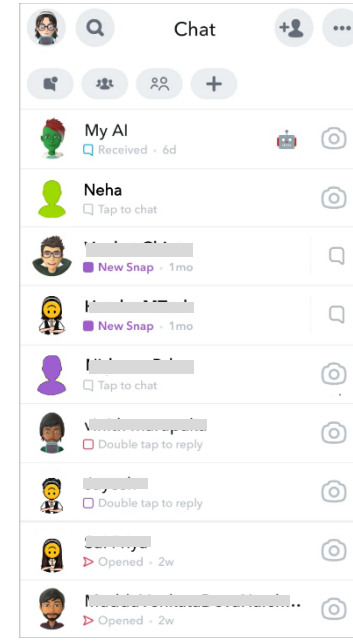
4. Virtual boundaries: From the previous research, while interviewing the participants, observably there was a sense of blurred boundaries when it came to online relationships. These platforms put everyone on the same playing field, hence the difference between an actual friend, a virtual friend and a virtual stranger is erased, a boundary which is clearer in the physical world. It's easier in these scenarios to let your guard down, and trust and befriend strangers online. So this prototype was designed in hopes of bringing those boundaries into the virtual world as a cautious reminder to users about who they know and who they don't.



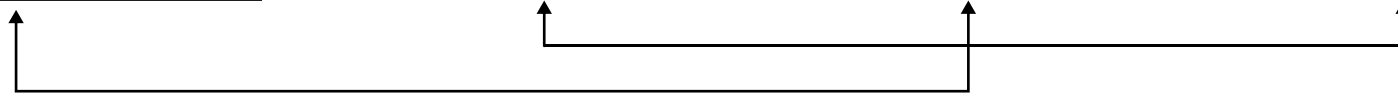
Variation 1

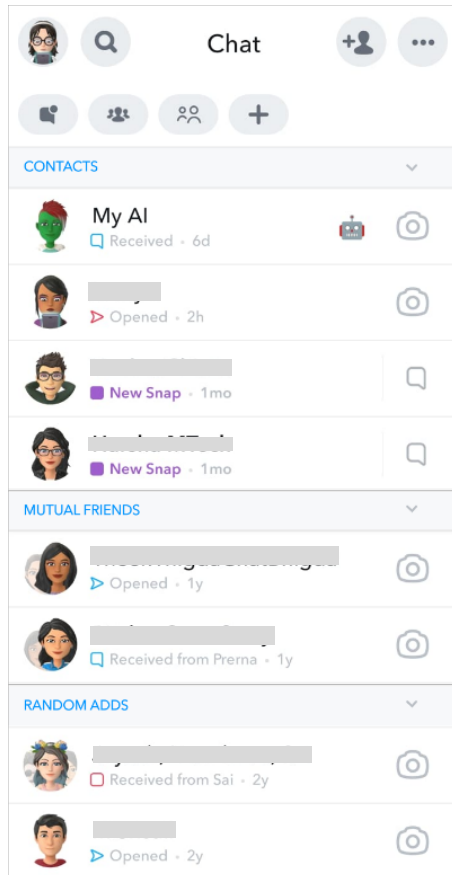


Variation 2

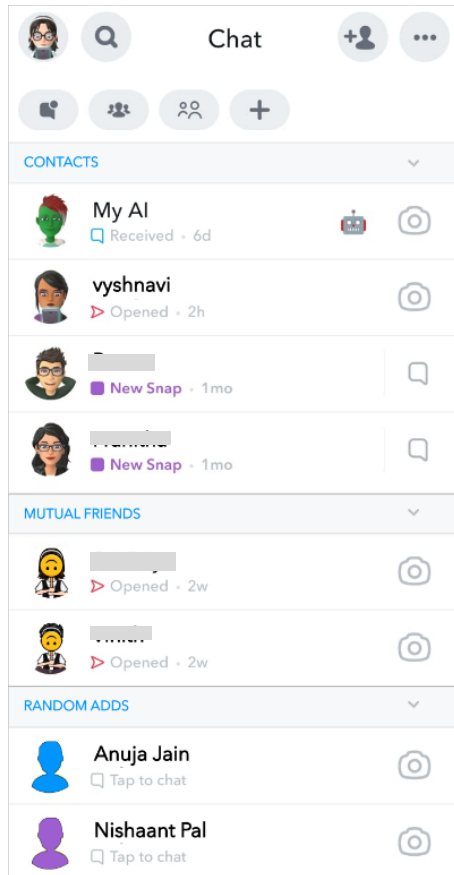


Variation 3

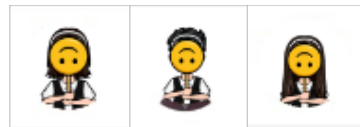




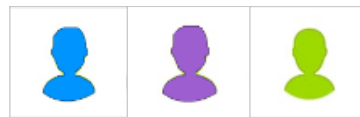
Variation 1: In the first variation, the friends are segregated into three sections based on how they are related to user and how they are added as a friend onto the Snapchat. People who are added directly from contacts, people with whom the user has mutual friends with, and people who user has added randomly, i.e, user has no contact information and have no mutual friends with them.



Profile Bitmoji for "Contact" friends



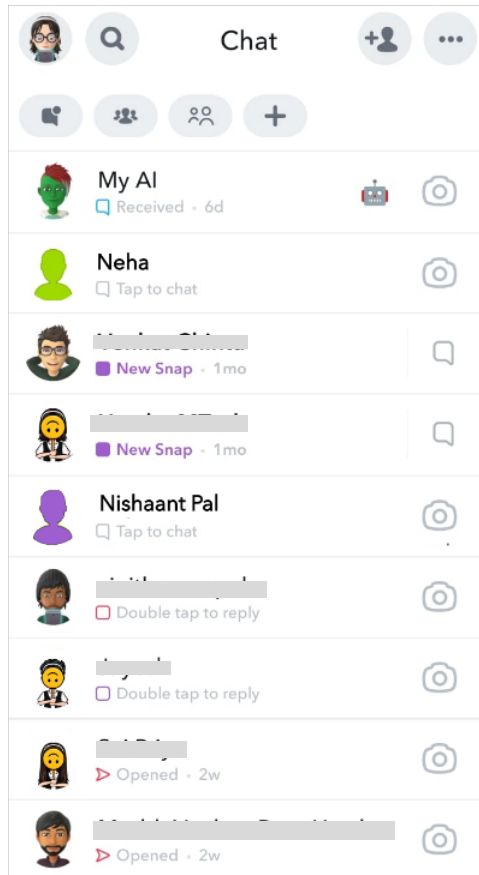
Profile Bitmoji for "Mutual Friends" friends



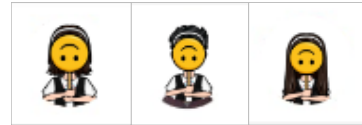
Profile Bitmoji for "Random Adds" Friends

Variation 2: In the second variation, along with the segregation, here the profile bitmojis are also changed. Based on the level of familiarity, the bitmoji changes. Friends added from the "Contacts" are shown in entirety, friends added with whom user has "Mutual Friends" with are shown partially, with a mask on their face, someone they know passingly, and finally, friends added from "Random Adds" are shown as blank icons,

as a reminder that these people are not someone the user knows in real life or physically.



Profile Bitmoji for “Contact” friends



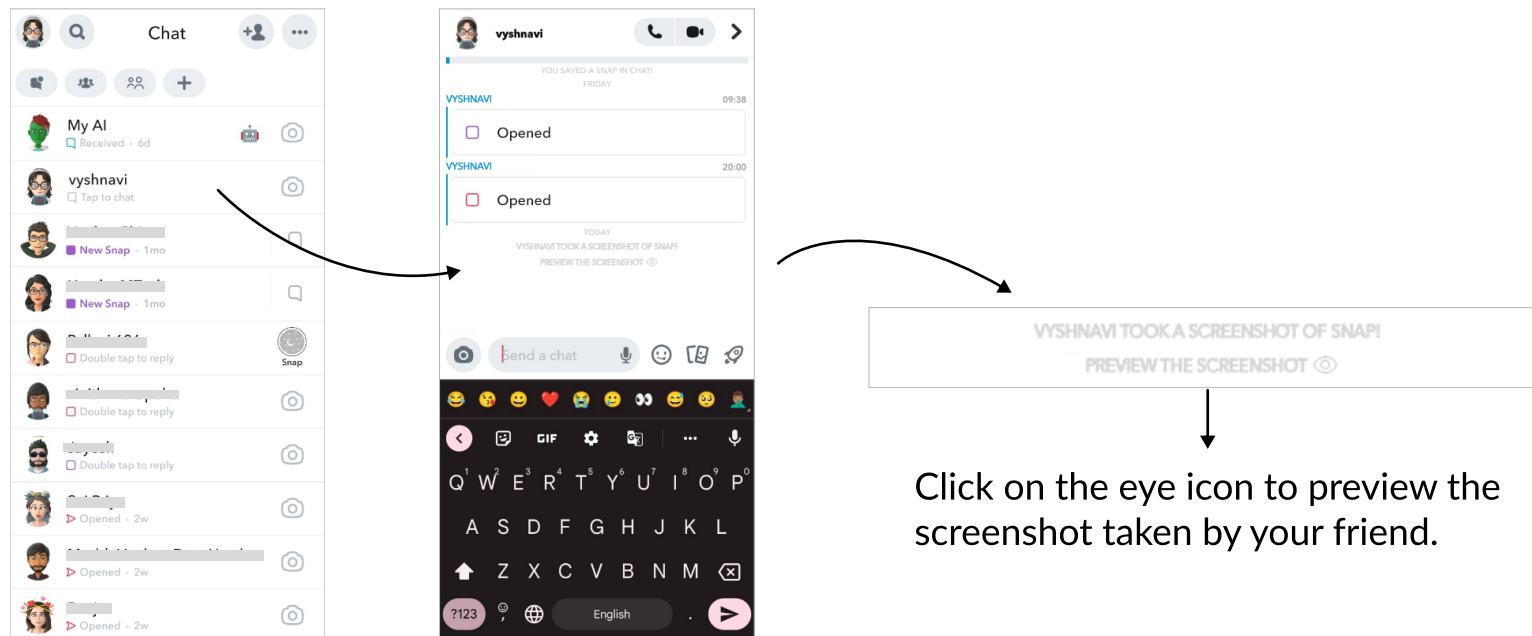
Profile Bitmoji for “Mutual Friends” friends

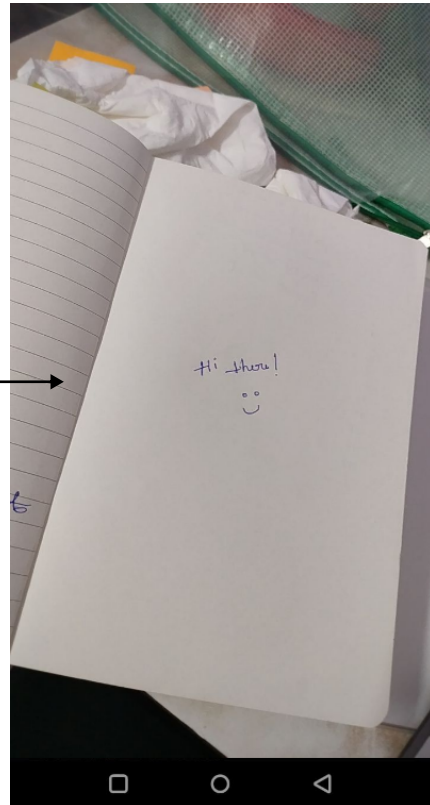
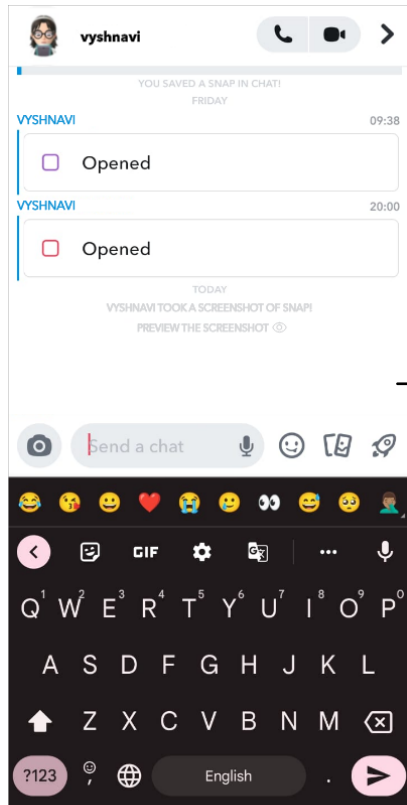


Profile Bitmoji for “Random Adds” Friends

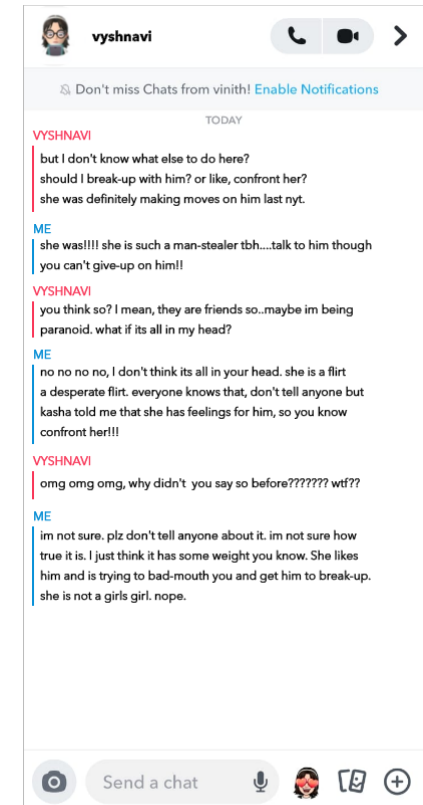
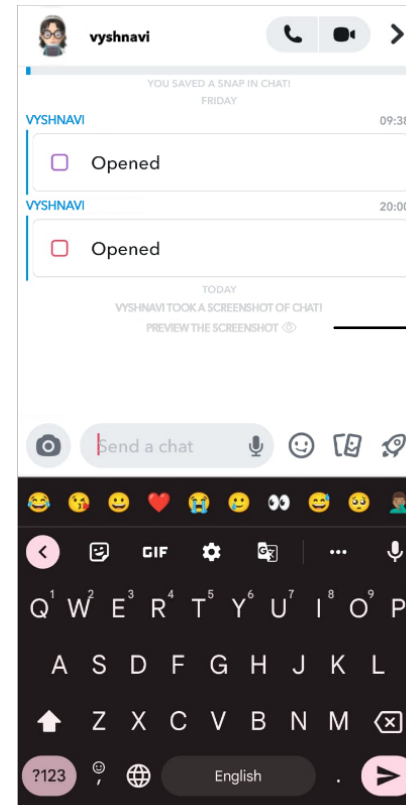
Variation 3: In the third variation, the change in profile bitmoji's are kept but the segregation is removed. The chat shows up based on the messaging sequence, but profiles here act as the cautious reminder for boundaries between people you know and people you don't.

5. Screenshot preview: Snapchat notifies when someone saves, replays or screenshots a snap or a text. In case of save and replay option, at least Snapchat shows which text message or snap in particular was saved or replayed. But the issue with screenshot notification is, people can screenshot any snap or any part of the conversation and the notification is not specific. Especially in Snapchat's case, where chats and snaps all disappear after a short amount of time, users find it hard to keep track of this information. Hence, this feature was prototyped where, when a screenshot is taken, the notification gives you the option to preview it.





The preview option shows the user which snap in particular was screenshotted regardless of the snap's disappearance.

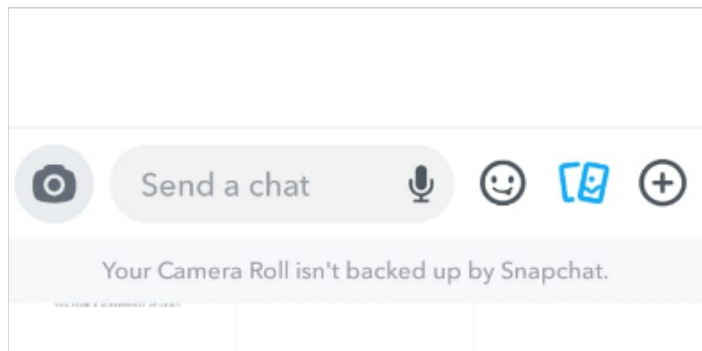


It also gives the user a preview of what part of the chat was screenshotted. So the the user is aware of the specific information being taken and saved.

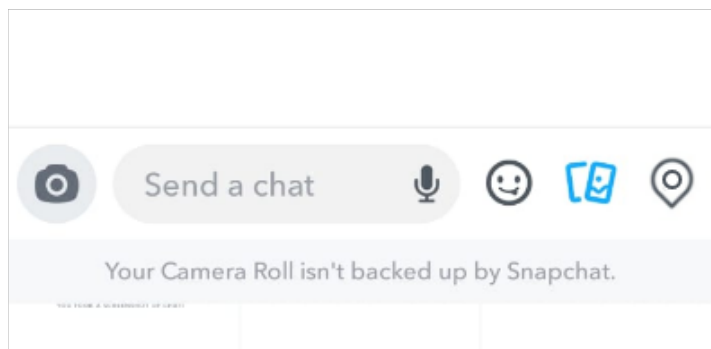
6.4 Some UI changes

After completing the heuristic evaluation, I discovered some UI issues within the existing design of Snapchat's screens. Some controls and features were designed inconveniently and were at present in unnecessary places. This was an attempt to fix those UI issues. The changes made were subtle in nature, so as not to take the existing users by surprise.

The existing design

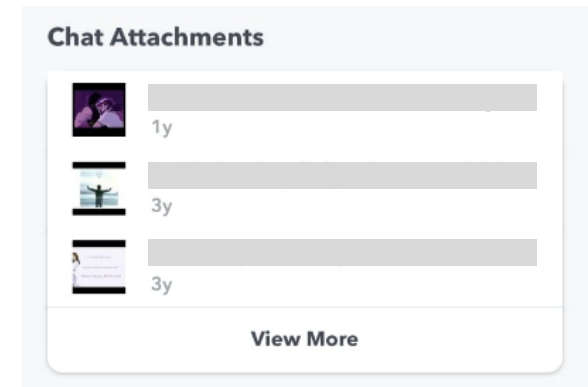
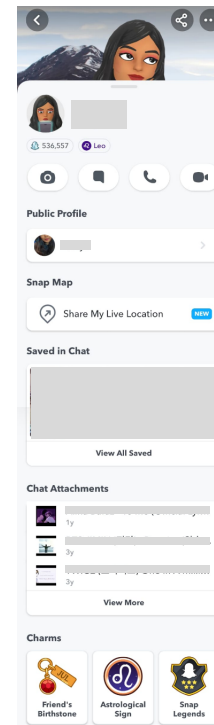


The changed design



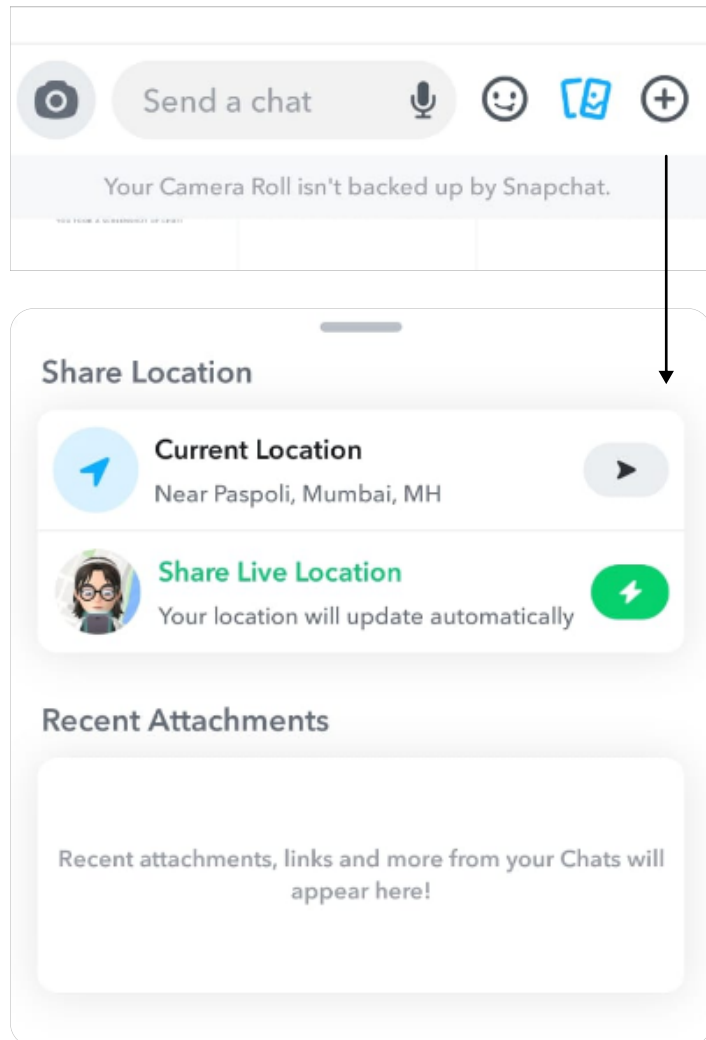
This keyboard function provided by the Snapchat primarily has three function out of which two of them are related to sharing location, and one related to chat attachments. But Snapchat also provides a separate section called "Chat Attachments" when you open your friend's profile.

By removing the repeated function, we can also change the icon to symbolize its usage, which any user can instantly recognize.

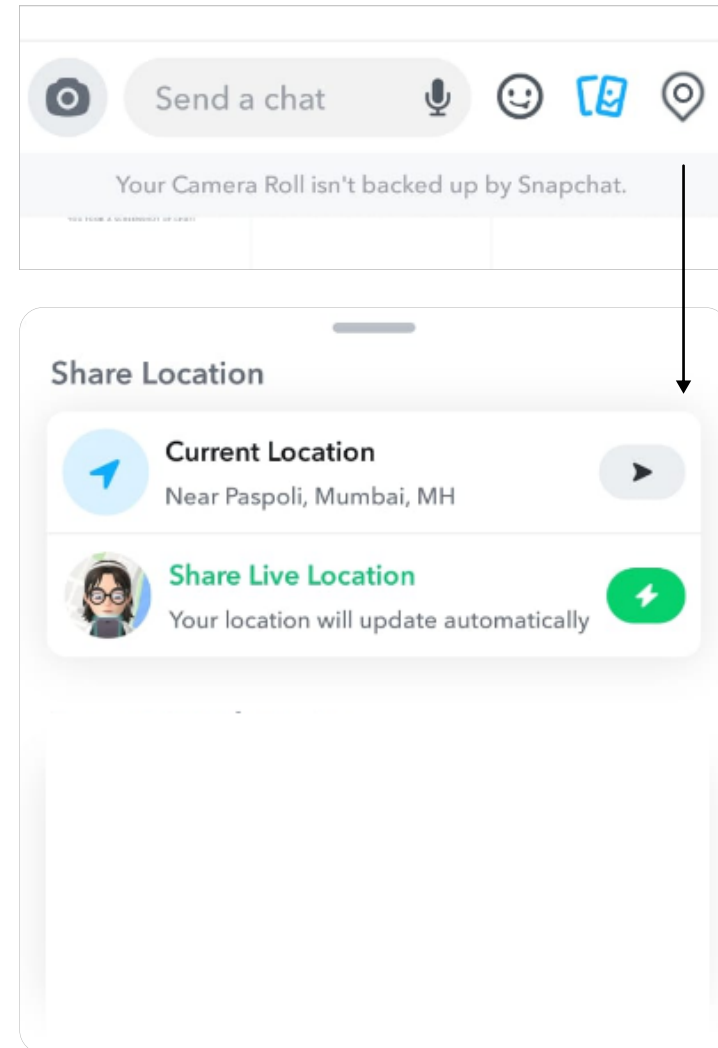


Snapchat already provides “Chat Attachments” within your friend’s profile for any user to access.

The existing design

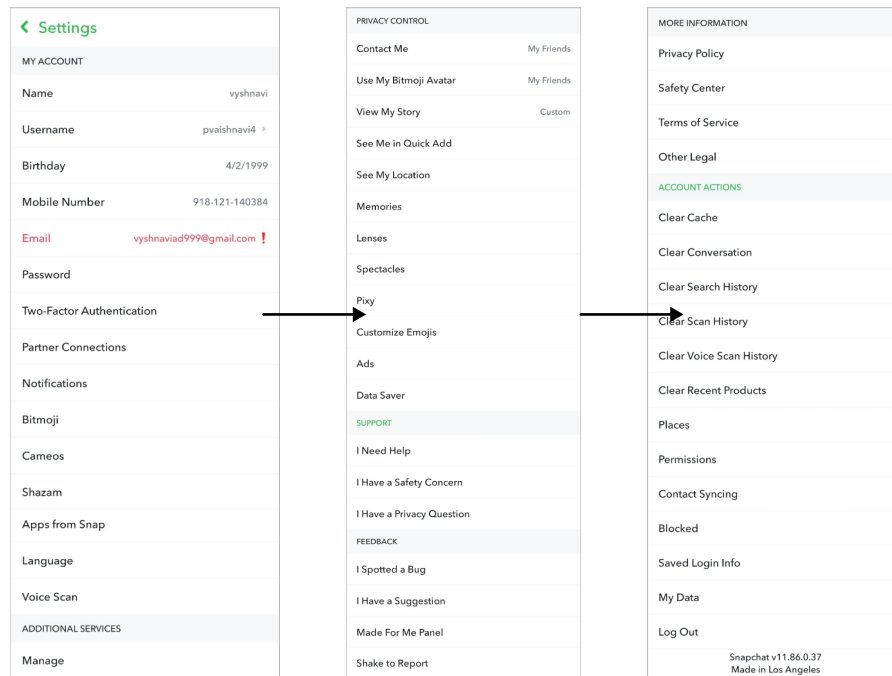


The changed design



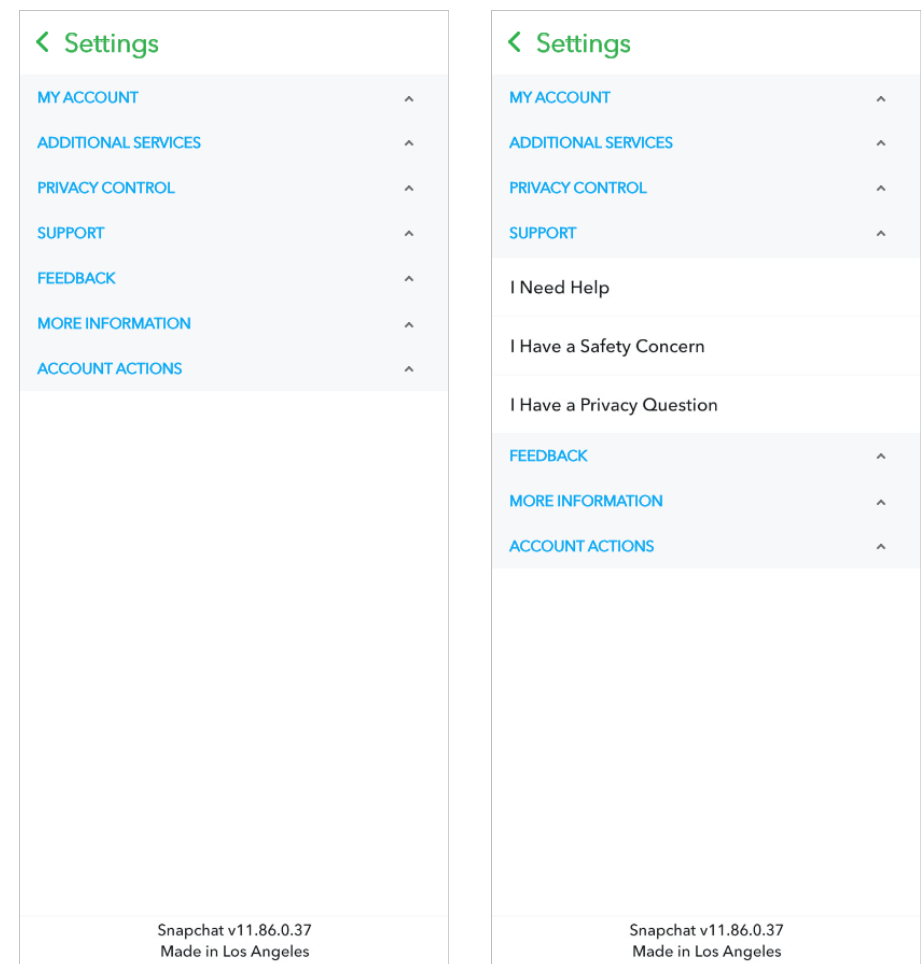
Removed the repeated function and made the function purely a location-based function.

The original design



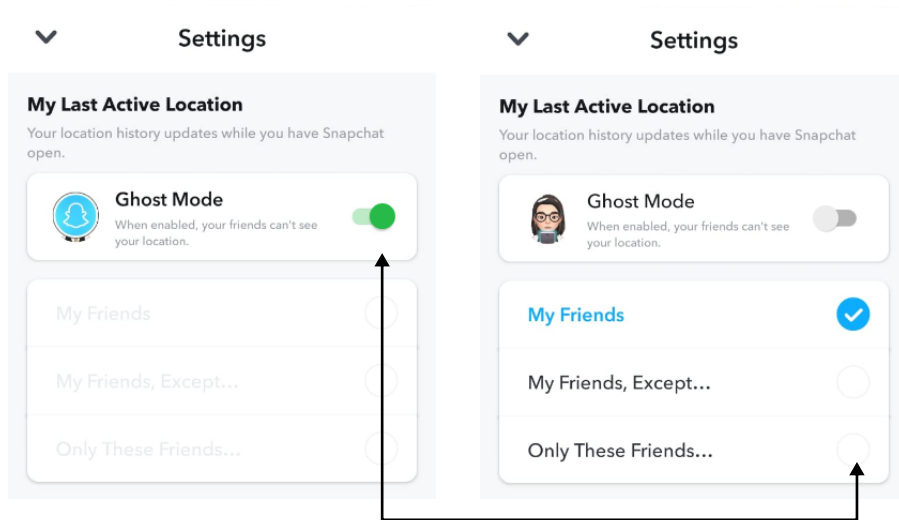
The Settings in Snapchat is designed as one giant screen that requires a lot of scrolling and searching to find the desired option. It's not efficient and is time-consuming.

The changed design



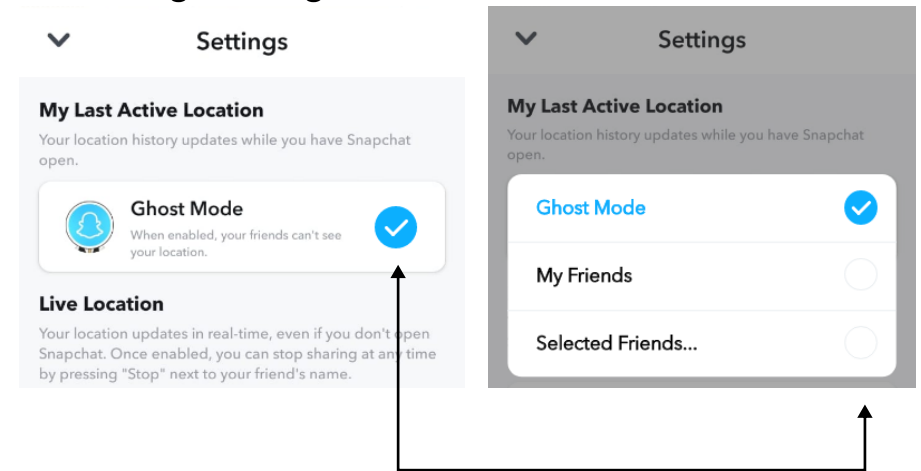
Instead of the endless scrolling up and down, and searching, a drop-down menu would be far more convenient and time-saving.

The original design



The options are greyed out which can lead to confusion, and the option titles can be a bit hard to understand.

The changed design



Instead, the options appear once you select or rather deselect the "Ghost Mode" and the simplified version of the titles can be easier to use and understand.

7. User testing

For each feature, a use-case scenario was created so that the participant can contextually understand the purpose of the feature.

Sample size: 7

Age: 20 - 28 years

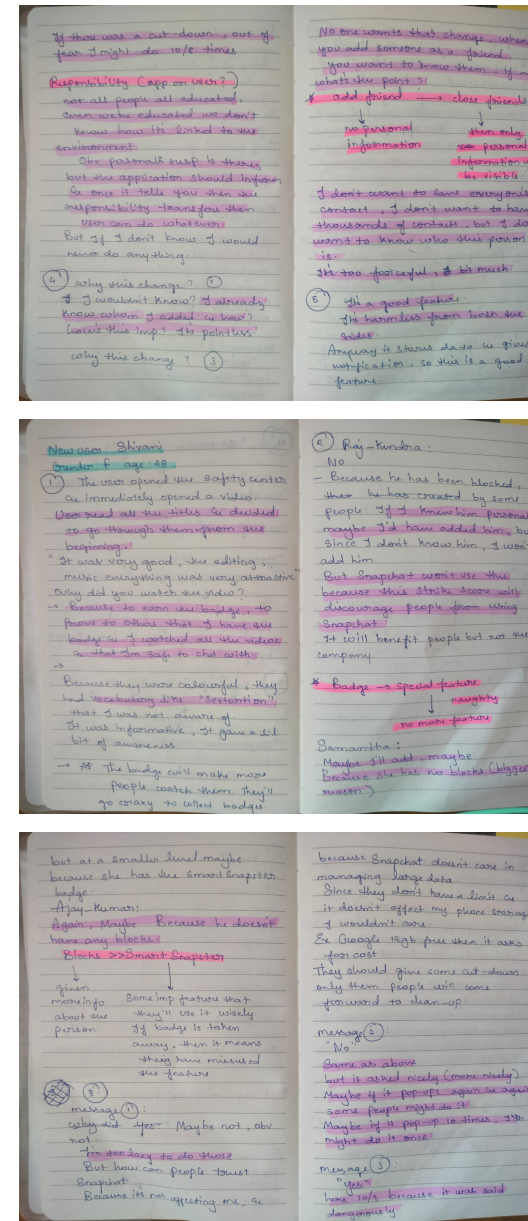
2 relatively new users, 5 avid users of Snapchat were asked to test out these designs.

Data collected was qualitative in nature, and a questionnaire was prepared before-hand. While the participants were interacting with these changes and features, observational notes were also taken.



fig. Participant interacting with the prototype

fig. Observational notes and participant comments/feedback



For the first feature, the use-case scenario: The participant was told that “Snapchat has made some new updates to every user’s profile. Please explore further”, and then based on the participant’s actions and decisions, further questions were asked.

Scenario 1: Participant discovers the safety center but doesn’t click on it.

Scenario 2: Participant clicks on the videos but doesn’t view them.

Scenario 3: Participant watches few videos, but stops mid-way.

Scenario 4: Participant watches all the videos.

Scenario 5: Participant doesn’t discover the safety center.

For the second feature, the use-case scenario: The participant is told “While you are scrolling through your ‘Add Friends’ list on Snapchat, you come across 3 of your high school seniors. You are not in touch with them, but you are familiar with their presence. Now, you have to decide which senior you would like to add as a friend and which you decide not to.

Senior 1: Raj Kundra. He has the “Strike Score” on his user profile with 15 strikes.

Senior 2: Samantha. She has the “Smart Snapster” badge in her profile.

Senior 3: Ajay Kumar. He has neither a “Strike Score”

nor a “Smart Snapster” badge.

Once the participant made their decision, related questions were asked such as: “Why did you decide to add them as your friend on Snapchat?” or “Why did you choose not to add them as your friend on Snapchat?” and “What all factors helped you in making your decision?”

For the third feature, the use-case scenario: The participant is told to go the Memories and scroll through the photos, view them or just browse around. After a delay, a pop-up shows up and they have to choose accordingly yes or no. Three pop-ups are given to them, and based on their choice, questions were asked.

Scenario 1: The participant chooses “yes” on the pop-up message.

Why do you think this message resonated with you and convinced you to try and erase some of the memories?

Scenario 2: The participant chooses “no” on the pop-up message.

Why do you think the message failed to convince you to try and erase some of the memories?

Do you think it’s Snapchat’s responsibility to educate people about the side effects of unlimited storage, or

do you think the responsibility purely lies with the users?

For the fourth feature, the use-case scenario: Please go to your chat with vyshnavi and open your conversation. The chat you had with her has been disappeared, but you see a screenshot notification with an additional option below.

Do you find this feature useful? if so, why?

Do you think it will change the way you engage with vyshnavi? if so, why?

For the UI improvements, the participants were shown both the before and the after designs side-by-side, and were asked to pick which one they preferred and why. and whether the changes would be of any help to them while they navigate through the application.

8. User feedback

1. **User-feedback for the “Safety Center in user profile”:** The safety center failed to attract majority of the participants attention. Until pointed out, they couldn’t discover the update and didn’t click on it. One of the new participants weren’t interested in finishing all the videos, and when asked why, they said that since they are still new to the platform, they didn’t understand why these videos were useful or important to watch. Most of the users read all the video titles first before they jumped into watching them, giving a sense that the way videos are titled might play a bigger role in attracting their attention. One participant noted that they would watch to “earn the badge” so as to “prove to others that they are safe to chat with.” While another participant said how they would’ve never discovered this feature because they never open their user profile at all. One comment about how this badge might keep “trouble-makers” away from bothering people was especially interesting. They explained how some users try to “mess” with people online, but seeing this in the profile might make them think twice before doing anything.

2. **User feedback for the “Strike Score” and the “Smart Snapster” badge:** Strike score failed to grab certain participants attention, while it was noticeable to other participants. Most of them immediately rejected the user with the Strike Score, while one participant expressed that they would still add them if they knew them personally. While majority of the participants found this feature to be very helpful and expressed a desire to have it, some noted how this feature would discourage users from using Snapchat and might drive them away from the platform, something which wouldn’t be acceptable to Snapchat as a corporation. More than the Smart Snapster badge, more importance was given to the Strike Score. Its absence or presence was noted immediately once they understood its function.
3. **User feedback on “Clean-up crew pop-up messages”:** For the first and second message, majority of the participants chose “no”. Many of the reasons boiled down to how it was too much work for them to scroll through all the media files and delete them accordingly, while some did note how even if they don’t visit those media files, they still rather keep them. Few participants chose “yes” for the second message, because they felt as if deleting recent unvisited media files was more doable and

reasonable to them. And mostly, all the participants chose “yes” for the third message. Some said that the message was “factual” or sounded “dangerous”. But mostly because they cared about the environment. When asked whether it is the application’s responsibility to inform about these side effects of data storage, all of them agreed. Some stating that “not all users are educated and even us who are, don’t know these facts”, while others expressed that its the applications duty to inform but once it informs, the responsibility is passed onto the user, and it depends on the user entirely.

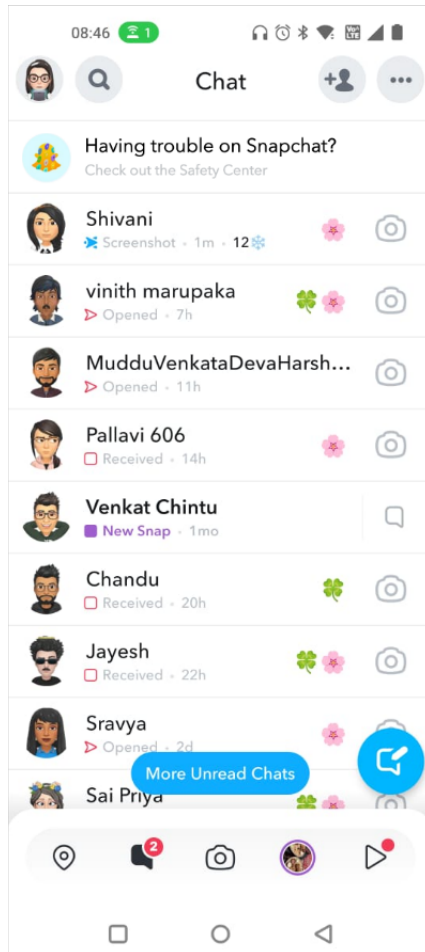
4. User feedback on “Virtual boundaries”: Some of the participants didn’t like the idea of having this boundary or this reminder. They expressed how adding someone as friends is all about erasing the boundaries, and that they didn’t see the point of this feature. While some of the other participants were very eager about the idea of having boundaries and reminders of who they know and who they don’t, most of the reasoning here was very subjective to each participant, but an appreciation for the feature was expressed.

5. User feedback on “Preview Screenshot”: All of the

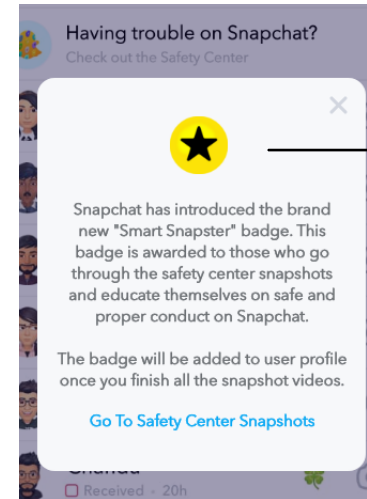
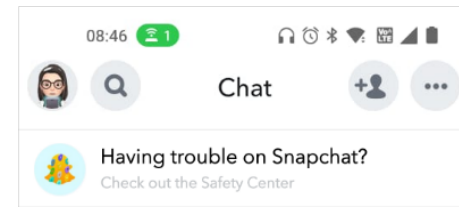
participants expressed that this feature was either very much wanted or was something that they find themselves finding beneficial. Most expressed how anxious they get when someone takes a screenshot, positing to how the notification creates these negative emotions in them, and how they would like to know what was screenshotted by the other person.

9. Final set of iterations

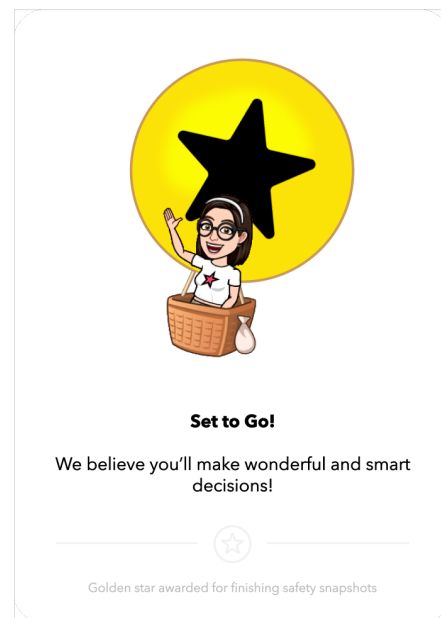
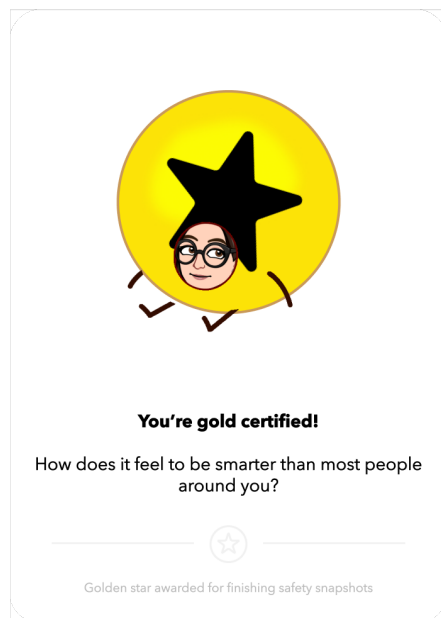
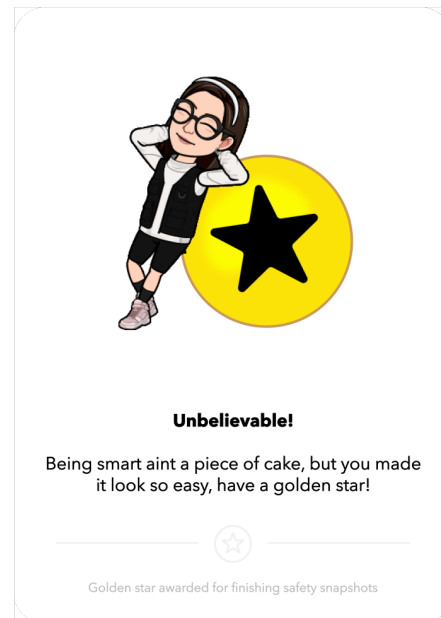
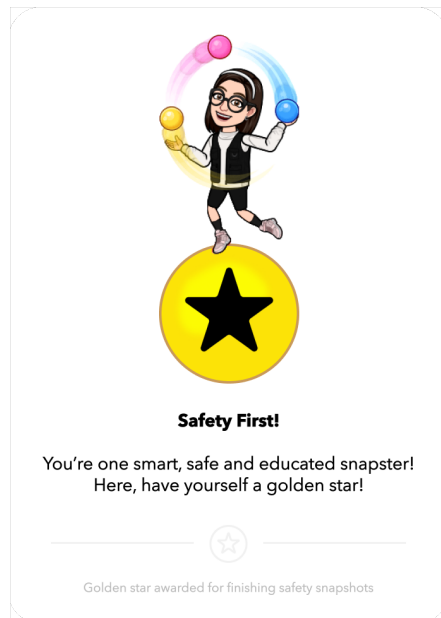
1. Safety center and safety snapshots:



placing the Safety Center in a busier area with more user-attention to increase visibility.

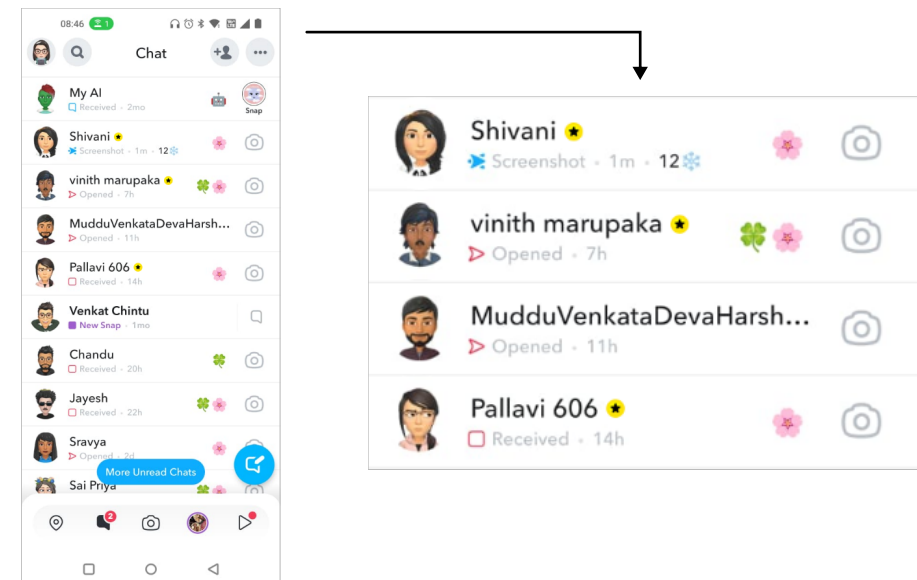


Designing the Safety Center symbol based on more recognizable designs such as Blue check-mark of Twitter



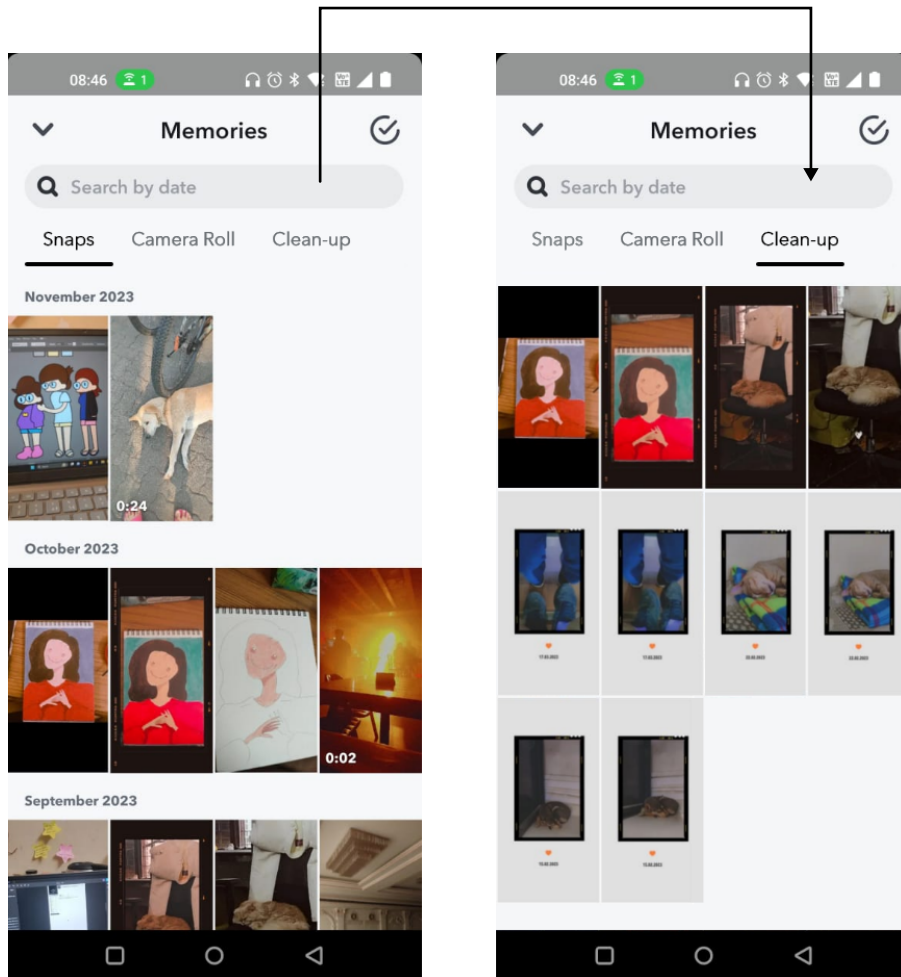
Celebratory pop-ups for when a user successfully finishes watching all of the Safety Center Snapshots. Something for them to screenshot and share or post as a Story.

2. Strike score and Smart Snapster badge



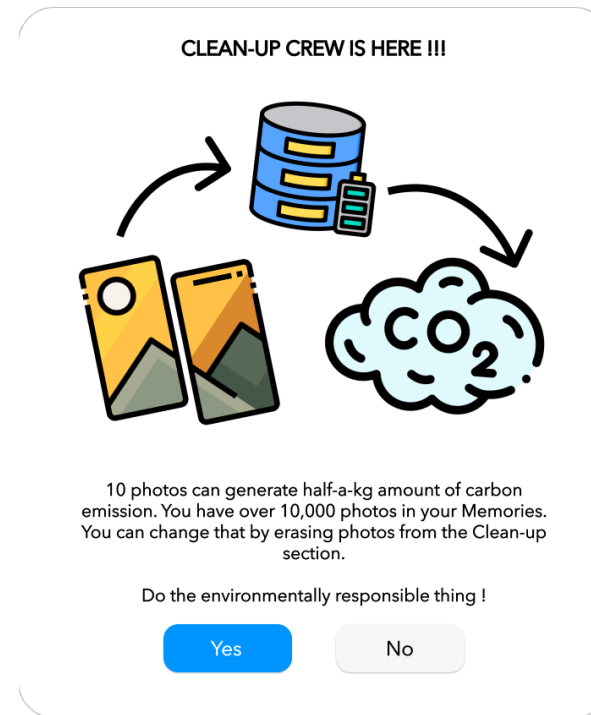
Placing the “Smart Snapster” badge at a more noticeable location, declaring a user as “gold certified”/ “safe verified”

3. Clean-up crew pop-up message

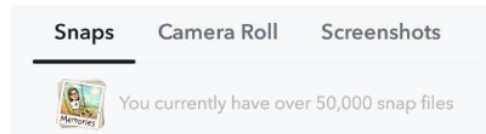
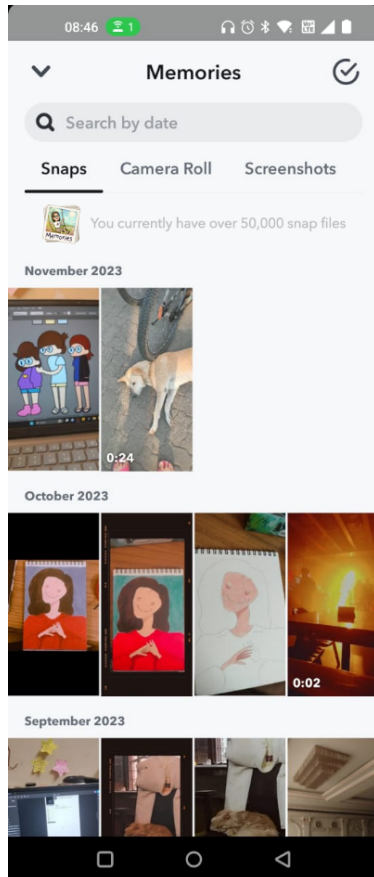


To make easier for the users to clean-up unvisited and duplicate memories, a separate clean-up section is provided within the Memories where all the duplicates

and unvisited memories are stored. Here, user can browse easily and remove trash data.

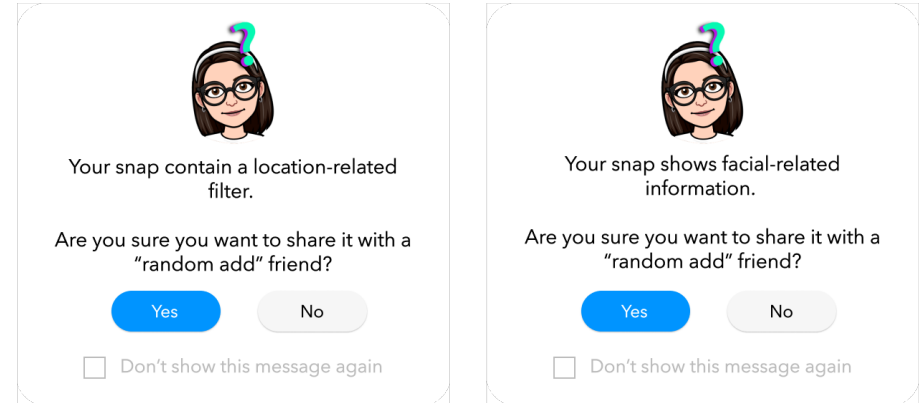
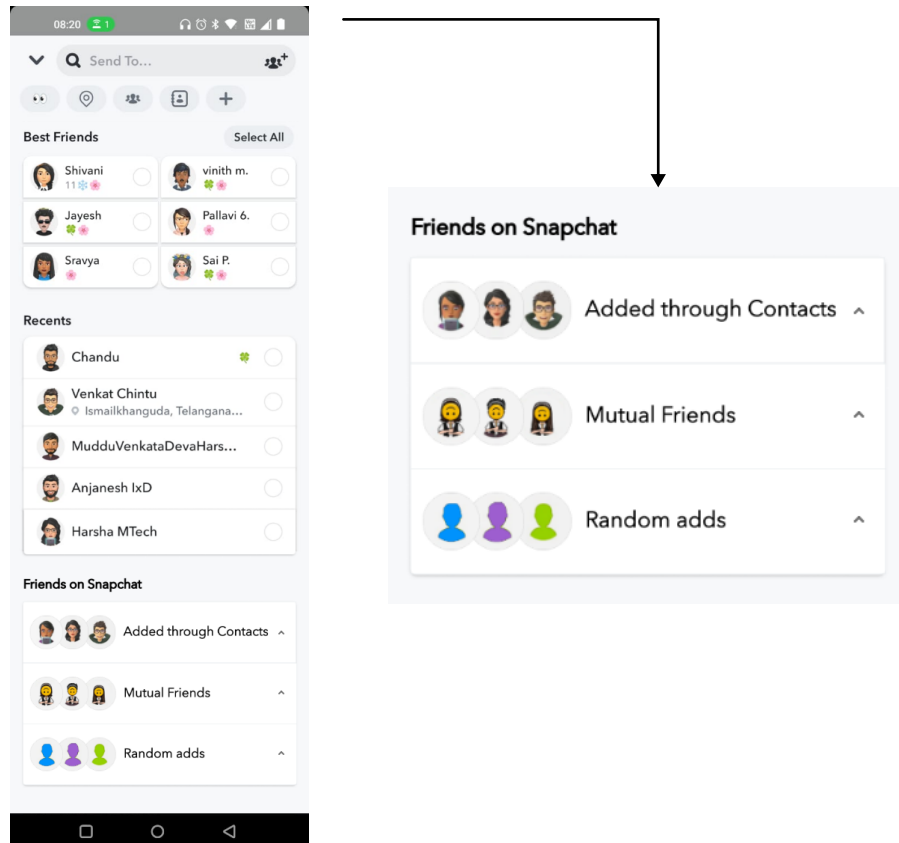


To make the pop-up message less textual and more visual more increase user engagement



Displaying the number of media files currently residing in the users “Memories” folder, an additional feature to the pop-up reminder, to constantly remind users of the amount of data they have accumulated.

4. Virtual boundaries



A warning pop-up to alert user when they're sharing personal information to friends from their "random add" list, such as, facial data or location-related filters.

Segregation while sending and sharing snaps as well.

10. Focus groups and feedback

To further evaluate the features, focus group mechanism was applied. Here, 3 or more participants were asked to sit together, explore the features and discuss amongst themselves the pros and cons of implementing them onto the platform. To bounce off ideas and for more stimulating and rich user feedback, this evaluation method was also used as a part of the over-all evaluation process.

Total number of focus groups applied - 2

first focus group:

total participants - 4

3 males and 1 female participants

Evaluation done offline. Participants were free to interact with the screens and notes were taken during the discussion time.

Second focus group:

total participant - 3

1 male and 2 female participants

Evaluation was done online. The screens and features were explained over video chat, and then the participants were free to discuss their opinions.

Focus group 1 feedback:

Feedback on increasing the visibility of Safety Center:

Participants felt that, since Snapchat is geared more towards communication between existing friends and not for making new connections, that safety center might not be much of a prioritized feature for the platform or for the users. They felt that, changing the location of the center and increasing its accessibility might make users more aware of its existence, but questioned whether it will lead to safer practices online. Participants also felt that simply presenting the Safety Center won't encourage users to watch the safety snapshots, that there was a lack of intrinsic motivation.

When the participants were explained the concept of streak achievement and how users on the platform share it via stories, they felt as if finishing a safety related tutorial wasn't a celebratory achievement, and questioned why any user would actively post this as a story.

They also posed the question regarding passive watching just to earn the golden star (Smart Snapster badge).

Feedback on clean-up related pop-up messages:

Participants commented how the pop-up message was text-heavy and wouldn't grab user attention. That users might skip the pop-up. They recounted that unless an application forces them to clear up space, they would never consider removing data, even if it holds no significant value to them. Terms such as "forced", "pushed to", only in "critical situations" were used while describing their experience regarding removing trash data.

Feedback on creation of virtual boundaries:

Participants felt that removing the bitmoji from the profile as a way to create boundaries could be disheartening for the users, explaining further how bitmojis take time to build and are the singular interesting feature about someone's profile, something that sets profiles apart from each-other. Few participants expressed that, without the user profile visible, they would lose interest in engaging with virtual strangers online.

Feedback on screenshot preview: Some participants expressed that users of the platform should be given the ultimate control to decide whether someone can screenshot the chat or not, while other participants noted how a feature like this can create issues within friendship-related dynamics. All participants agreed

that knowing the content of the screenshot wouldn't make one more cautious, rather not allowing one the power would be more helpful.

Ultimately, participants felt that if a user wanted to share their personal or intimate information online, no amount of cautious steps in-between would prevent that from happening. That ultimately, the decision solely depends on the user, and not on the platform.

Focus group 2 feedback:

Feedback on increasing the visibility of Safety Center:

Participants felt that awarding the golden star for merely watching the video is not enough. It doesn't award good behavior, rather rewards just watching the videos. They professed how users can still misbehave on platform regardless of watching the videos.

Feedback on the Strike Score: One participant pointed out how users can easily create fake profiles or multiple accounts to evade the Strike Score. The same participant also felt that Snapchat is more like WhatsApp, rather than Instagram and Facebook, its more so for connecting with existing friends and not for befriending strangers, so they felt that the existence of Strike Score was pointless. But the female participants rallied for the feature, saying how the positives outweighs the negatives, and keeps the platform safe, while the male participant was doubtful.

Feedback on the clean-up crew pop-up: Participants felt that having unlimited storage space becomes a selling point for the platform, and so, asking users to clean-up their memories can discourage them from using the platform altogether.

They also felt that the feature would be effective in

terms of educating the users about the side-effects of trash data, but won't be too effective in encouraging them to clean it up. They themselves expressed how they might delete some memories which weren't shot well, but apart from that, they wouldn't really remove any media files from their Memories. The emotional reasons for keeping the media files will always outweigh the urge to help care of the environment.

Feedback on virtual boundaries: Participants felt that removing the bitmoji won't make any difference, since the user profile is a cartoon avatar and not an actual user picture. Also, the same question about whether Snapchat users befriend strangers on its platform was also put-forth. But the participants much preferred the warning pop-up than the segregation.

Feedback on the screenshot preview: The participants felt that giving extreme bouts of control over the screenshot privileges would lead to issues in relationship dynamics and users would question and care more about who trusts them, who doesn't and why. But at the same time, they felt that removing the notification won't be helpful either. They felt that users trust the platform because of these features, feel secure and hence converse freely.

Some noticeable parts of the discussions were how divided male and female participants were when it came to certain features, especially this particular one. While the female participants wanted the extra layer of information, to know what was screenshotted, the male participants felt that simply asking and trusting people would suffice the issue. Contrarily, female participants expressed how they rather trust the platform than trust the people they converse with.

11. Findings and discussion

The project uncovered some interesting, dilemmatic findings that cannot simply be resolved by using technological interventions.

Rewarding users for watching the safety protocols had turned into an issue around virtue signaling. The motivation was askewed. Participants expressed how they rather watch the safety protocols for the sake of showing-casing to other users on the platform that they are “safe” to chat with or are “more approachable”. On other hand, one participant felt that the gold-star would ward away online trolls, will act as a symbol of knowledge and caution. In both the cases, the motivation was not to educate the self, but to prove something to the others.

Although the feedback for the clean-up crew pop-up provided itself to be beneficial in educating and raising awareness amongst the users, unanimously, all the participants felt that despite them knowing how harmful data hoarding can be, they would rather keep on holding onto the memories. The emotional connection to the images and videos out-weighs the conscience of the users. The future fear of deleting a

memory and then regretting it was something that was holding back many users from cleaning up unvisited media files.

Gender also factored in when it came to the participants liking or disliking certain features. Many of the male participants felt that Snapchat, similar to WhatsApp, was a platform to stay connected with close friends, and wasn't a networking platform where users went out of their way to connect with strangers. Hence, safety protocols, virtual boundaries and Strike scores weren't important or were out of place features. But the female participants, both in the user-testing and in the focus groups, expressed how they felt more safe with the added layer of technology in place. That simply trusting other users was not enough, even if they were familiar to the female participants. It shifts the focus from safety and cautionary features, to how gender plays a roles in what is viewed as safe and what is viewed as not safe, or not safe “enough”.

The same issue was raised when it came to the screenshot feature. While male participants felt that simply inquiring about what was screenshotted would be enough, female participants expressed how they rather trust the technology to tell them the truth. The feature also opened up discussions around the level of control that should be given to a user to protect their

privacy. How enable/disable features for screenshotting or saving chats is the only way to ensure data privacy, but it can also lead to issues in relationship dynamics. While some participants felt that the positives outweighs the negatives here, some participants felt quite the opposite.

Many users also expressed how, one of the most esteemed feature of Snapchat, the screenshot notification, induces panic and anxiety in them. But removing the feature was also met with high amounts of resistance. The users made it very clear that, either the feature should remain the same, or more screenshot controls should be provided. The solution always pointed at more technology, and any decrease in technological intervention was unacceptable to the users users.

12. Limitations and future directions

Making the safety center more accessible to the users was one of the main concerns. Positioning it at a location where users could find it easily and are aware of its existence was in a way achieved here, but it didn't encourage safe practices within the users. The contents of the safety center weren't modified in any way either. The clean-up feature also mainly focused on how users can be educated about the side-effects of data storage, but it did not lead to them clearing out trash or unwanted data. While these features were created with the aim of bringing forth changes in users' thoughts and actions, all they managed to achieve was to educate the users, rather than encourage them.

Other features, such as virtual boundaries and Strike score, were subjected to heavy criticism or praise purely based on personal preferences. These features further require research, to understand and learn whether they are necessary and wanted by the users of Snapchat. And if so, how can their implementation be designed, such that, it doesn't disrupt or discourage users from forming new connections online.

Features such as the Strike Score was designed while keeping certain benefits and participants in mind, while ignoring how a feature like this can be abused in the long-run. While its important to make users feel safe, and that the platform can be trusted enough to help them in making the right decisions, we as designers should also acknowledge scenarios where there's a possibility of those same features being misused, or can handled to harm others.

The previous research and the evaluation process was mainly based in Hyderabad and Mumbai, and only considered users and participants within the age groups of 21-30 years old. That means, the participants were all from similar sociodemographic backgrounds and were raised in majorly urban areas. Their understanding and usage of platforms like Snapchat would be quite different from a user, per say, residing in a more rural area, or a user still in their high school. Snapchat also houses many influencers and content channels, which weren't a part of this project. Designing features from their perspective could lead to different challenges and findings as well.

13. Conclusion

The project has demonstrated the value of user-testing and especially focus groups for evaluating interface designs. Focus groups lead to discussions amongst participants, which provided the opportunity to see how different users had different requirements, and how often times these requirements clashed with each other. However, it is not sufficient to design with just user requirements in mind. In many ways, users demand utmost control over their data, storage and privacy. While it can be beneficial in some ways, ultimate control can lead to irreparable decisions.

The qualitative nature of the inquiry provided with instances where participants demanded more technology, which only lead to increased reliance on it. Their requirements showcased more concern for short-term gratification, rather than long-term consequences.

More research to investigate cautiousness and safety while designing features is required as well. It's important to understand the concerns users have in regards to how safe they feel on a platform, before the issue is tackled through creation of screens.

14. Personal reflections

The project has, inadvertently, proved that crafting solutions out of technology, for problems created by the technology does not lead to successful outcome. That technological issues no longer reside within the it's realm, and that several of these issues have been turned into behavioral patterns, with emotional weightage and have become wicked problems by nature.

Any changes within a tool is met with a certain amount of resistance. And if the change is not designed carefully, users can abandon the tool to find something similar. The initial thought process was that, changing the platform might lead to change in thoughts and actions. But in a world where tools are abundant in number, the users can always look up for other tools or platforms, instead of being challenged to think or act differently.

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