



# Digital Companions:

How AI can Alleviate  
Loneliness in Youths



# Electric Boogaloo



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**“More than 1 in 10 people aged  
15 and older said that they  
always or often felt lonely”**

**-2021 Canadian Social Survey**



This statistic was taken at the end of the covid-19 pandemic where feelings of isolation were heightened. Loneliness is still a lasting problem today.

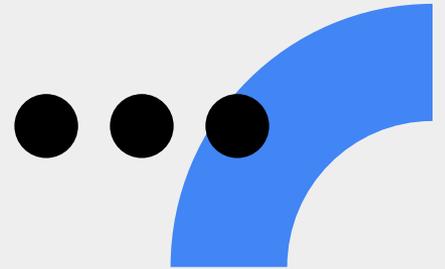
# For youths, the problem space of loneliness is the following types:

## **Situational Loneliness**

The various factors associated with situational loneliness are environmental factors (unpleasant experiences, discrepancy between the levels of his/her needs), migration of people, interpersonal conflicts, accidents and disasters, etc

## **Internal Loneliness**

The various factors associated with internal loneliness are personality factors, locus of control, mental distress, low self-esteem, guilt feeling , and poor coping strategies with situations



[Reference](#)

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**“According to an August 2016 report by Grand View Research, the Intelligent Virtual Assistant market will be worth over \$12bn globally by 2024”**

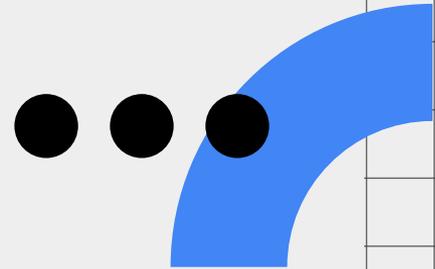
**-WGSN 2023.**

Current trends lean towards a growing interest into the gaps that AI can fill. This is a space where innovation is fresh, and what better demographic to experiment than the technologically savvy younger adults.

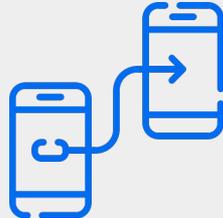


# How might we help young adults combat loneliness using AI companions?

Note that our keyword is companions, because having our users connect deeply with their virtual assistant will provide them opportunities for meaningful insights gained from them, especially with a delicate issue such as loneliness.



# Research and Development



Research

Prototype

User Test

Final Solution

- Focus Groups**
- Competitor Analysis**
- Questionnaire**

- Wireframe**
- Personas**

- Online Presentation**
- Test Circle**

- High Fidelity Prototype**

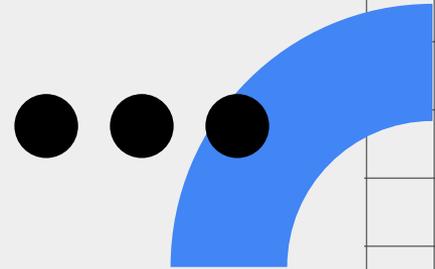
Over the course of developing our solution we did extensive research namely with questionnaires, market analysis, and focus groups. Every step of the way we iterated on our idea and eventual prototype with the findings gathered. Our focus group and critique session conducted with another team in class was especially essential in iterating on our solution.

# 2 focus groups were conducted using a competitor's established chatbot model.

Since it wasn't in the scope of the project, we conducted our focus group with betacharacter.ai, a competitor in the space with an already established "therapist" Ai. We had two separate sessions ran where participants used a psychologist chatbot to work through their loneliness.

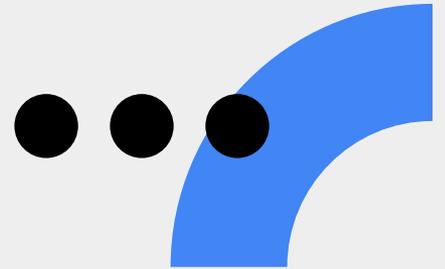
One participant noted issues with being incorrectly diagnosed by the AI, which brought upon concerns with accuracy in content. Alternatively, different participants shared how cathartic it was to vent to a computer knowing that it is incapable of judging the participant.

Other important insights were the concern with feelings of "uncanny valley" and the concern of users becoming too dependant on their relationship with the Ai, thus replacing their human connections with Ai connections.



# The Role of AI

We took these mixed reactions and informed our research and design decisions, namely the potential benefit of using AI as a tool to provide support for lonely users. Being able to provide companionship but not making users reliant on AI is a way we wanted to stand out from competitors currently in the space. Human interaction is not always possible but AI can provide a remedy to situational and internal loneliness, and can be a source of support to ease any social anxiety in users when it comes to forming new connections.





Replika

Need someone  
to talk to?



微软二代小冰

“在亿万人之中，我只属于你”

**A growing competitive landscape  
has been established.**

Replika & Microsoft's Xiaoice are among some of the more notable chatbot companions that have appeared in recent years. However, they have been criticized for creating an addictive experience for users. The seemingly-human chatbots allow for parasocial relationships to be formed and are not meaningful solution to solving a lack of human connection.

# Our Solution

This is where our solution can fill a gap in the market- an AI chatbot that acts as a catalyst for users to seek human connection.

Unlike competitors our model is based on a coaching companion, not a replacement for human interaction.





# Tomo

Your pocket-sized companion and cheerleader, helping you make the strides you desire in your social life.

[Link to Prototype](#)



tomo



# Sets Goals

**Encourages users to go out and make meaningful connections with humans.**

Using the onboarding questionnaire, Tomo learns about the user and helps them set social goals that make sense for them. Goals such as “talk to 3 new people today” encourage users to get off the app and interact with more people face to face - helping them form more connections and build a support system outside of the app.

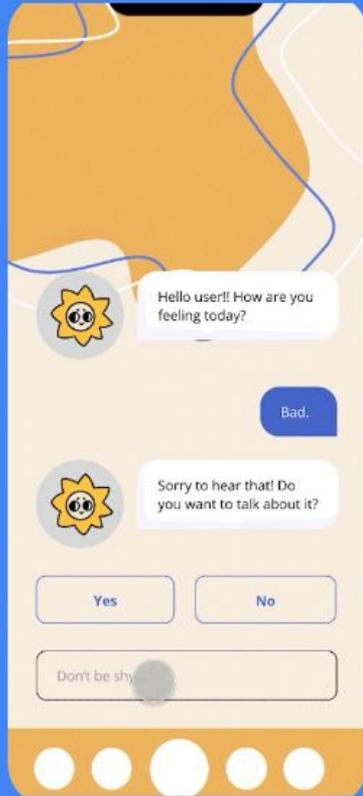


# Coaches

**Tomo gives general guidance that supports the user and helps them feel connected.**

Like a coach, Tomo provides general guidance that supports the user to help them feel connected to the people around them. Advice on how to talk to new people and how to start conversations comfort and reassure users, giving them more confidence to build friendships with the people they meet in their daily lives.





# Listens

Using AI to vent is helpful since the empathy built in does a good job of stimulating a listening friend.

As a chatbot, Tomo can act as a listening friend to allow users to vent about their frustrations, and work through the difficulties of socializing with others.

Available 24/7, Tomo is able to provide you with the support that you need whenever you need it.



# Personalized

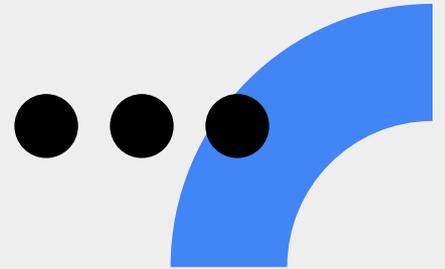
**Avoids the uncanny valley with a user-created companion.**

Unlike competitors, illustrations are the face of our AI, preventing users from becoming attached while also providing them a way to create a companion that suits their tastes.



# Iterations

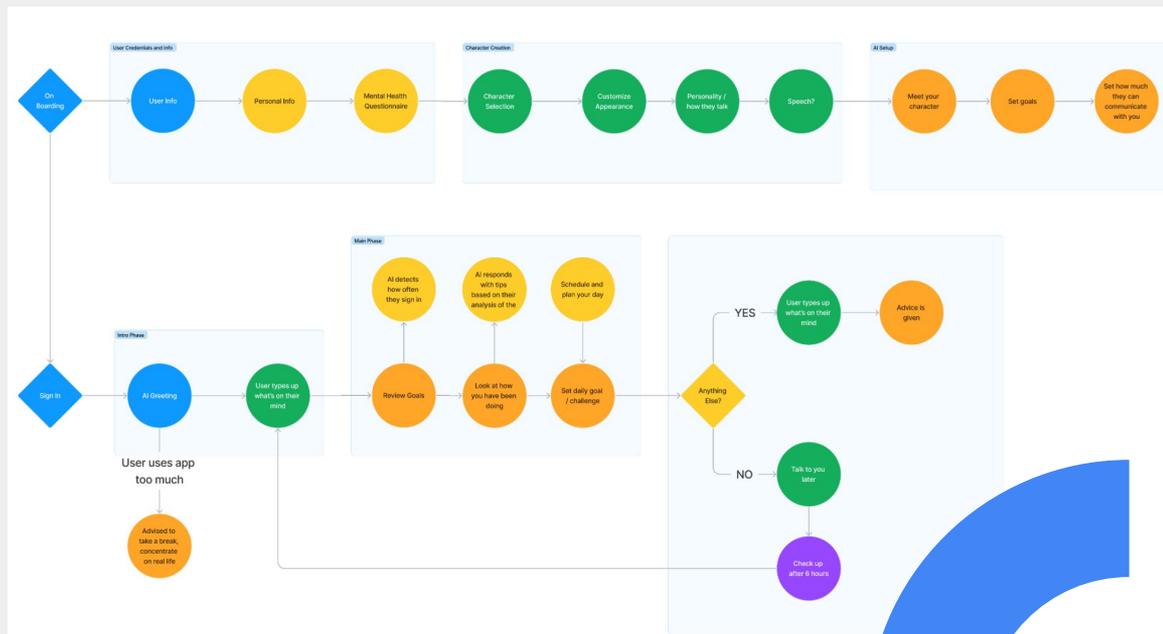
After creating the prototype, we followed up with one of the focus groups we conducted the first round of research with and presented our prototype to them. The feedback was incredibly positive, all the user concerns that were given in the first round were answered and solved with our prototype, leaving the focus group a lot more confident in our product over the competitors.





## User Flow

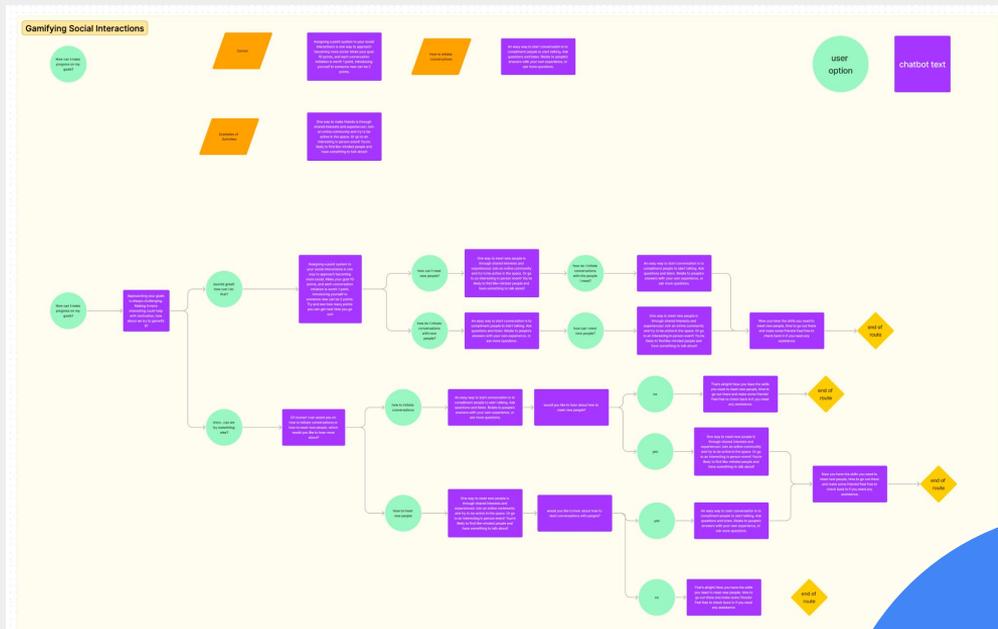
A user flow was created to determine the steps / screens the user would go through while using the app. Four main sections ended up being created: Onboarding, Character Creation, and two scenarios that the user would walk through during the user testing phase.





## Scenario Creation

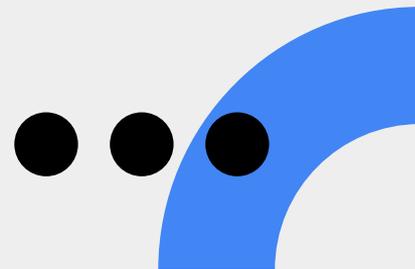
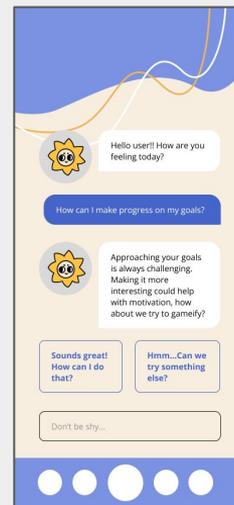
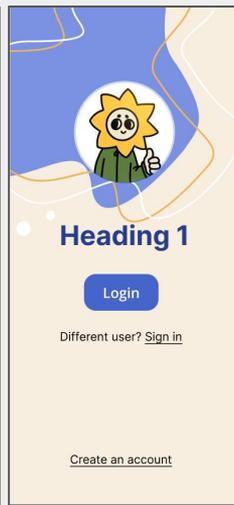
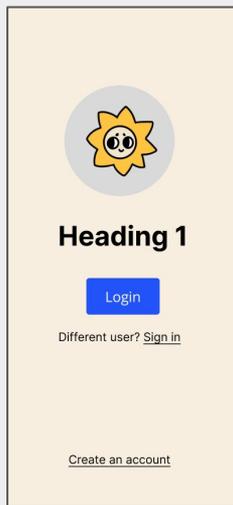
Once the phases were established, the script was written for the two scenarios. Scenario one would feature a “gameify” type challenge, where the user would be given advice on how to achieve the goals created for them in the onboarding section. The second scenario focused on how the Ai bot would encourage and comfort the user if they were to vent to it, showing the dynamics and range of the Ai.





## Wireframe to final comparison

After establishing the screens that the user needed to walk through, we created a component bank and overall styling for the rest of the application. The goal for the visuals was to encourage the feeling of a soft and comfortable vibe, so pastel colours and rounded shapes were used to promote this feeling. A beige colour was chosen for the background to further soften the appearance of the UX.



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“It doesn't make itself look like it's trying to force you to fix your problems, but rather it gently holds your hand and guides you... It's very nice.”

- Focus Group Participant





**Our pocket-sized companion improves quality of life by providing support during moments of loneliness. Tomo helps people to feel more connected, supported, and empowered in their lives.**

