

Product Design & Development

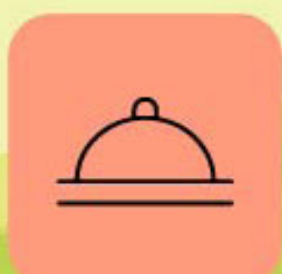
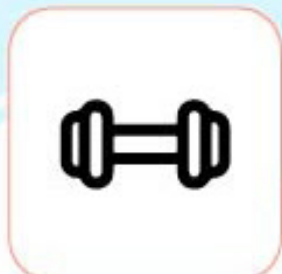
PORTFOLIO

S A R A F R I E N D

Visualizing Our Minds

Thesis for the Master of Design program at UC Berkeley

Daily Goals

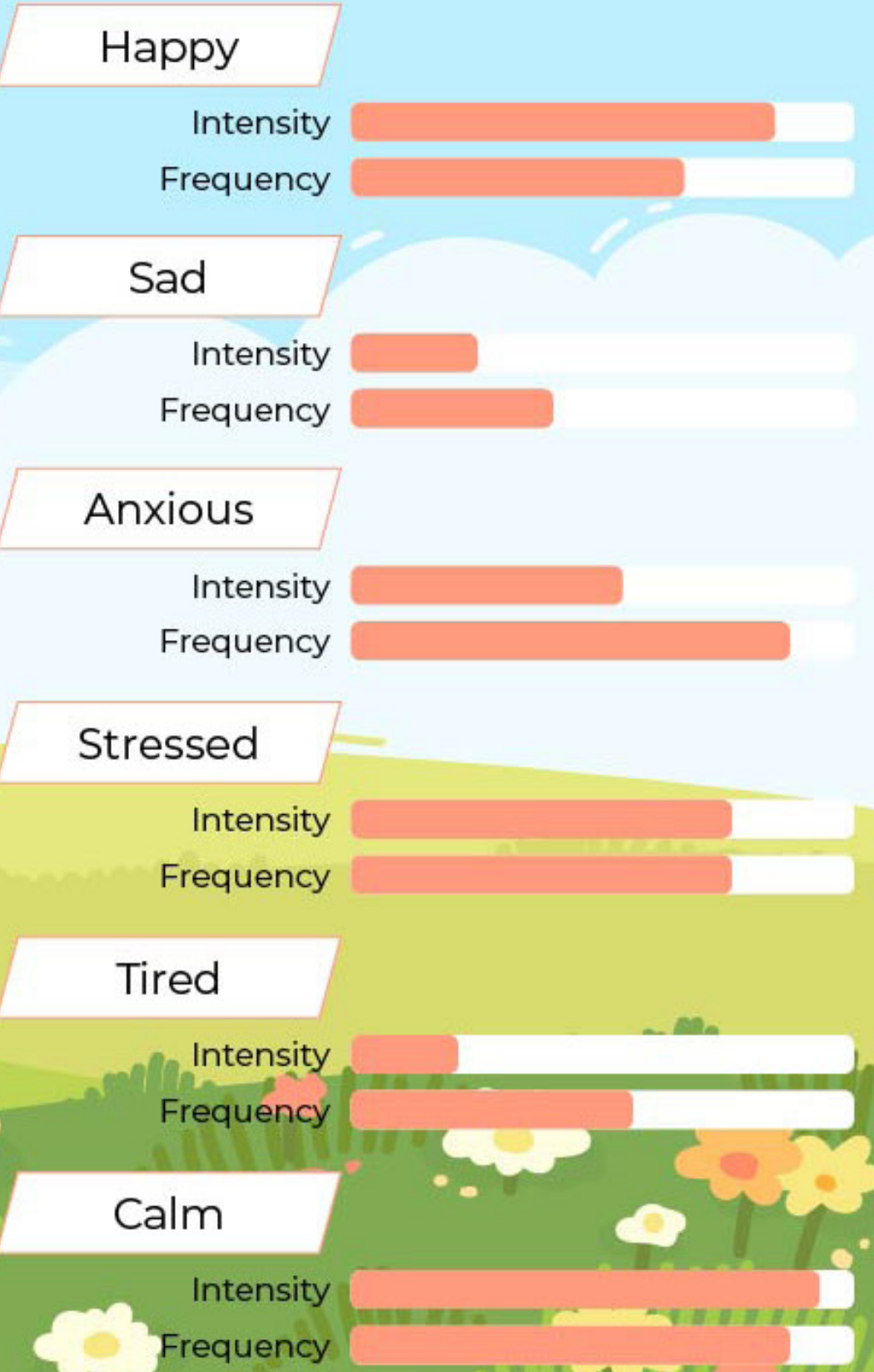


- Shower
- Wash Face
- Brush Teeth
- Take Meds

What's on your mind today?



Stats



Journal

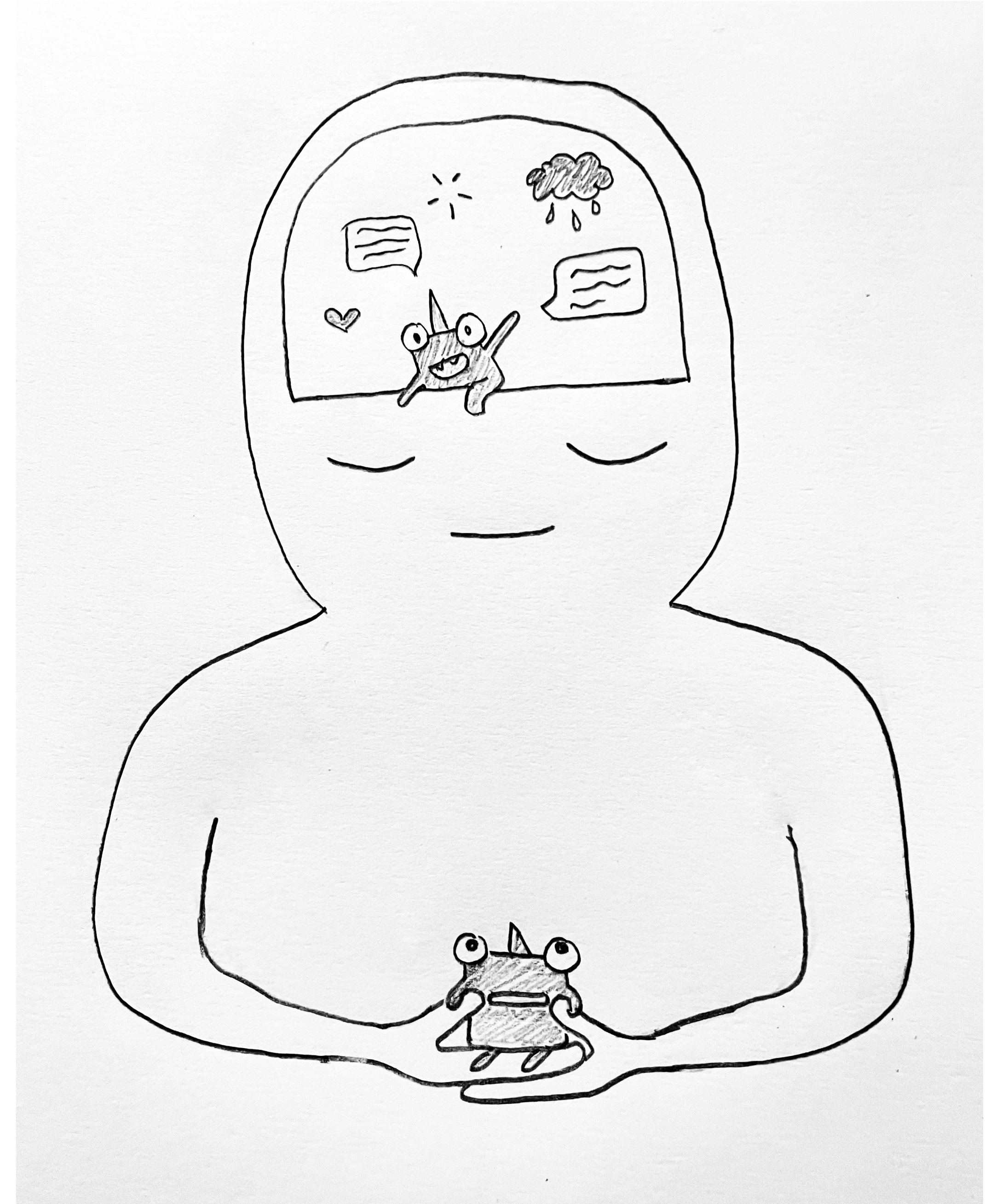
Write about your day here. What's on your mind? What are you feeling today?

The Goal

Connect with your mind in the way you connect with others

Foster **deeper empathy** with yourself and your mental wellbeing

Help people **reframe** the way they see mental health and encourage **self reflection**



Research - Major Takeaways



AI generated images of monsters

Monsters are used to represent mental health all the time, from professional illustrations to the use of the “anxiety monster” in therapy practices.

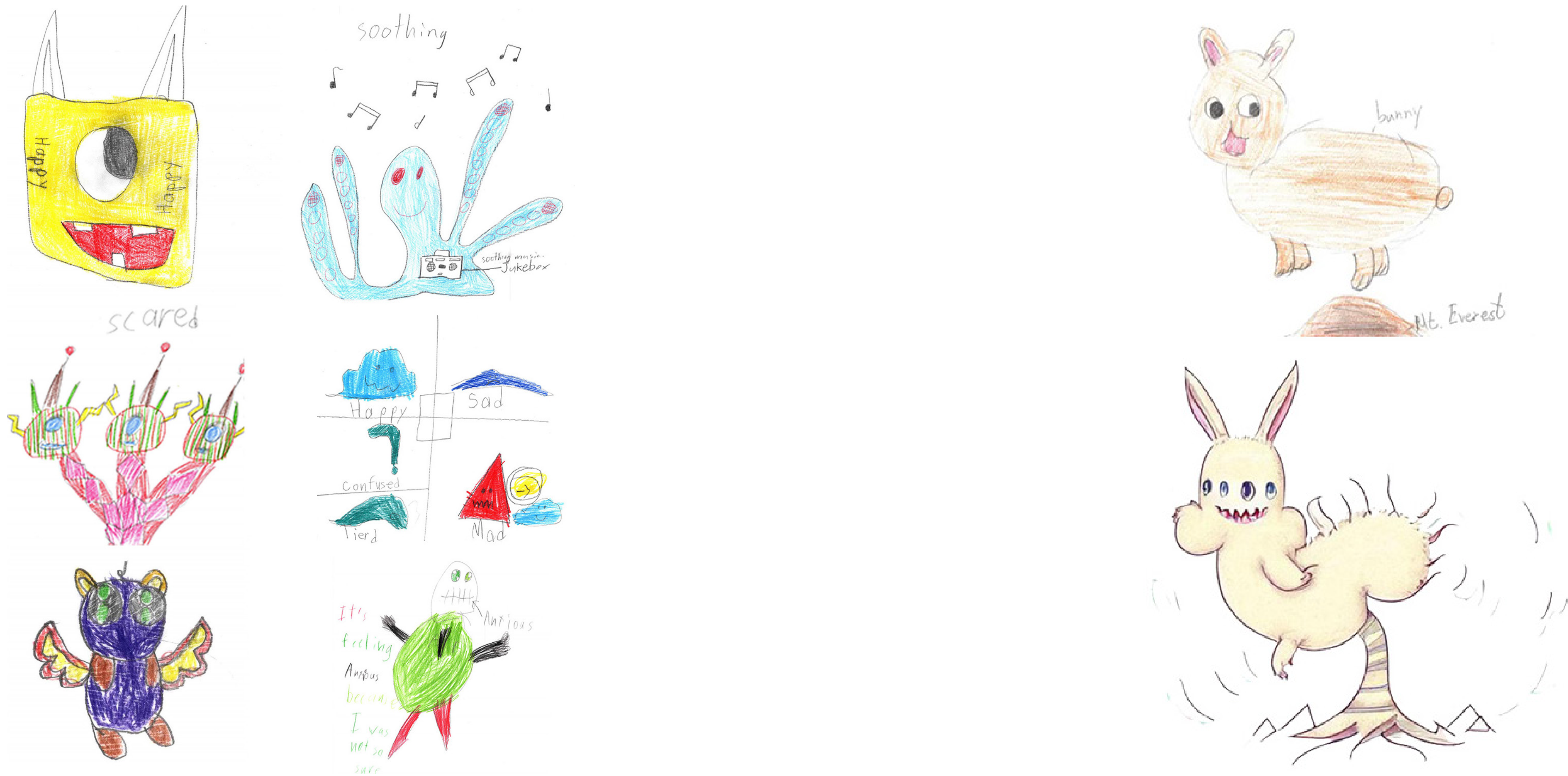
Journaling has proven benefits for dealing with symptoms of many mental health issues such as anxiety and depression

Technologies such as **NLP and Text to Image AI** can be used to extract data from text and generate art from data.



AI generated image of monsters

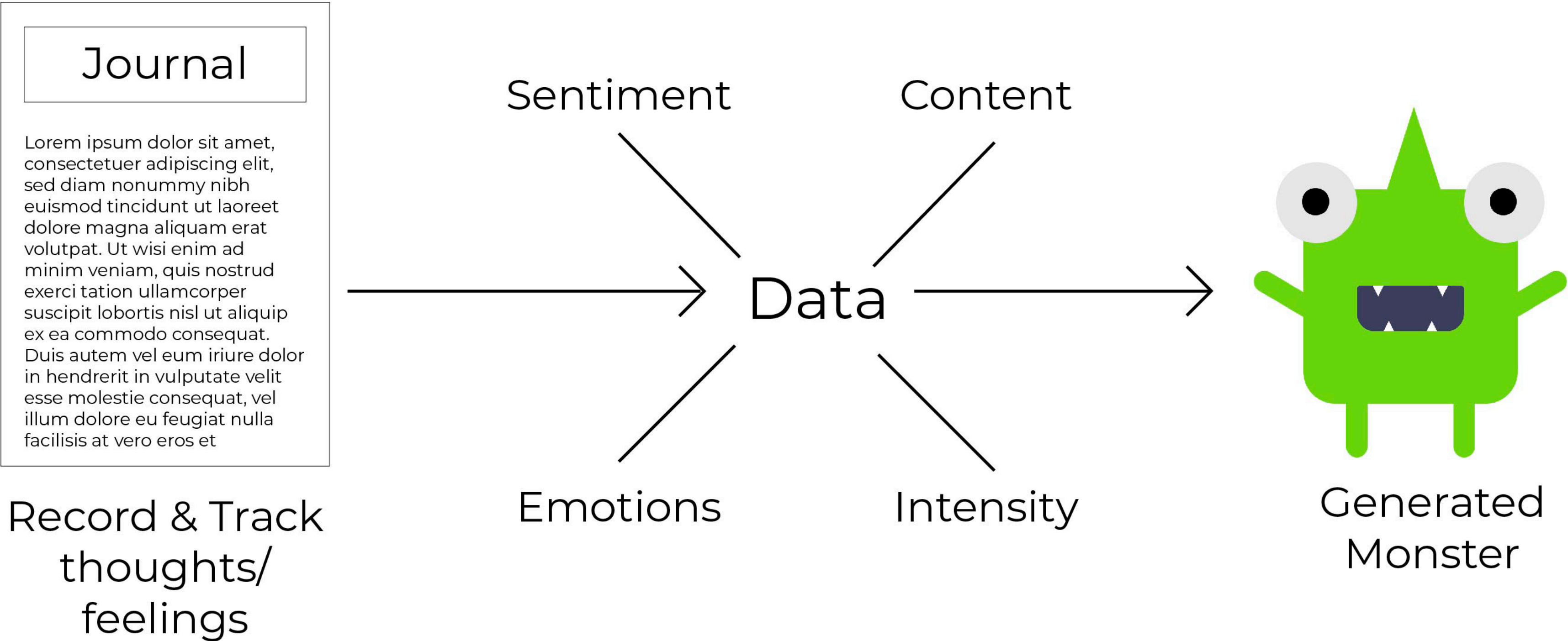
Research - Drawings



Gathered dozens of drawings from children of what they imagined their mind monsters to be in order to get ideas for features, themes, and meaningful visual elements

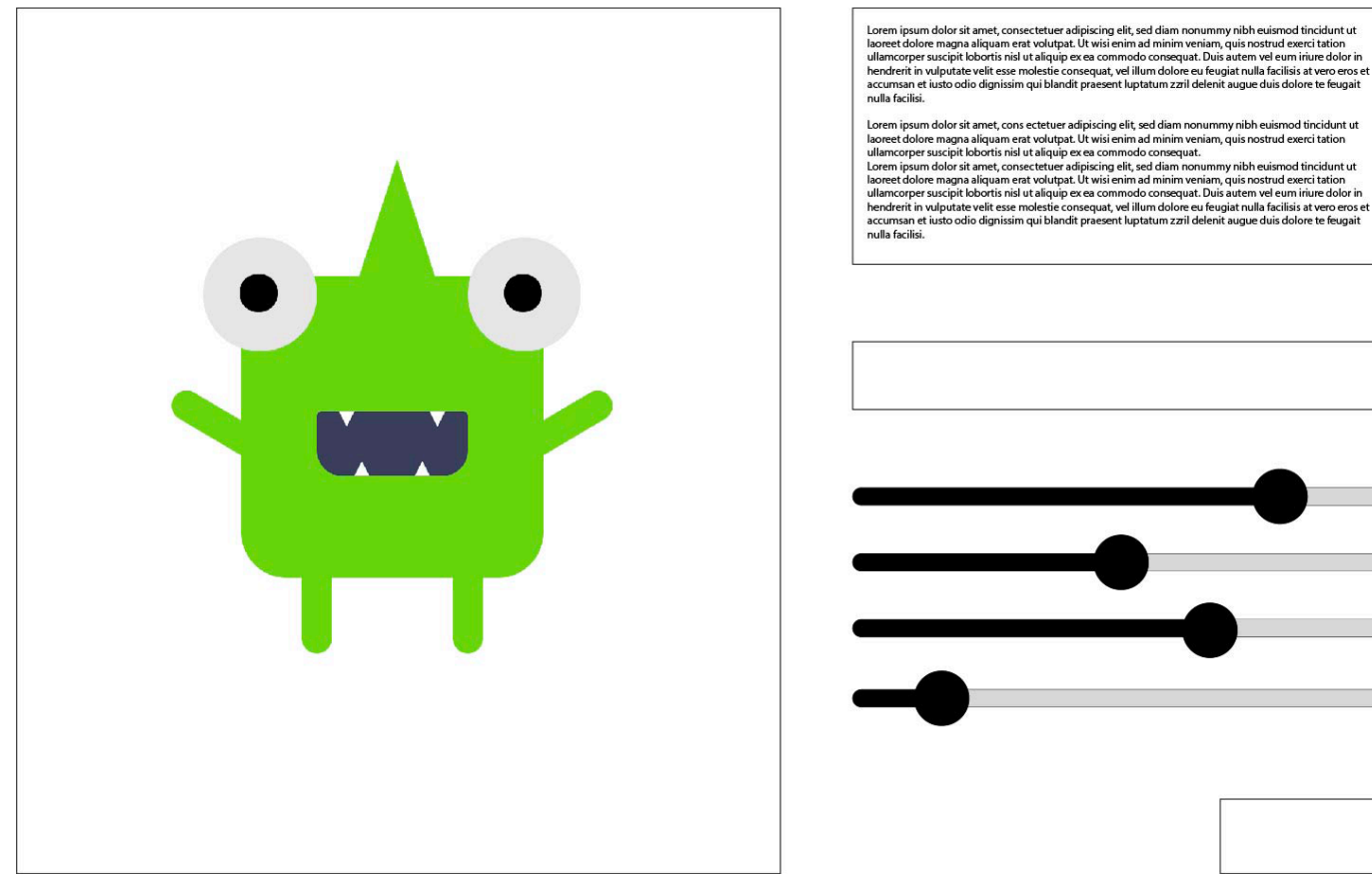
Experimented with using AI tools like Artbreeder to create generated monsters from the drawings and written notes on feelings

Concept



The main concept is to create an application that takes the user's journal entries, analyzes them with natural language processing to extract data, and then produces a generated monster that represents one's mind and mental wellbeing.

Concept

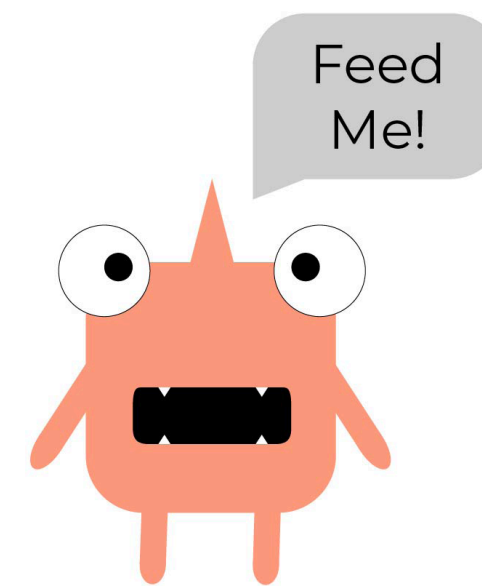


Input and edit information for dynamic changes to the monster

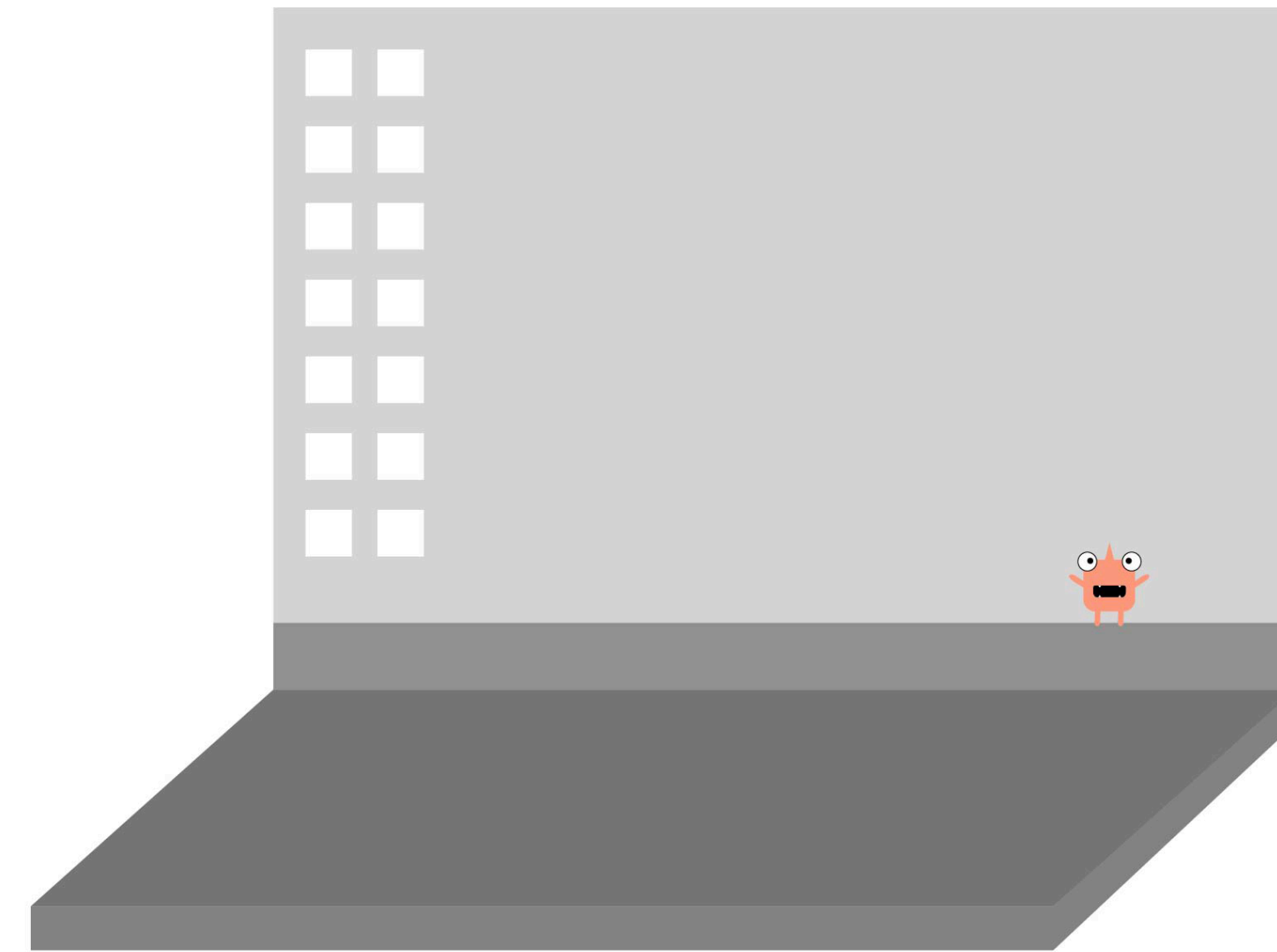
Goals

- Eat 3 meals today
- Shower
- Spend time with friends
- Sleep before midnight
- Go on a walk

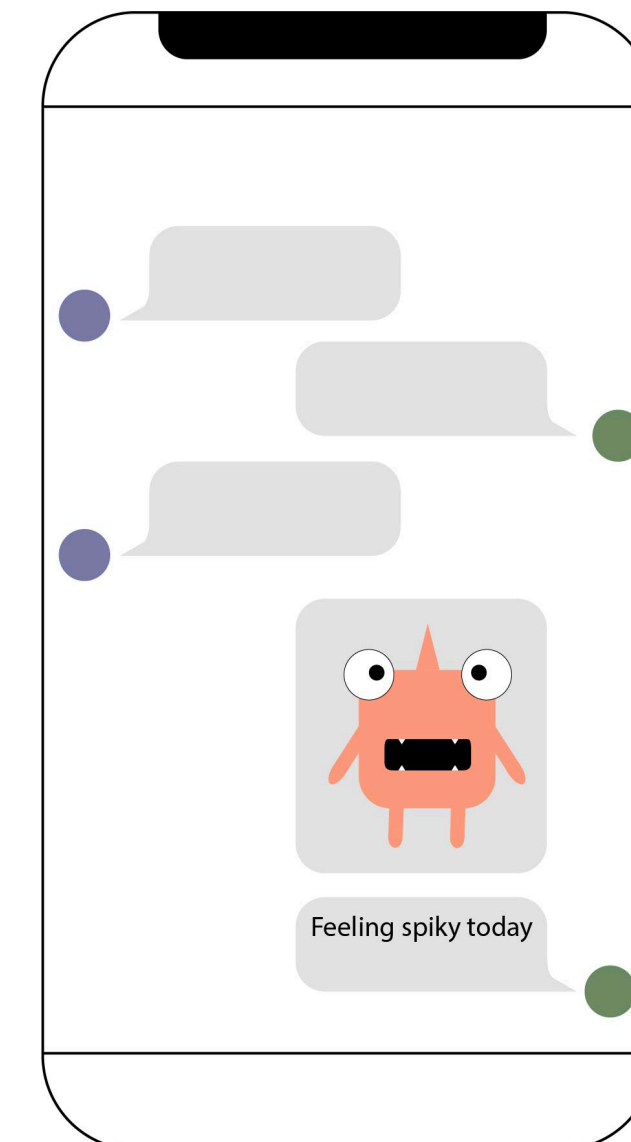
Set self care goals for your day to day life



Check off self care goals to care for your monster

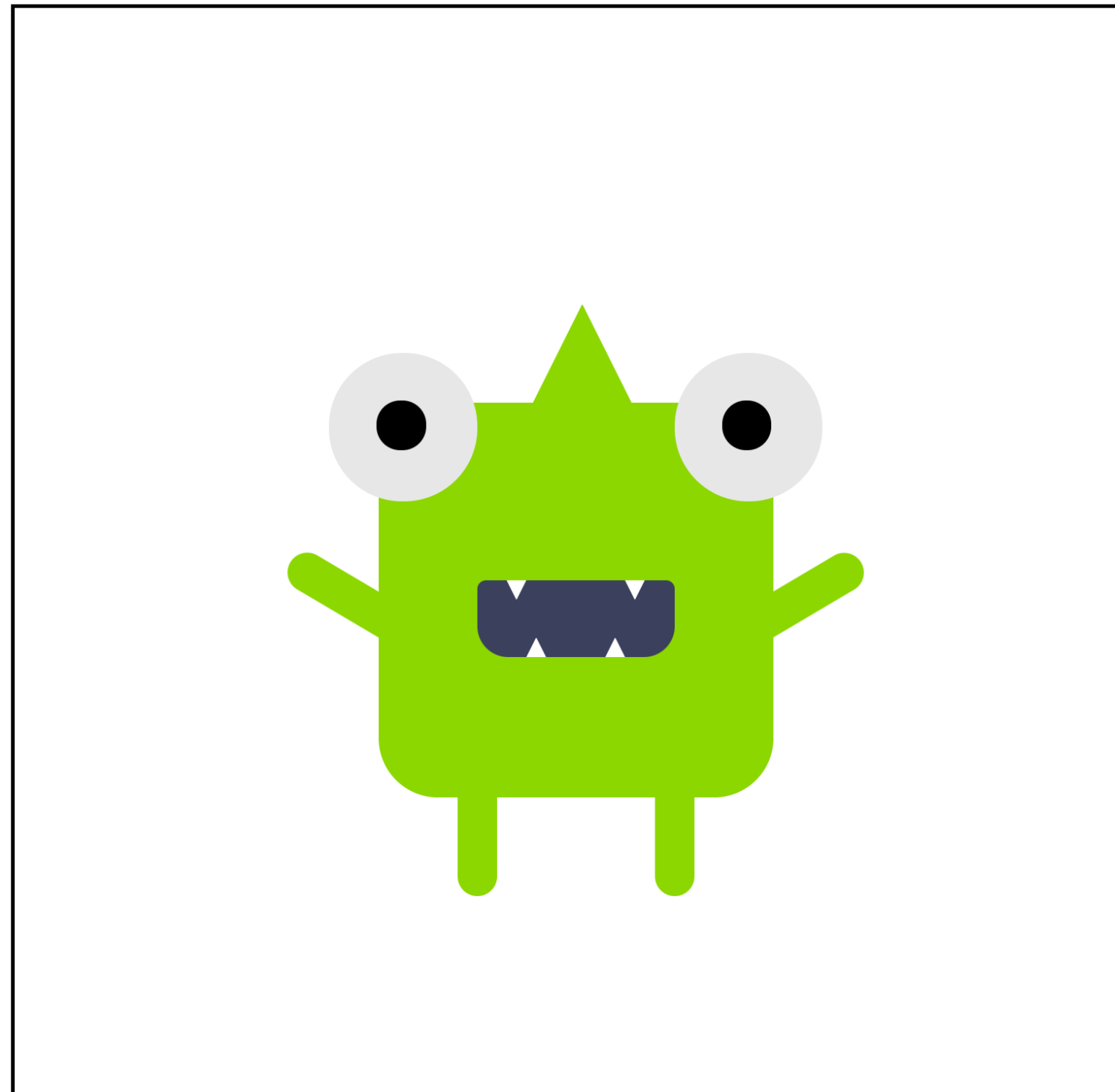


Keep your monster with you throughout the day



Communicate your feelings with others in a new way

Prototype



What's on your mind today?

Lorem ipsum dolor sit amet, consectetur adipiscing elit. Integer vel mollis lacus. Ut pretium, mi sed lobortis venenatis, ante magna semper nibh, vel egestas urna quam eget sapien. Nam sollicitudin, nunc in aliquet auctor, nisl tellus pellentesque massa, et imperdiet elit tortor a tortor. In sodales interdum dolor ac dignissim. Aenean ut neque ut erat vulputate euismod. Aliquam pretium nisl sit amet quam pellentesque ultricies. Aenean laoreet urna a est tincidunt, et blandit turpis lobortis. Praesent ac erat aliquet. Luctus justo in condimentum tellus. Suspendisse

Can you identify the main emotions you are feeling right now?

- Happy
- Sad
- Anxious
- Stressed
- Tired
- Calm

Overall, how intense are your emotions today?



Happy

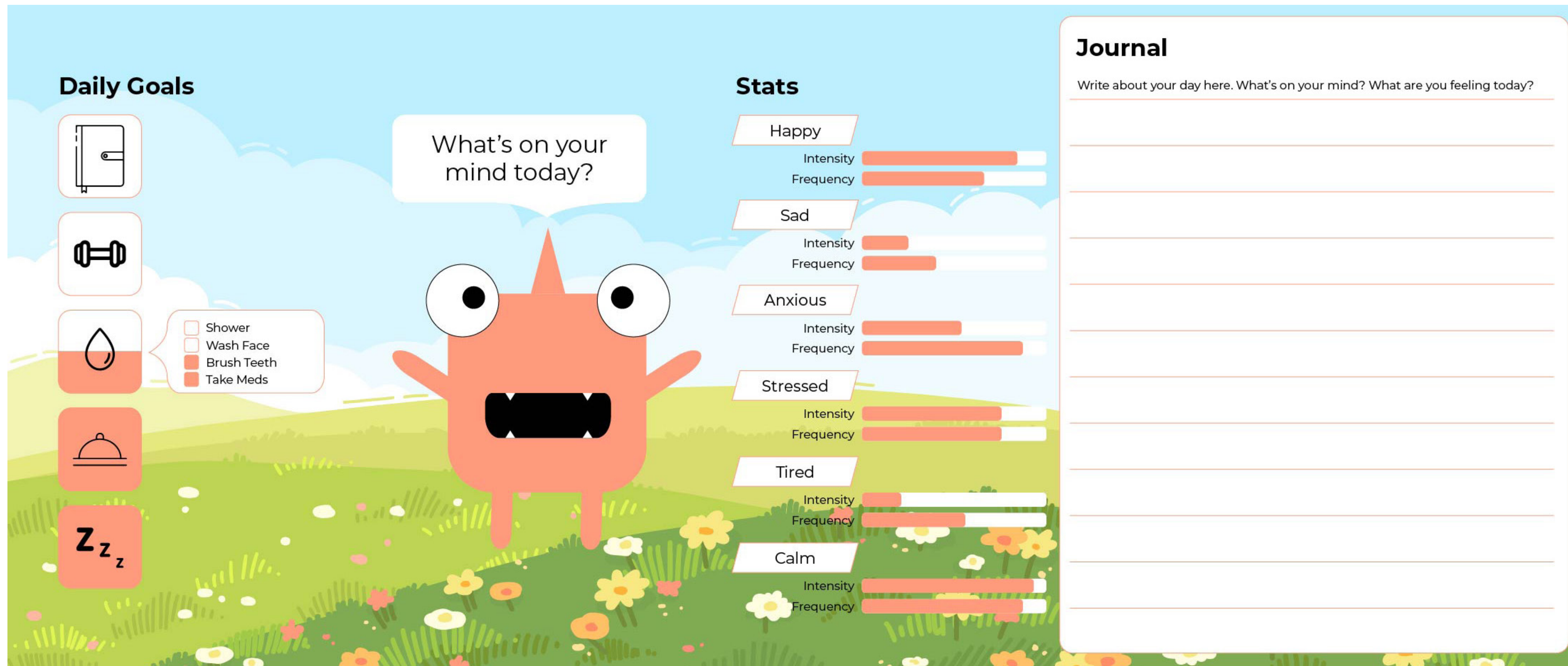


Sad



The main functionality (journaling, natural language processing, dynamic manipulation of monster image) was prototyped mainly in JavaScript to develop and test demo of the design

Prototype

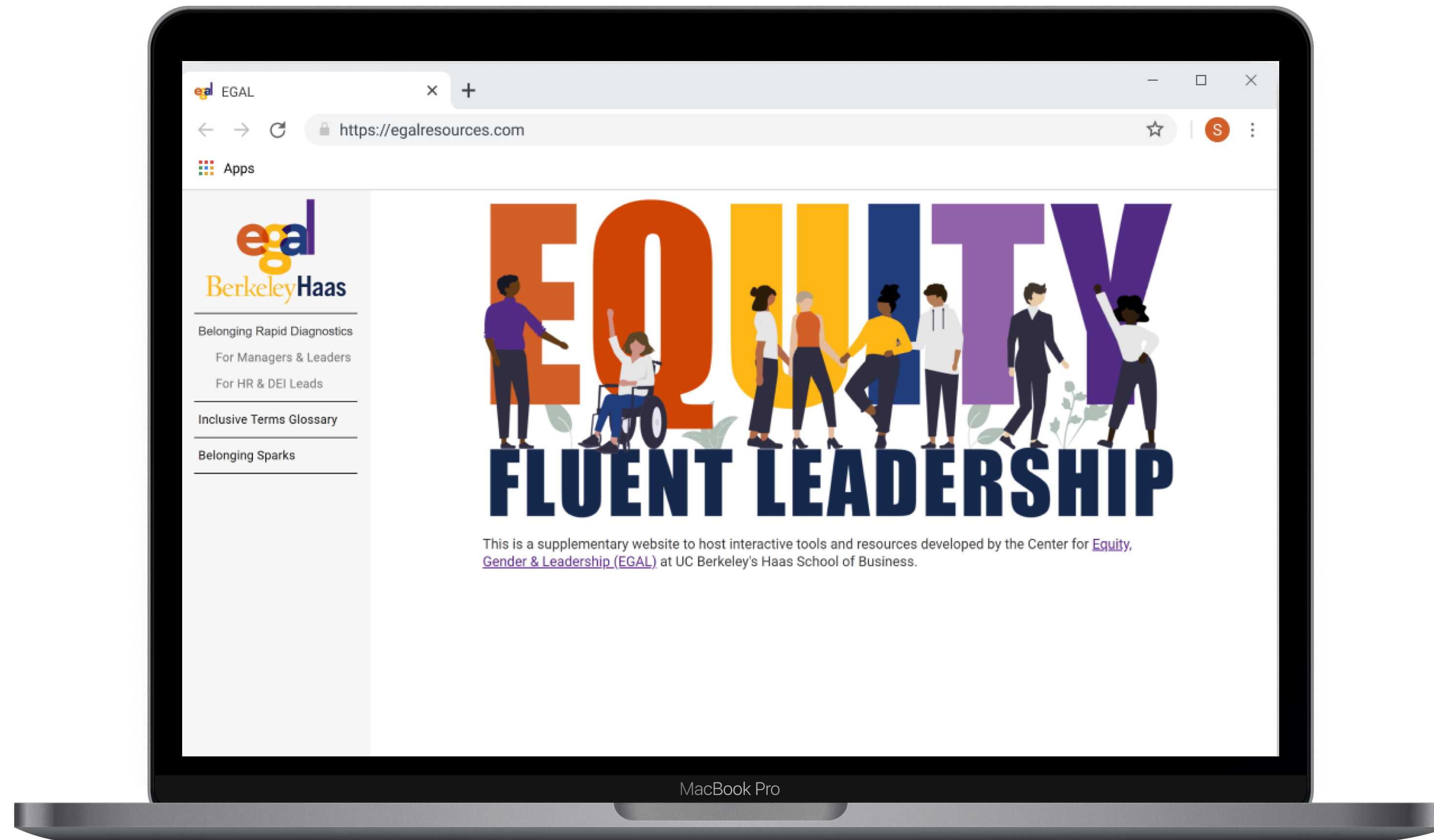


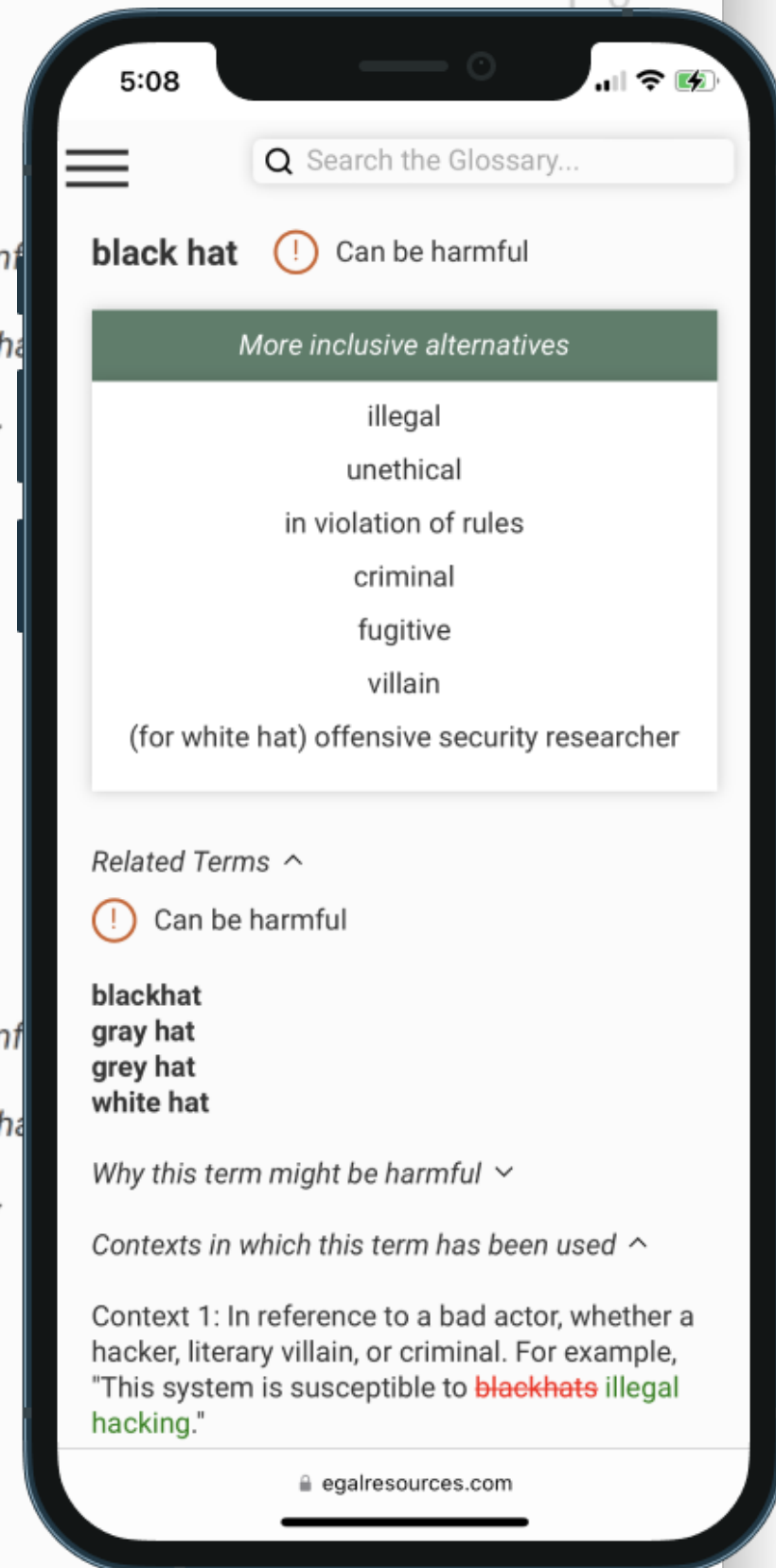
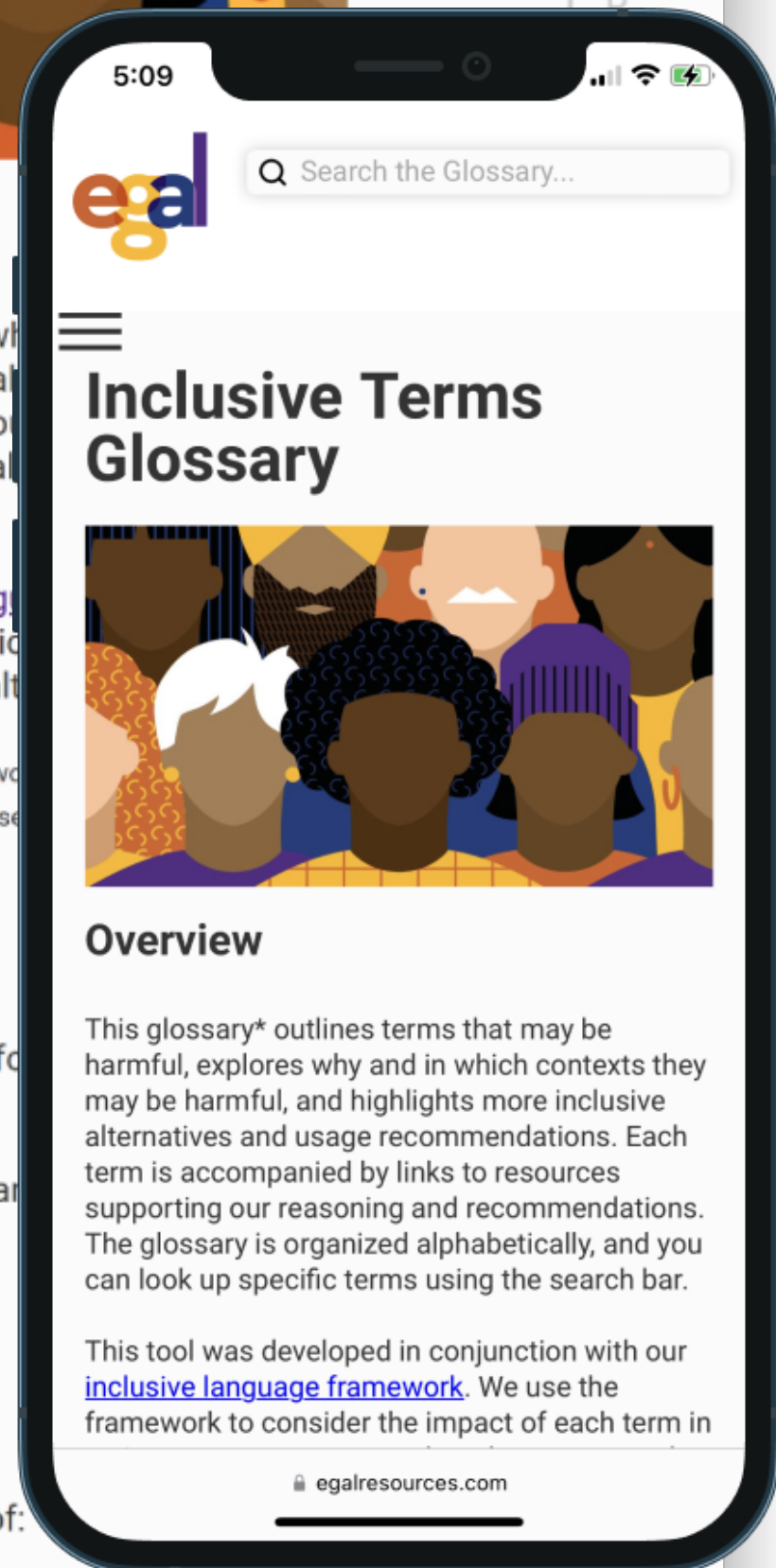
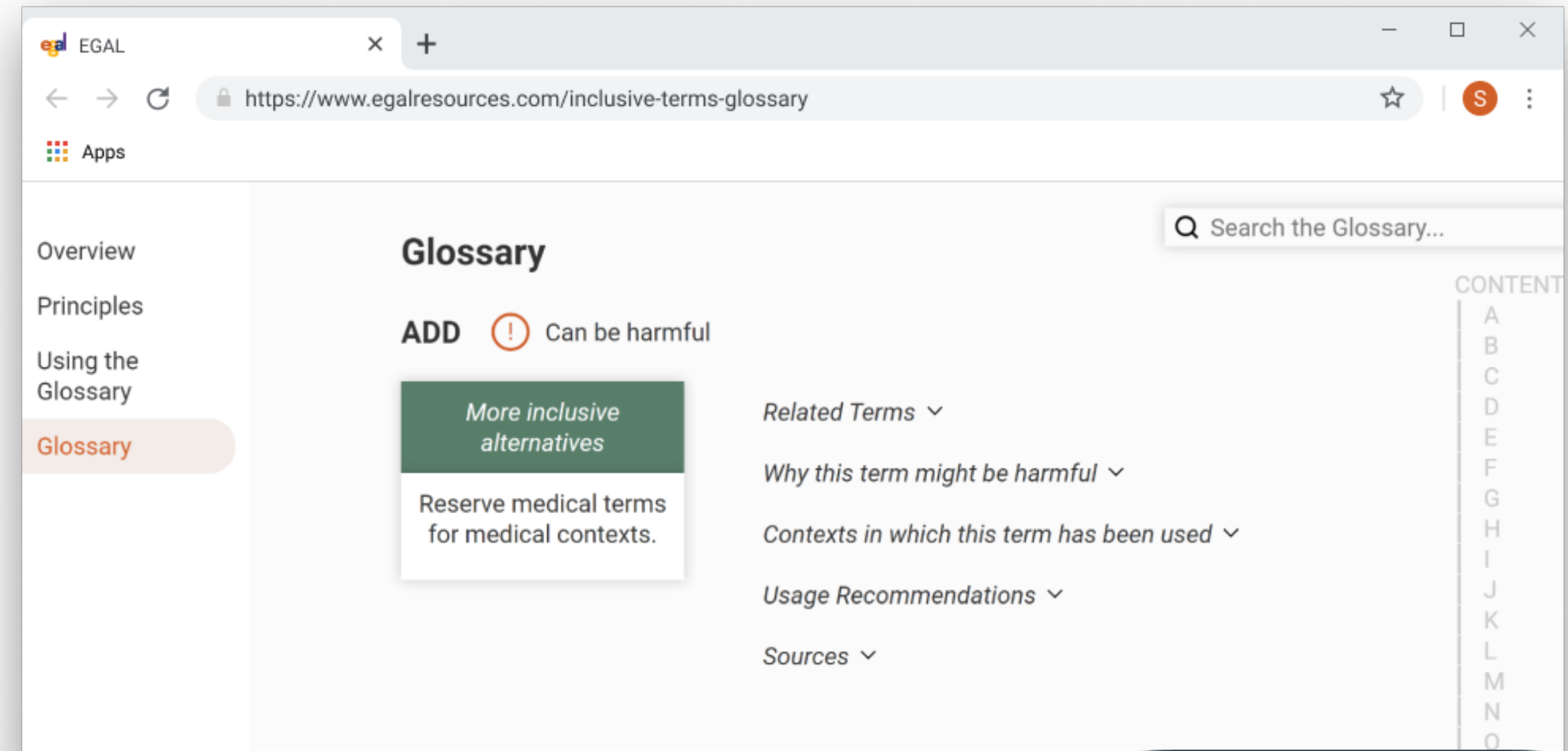
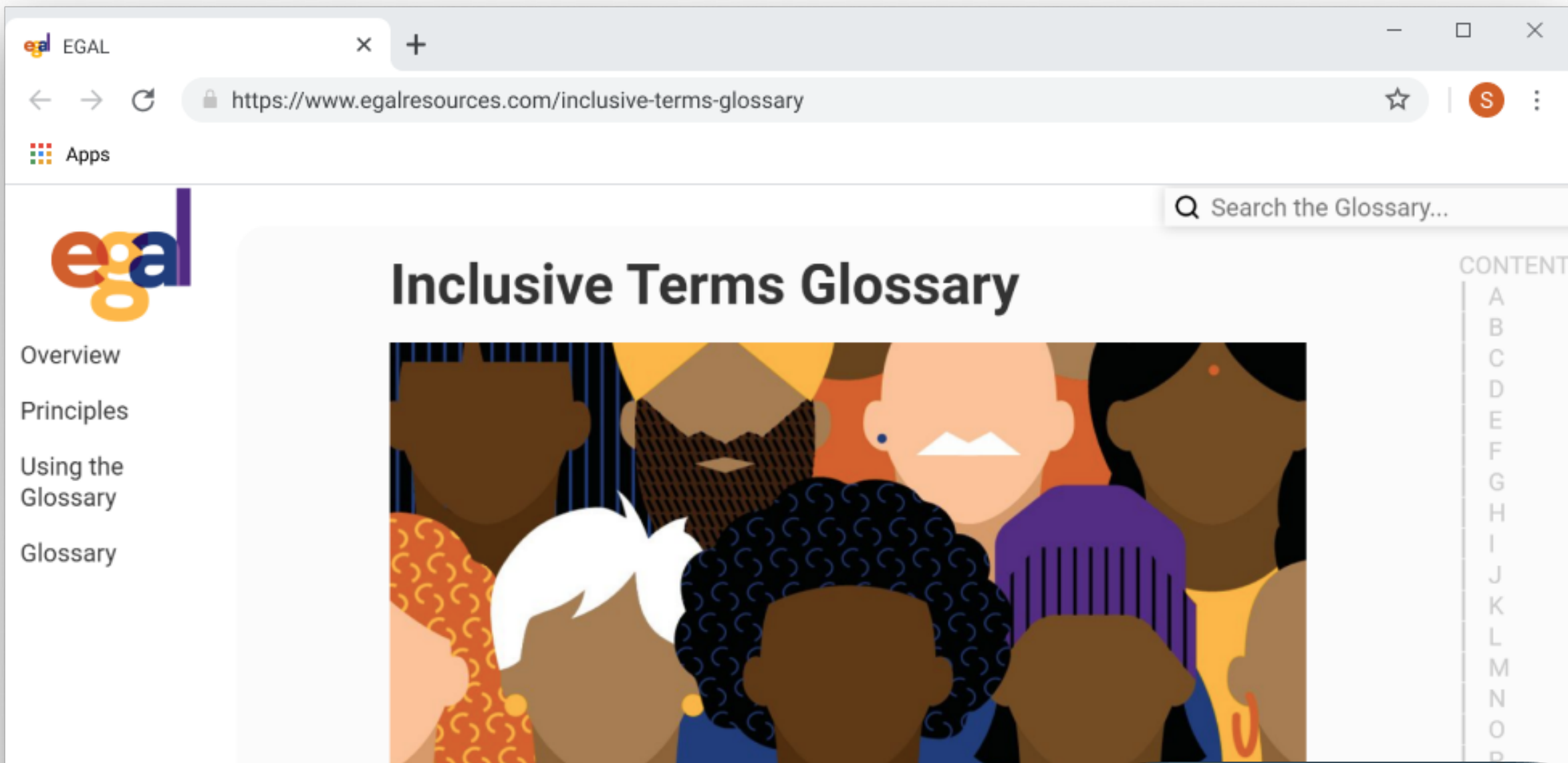
The main screens were designed and mocked up to represent a fun and playful UI that gamifies self care and mental wellbeing.

egalresources.com

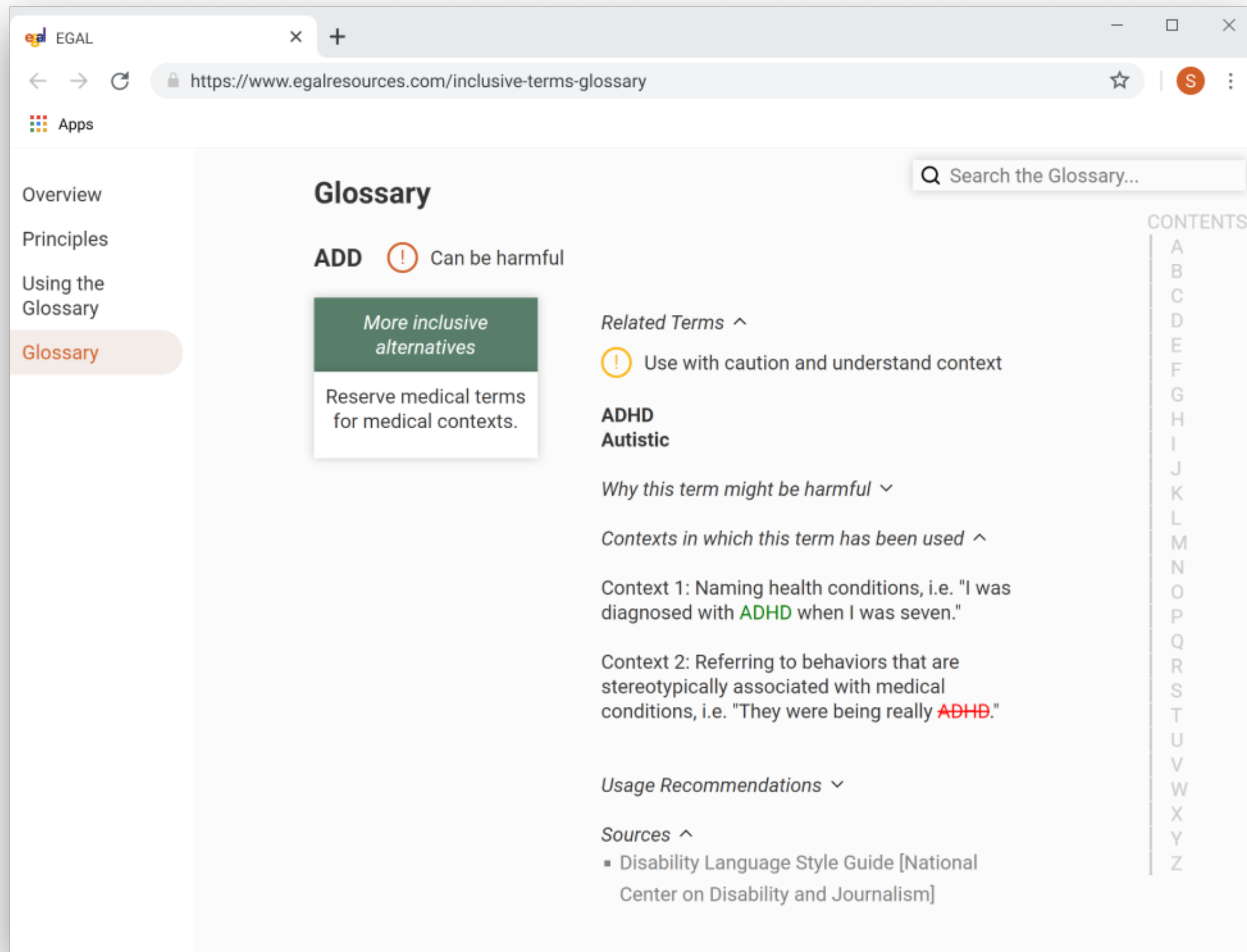
Berkeley Haas Center for Equity, Gender, and Leadership

I worked as a **Web Designer/Developer** for EGAL and built egalresources.com from scratch using mostly **HTML, CSS, and JavaScript**. It is hosted on **Webflow** and is used as an extension of their official Berkeley site to deploy tools that advance their mission of creating Equity Fluent Leaders.





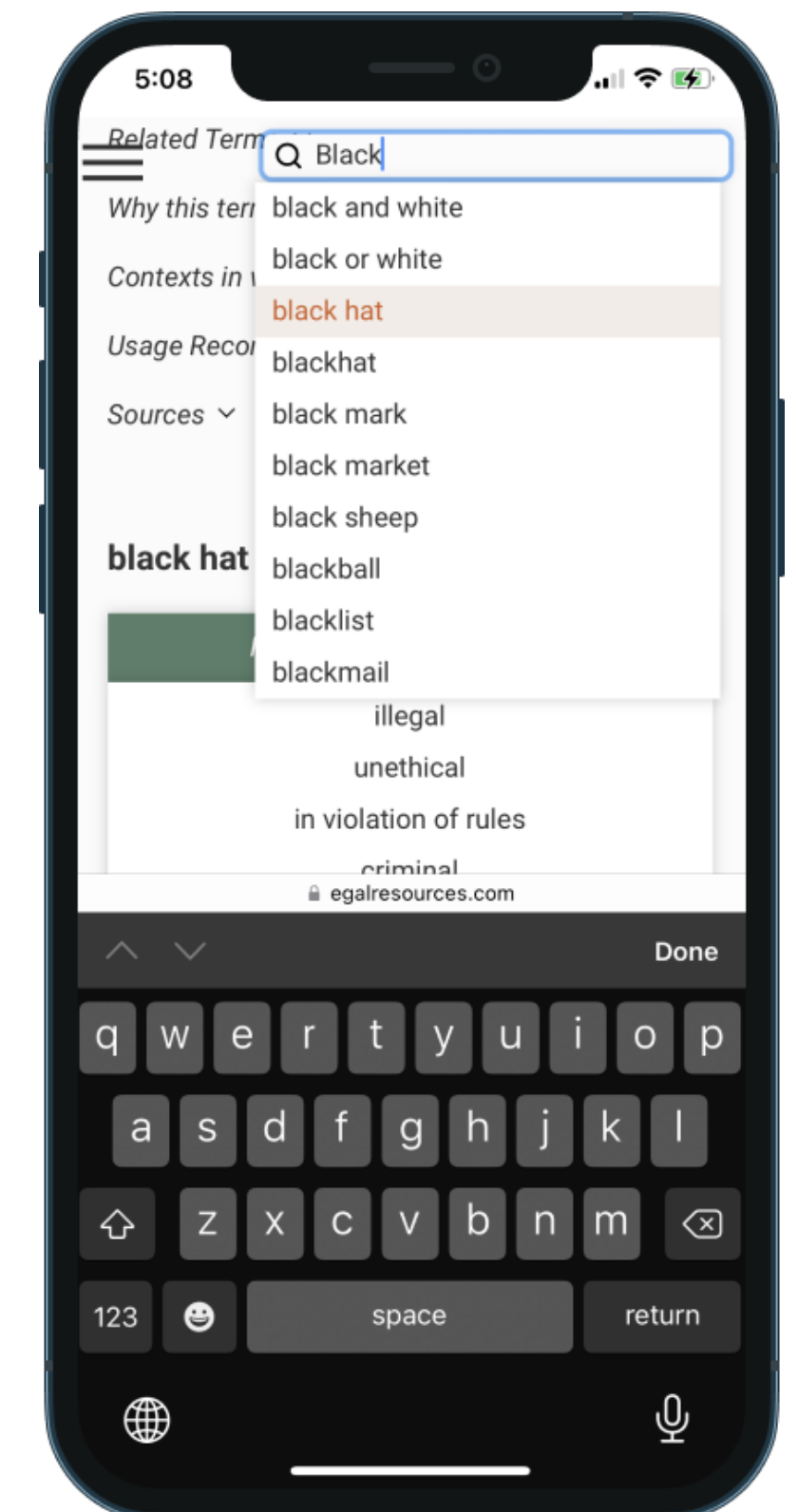
Inclusive Terms Glossary



The sidebar lets the user **navigate** through the information about the glossary as well as jump straight to the terms.

The content menu lets the user **jump to a specific letter** of the alphabet and see what words begin with that letter.


The glossary is in alphabetical order and is also **easily searchable**.



EGAL

https://www.egalresources.com/belonging-rapid-diagnostic-for-managers-leaders

Apps



BELONGING RAPID DIAGNOSTIC For Managers & Leaders

This survey will take ~10 minutes to complete.


This tool is for managers and business leaders who would like to take the lead in helping advance belonging in their organization.

INSTRUCTIONS

- Reflect on and answer the questions below by selecting your response to be shared with others and is for your own personal leadership growth.
 - Note: Many questions in this diagnostic tool can be interpreted subjectively. To help you answer the questions and check any biases, we also provide an example of how you have delivered on what the question is asking about. This is for personal reflection and will not be shared with anyone else. At least one example is provided for each question.
- Write some actions you will work on related to the questions you circled. Share your ideas / plays to put into action relevant around what you circled.
- Re-take this diagnostic periodically (we suggest every six months) to help as a check in on your progress, and to inform how you can continue to grow as a Leader.
- Find the PDF version of the tool [here](#)

Start the Survey

5:11



BELONGING RAPID DIAGNOSTIC For Managers & Leaders

This survey will take ~10 minutes to complete.

This tool is for managers and business leaders who would like to take the lead in helping advance belonging in their organization.

INSTRUCTIONS

- Reflect on and answer the questions below by selecting your response. This is a tool not meant to be shared with others and is for your own personal leadership growth, so answer honestly!
 - Note: Many questions in this diagnostic tool can be interpreted subjectively. This is meant to serve as a personal reflection tool as opposed to a concrete, comparable scoring tool. To help you answer the questions and check any biases, we also suggest you try to write down an example of how you have delivered on what the question is asking about.

egalresources.com

EGAL

https://www.egalresources.com/belonging-rapid-diagnostic-for-managers-leaders

Apps

Your overall score on the assessment is 50%

Inclusive Work Environments 57%

[Consult these particular strategic plays](#)

Play 1: Hold meetings where all participants feel supported, can actively participate, and are heard.

Play 3: Prioritize inclusive and precise language.

Connectivity Opportunities

[Consult these particular strategic plays](#)

Play 4: Create formal and informal opportunities for employees to connect.

Organizational Values & Principles

[Consult these particular strategic plays](#)

Play 6: Leaders - Refine the organization's mission, vision, and purpose and live by them every day.

Play 7: Leaders - Establish clear organizational values and create standards of conduct based on those values.

Acknowledgement & Accountability Structures

[Consult these particular strategic plays](#)

Play 8: Give recognition and reward people for their work contributions.

Play 9: Update job descriptions and provide key information in hiring.

Work-Life Boundaries

3:46

Your overall score on the assessment is 66%

Inclusive Work Environments 66%

[Consult these particular strategic plays](#)

Play 1: Hold meetings where all participants feel supported, can actively participate, and are heard.

Connectivity Opportunities 83%

[Consult these particular strategic plays](#)

Congrats! You did great in this section! Look through the other sections for areas you may need more improvement.

Organizational Values & Principles 22%

[Consult these particular strategic plays](#)

Play 6: Leaders - Refine the organization's mission, vision, and purpose and live by them every day.

egalresources.com

Belonging Rapid Diagnostics

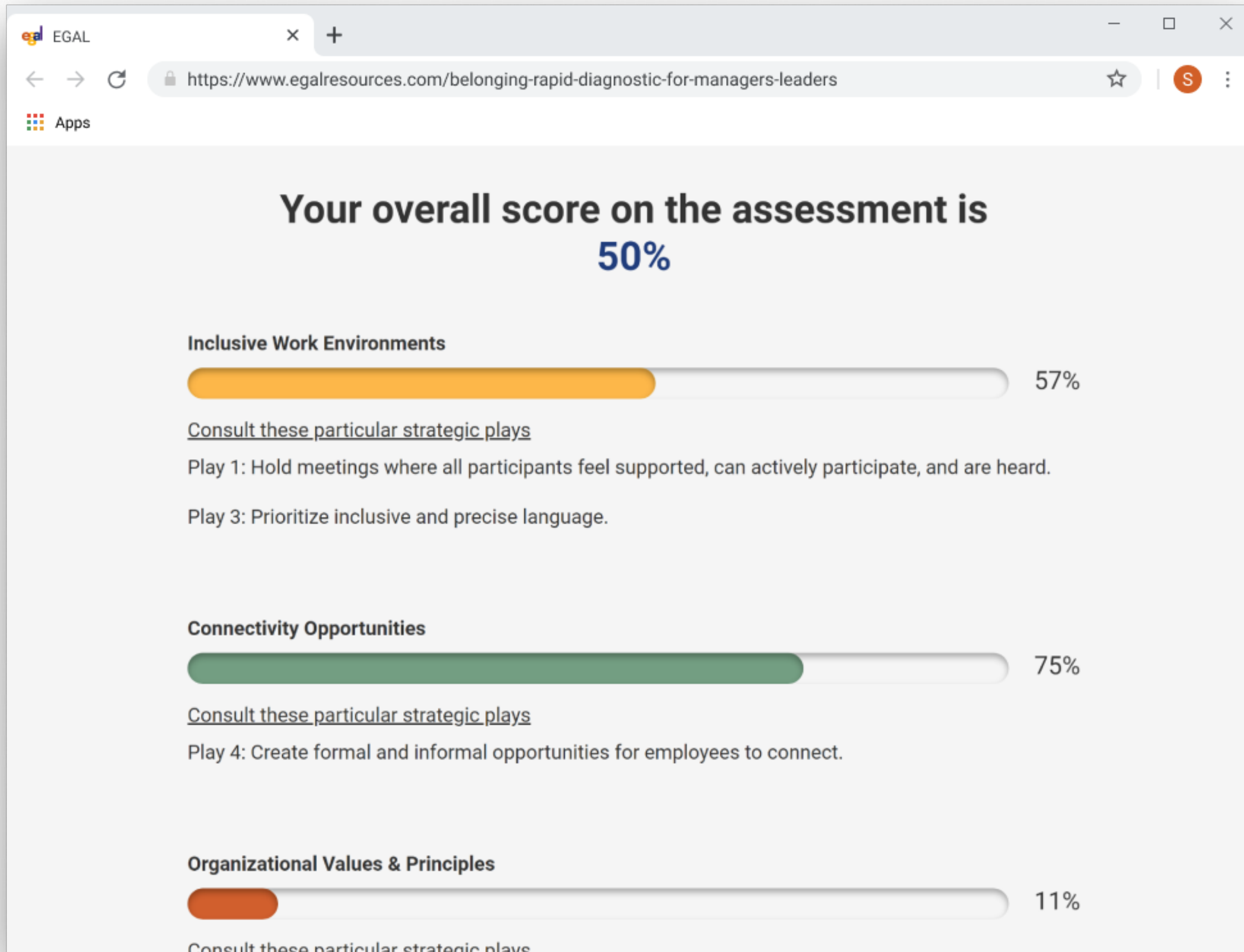
The screenshot shows a web browser window with the URL <https://www.egalresources.com/belonging-rapid-diagnostic-for-managers-leaders>. The page features the logo for 'egal BerkeleyHaas' in the top left. The main heading is 'BELONGING RAPID DIAGNOSTIC For Managers & Leaders'. Below this is a progress bar and the section title 'Inclusive Work Environments'. The first question is: '1. How often are you starting meetings with a couple minutes for employees to chat and connect or using personal prompts to which employees can respond? *'. The response options are: Never, Sometimes, Usually, Always, and N/A. The second question is: '2. Do you ensure all attendees have opportunities to speak and be heard in meetings? *'. The response options are: Never, Sometimes, Usually, and Always.

Each survey asks about 30-40 **multiple choice questions** about the way the user is running their organization.

An area for **reflections** at the bottom of each page allows the user to write about examples and experiences related to the question topics and keep a record of ways they are currently advancing belonging in their organization.

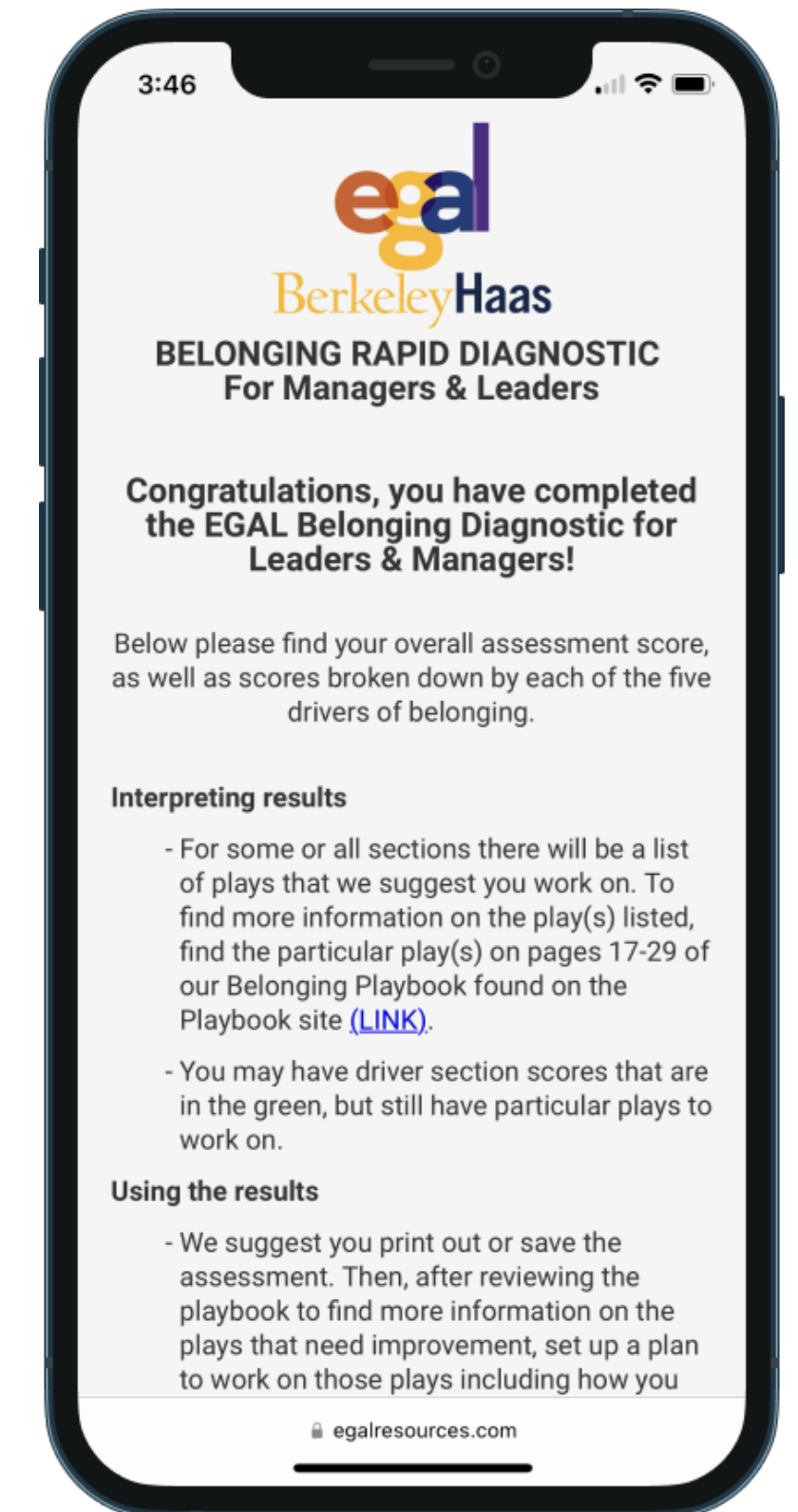
The screenshot shows the mobile version of the survey. At the top, it displays the time '5:11' and signal strength, Wi-Fi, and battery icons. The logo for 'egal BerkeleyHaas' is at the top center. Below the logo is the heading 'BELONGING RAPID DIAGNOSTIC For Managers & Leaders' and a progress bar. The section title 'Demographic Questions' is centered. The first question is: 'What's the industry that most accurately describes your organization? *'. Below this is a dropdown menu with 'Select...' and a downward arrow. The second question is: 'Select your region: *'. Below this is another dropdown menu with 'Select...' and a downward arrow. At the bottom, there are two buttons: 'Back' and 'Next'. The footer of the page shows the URL 'egalresources.com'.

Belonging Rapid Diagnostics

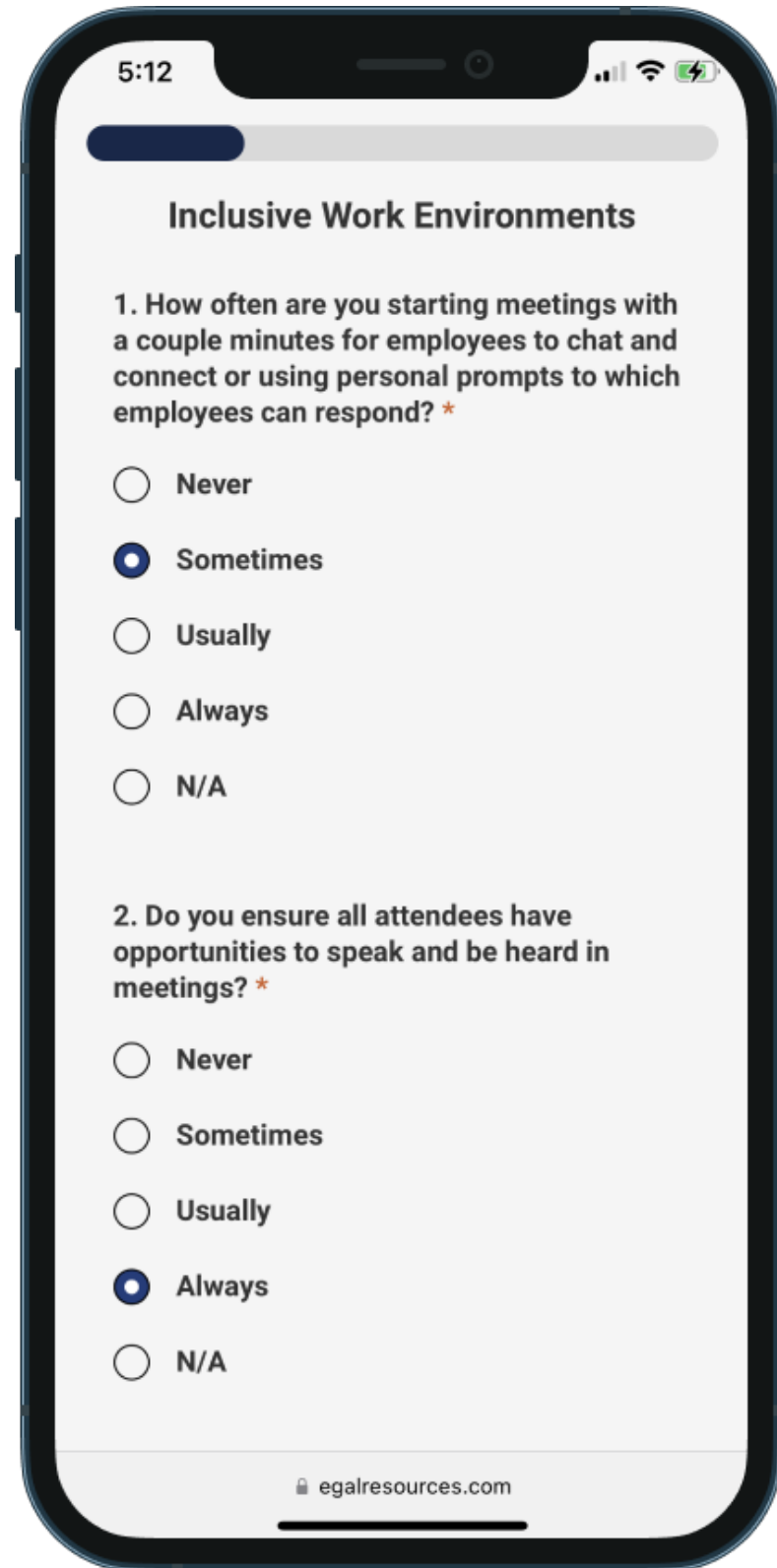


After submitting the survey, a **scoresheet** showing the **overall score** as well as **individual scores for each category** of question will be displayed. Each question is linked to a specific play in the Belonging Playbook so in each section, a **list of suggested plays** will be shown based on what questions were scored low.

If the user filled out their email on the optional email question of the survey, a copy of this scoresheet would also be sent to them after submitting the diagnostic.



Belonging Rapid Diagnostics



Center for Equity, Gender, and Leadership <egal@berkeley.edu>
 Reply-To: us17-c62b590601-d459b15fd5@inbound.mailchimp.com
 To: sarafriend@berkeley.edu

Sat, Aug 13, 2022 at 3:10 /



Hello,

You are receiving this email because you filled out the Belonging Rapid Diagnostic for HR & DEI Leaders and opted in to a periodic check-in. Retaking the diagnostic every six months and comparing your results can help you to hold yourself accountable, check on your progress, and inform how you can continue to grow as an Equity Fluent Leader.

Click [\[here\]](#) to retake the diagnostic.

Best,
 Team EGAL

Data	Overall Score	Inclusive Work Environments	Connectivity Opportunities	Organizational Values & Principles	Acknowledgment & Accountability Structures	Work-Life Boundaries	Putting Equity Fluent Leadership Into Practice	Responses
Average	65	69	60	60	60	71	62	5
Geography								
Africa	0	0	0	0	0	0	0	0
Asia	0	0	0	0	0	0	0	0
Caribbean	0	0	0	0	0	0	0	0
CentralAmerica	0	0	0	0	0	0	0	0
Europe	0	0	0	0	0	0	0	0
NorthAmerica	65	69	60	60	60	71	62	5
Oceania	0	0	0	0	0	0	0	0
SouthAmerica	0	0	0	0	0	0	0	0
Industry								
Natural Resources and Mining	0	0	0	0	0	0	0	0
Construction	0	0	0	0	0	0	0	0
Manufacturing	0	0	0	0	0	0	0	0
Trade, Transportation, and Utilities	0	0	0	0	0	0	0	0
Information	49	66	58	33	13	61	42	1
Financial Activities	0	0	0	0	0	0	0	0
Professional and Business Services	62	71	66	44	53	71	50	1
Education, Health Services, and Social Assistance	81	87	58	100	86	71	92	1
Leisure and Hospitality	0	0	0	0	0	0	0	0
Other services (except Public Administration)	0	0	0	0	0	0	0	0
Public Administration	0	0	0	0	0	0	0	0
Nonprofit/hongovernmental	67	59	59	61	74	77	63	2
N/A	0	0	0	0	0	0	0	0

Fully **responsive**

If you enter your email, you receive a **follow up email** in 6 months to encourage you to retake the assessment This is done through customer journeys in **Mailchimp**.

Data from the surveys are **stored onsite** in a spreadsheet for EGAL to understand the way people are scoring on the surveys. This data is averaged overall, per category, and for each demographic.

iCareU

Practice self care, anywhere



How might we use **meditative practices** to relieve people's anxiety when they are not at home?

How might we **utilize the senses** to provide a calming affect to the user's body?

How might we make self care and anxiety relief **portable, accessible, and discrete**?





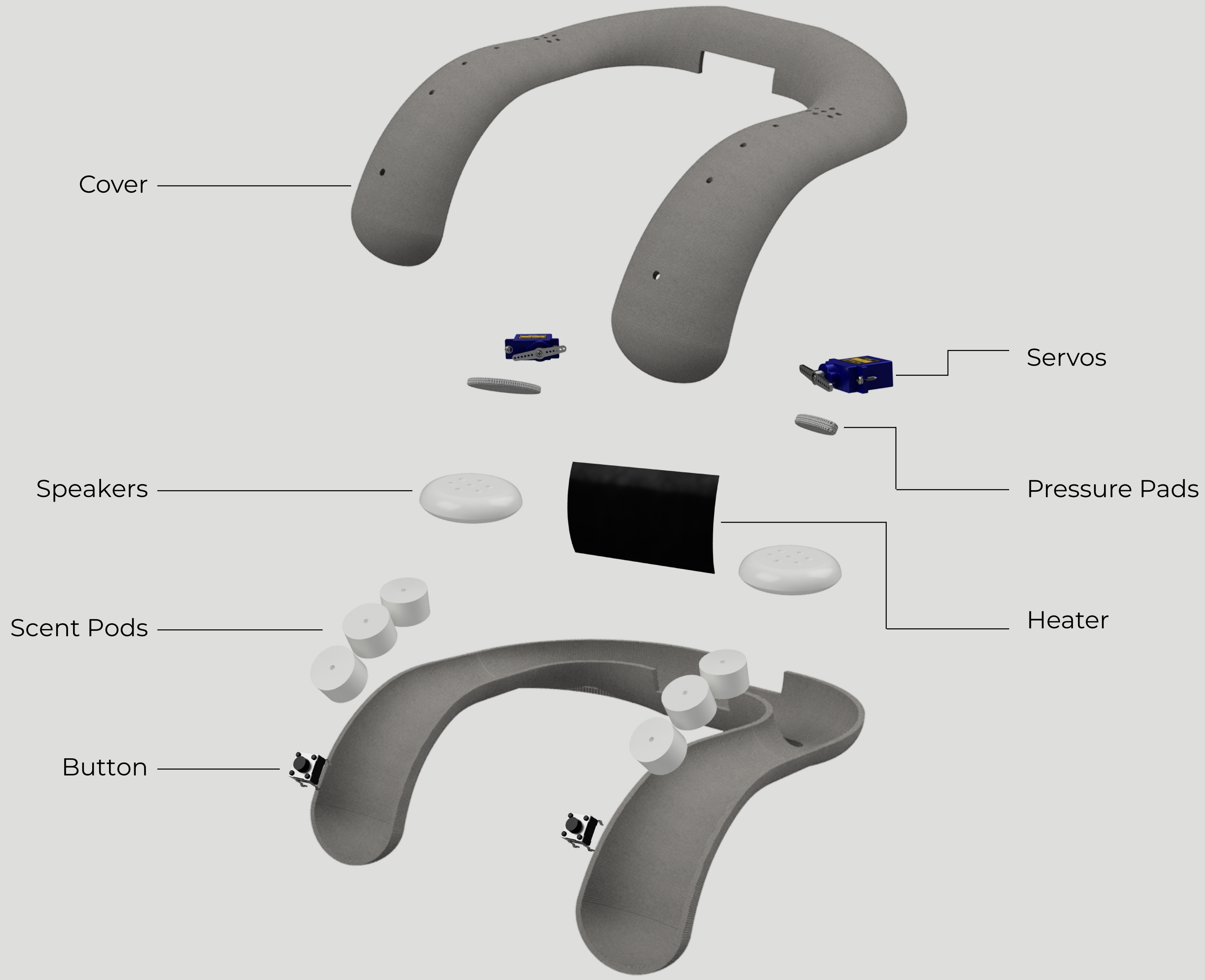
iCareU utilizes meditation practices to help users **relieve their stress and anxiety.**

Our design activates different senses through scent, sound, heat, and pressure so **no matter where you are, you can feel calm and confident.**

The iCareU System

The wearable's purpose is to allow the user to **activate their different senses**. It sits around a user's neck on their shoulders and is designed to **curve around the contours of the body**.

- Inside the device, there are:
- servos that can push down on pressure pads aimed at your shoulder wells,
- speakers to play sounds or calming music,
- scent pods to release your favorite smells,
- and a heater at the back of your neck to provide warmth.

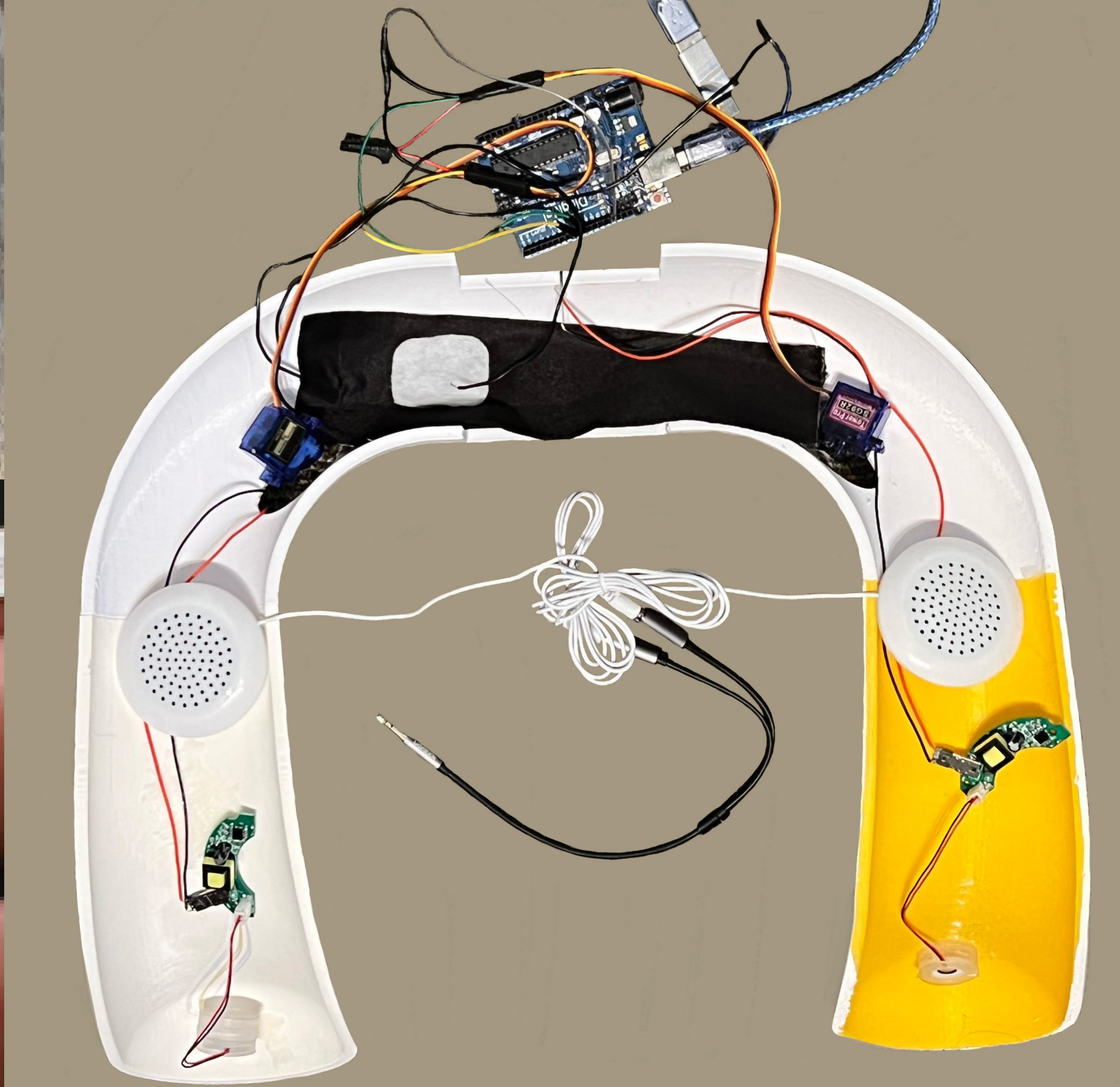


Prototyping

Our prototype was created by modeling the outer casing in **CAD and 3D printing** it in pieces.

We had all of the different components mounted inside and controlled with a combination of **Arduino and Raspberry Pi**.

Future iterations of this prototype would include being made out of a softer, more flexible material, including the power source inside the casing to make the device fully self contained, and tweaking the servo mechanism to better hit the pressure points in the users shoulders. We also would want to connect it to our app to give the user better control.

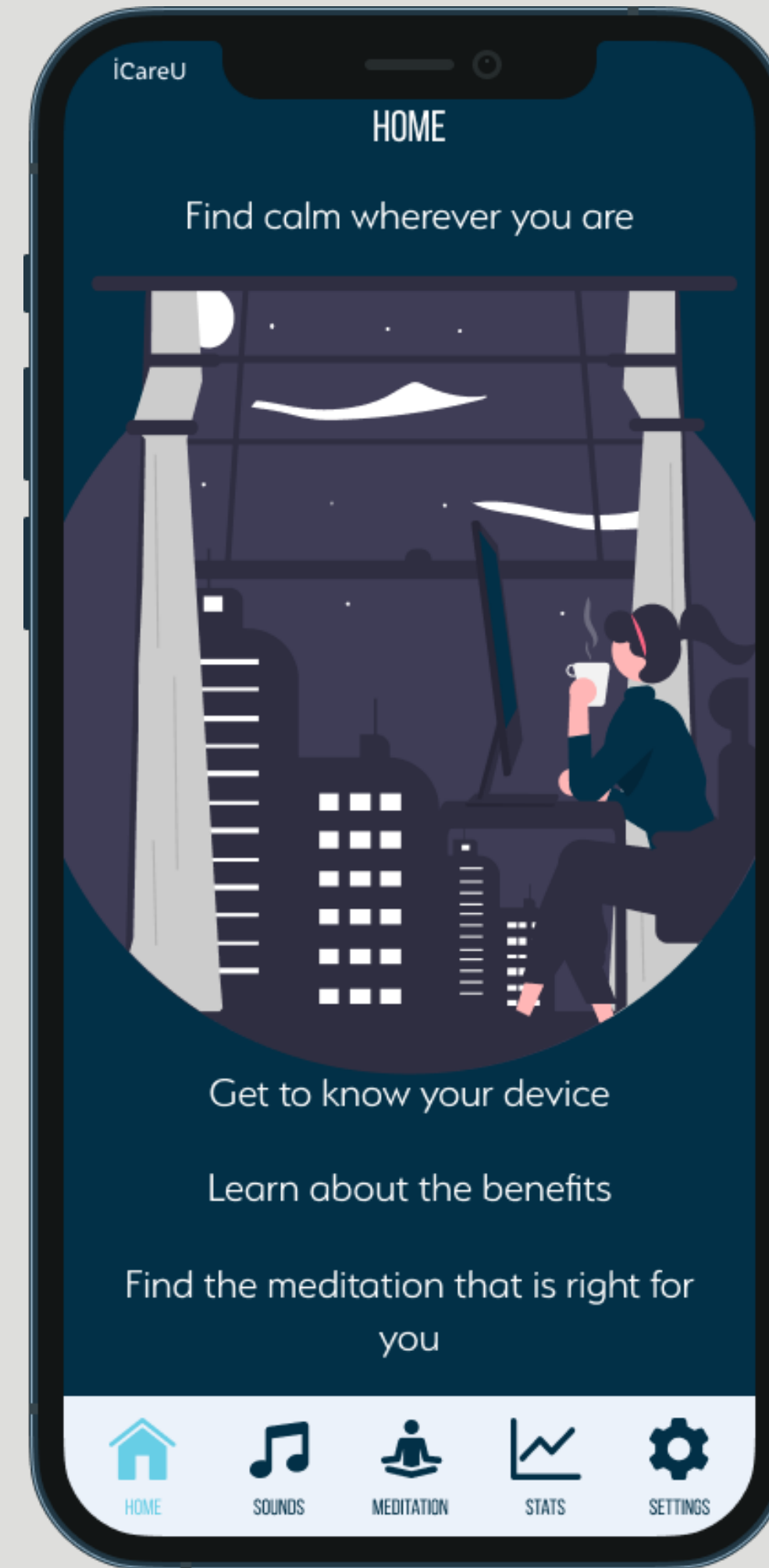
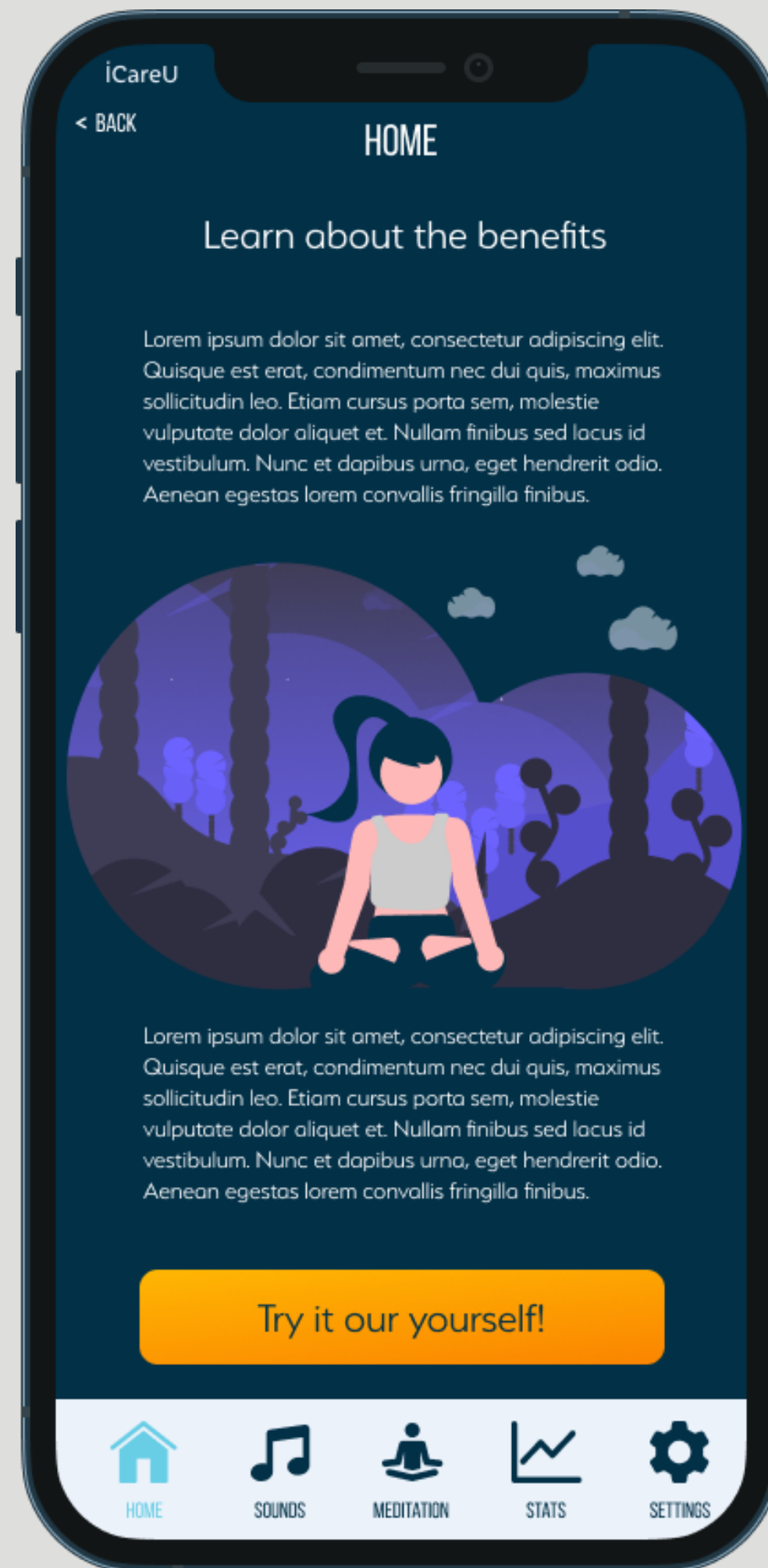


The iCareU App

The app was designed and prototyped in **Figma** to showcase the intended functionality and interactions.

Learn about the iCareU device, how to set it up, and the benefits of using it. Walk through the device function and get the **background information** needed to get started.

Choose **calming music or sounds** to play through the device speakers. These sounds include noises such as forest, ocean, and Cafe.

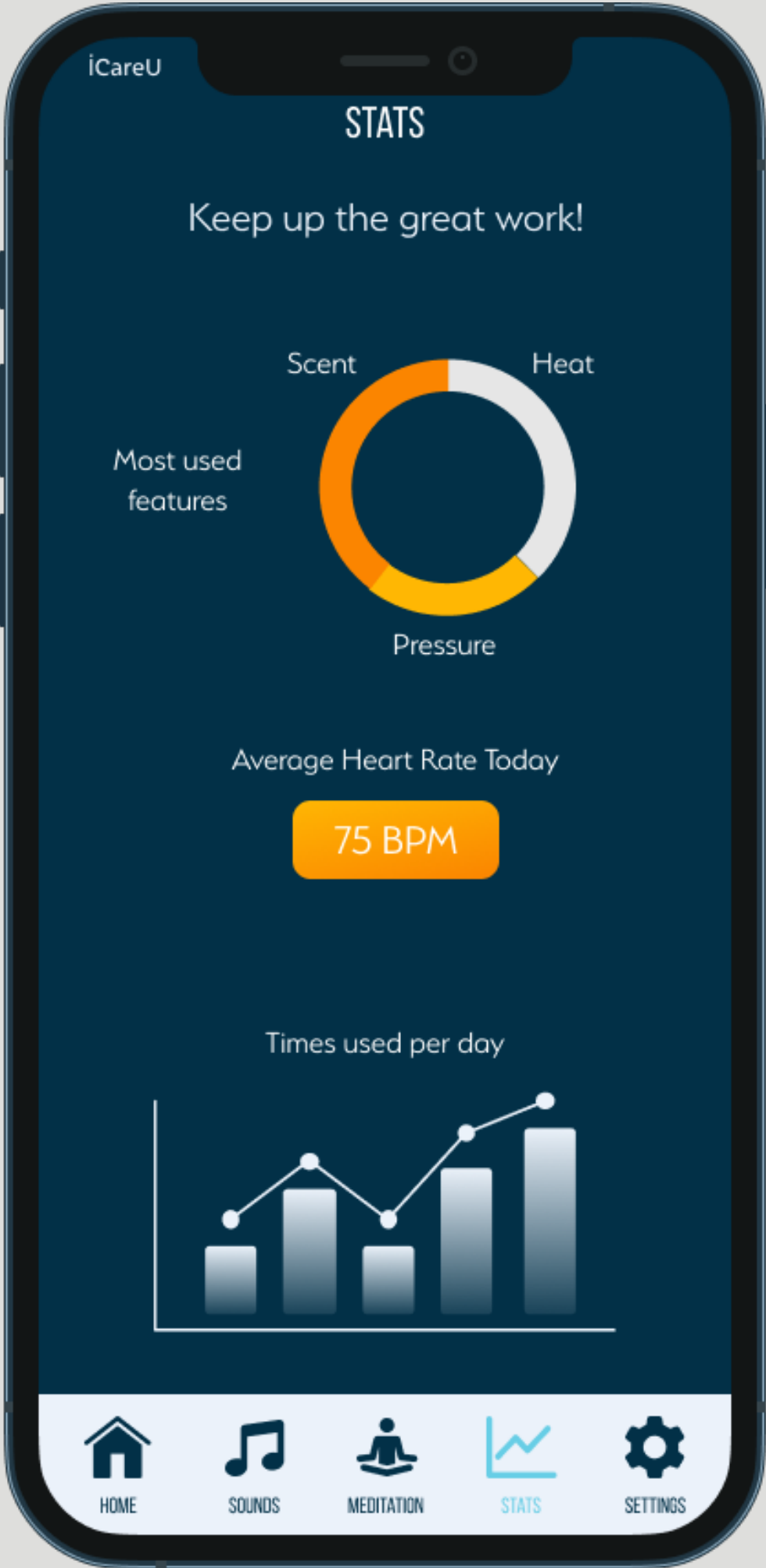
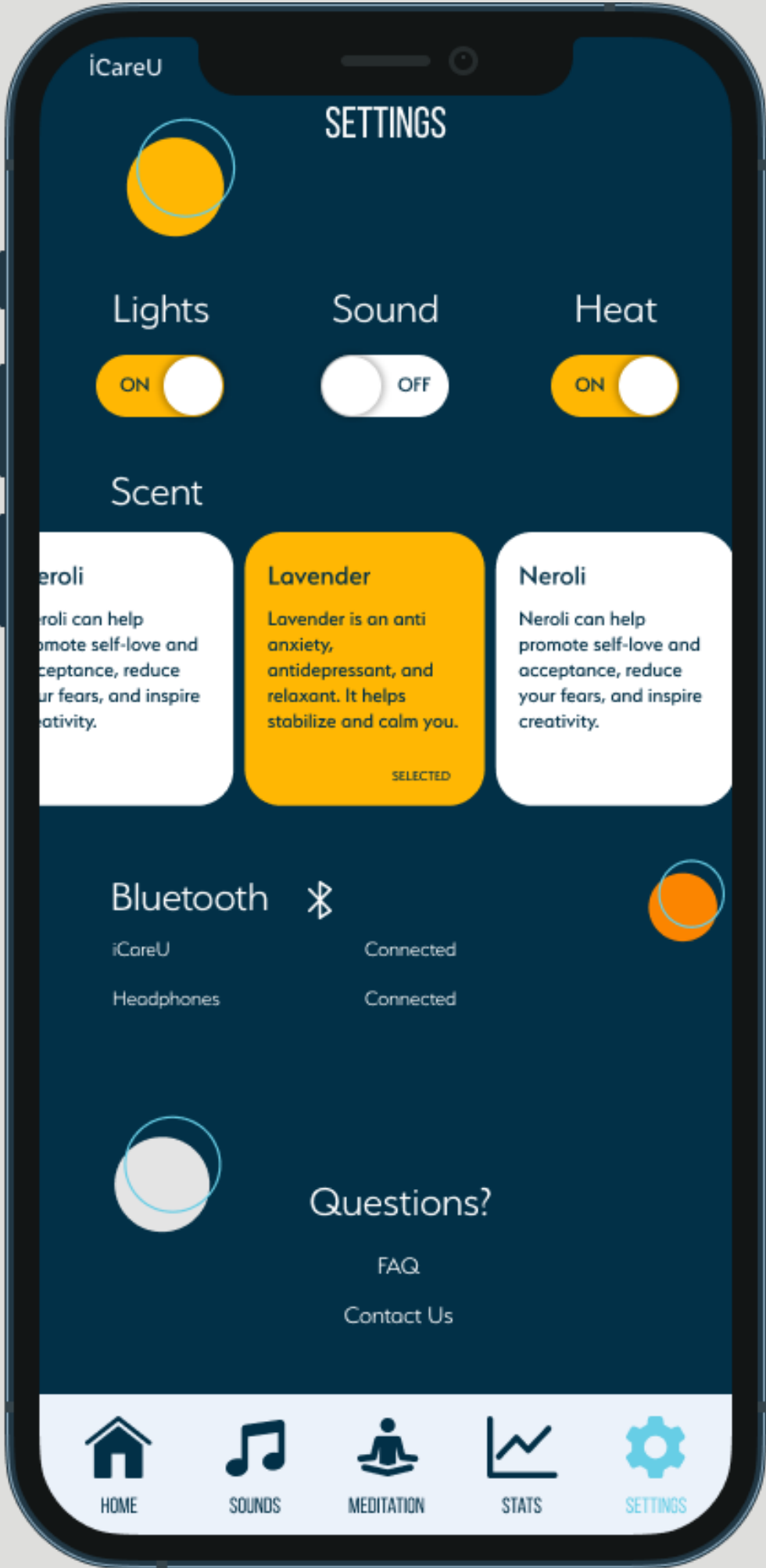
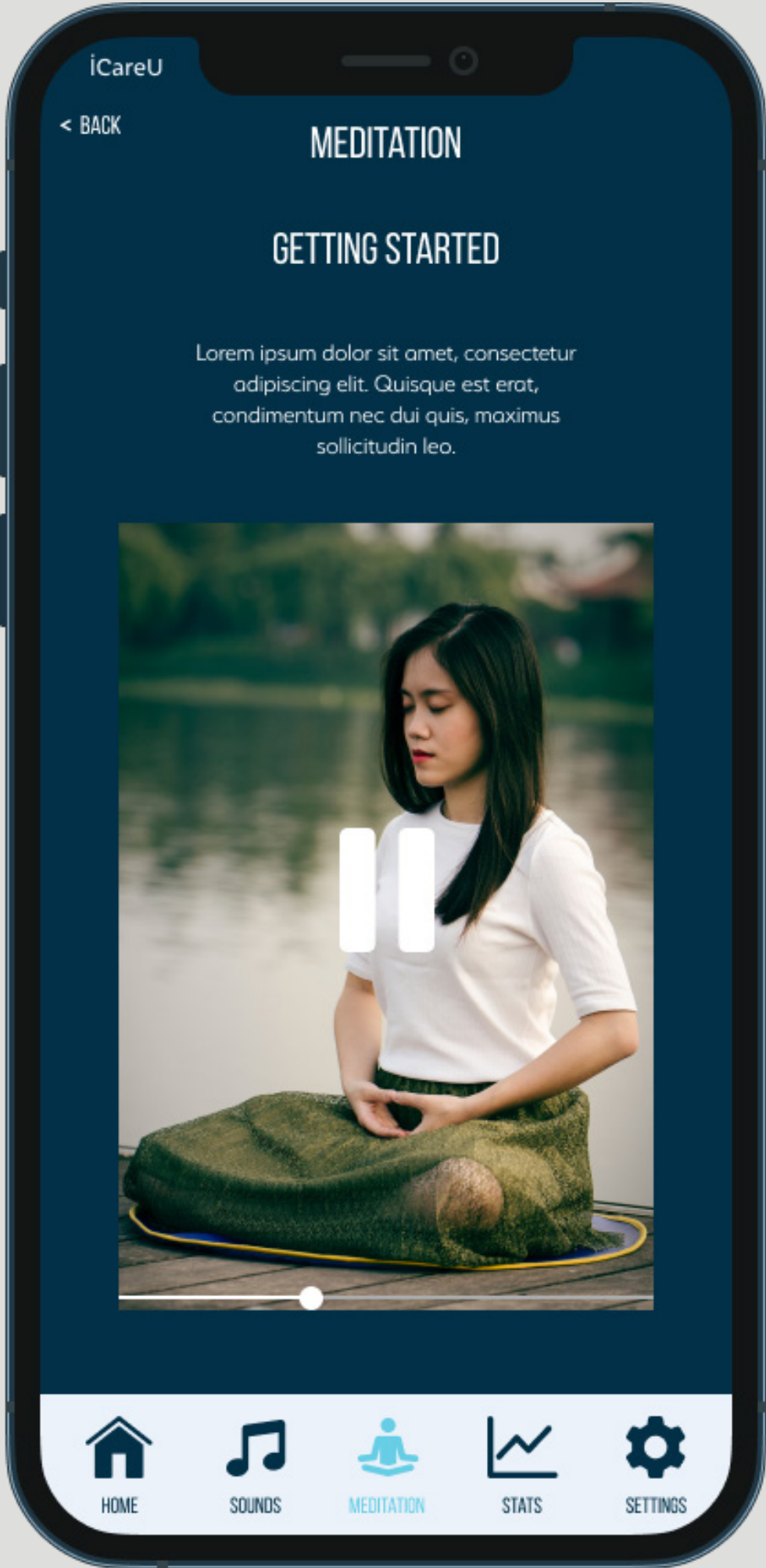


The iCareU App

Watch meditation walkthroughs and learn how to meditate on your own. Choose from a wide variety of meditation types to try.

Choose your device settings such as what features are turned on and what scent you want. Also see your stats from using the device.

Future work would be to develop the app based on the design and connect it to the physical iCareU device



iCareU

Practice self care, anywhere

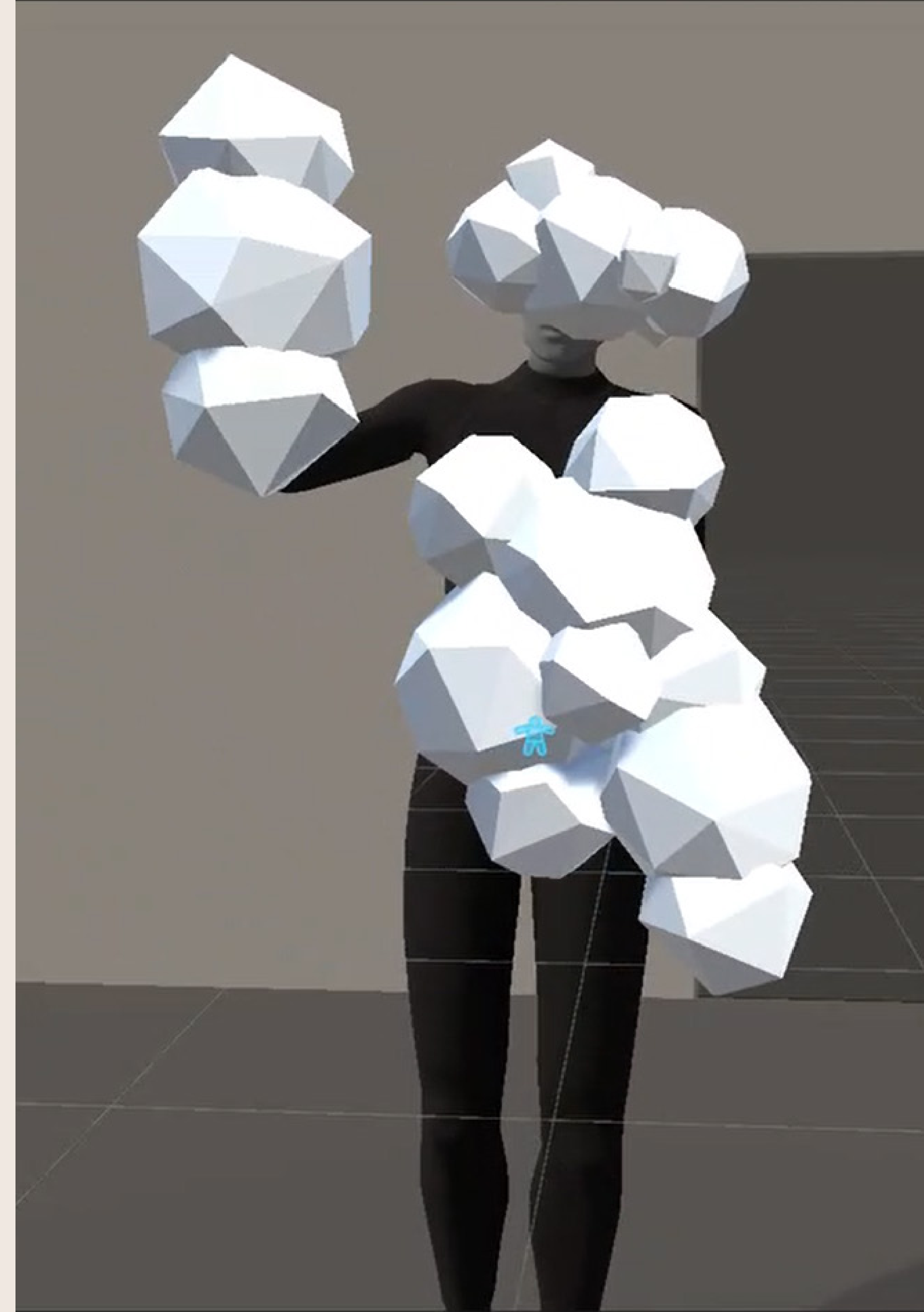


HYBRID IDENTITIES



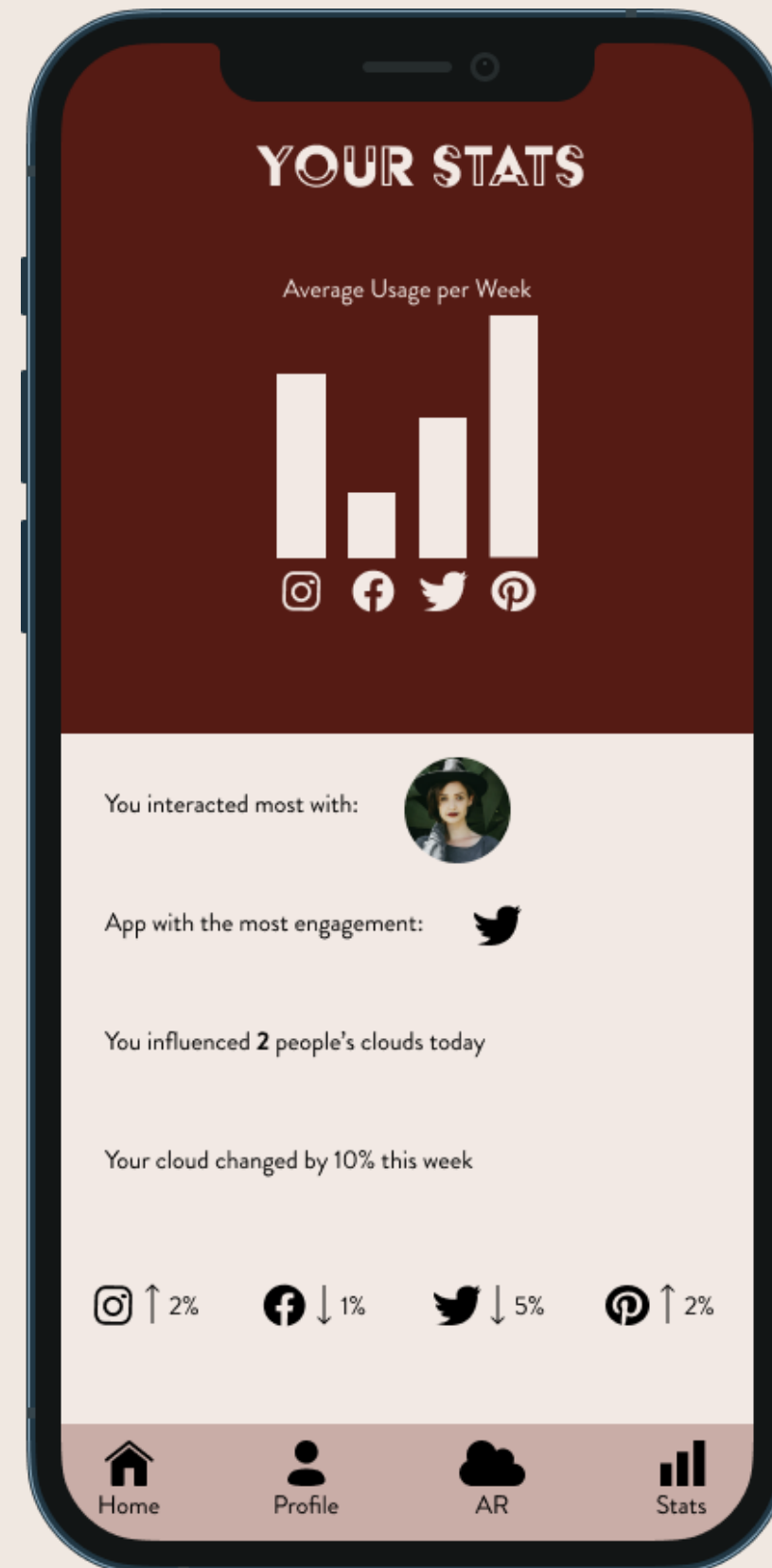
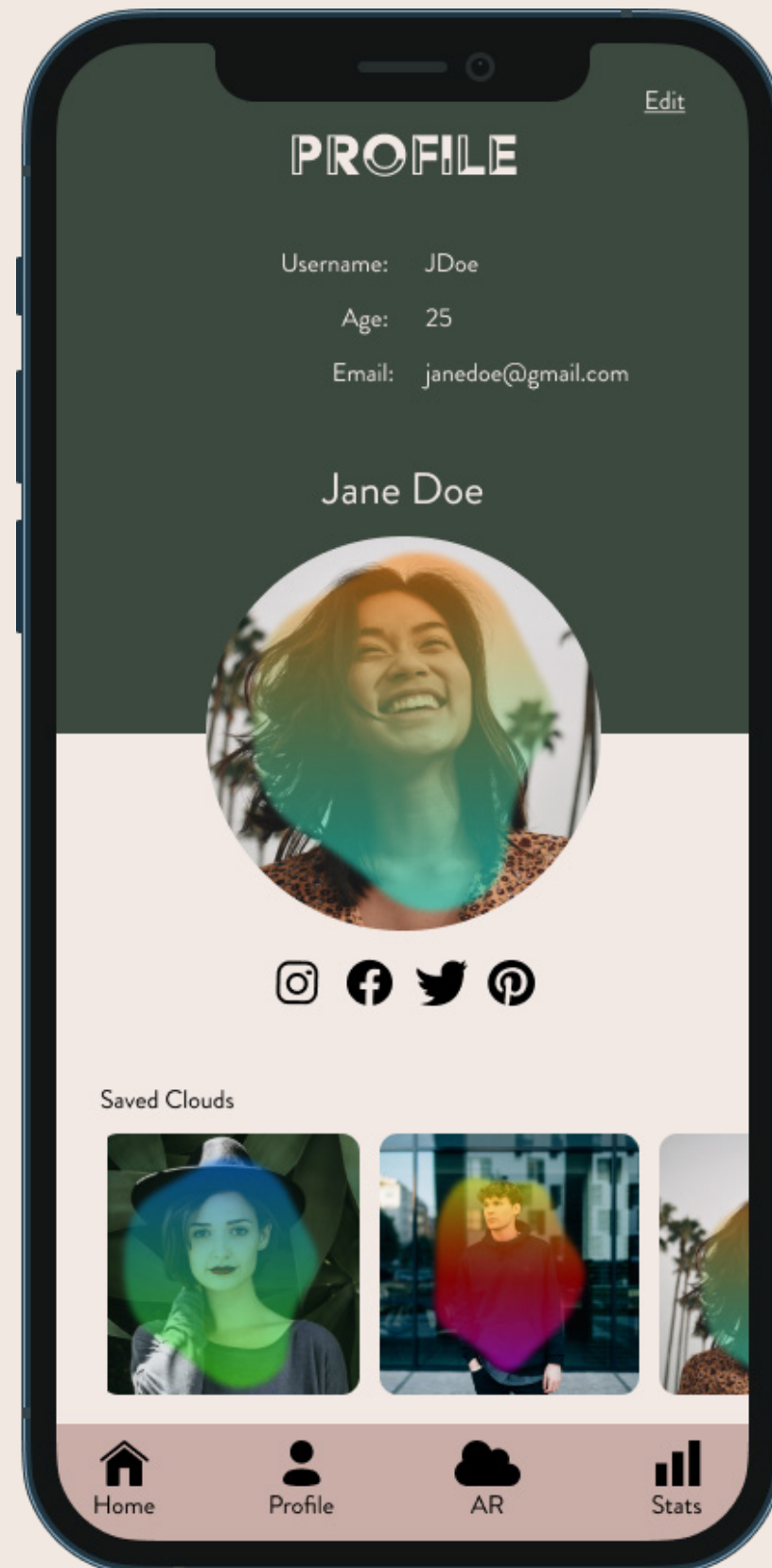
HYBRID IDENTITIES

The **Hybrid Identities app** and **AR experience** analyzes a user's online presence and experiences and generates a color based cloud to represent that activity. It overlays this over their face and body in AR and allows the user to see their own **digital identity** physicalized as well as compare it to those of others.



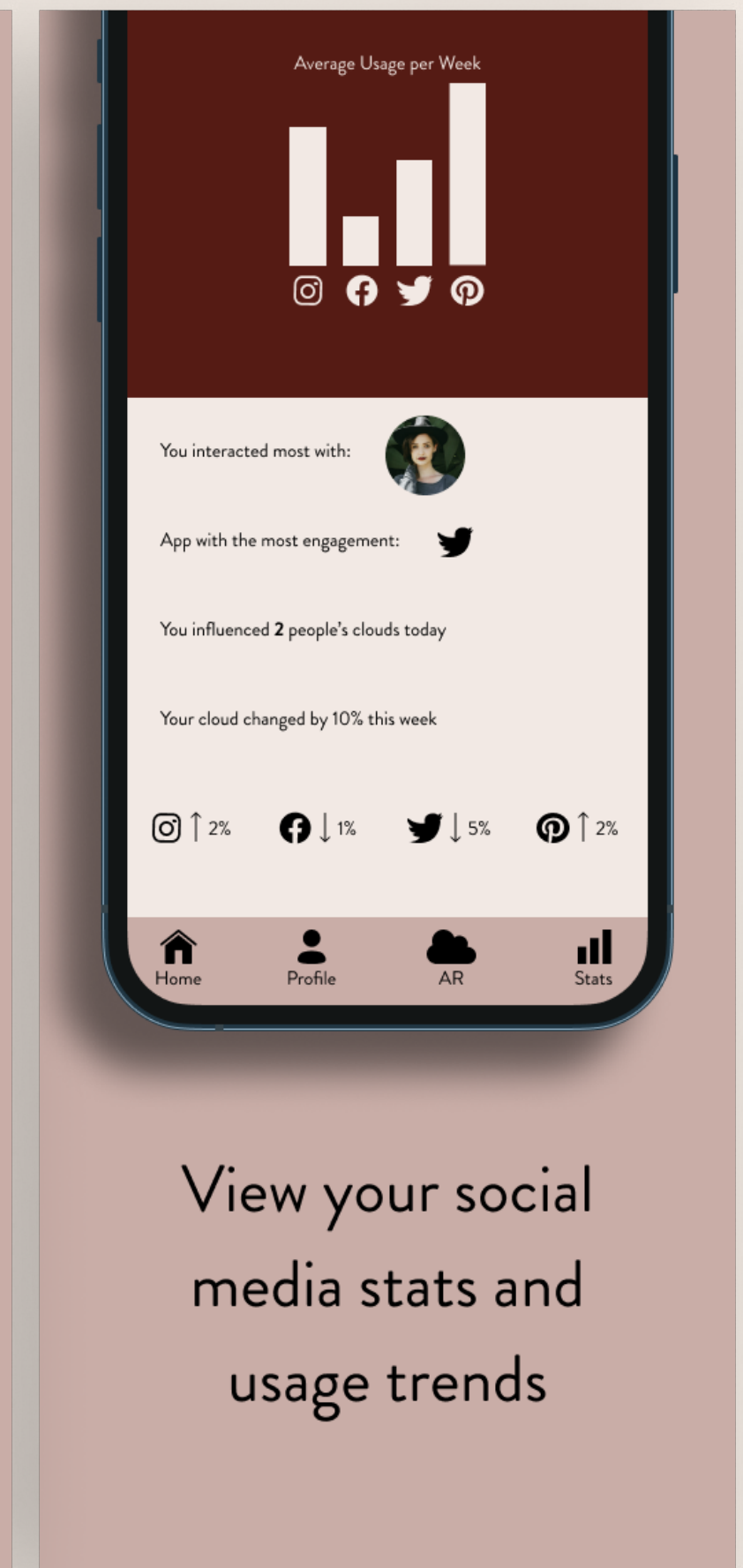
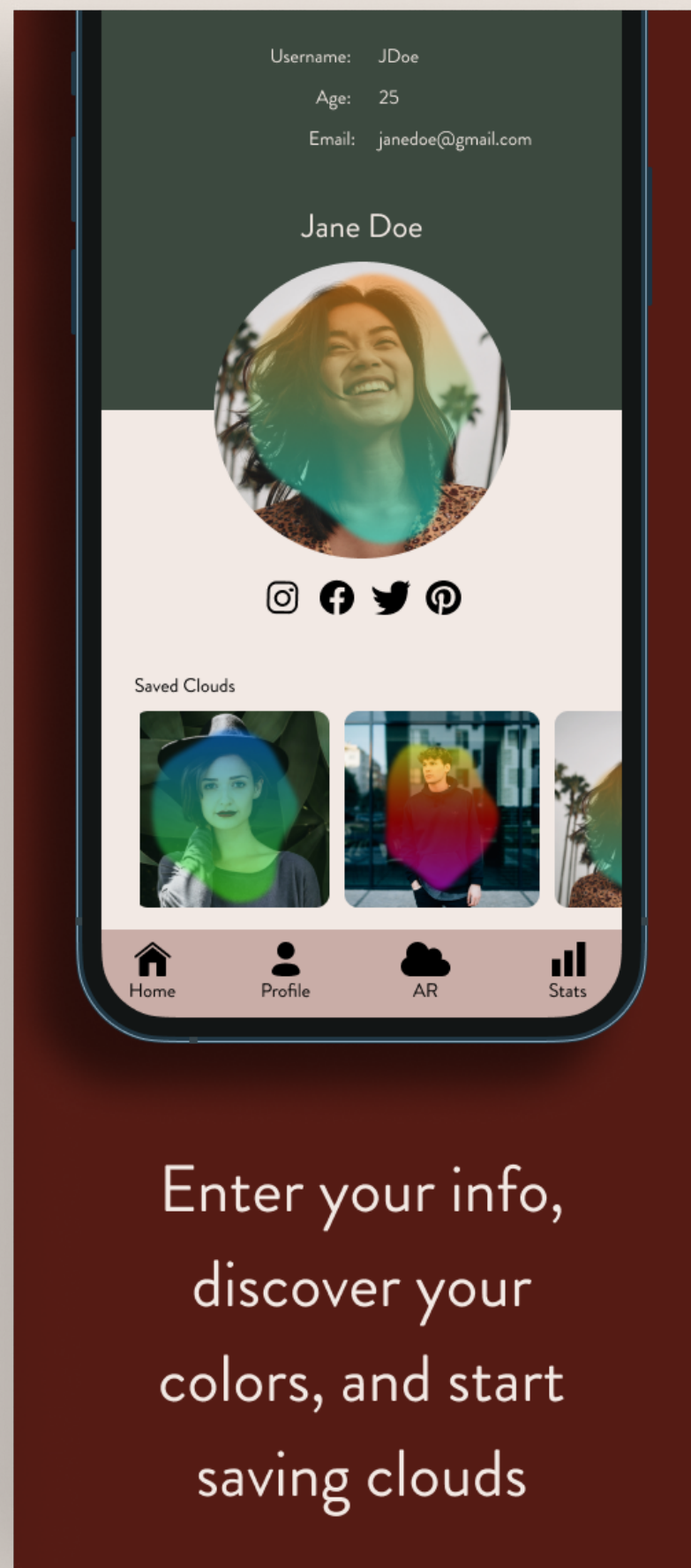
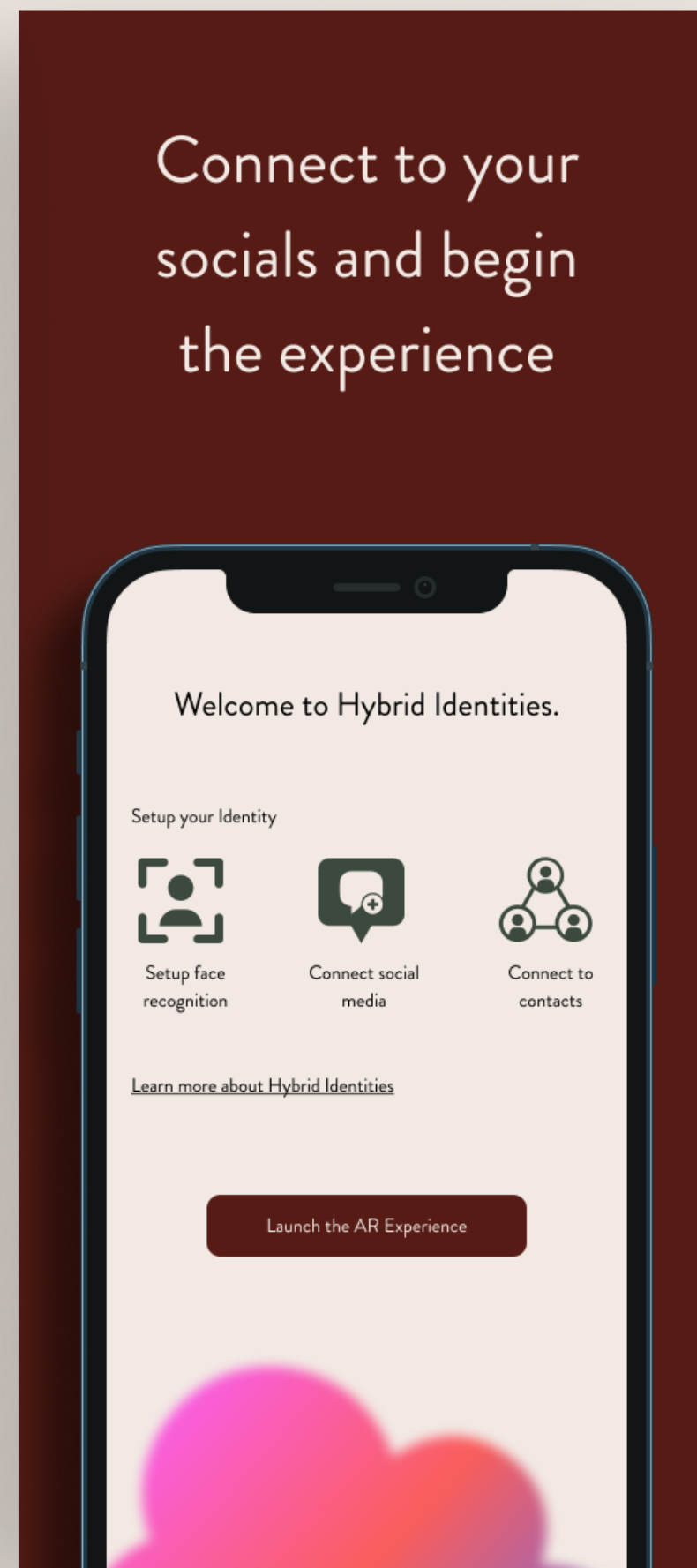
HYBRID IDENTITIES

Hybrid Identities gives you the ability to **reflect on one's own experiences and perceptions** of the world with respect to others' around them. As users traverse the world, they are nudged to observe how others perceive things differently and how their perceptions can modify our own.



HYBRID IDENTITIES

Hybrid Identities is a conceptual project. The AR components were mocked up in Unity Mars and the app was designed and prototyped in Figma to show the intended interactions and design.



HYBRID IDENTITIES



Through the application, with permission granted from users, we would collect **qualitative information from social media interactions**: which apps you use, what you do on them, who you interact with, etc. The app would then interpret the data to build the user's own **unique, virtual identity** that is represented using vibrant colors and hues. This is shown through low poly, **color coded clouds** overlaid the user's face and body in AR, adding a layer of their digital identity that is now perceivable by those in the physical space around them.

The AR would recognize the face of each user of the app and place different colored clouds over different parts of the body. The larger the cloud, the more prominent that color coded aspect is in the user's online life. These clouds of color are **ever changing**. As one moves through the world (both in real life and online), **interactions with new people and places change the clouds** and therefore, no person's color identity is ever static or complete but constantly forming through mobility. Our intention is for users to be able to experience both a **new way of visualizing your own identity** as well as see those of other people.

SARA FRIEND

ABOUT ME

My name is Sara and I am a designer based in the Bay Area. I am passionate about design and social innovation. My background in human centered design drives my passion to create products that impact people. I am specifically interested in accessibility and assistive technology.

I have a BS in Mechanical Engineering and a Minor in Computer Science from Northwestern University. I am currently pursuing a Masters of Design at UC Berkeley and will be graduating in Fall 2022.

SKILLS

Photoshop	HTML	Blender
Illustrator	CSS	Fusion360
Adobe XD	JavaScript	SolidWorks
InDesign	React	NX
Figma	C++	Inventor
	Python	Maya

CONTACT

sarafriend.design@gmail.com

(650) 400-0111

www.linkedin.com/in/sara-friend

EDUCATION

Master of Design at UC Berkeley, Berkeley, CA
GPA: 4.0/4.0

Studied Digital Media at West Valley College
Northwestern University, Evanston, IL

Bachelor of Science in Mechanical Engineering with a minor in Computer Science
GPA: 3.7/4.0

August 2021 - December 2022

September 2020 - May 2021
September 2016 - June 2020

DIGITAL MEDIA DESIGN

Berkeley Haas Center for Equity, Gender, and Leadership - Web designer/developer

May 2022 - Present

- Developed interactive tools to promote equity and belonging in the workplace
- Coded tools in HTML/CSS/Javascript and embedded into a website I designed and built in Webflow

Nspire Careers - Freelance Web Designer

June 2021 - Present

- Edited and built website in Showit, designing UI, layout, color palette, and navigation

West Valley College, Saratoga, CA

September 2020 - July 2021

- Studied graphic design, web design, interface design, app design, and digital art/animation
- Created projects such as magazine layouts, logo designs, book cover designs, conceptual app proposals, websites, and more

West Valley Fashion Show, Saratoga, CA

April 2021

- Designed logo concept for the West Valley Fashion Show and animated it in After Effects

Orchard Valley Coffee, Campbell, CA - Freelance Web Designer

April 2021

- Evaluated website for ADA compliance, suggested changes for better accessibility/functionality

ENGINEERING & MECHANICAL DESIGN

Prince Castle, Carol Stream, IL - Mechanical Engineering Intern

June - September 2019

- Validated an alternative supplier for heaters with a potential of \$500k annual savings
- Created original designs of custom holding bins for client by designing sheet metal parts in SolidWorks, assembling products, and iterating on design of parts
- Conducted user research at stores and designed an automated fryer to increase kitchen safety

LTA Research & Exploration, Mountain View, CA - Mechanical Engineering Intern

June - August 2018

- Designed and manufactured a solar panel testing jig with angle variation to the sun
- Built an automated cable cutting machine

Carbon 3D, Redwood City, CA - Mechanical Engineering Intern

June - August 2017

- Designed and built tooling fixtures to aid in the production and use of new 3D printer prototypes
- Evaluated feasibility of printing scannable Data Matrices on 3D printed parts