Design Space and Stakeholders

For this project, we chose the design space of the voice technology ecosystem. This ecosystem looks something like the representation in fig 1. Core voice technology has several moving parts that contribute individually and together to represent the whole body known as voice tech. Some of these parts are speech synthesis, speech recognition, natural language understanding and processing, command modelling, and conversational design. The development of core voice tech needs machine *learning models* which are built by **Developers** working in this space. For developers to successfully develop models that can provide an Artificial Intelligence software with capabilities to understand and synthesize speech, they need voice data on a large scale (or big data) that is clean and labelled. Such huge datasets are then used by developers to train and test their models upon and can then be employed to either recognize, understand, or generate speech. Traditional attempts of voice synthesis were restricted to cutting and joining together snippets of recorded voice. However, machine learning based voice technology takes a different approach. If the development is for a big corporation (e.g. Amazon), it is likely that this *voice dataset* will be provided to the developers by recording hundreds of thousands of lines recorded from professional voice talent (Anders, 2017). On the other hand, open source development (e.g. Mozilla) for voice takes a different route. Mozilla, for example, relies on its Common Voice project asking citizen scientists to donate their voices to create an open-source dataset consisting of thousands of voices that are also labelled by the same citizen scientists. This future dataset will consist of speech in almost 50 languages (Mozilla, 2018). A crowdsourcing attempt such as this is probably an effective way to collect a variety of voices and help train machine learning models that produce superior voice technology that is more inclusive and is a better generalization of human voices. Legal and Data Ethics teams of either of these different types of organizations need to then get involved to oversee how these datasets are built and where the data is collected from. Based on the pillars (the moving parts) of core voice tech mentioned above, voice technology can then be used to develop independent end user applications such as Voice Assistants and Interactive Voice Response systems (IVRs) or augment other end-user environments with speech capabilities (e.g. using voice commands in a VR environment). These applications are directly used by Active End Users and because of the public nature of many of these products, non-users or **passive users** also get impacted in some way or the other. Researchers in the voice space (such as ourselves) would want to talk to all the different stakeholders in this space to understand more about their own perspectives. By talking to active users and passive users, for example, one can know what works and what doesn't work for them while using voice or why one would choose not to use voice assistive technology. This more or less describes the current space of open source/private corporation-based development of voice technology.

Our initial investigation into this space revealed that while initiatives such as Common Voice are an effective way of tackling problems that arrive by relying only on a small set of professional voice talents, this community of citizen scientists contributing to voice is small and fairly non-representative of the world's speaking population. If this continues, it is likely that such initiatives may end up creating the same kind of biases that come with the datasets created by big corporations. This makes us think about all the people who are currently not involved in crowdsourcing attempts to create robust datasets such as the one attempted by Mozilla's Common Voice. These are **potential citizen scientists** that can be tapped upon in the future. *Our design intervention focuses heavily on bringing these people into the foray of making voice technology more inclusive and empathetic*. Fig. 1 describes this entire space in a graphical manner.



Fig 1: Design space where this intervention will take place

Contextual Inquiries

We conducted two contextual inquiries with two different stakeholders from the design space described above. The two stakeholder interviews - one with a citizen scientist working on the common voice project, and another a passive user of voice technology.

Method: Each interview was scheduled for an hour with the following breakdown:

- Traditional Interview 15 minutes
- Transition 5 minutes
- Contextual Interview 30 minutes
- Wrap Up 10 minutes

Contextual Inquiry #1 – Interviewing a Citizen Scientist working on Common Voice

Who, What & Why: The stakeholder we interviewed is an active user of Mozilla's Common Voice project - Richard McGovern. We observed the process they went through while contributing to this project, as I wanted to understand their motivations behind contributing to such a project.

Where: The contextual inquiry took place in a bar, it wasn't the usual place of work for said stakeholder where he would perform the task, but it was the only place we were able to meet due to external conditions (snowstorm). He readily adjusted to the surroundings by using a headset to block external noise.

Insights from Traditional Interview:

Richard had some speech defect early on in life which he overcame by speech therapy, but he is a very social person and really likes to talk. He has very little experience using voice assistants and at most uses the Google assistant to find routes or simple search queries. He introduced us to the Common Voice project – a citizen-science-based effort from Mozilla to crowdsource voice data which is donated and labelled by citizen scientists from around the world. Richard, however, said that he felt that most of the data that is contributed to these projects are from people like him - upper class, native English speakers, white males, which makes people from the rest of the world quite under-represented in these technology systems. As a data scientist, he felt that gathering data was one of the most

important steps in the development of machine learning or AI systems and not enough data is gathered in the voice space at least something that is publicly available. He said that he feels good when he records something in common voice then he is able to play it back, it has a feel-good effect and is quite addictive

Transition

We asked him about things we should avoid as he worked on the main task in hand. He mentioned that he doesn't like being interrupted as it causes him to lose his chain of thoughts. He gets really annoyed if someone does that.

Findings from Contextual Inquiry

Explicit Information learnt

Richard recorded 5 clips at a time and hit submit after listening to each one of them. He repeated the whole thing four or five times. The system showed a few errors a few times, but he seemed surprised but not demotivated. He said that he can imagine this data being used in many contexts though, for example for English language learning and he was not sure if his voice is the best for that. He spoke about the addictive nature of the system as it is designed in a certain way so as to encourage people to keep doing more but yet not force them, as they have to donate or label speech in batches of 5 sentences. He hides the text with his hand while listening to label other people's speeches

Richard spoke about colloquialisms, as most of the text that appeared in the common voice project seemed to him like something people from other regions wouldn't be able to understand, thereby making it more difficult for non-native English speakers to be able to understand. He believes people should be able to understand each other, or at least try to make an effort to do so. If language and accent is a barrier, may be technology can help overcome it. English language learning is a possible example of an application of this project, especially for teaching non-native speakers.

Implicit Information learnt

He really seemed to enjoy doing this process, despite being only a volunteer at this. Despite being in a noisy, crowded bar, he was able to isolate his thought process and focus on the work. It shows that he is really invested in this project. Some of the motivation for working on a project like this seemed very much spawning from his background of being a data scientist and being involved in a voice-based project despite of the fact that he was not a heavy user of voice assistants and had no opinion on the current line of voice assistants. He seemed more worried about the human element of the project, being able to understand each other and making an effort to do so.

Wrap Up Phase

Richard mentioned that it was very important for him that these technologies became more inclusive in nature. Being able to identify and understand speeches from English speakers across the world, or people speaking any other language was primarily important for him.

Difficulties, Challenges, and Lessons Learnt

Some of the difficulties we faced during this contextual interview ranged from scheduling issues to last minute change in location due to a snowstorm, noisy environments and no equipment to counter the noise. Editing content from 75 minutes to a 2-minute summary video was also very challenging.

Contextual Inquiry #2 – Interviewing a Passive User of Voice Assistive Technology

Who, What, Where & Why: The stakeholder we interviewed is passive user of voice assistive technologies – Sindhuja Dutta, an MSIM student and a tech professional. By placing Sindhuja in a room

with a couple Alexa devices and in the presence of her close friends who are active users of Alexa devices, we tried to understand her plight and what she goes through when her friends keep using a technology that she cannot connect with. Sindhu is a calm person. She parties hard but she loves her own peace in her personal space. She calls herself tech-savvy because she loves to read and keep her knowledge up to date about the latest technological trends. However, she is not really keen on using and leveraging each of these technologies. She analyses and if it suits her needs, she makes that technology a part of her life.

Setup

We particularly wanted to observe the way Sindhuja uses and interacts with voice assistants. Specific questions we had in mind that we wanted answers to were:

- Did she have an initial barrier about using these technologies?
- Did she know how to perform the tasks?
- What was her general sentiment before performing this activity?
- What was her sentiment after performing this activity?
- How would she (if she became an active user) would want the ideal home assistant to me?
- What is her perception of voice as a technology and how does she see it being used ideally?

We decided to understand and record the traditional interview of Sindhuja in a closed room with no voice assistants. We understood her opinions and made notes of it. For the actual contextual interview, we brought her to Proshonjit's living room which has two Alexa-based devices coupled with smart home appliances. While the members in the house were interacting as usual with the assistants, we also made Sindhuja perform some tasks and observed her as she was performing them. The environment was rather a cozy one, surrounded by friends, so that she is comfortable using them and is not reluctant being the odd one out.

Findings from Contextual Inquiry

Explicit Information learnt:

Sindhuja dislikes using the context that she was in, but she doesn't despise it as everyone around her seems to use voice assistants. She believes in the fact that human kind is equipped to do tasks themselves than depending on 'petty' voice assistants. She was curious to use these technologies but is not happy with the fact that humans are so much dependent on it for their tasks. She hates the monotonous voice of the assistants and she never uses a single one on her personal device as well.

Implicit Information learnt:

When we made Sindhu interact with the voice assistants, she literally yelled at it when it couldn't stop. She was frustrated at the end of it and had nearly lost interest interacting with it. Sindhu also ran out of questions and she wasn't sure what things a voice assistant can really perform. She was curious to know the answer they would give but was disappointed and confused when all of them started playing at the same time. When asked her to engage in a conversation, she was enthusiastic about it. More than the voice, she was upset about the fact that these assistants lack the ability of human emotions and the capability of carrying out a conversation. After the activity, she preferred to use these assistants more for carrying out tasks than having a conversation with them.

Wrap Up Phase

We used the wrap up phase to give Sindhuja some choices based on her reaction. We asked her about what she thinks an ideal voice assistant could be. While Sindhu hates the monotonous robotic sound

of the assistants, the human touch and a more humanly voice would make things better for her. Also, she wanted the assistant to perform a rather advanced task which she cannot perform or other users in the system cannot perform (something like going a getting a plate) which she admitted on her own is a bit far-fetched for AI at this point of time. Her frustration was stemmed out of the fact that she had to repeat everything and there was a long pause in the communication. Based on her inquiry, we gave her a choice if she would want to use her ideal voice assistant for doing tasks or for carrying out a conversation? Although her initial interview was about disliking these assistants because humans use them to perform tasks, at the end of the interview, she actually thought that these assistants will be better off performing small tasks for humans better than carrying out a conversation. When asked to describe her general sentiment about these assistants, she doesn't like them and gets frustrated by them.

Summary of the contextual interview experience:

Overall, this was a fun inquiry performed amongst friends. The environment was casual. There was a great part where Sindhuja got really involved in the conversation with Alexa, but we couldn't properly capture her expressions on video. We only used the audio for that part, but her body language and her expressions could have been a good point to note for later references.

Link for Contextual Inquiries:

Richard's Interview: <u>https://youtu.be/IY4riC4eZOs</u> Sindhuja's Interview: <u>https://drive.google.com/a/uw.edu/file/d/1n4alrligrrNQrSsAbqP4G8JDDn6bILjh/view?usp=sharing</u>

Defining the Problem Space of our Design Intervention

Our initial idea was to use Public Engagement in Science to improve Voice technology. We watched and analyzed both of our contextual inquiries to understand the reason of the frustration caused by voice technologies. This led us to understand that most of this frustration is caused because of biases present in the current voice-led interactive systems (especially cultural bias due to their inability to understand accents, dialects, and colloquialisms) as well as their inability to understand human emotion. By looking at the numbers of the Common Voice project, we concluded that previous attempts at addressing these biases couldn't succeed because they couldn't create engagement amongst users to provide their data.

While the reason for the cultural bias could be mapped out to the fact that data was coming in from only a small segment of speakers. The lack of emotion defining labels in these methods of collections could also be one of the key factors behind today's voice technologies apparent lack of empathy. Due to the absence of the right kind of data in terms of diversity, quantity, and emotional context, voice technology of today is limited, and this causes frustration amongst the users.

The challenge we are addressing through this intervention is that of reducing cultural bias and introducing emotional understanding of speech in Voice AI by creating engagement among potential citizen scientist to foster the building of a robust, diverse, and tone-aware voice dataset that can be used for making voice technology of tomorrow more inclusive and empathetic.

Ideation

We started to brainstorm about this design intervention by pinning all our ideas on the whiteboard and evaluating the choices to determine if the solution addressed the problems considered above. We used a timeboxed approach as that really works well for coming up with unique ideas. We timeboxed ourselves to 30 minutes and came up with approximately 25 ideas. We then mapped these ideas on a *Now-How-Wow Matrix* to measure each idea's originality versus its feasibility.



Image 1&2: Sorting the ideas based on originality (X-axis) and feasibility (Y-axis)

For idea selection, we decided to use siloed dot voting. All three of us got 3 votes and we each had to rank our three votes, but the caveat was that we had to decide without telling each other to avoid group-think. We then dot-voted on our ideas to find our top 3 ideas. Our top three ideas included:

- i) **Names**: A simple mobile/web app that allows citizen scientists to enter their name and then record their own pronunciation of their names. This idea would tackle the problem of voice interfaces not able to learn names that are less frequently used in certain languages (e.g. the name Proshonjit is rarely recognized by any voice assistant).
- ii) **Rplayr**: An entertainment content based social media mobile application that lets users recreate popular videos. This makes all users of this system citizen scientists, even though they may not be aware of the term. Their incentive being the social nature of the app, and the entertaining content shared by their friends and others alike.
- iii) **Empathizr**: An app to collect emotional/tonal information about voice.



Image 3: Mapping the positives and the challenges of each of our top 3 ideas and then combining the positives of all 3

We also discussed the pros and cons of each of the top 3 ideas, then combined the positives of each of the three ideas as they together were able to negate the challenges of the individual ideas.

Based on the above analysis, we came up with the idea of 'Rplayr'.

Design Intervention

Rplayr (etymology comes from the word role-player but is pronounced as 're-player') is a social media platform in the form of a Mobile app that lets the user enact popular scenes from movies and tv/web series. The app provides users a database of video clips (usually less than 10 seconds long) that they can recreate from. Each video clip provided is muted to make sure that users do not try to imitate the original clip, as the purpose of this application is to capture as many diverse and natural ways of saying the same words/phrases as is possible. A transcript is provided in the form of subtitles so that they know when to say what. They can record their recreation of the video clips or dub existing video clips with their voice to share it amongst friends. The idea is to increase engagement by making it fun for the people so that there is a voluntary donation of data in a social network setting. Every user is expected to re-enact the scene in a tone and accent that comes naturally to them or as they deem appropriate (for example, a user may want to say the popular dialogue from The Godfather "I'll make him an offer he can't refuse" in a funny tone. That would be totally appropriate for this app. They can then share it with their friends. Their friends can now rate the similarity with the original clip through an anonymous rating system. This data will be used to reduce the bias suffered by voice technologies that exist today as there will be culturally diverse data, tonal data to address emotional context and it will involve a seamless user engagement.

User Personas

We created two user personas – Shirley Chan and Varun Panicker, based on some research about our target users – people who've probably not participated in citizen science initiatives such as Common Voice. Shirley, 21, from Hong Kong is a heavy TikTok user who loves to perform on the social platform. Varun is not as much an extrovert as Shirley, and being 26 and single, working in an MNC, he really wants to make an impression in his social circle. He is a big movie buff, and an app like Rplayr would be a great platform for him to display his passion and talents. These user personas helped us draw up scenarios to construct the user journey and thereby create the information architecture for the app.

Look for detailed user personas in the Appendix section – User Personas.

User Journey

We mapped out all possible features we wanted in our app based on our research, problem definition, and ideation. We made connections between all these features. We then used a scenario that one of our user personas, Varun, might take and decided to focus on that flow for this initial series of prototyping and testing.

Taking a look at this scenario, Varun logs in to the app using one of multiple login methods. He comes on his feed and scrolls through several videos. He likes some, comments, on some, and he is very judgmental about their performances. "This guy can't even speak properly." "She is supposed to be angry while saying this, why is she laughing." He provides these videos with anonymous feedback on his feed and then decides to finally make a video himself. He searches for a video and finds his favorite video from Avengers: Infinity War. He selects the Recreate button and records his own version of this video, reviews it, adds a few hashtags to make sure it reaches the right audience and he is able to get more likes. He then shares it with his friends.



Image 4: User Flow for our persona Varun (shown in blue) that is part of this prototype that we set out to test

Documentation of Prototype - Phase 1 - Wireframes

The user signs up into Rplayr using their email ID and personal information. For every first-time user, we require that the user provides us with a clear consent about their voice data is going to be used for improving the current voice technologies. Consent by the user will be given by speaking their name into the microphone as well as providing their digital signature. This will be the first step to reduce the cultural 'name' pronunciation problem faced by voice technologies.

Rplayr	
Consent Form	
I give consent to RPlayr to use my data	
Additionally, we would also like you to appro this conserve by holding the microphone and saying your name	
	ノ

Image 5: Consent by providing a "Voice" signature

Upon receiving the consent, the user will be logged in. A first-time user will now be directed towards customizing his/her feed based on certain screens that ask the user for the choice of their favorite artist, other categories, and linking friends from other social platforms or a friend finder screen which

links the user to existing friends on the platform. Once their choices are known, the feed can now be customized. Note: This first-time user flow is not the focus of this project but will be marked as future scope.

The user now has three options - View Feed (which lets the user to look at other videos uploaded by his friends), Create Feed (which lets the user create his own video by searching), Menu (which lets the user perform other external actions).

The View Feed screen allows other users to react to the posts and rate the relevance/similarity of the recorded video with the actual video by submitting an anonymous rating so that the voice technology is trained accurately as well.



Image 6: User goes from Feed to Finding a Video Clip to Recreate

Based on the above choice, the user can now record a new video and publish it on RPlayr or share it on other social media platforms.

Look for all the wireframes in the Appendix section – Wireframes.

Evaluation

Aspects of User Testing

Through our usability plan (articulated in the section below), we intend to focus on three aspects of our prototype.

i) *Flow:* Based on two user personas we created, we created two scenarios and thereby the possible user flows on the assumptions we made for those two types of users. We want to test out if the flow that we created is close to what the users of this system would follow without any guidance.

ii) *Engagement:* We want to find out if this system would be engaging enough for our users that they might want to use it for the simple fact that it is engaging, entertaining, and perhaps, addictive.

iii) *Making a Distinction between Social Commentary and Labelling tasks:* Most of the user base that we are trying to tap here are not experienced in citizen science and it would be important for users to be able to differentiate between different types of feedback - to be able to differentiate between social commentary (comments, likes, and share on the content creator and the content itself) and

speech commentary or labelling (feedback on the quality of speech provided as compared to original transcript – Is the recreated speech similar to the transcript? What emotion does the recreated speech emote? – Answers to these questions are actually valuable for researchers and developers working on Voice to use for machine learning purposes).

User Testing Plan

Methods: For this evaluation, we conducted two sets of evaluations.

Evaluation Method #1

Cognitive Walkthrough using Paper Prototypes: By printing out the current mockups and following the conventional methods of paper prototyping we tested out the ways the user uses our system. We asked the user to use the "Think Out Loud" by explaining to them what it means. One of us will acted as moderator and the other person acted as the system manager. We tested out the following aspects during this test: *Flow & Engagement*. Each participant will sign a consent form at the beginning of the test.

Tasks to perform:

- 1. Give feedback on a video shared by a friend
- 2. Select and recreate a video using your own style
- 3. (If time persists) Provide consent to sign up for the first time

Number of User Testers: 5 Prototype Tested: Lo-Fi Wireframes

Evaluation Method #2

User Testing using Think Aloud Technique: Prior to beginning the test, each participant would provide consent for video release. If they did not provide their consent, we did not record their video. We began with a pre-test interview to determine their familiarity and previous experience with social media systems such as ours. We conducted the conventional user test using an iPhone (with the InVision app). This prototype was a clickable prototype which looked and felt closer to the final version of the app. Aspects we focused during this test: *Engagement & Ability to Make Distinction between different types of feedback*. We primarily only tested our chosen user flow, and if time permits, test out a secondary user flow (consent form).

Tasks to perform:

- 1. Give feedback on a video shared by a friend
- 2. Select and recreate a video using your own style
- 3. (If time persists) Provide consent to sign up for the first time

Number of User Testers: 5

Prototype tested: High fidelity mobile prototype built using Sketch + InVision

Recruiting Stakeholders

The primary stakeholders that we will interview would be potential citizen scientists. These are those people who do not have any experience actively participating in citizen science projects (requirement). We want to create a base of citizen scientists that is currently untapped, thus the focus on engagement and the social aspect. Since our solution is also a social platform, we want users who are active on any social platform (requirement), especially entertainment platforms like TikTok (preferred). Our users can be of ages between 18-48 years of age.

Demographic Information

Divergent on: Nationalities: Taiwanese, Japanese, Indian, Middle Eastern Age range: 19-33 years old Gender: 5 Female, 5 Male

Convergent on:

Experience using multiple social media platforms in the form of mobile apps Experience using entertainment applications No background in user experience/HCI

Look for recruitment form in the Appendix section – Recruitment form.

Data to be collected:

Issue or question	Data	Туре	Collection	Planned analysis
Number of errors recreating a video (task error rate)	# Errors	Quantitative objective	Observation	Descriptive stats
Number of times the "back" button was used	# Times user pressed the back button	Quantitative objective	Observation	Descriptive stats
Overall satisfaction level	Level of satisfaction scale	Quantitative, subjective	Likert scale	Descriptive stats
Moments of confusion/frustration	# Times user expresses confusion	Quantitative objective	Observation	Descriptive stats
Task completion rate (feedback given/ video recreated)	Complete/ Incomplete	Quantitative, objective	Observation	Descriptive stats
Overall experience	Participant feedback	Qualitative, subjective	Post-test interview	Aggregate responses, find trends
Participant workflow	Click-through process	Qualitative, subjective	Click pattern analysis	Affinity analysis

Analysis & Findings:

Look for the affinity analysis and all the findings in the Appendix section – Usability Analysis & Results.

Major Findings

A summary of all the major findings of our usability evaluations can be found below:

- 1. Most users had a very hard time understand the anonymous feedback system because of the way it was presented
- 2. Most users wanted a more visually appealing way to be able to even take a look at the privacy policy
- 3. Users barely understood the gamification aspect of the app and hence did not care about it either

- 4. Search & Find Video pages were not very well received because of limited functionality and inconsistent visuals.
- 5. The "Aha" moment of the research was that almost all the users found the entire process of recreating a video simple, intuitive and very unique.

Three Iterations & Their Comparisons

Based on the results of our usability evaluation, we iterated on the pain points and the areas of confusion to redesign certain aspects of the application completely over the next two iterations.

Video Icon and the Search Button: The video icon in the navigation bar was confusing to some users. When presented with a task that said 'Search a video and recreate it', the common behaviour of the users was to look for a search bar/button. Our assumption of the user clicking the video icon to explore the video search option wasn't justified. We came with a better icon for videos that explains the concept of 'video clip' or a 'movie clip' as opposed to just a video. We assumed that the user would always search for the clip once he is in the video tab and didn't account for the cases where the user wants to search button in the navigation bar as well. A global search lets users search about absolutely anything on Rplayr platform. The chosen replacement icon for Video clip proved to be still confusing to many in the next iteration, and the layout of the search and video pages in the higher fidelity prototype seemed very blunt because of the sharp edges. Also, the page did not say, where the user was, on the top pane. In another iteration, all these issues were fixed.



Feedback system: The anonymous feedback system was one of the key features in the earlier versions of Rplayr, but it was integrated with the feed. When we did our paper prototyping, we found out that users could not visually tell the difference between the social feedback section and the speech feedback section. Assuming that the problem was in the way it was displayed, we tried to make a clear distinction between the two sections in the high fidelity iteration. In our paper prototypes, we let the users rate other users video and the accuracy of their speech by using a slider. We assumed that a slider would be self-explanatory and if it is not, users can click on the information button to know more about the rating system. When we did our user tests, very few users understood the importance of the slider. The information was not explicit and users also attempted to rate their video as well. While the feedback system worked great, users raised concern about changing the ratings in the feedback. Feedback is the core element of this design and imbibing seriousness amongst the users to

make sure that the feedback was delivered in a correct manner was essential. Here are the key things we tackled in the second iteration:

- Allowing the user to change and submit their feedback
- Removing the option of providing self-feedback
- Removing the information button and stating the instructions explicitly

However, our usability testing still raised some confusing aspects about the feedback system. By trying to make it more distinct than the social feedback section, users started thinking that it was not related to the video itself. For those who understood that it was related to the video, kept rating the videos based on the fact that they were friends and that one shouldn't say bad things about friends in public. To tackle this two-fold issue, we decided to disconnect the feedback system from the social circle, and make the videos displayed as anonymous stories on top as a completely new section called "Reaxn" (pronounced "reaction"). We do this to reduce the bias that the users may have while rating their friends versus rating strangers. For users to be interested to click on watching videos from strangers, we will populate stories from topics the users are interested in. For example, Varun is interested in Marvel and Harry Potter, so, recreations from those topics are displayed on top of his feed as stories. Here, Varun can now see stories based on his interests from strangers and he can answer simple questions (the slider question is gone) after each recreated clip that he watches. These stories will come with a question that is cognitively not stressful enough and provides us the feedback as required. We are using the users addiction to stories and curiosity to view more of it as a way to get quick feedback. We also added a gamification aspect – as many questions the user answers, the more points they gain. Not only that, content creators gain the exact same amount of points for the number of people rating their videos – thereby motivating everyone to create and make their posts public (for everyone to watch based on interest), and to watch and answer as many questions as possible.



Iteration 1 - Feedback Iteration 2 – F/b w confirmation Iteration 3 – Stories (for f/b) Iteration 3 – Simple questions

Gamification: An aspect of this application assumes every user to rate the accuracy of the speech honestly. Because of other popular applications, some of the users thought that they would rather like to change the words in the transcript or use puns/mispronunciations to add an element of fun. While this could elevate the entertainment factor, it beats our purpose and defeats our assumption that users would genuinely read out the transcripts to make the video. We tackled this problem by including an aspect of gamification in our design. Users would now get points and would be ranked based on a two-fold aspect. One, how much have other users rated him/her and second, how (and how many) accurate feedbacks have the user given. It would also depend on whether the user rated two videos in one go or rated 5 videos in one go which signifies a larger share of his contribution

towards evaluating the accuracy. At this stage the scoring system is just an example and the rules can be fleshed out later.



Dub Video vs Recreate Video: Our users were confused about that the 'Recreate the video' button. Most of them thought that it was the 'Dub video' feature. We decided to address this in our second iteration by adding a feature of dubbing the video. We thought while the Recreate the video gave us the idea about the tone, accent and emotions; the 'Dub Video' can also help us achieve exactly the same thing, so why stop the users from doing what they want to, especially since some users could be camera shy (as were a few of our user testers).



Iteration 1: Recreate the clip

Iteration 2: Dub and Recreate the Clip

Iteration 3: Updated icons and scroll added

Removing Confusing Icons: We eliminated the confusing icons from the actual record page to keep a minimalist 'Post' or 'Delete' functionality since users would get confused with the download action and the download action itself would stop our users would achieving their end goal of sharing a video on our platform.



Iteration 1: Video playback



Iteration 2: Video Playback

Voice Signature on Consent Form: The voice consent in our first iteration was confusing to the users because they were not sure if it is a button or a checkbox and didn't know exactly how it would behave when clicked.



Clickable Prototype Link

Here is the link to the clickable prototype: https://projects.invisionapp.com/prototype/cjt5j5vmd0022sg01np7h3cmp/play

Design Process Video

Watch the entire design process video here: <u>https://www.youtube.com/watch?v=U-nw-M63qJc</u>

Future Scope

As part of another round of evaluation, we approached an Alexa machine learning engineer and asked him about the feasibility of our project. While he really loved the idea, he questioned the technical feasibility of it. He mentioned that with the scale that we're thinking about makes it exponentially difficult to implement something like the "next, better Alexa" or a "JARVIS" once you have the kind of data Rplayr promises to collect. He recommended us to first decide what we want to do after collecting this data, and then plan backwards to research everything about what we would need to do to at least try to make it happen. "Without a solid, through and through plan, this fantastic idea, too, will fail." That discussion gives us another dimensionality to think about Rplayr holistically as a product/ecosystem and not just a UX Design project. Based on that here is a plan on the things we could do in the future:

- 1. Interview Data Ethics & Legal experts to tackle the problem of data ethics and privacy to create a better terms and conditions page and an overall ethical privacy experience considering the nature of the app.
- 2. Create a study plan for gamification and design the best gamification approach based on the results of that study.
- 3. Redesign the search flow based on user feedback from our usability tests.
- 4. Keep each user flow limited to a maximum of 6 user steps (as is the case of recreating a video)
- 5. Create and test first-time user flows such as sign up flow, preferences flow, and tutorials to ensure a smooth onboarding experience for new users.
- 6. Create a technical study plan and talk to as many machine learning and Voice AI experts to understand the technical difficulties in trying to create a new voice assistant, and if things don't seem feasible, pivot to make better use of the data being collected from Rplayr.

Works Cited

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APPENDIX A

User Personas

Shirley Chan



"I love acting and showing it off to my friends."

Age: 21 Work: Student Location: HongKong Character: Frivolous
 Attention Seeker
 Tries to be funny

 Bio
 Shirley is a college student in HongKong. Most of

the time she spends on social media, mostly Tiktok. She likes to judge and comment on posts. She is not really a movie buff, but she likes to follow trends. Shirley is fluent in Cantonese and Mandarin. She starts her day by looking at her notifications and scrolling through her friends' posts

Social Media Activity

Extrovert
Feeling
Feeling

Varun Panicker



"When I am free, Il like to scroll the feed section and look for good content"

Age: 26 Location: Mumbai, India Character: Enthusiastic

Fun	MovieBuff

Bio

Varun works in an Indian MNC. Currently, he lives with his parents. Varun is a huge movie buff. He even watched world cinema. Varun is an active Bumble user. He likes to date girls and occasionally looks for girls on social media to talk to. He can be humorous sometimes, but he prefers to be sarcastic. He is fluent in English but is curious about other cultures as well.

Social Media Activity





Snapchat

Personality



Usability Study Recruitment Form

Npiayi Usabii	ity Study	Recruitme	nt Form	G
We are Proshonjit Mitra, Manasi Ki University of Washington in Seattl designed a mobile app named "Rp We are looking to talk to people wi round of usability testing.	ulkarni, and Ajinkya She a. As part of our course layr", a social network/ th some experience us	eth, graduate students in the work for our Design Method 'entertainment based platfor ing social network platforms	School of Information at th s course (IMT 540) we hav m that is in its early design s to test our initial design th	e e phase. rough a
We are open to meeting in-person filling up this form if you are intere Thursday, Feb 28, 2019 - Between Friday, Mar 1, 2019 - Between 9 AN Saturday, Mar 2, 2019 - All day Sunday, Mar 3, 2019 - Between 9 A	to conduct this 20 min sted in participating in 4 PM and 9 PM <i>I</i> - 4 PM VM - 4PM	ute interview. We promise to this study and have some tir	keep the time. Please resp ne on the following days:	ond by
We are unable to offer any materia	I reward for participati	on.		
For contact, please feel free to e-m	ail ptmitra@uw.edu.			
Please select your age	range		Multiple choice	~
Below 18	\times	Submit form		$\overline{\nabla}$
18-24	\times	Continue to next section		Ţ
25-39	×	Continue to next section		Ŧ
40-48	×	Continue to next section		~
Above 48	\times	Submit form		$\overline{\mathbf{v}}$
Add option or ADD "OTHER"				
Section 2 of 5				×
Augstion 2				
Question 2				
Description (optional)				
			computer Interact	an2 *
Do you work in the fiel	d of User Expe	rience or Human C		one
Do you work in the fiel	d of User Expe	rience or Human C		OIL
Do you work in the fiel Yes, as a UX Designer Yes, as a UX Researcher	d of User Expe	rience or Human C		on
Do you work in the fiel Yes, as a UX Designer Yes, as a UX Researcher Yes, as a Content Strategist	d of User Expe	rience or Human C		IOT ?
Do you work in the fiel Yes, as a UX Designer Yes, as a UX Researcher Yes, as a Content Strategist Yes, I am a student pursuing	d of User Expe	rience or Human C		ION?
Do you work in the fiel Yes, as a UX Designer Yes, as a UX Researcher Yes, as a Content Strategist Yes, I am a student pursuing Yes, I am a student and a UX	d of User Expe ux/HCI professional	rience or Human C		ION?
Do you work in the fiel Yes, as a UX Designer Yes, as a UX Researcher Yes, as a Content Strategist Yes, I am a student pursuing Yes, I am a student and a UX No	d of User Expe	rience or Human C		ion?
Do you work in the fiel Yes, as a UX Designer Yes, as a UX Researcher Yes, as a Content Strategist Yes, I am a student pursuing Yes, I am a student and a UX No Section 3 of 5	d of User Expe UX/HCI professional	rience or Human C	×	:
Do you work in the fiel Yes, as a UX Designer Yes, as a UX Researcher Yes, as a Content Strategist Yes, I am a student pursuing Yes, I am a student and a UX No Section 3 of 5 Question 3	d of User Expe UX/HCI professional	rience or Human C	×	:
Do you work in the fiel Yes, as a UX Designer Yes, as a UX Researcher Yes, as a Content Strategist Yes, I am a student pursuing Yes, I am a student and a UX No Section 3 of 5 Question 3 Description (optional)	d of User Expe	rience or Human C		1

🔘 Today

- O Within the last week
- O Within the last month
- Within the last yearMore than a year ago
- I have never used social networking platforms

Section 4 of 5	×	:
Question 4		
Description (optional)		
Are you comfortable to be video recorded during the usability test? *		
O Yes		
○ No		
Only comfortable to record hand movements as they interact with the mobile screen and Voice		
Only comfortable to record hand movements as they interact with the mobile screen		
Einel De me		

Final Page

Description (optional)

Do you have experience using any of the following social networking mobile * apps?

- Dubsmash
- Tiktok
- Snapchat
- Instagram
- Vine

Please select any of the following slots to inform us when you would be free * to conduct this test. You can also enter any timing exceptions or if you want to specify a time within our given time ranges by typing in the "Other" section.

- Today (Thursday, Feb 28) Between 4 PM and 9 PM
- Friday, Mar 1 Between 9 AM and 4 PM
- Saturday, Mar 2 All day
- Sunday, Mar 3 Between 9 AM and 4 PM

Other...

Usability Study Analysis – Paper Prototyping



Usability Study Findings – Paper Prototyping

Positives:

- 1. 3 out of 5 users said that the UX was intuitive and seamless
- 2. 4 out of 5 users said that they really liked the popular recreation section
- 3. 4 out of 5 users said that they liked the Like, Comments, Re-post section
- 4. 4 out of 5 users clearly understood the Camera switching icon
- 5. 3 out of 5 users understood the meaning of the video icon without getting confused, but only 1 out of 5 users explicitly said that it was clear to them
- 6. 1 out of 5 users said that the emoji scale was intuitive, but their idea of the emoji scale is completely different from its intent. 3 out of 5 users actually figured out the intent behind the emoji scale.
- 7. 5 out of 5 users thought that the idea of recreating videos was fun and good
- 8. 2 out of 5 users completely understood the feedback system. 1 other understood after reading the tooltip.
- 9. 1 out of 5 users thought that the Like and Share options were really cool on the Original Clip screen. 4 out of 5 users understood and used the share button.
- 10. 1 out of 5 users mentioned that the "Review & Share/New Post" screen was great. 5 out of 5 users had no trouble navigating through the "Review & Share/New Post" screen.

Negatives (user behavior that can undermine app usability drastically):

- 1. 2 out of 5 users mentioned they would change the words/use puns/do mimicry while recording their recreations (this would make it really hard to police and give the proper rating and would corrupt the data)
- 2. 1 out of 5 users preferred doing completely original videos (which is something we cannot and will not incorporate in this application)
- 3. 2 out of 5 users said that they wouldn't bother considering how accurate the speech is compared to the subtitle while rating the video (totally beats our purpose).

Errors/Missing information:

- 1. 4 out of 5 users selected "category" button instead of "search" on the Create Video page
- 2. 4 out of 5 users clicked "Advanced Settings"

Moments of Confusions:

- 1. 1 out of 5 users was confused about the usefulness of the slider in the feedback section
- 2. 2 out of 5 users did not understand the re-post icon.
- 3. 1 out of 5 users thought that description was clickable
- 4. 2 out of 5 users thought the "discard and re-record" icon was confusing
- 5. 3 out of 5 users got confused between "download" and "confirm" buttons on the Review Recording page
- 6. 1 out of 5 users did not understand the video camera button
- 7. 3 out of 5 users tried to unmute the original video clip
- 8. 1 out of 5 users attempted to rate themselves using slider rating
- 9. 1 out of 5 users said that the rating scale was confusing
- 10. 2 out of 5 users said that there was confusion about anonymous feedback and that it would matter to them
- 11. 2 out of 5 users said that the Mic button was not intuitive enough
- 12. 2 out of 5 users were confused about dubbing the video versus recreating the video
- 13. 1 user thought they could not connect to the word "Television"
- 14. 2 users did not understand where the back button was
- 15. 1 user thought that the use of the words "consent form" instead of "privacy policy" was unusual and confusing

- 16. 1 user thought that the wordings "Additionally" made the voice signature part sound optional and confusing
- 17. 1 user was confused about the purpose of muting the video
- 18. 1 user wanted to see how many people liked the original clip
- 19. 1 user was confused with the TV button and thought it meant airplay
- 20. 3 users identified the confusion in the rating system about feeling versus emotional content

Suggestions

- 1. 1 user thought tutorial/instructions were required
- 2. 3 users thought the Search option was required on the homepage
- 3. 2 users believed there should also be the option of dubbing the original clip with our own voices
- 4. 1 user thought that the messaging feature would make the app better
- 5. 1 user thought that the emojis feedback should be completely anonymous and that the content creator should never see that feedback. However, they also thought that the content creator should be able to rate their own video with the emoji that reflects the emotion that they were going for in their recreation.
- 6. 1 user thought that average speech rating should be provided to the content creator in an anonymous manner and a penalizing scheme could help the user perform better.
- 7. For self-video, 1 user thought that Like, Comments, Re-post, and Emoji feedback should be there, but not the accuracy slider
- 8. 1 user thought that the anonymous comment section should disappear for a given post once users have entered their feedback in the system
- 9. 1 user thought that the consent form should have short summaries
- 10. 1 user thought that the privacy policy should have the option of opting out of optional clauses



Usability Study Analysis – User Testing (Think Aloud)

Usability Study Findings – User Testing (Think Aloud)

Positives:

- 1. 4 out of 5 users mentioned that the app UI was modelled after Instagram and was easy to follow
- 2. 4 out of 5 users thought that Voice signatures prompted them to take a look at the privacy policy
- 3. 2 out of 5 users explicitly mentioned that they would be comfortable sharing their voice data on this application
- 4. 1 out of 5 users thought that the process of finding a video was easy
- 5. 4 out of 5 users thought that sharing on other social media was cool
- 6. 2 out of 5 users really liked the Video clip page and completely understood the recreate versus dub buttons
- 7. 4 out of 5 users said that the UI was simple and the UX seamless
- 8. 3 out of 5 users clearly understood what "Assigning an Emotion" meant
- 9. Users generally thought that emojis were a good way of showing emotions
- 10. Social commentary and Notification sections were pretty familiar to users

Negatives (user behavior that can undermine app usability drastically):

- 1. 1 out of 5 users said that they would rate the video based on how much they liked the video
- 2. 1 out of 5 users said that factors such as what language (content) the content creators wrote as captions mattered to them while giving them a score

Confusions:

- 1. 2 out of 5 users noticed the Rplayr Rank and Leaderboard. Of these 2, 1 user thought that the Leaderboard and Rank were confusing, the other thought that the Rank was dependent on Speech Score which is incorrect.
- 2. 2 out of 5 users thought that the initial View Feed page was crowded
- 3. Most users could not intuitively identify that the anonymous feedback section was anonymous
- 4. 4 out of 5 users were distracted by sliders
- 5. 3 out of 5 users thought Search page was confusing and needed improvements they expected to see filters and textual descriptions in that page
- 6. 1 user could not identify the share button on the feed. 2 users thought that button was for sharing on other apps
- 7. 2 users thought that the anonymous feedback section was not related to the post
- 8. 3 out of 5 users did not read textual cues
- 9. 1 user did not recognize that their video was being recorded due to the absence of a status indication
- 10. 1 user thought that the find video process was confusing
- 11. 1 user thought there was a confusion between using the same words to recreate videos or create parodies instead
- 12. 2 users absolutely did not get the purpose of this application
- 13. 2 users could not identify or understand the feedback system
- 14. 1 user thought sharp edges made the category page look unwelcoming and non-friendly
- 15. 1 user believed that dubbing a video sounds like dub in other languages
- 16. 2 out of 4 users did not read the privacy policy on the T&C page
- 17. 2 out of 4 users thought a visual summary was needed for terms and conditions highlighting major points like use of voice data to improve voice technology
- 18. 1 user thought they would provide comments as a means of qualitative feedback on speech quality

- 19. 1 user thought that slider was a meter to measure emotions
- 20. 1 user did not understand the camera flip button

Suggestions:

- 1. 5 out of 5 users said more emojis were required, introduce a horizontal scroll if required
- 2. 1 user suggested the use of a 5-star rating scale instead of slider
- 3. 1 user suggested comments needed the feature to like the comments
- 4. 1 user suggested the introduction of filters/face filters
- 5. 1 user needed error prevention mechanism on the record-review page while using the discard button
- 6. 1 user needed the download feature
- 7. 1 user suggested to add the location feature
- 8. 1 user suggested confirmation (acknowledgement) of sharing on other social media
- 9. 1 user suggested additional content like politics, sports, etc.
- 10. 1 user suggested the Sign up should be just below Forgot Password on the Login page.

Errors/Missing Information

- 1. Expansion of comments section needed
- 2. Prototyping Issue: Navigation bar tabs not working on some pages
- 3. Prototyping issue: Facebook Share button not working on some pages
- 4. Links required on Profile Stats which should expand into new pages
- 5. Find Video page doesn't have the title "Find Video" on top

APPENDIX B Prototypes - Rplayr

Reducing cultural biases in voice technology through social engagement

Proshonjit Mitra, Manasi Kulkarni, Ajinkya Sheth

Prototyping Phase #1 Low Fidelity

Wireframes using Balsamiq

Login Screen

(0750 PM	
Bolovr	
LOGIN	
f G	
Email/Phone Number janedoe@gmail.com Password	

Log In FORGOT PASSWORD?	ā
Don't have an account? Sign Up	
	J

View Feed Screen

The user is shown the View Screen which includes content created by other users

Anonymous Feedback system which takes in Accuracy (slider) and Primary Emotion Associated with the video (Circular Labels)



The three dots stand for "More Options for the video. More options such as Report Abuse for example

Three icons below denoting: Llke, Comment, Share

Create Feed

Search Bar takes user input and transitions to next wireframe

The User can choose to browse through various categories

07:50 PM			١
	Logo	4	
Q search			
Categories			
Ħ	Ţ	You Tube	
Movies	Telelvision	Youtube Hits	
Cotegory	Cotegory	Cotegory	
Enveritee			1
< video	video	video >	8
Recommen	<u> </u>		
< video	video	video >	6
Trending		<u> </u>	
< video	video	video >	81
		=	
\sim			

The user arrives at the Create Screen by clicking the Video button below.

Create Feed shows User Marked Favourites, Recommended and Trending Original clips.

Create Feed - Search

The User enters a search term and the app displays related search terms



The User can select the Related Search Term or Press Enter to prompt various original clips



Video Description Page

Once the User clicks on video of interest. The video description page pops up.

Option to add the video into favourites or share to friends

Button to prompt the user



Top-voted recreations of the clip

Record Screens





Record Screen 2: To retake, publish and save the video



Review and Share

After clicking on publish the User can add relevant details and share the video.

07:50 PM		ے ہ	†
<	Review & Share	e	Ą
recorded video	Write a caption		
Add Hashtags			
#bollywood	#comedy	#hindi	>
Tag People			>
Facebook			Ø
Instagram			0
Snapchat			0
Twitter			0
		Sh	are
Advanced Settin	ngs		
		=	

Menu and Profile



The user opens his or her profile (screen on the right) by clicking on "View you profile"/username section at the top part of the screen on the left

> The user can view personal feed, profile picture, bio and user stats on the profile screen.

The user clicks on the the triple lines button at the bottom to provoke the menu screen from any other screen.



Prototyping Phase #2 High Fidelity

Mobile App Prototype made using Sketch and InVision

Link to clickable prototype: <u>https://invis.io/EBQSY2VNP3W#/349950039_Login</u>

Login Screen



Rpl	ayR

Login Username/Email address Password Log In Forgot Password? Sign in with Facebook G Sign in with Google

First screen of the app. The user can choose to log in through email, Facebook/ Google or sign up.

Don't have an account? Sign Up

Privacy Screen

User sees Terms and Conditions during sign up for the first time. The user gives consent through voice by speaking out his or her name. Voice icon (in green) is highlighted during voice input. Voice captured and analyzed and consent is received.

Terms and Conditions

Welcome to RPlayR!

These Terms of Use govern your use of RPlavR and provide

information about the RPlayR Service, outlined below. When

you create an RPlayR account or use RPlayR, you agree to

1) You agree that RPlavR uses your voice data to train

machine learning models deployed in actively making voice

technologies better. Your voice data will only be used for this

purpose and nothing else. View the entire agreement for a list

2) You give us permission to show your username, profile

picture, and information about your actions (such as likes) or

relationships (such as follows) next to or in connection with

anyone who you follow or engage and are displayed on

3) We use the information we have to study our Service and

collaborate with others on research to make our Service

Read the entire agreement

I agree to the terms and conditions

Please hold the microphone button to record

your name and provide consent

Next >

better and contribute to the well-being of our community.

of the companies involved in this project.

RPlavR, without any compensation to you.

these terms



Terms and Conditions

Welcome to RPlayR!

These Terms of Use govern your use of RPIayR and provide information about the RPIayR Service, outlined below. When you create an RPIayR account or use RPIayR, you agree to these terms.

 You agree that RPlayR uses your voice data to train machine learning models deployed in actively making voice technologies better. Your voice data will only be used for this purpose and nothing else. View the entire agreement for a list of the companies involved in this project.

2) You give us permission to show your username, profile picture, and information about your actions (such as likes) or relationships (such as follows) next to or in connection with anyone who you follow or engage and are displayed on RPlayR, without any compensation to you.

3) We use the information we have to study our Service and collaborate with others on research to make our Service better and contribute to the well-being of our community.

Read the entire agreement

I agree to the terms and conditions

Please hold the microphone button to record your name and provide consent



Terms and Conditions

Welcome to RPlayR!

These Terms of Use govern your use of RPlayR and provide information about the RPlayR Service, outlined below. When you create an RPlayR account or use RPlayR, you agree to these terms.

 You agree that RPlayR uses your voice data to train machine learning models deployed in actively making voice technologies better. Your voice data will only be used for this purpose and nothing else. View the entire agreement for a list of the companies involved in this project.

2) You give us permission to show your username, profile picture, and information about your actions (such as likes) or relationships (such as follows) next to or in connection with anyone who you follow or engage and are displayed on RPlayR, without any compensation to you.

3) We use the information we have to study our Service and collaborate with others on research to make our Service better and contribute to the well-being of our community.

Read the entire agreement

I agree to the terms and conditions

Please hold the microphone button to record your name and provide consent



Terms and Conditions

Welcome to RPlayR!

These Terms of Use govern your use of RPlayR and provide information about the RPlayR Service, outlined below. When you create an RPlayR account or use RPlayR, you agree to these terms.

 You agree that RPlayR uses your voice data to train machine learning models deployed in actively making voice technologies better. Your voice data will only be used for this purpose and nothing else. View the entire agreement for a list of the companies involved in this project.

2) You give us permission to show your username, profile picture, and information about your actions (such as likes) or relationships (such as follows) next to or in connection with anyone who you follow or engage and are displayed on RPIaPR, without any compensation to you.

3) We use the information we have to study our Service and collaborate with others on research to make our Service better and contribute to the well-being of our community.

Read the entire agreement



Please hold the microphone button to record your name and provide consent

Profile Screens

Profile screen of a friend's / other followed person's screen



Profile screen of a friend's screen after scrolling



Profile screen of self



User Settings Screen



User setting screen



Post Feedback Screens

Feedback screen for untouched videos.



Slider for denoting accuracy between subtitles

> Emoji's to denote emotion of content creator



Would you like to submit

RplayR

GoT - Danaerus - "Break the Wheel"

K Back

Shirley Chan

Ū

Feed after submitting feedback



Shirley Chan Don't you think I look cute as the Mother of Dragons? 34 minutes ago **Rahul Sharma**



spoken words and

34 minutes ago

10 Q

1456 likes



Shirley Chan Don't you think I look cute as the Mother of Dragons?

Earn Rplayr points and climb the leaderboard by anonymously rating Shirley's speech quality and emotional tone.

Recreation Screens - Find Videos

User clicks on Recreate button on the Nav bar





Recommended



Trending









Q Search

Favorites





Trending





Bollywood





When a User clicks on category like Movies, for example the ON 2.1M likes user is shown sub categories and video clips falling into those sub categories

User has the option to dub the selected the video or recreate it





Disney Show us your inner Thanos by recreating this clip. 14.3K people recreated this

Popular Recreations



Recreate Video Dub Video 0

Recreation Screens -Recreate video of choice

Press red button (circular) to record



Press red button (square) to stop



Choose to discard the video or accept it. (The video plays in loop)



The user sees subtitles and himself while recreating

Recreation Screens -Review recreated video

Click on Recreate button on nav bar. Review, Edit and Share options for the recreated video

apchat vitter		
apchat		
stagram		
cebook		
g People		>
sign Emotion	s 😡 😰 🎡	8 😔
ollywood #c	comedy #hindi #jl	hakas 🕨
d Hashtags		
8	Write a caption	
ack	Share	
		1562

Along with text and hashtags, the user can assign an emotion to the video and share across social platforms



F

Q

0

If a user clicks on a different button on the nav bar, the user is shown the warning below

9:41		all
K Back	Share	
8	Write a caption	n
Add Hashtags		
#bollywood #cor	nedy #hindi	#jhakas
Assiç Do you wa	ant to leave	this page?
All change	es will be disca leave.	rded if you
Tag F Go Bac	:k	Yes
Facebook		
Instagram		
Snapchat		(
Twitter		C

F

Feed after creating a new post

Video feed right after creating a new post. The content creator doesn't see the feedback component of his own video



1 like Varun Panicker Fun is Hakuna Matata!

Shirley Chan GoT - Danaerys - "Break the Wheel"



Scrolling down to the next video. (The video where the user provided his feedback)



1456 likes Shirley Chan Don't you think I look cute as the Mother of Dragons? 34 minutes ago







Scrolling down further. (The video where user is yet to give feedback video)









67 minutes ago

Searching other users and their content

Click on the search button on Nav bar to open this screen



User types Shirley to search for her profile



Scrolling down further for user posts and original video clips.



Prototyping Phase #3 High Fidelity with Better Interactions

Mobile App Prototype made using InVision Studio

Link to clickable prototype: <u>https://projects.invisionapp.com/prototype/cjt5j5vmd0022sg01np7h3cmp/play</u>

Feedback section now a separate feature -Reaxn stories

No crowded feed interface



Shirley Chan GoT - Danaerys - "Break the Wheel"



1456 likes Shirley Chan. Don't you think I look cute as the Mother of Dragons2go



1456 likes Shirley Chan Don't you think I look cute as the Mother of Dragoes 200





ST likes Rahul Sharma With the "Senorita" of my life!



Watch clips based on interest



Answer simple questions



Score points as you answer



More emojis added, but emoji scale retained



Random questions for each video clip



Keep playing to score exponentially more



Scrollable section for Popular Recreations





2.1M likes Disney Show us your inner Thanos by recreating this clip. 14.3K people recreated this

Popular Recreations





Better "Find Video" logo





 Q
 Z.1M likes

 Disney Show us your inner Thanos by recreating this clip.
 14.3K people recreated this

Popular Recreations





Can share a post with friends

9:41 < Back Share Write a caption... Add Hashtags #bollywood #comedy #hindi #ihakas > > Tag People Facebook Instagram Snapchat Twitter Public Post

Share



Or with family



Friendlier interface, no sharp edges



Find Video on Top pane





Anonymous stories that interest you

Scrolling is now possible in either direction

Answer simple questions



Score Points

Stop whenever you like

The End