Benal Johnson is a *designer* and human swiss army knife.

RESUME

benaljohnson.com
benal.e.johnson@gmail.com

EDUCATION

UC Berkeley
Master of Design
Graduating Fall 2022

Carnegie Mellon University
BDes in Industrial Design
Honors with Distinction

AWARDS

Distinguished Scholar Award
UC Berkeley

Grand Prize Winner
Haas Innovation Challenge
IDEO, Silicon Valley Bank

SKILLS

SolidWorks
Autodesk Fusion 360
Keyshot
Laser Cutting
3D Printing
Woodworking
Vacuum Forming
Rapid Prototyping
CNC
Figma
Miro
Lucidchart
Adobe Creative Suite
UX Research

EXPERIENCE

Senior UX Design Contractor / CAPITAL ONE
SEPT 2021 - PRESENT | REMOTE | PART-TIME CONTRACTOR

Leading user research and design strategy on a cross-functional team to define the post-MVP Smart Pay experience. Insights I collected across several rounds of research **led to the development of a multi tier offering** in our Smart Pay product. Providing mentorship to product managers on best practices for UX research, leading to better team alignment on the end-to-end user experience.

Senior Experience Designer / CAPITAL ONE
JUL 2019 - JUN 2021 | MCLEAN, VA | FULL-TIME

Led strategy, design, and research initiatives into a full redesign of the Electronic Accounts Payable registration experience, **leading to a 150% lift in user opt in**. **Defined key design and research strategy** alongside a cross-functional team for Capital One's brand new Smart Pay product, which helps small businesses seamlessly manage their AP processes.

UC BERKELEY / **Graduate Instructor**
JUN 2022 - PRESENT| BERKELEY, CA

Instructing undergraduate and graduate students on **visual communication and storytelling** methods to express their ideas. Demoing a variety of analog and digital drawing tools and mentoring students 1-on-1 to provide critique. Instructed undergraduate students on the **fundamentals of prototyping and fabrication**, from low-fidelity concepting with cardboard and foam core to high-fidelity products using 3D printing and laser cutting.

COMMUNITY

Cohort Lead / UC BERKELEY MASTER OF DESIGN STUDENT ASSOCIATION
JAN 2022 - PRESENT

Elected as Cohort Lead by my peers due to skills in leadership, communication, and advocacy. Managing a team of officers to serve and advocate for MDes students. Collaborating with faculty members to make curriculum improvements that greatly improve students' learning outcomes and quality of life.

Fabrication Lab Assistant / CITRIS INVENTION LAB
JAN 2022 - PRESENT

Assistant managing the CITRIS Invention Lab, which provides fabrication and teaching support for students, faculty, and entrepreneurs at UC Berkeley. Maintaining a variety of Ultimaker FDM printers, FormLabs SLA printers, and Trotec laser cutters to ensure they run smoothly and safely for all users.

PROJECTS

Industrial Designer + Design Technologist / POETIC TECHNOLOGIES
AUG 2022 - PRESENT | THESIS PROJECT

Challenging existing norms around technology through the design of a set of interactive and tangible smart devices. Curating an interactive exhibit to showcase these different modalities of technology interaction. Designing and fabricating a set of devices with PLA and SLA printing and actuated through the use of Arduino and a variety of sensors.

Biocollector

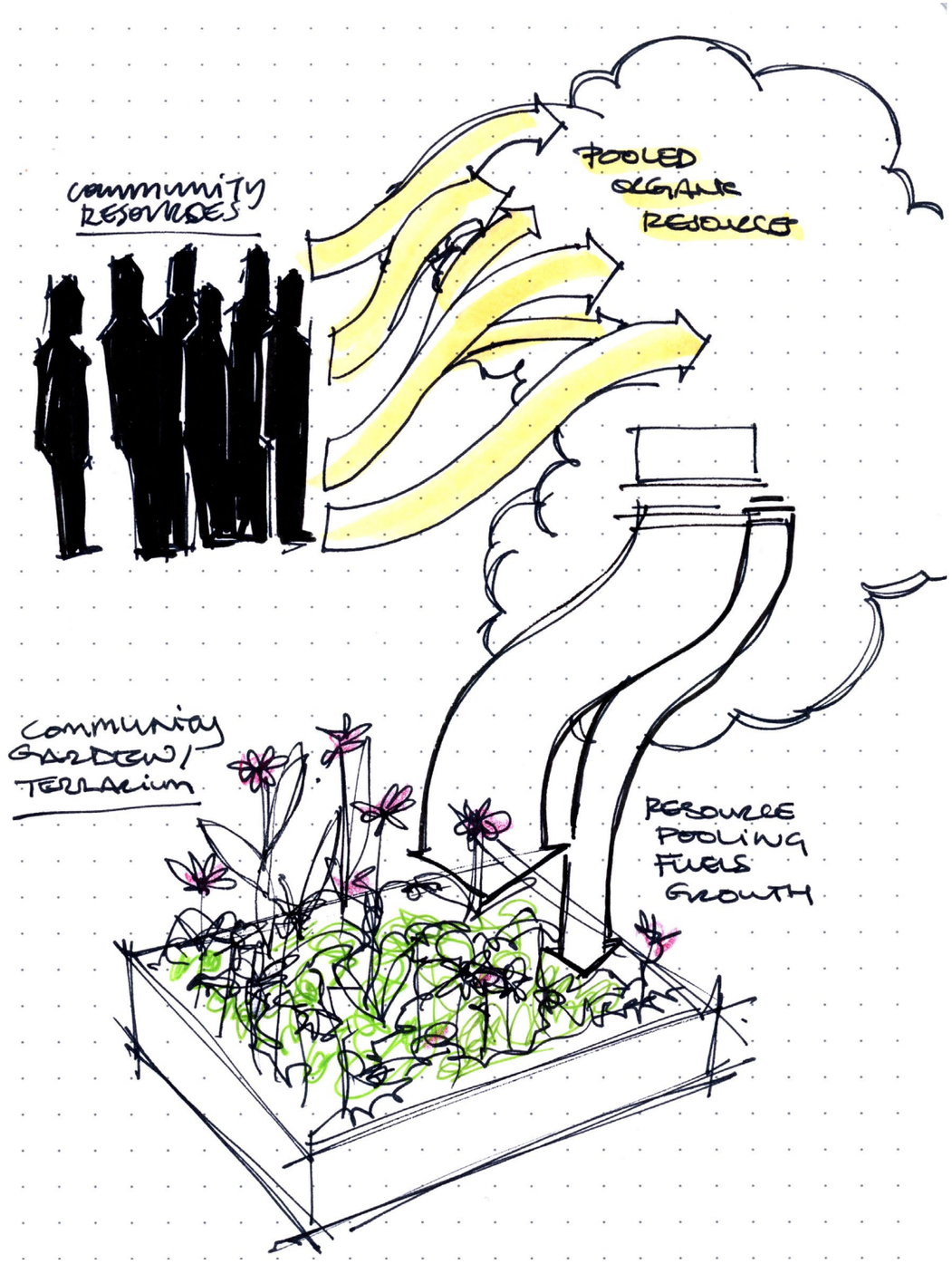
How can people develop a symbiotic relationship with nature instead of a dominant one?

The provocation is the Biocollector: a sophisticated wearable that collects sweat, dust, and other bodily fluids to provide bacteria-rich material for terrariums and gardens to facilitate symbiosis between human and nature.

How do we plan for humanity's future amidst climate change?

Exploring symbiosis

Here, we explored what symbiosis meant in the context of natural relationships. We considered how humans could "give back" to nature, taking inspiration from natural processes such as mycelium networking, decomposition, and terrarium systems.



Designing a wearable to facilitate symbiosis

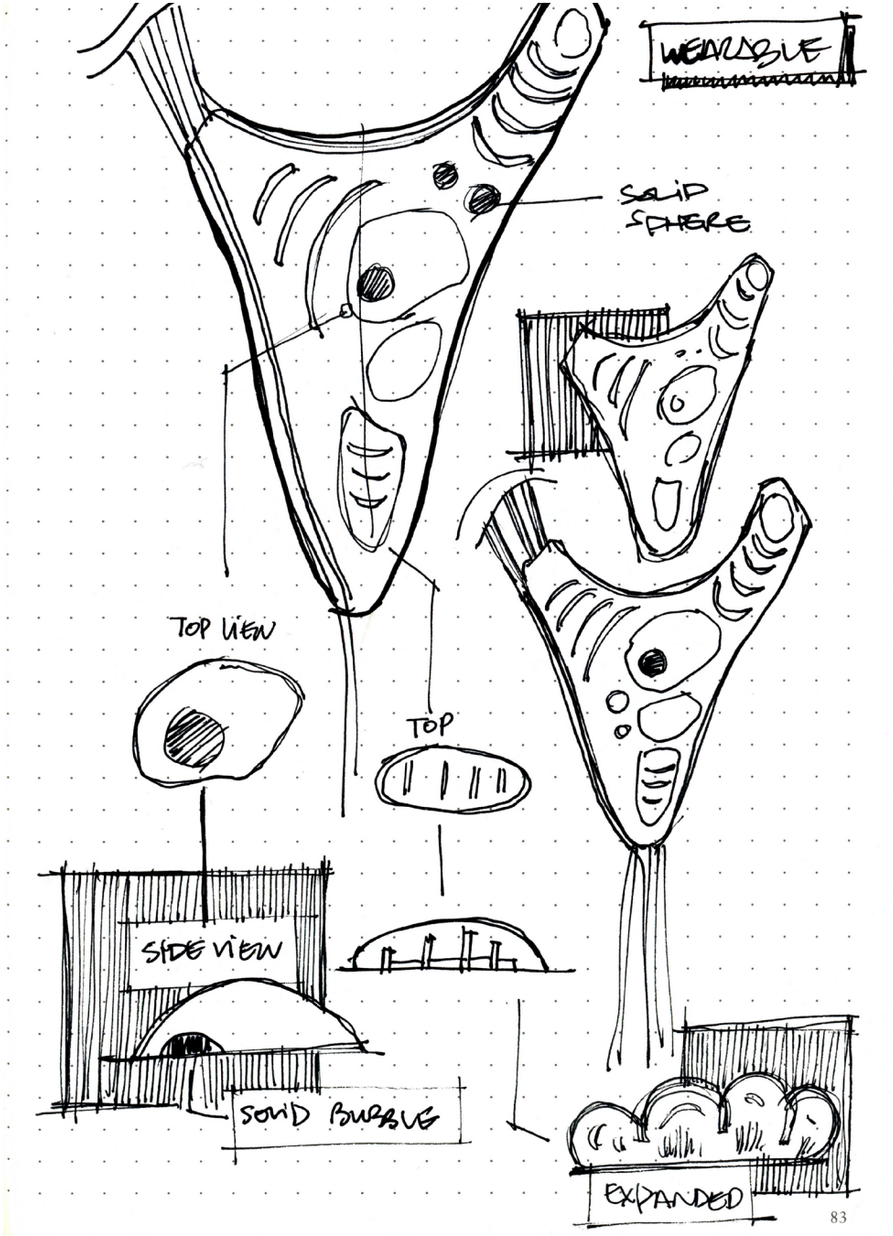
We refined our idea to be around a wearable biomaterial collector that would facilitate a symbiotic relationship between humans and nature through the sharing of resources. The wearable would collect body fluids to enrich mineral-depleted soils.

preliminary sketch of wearable

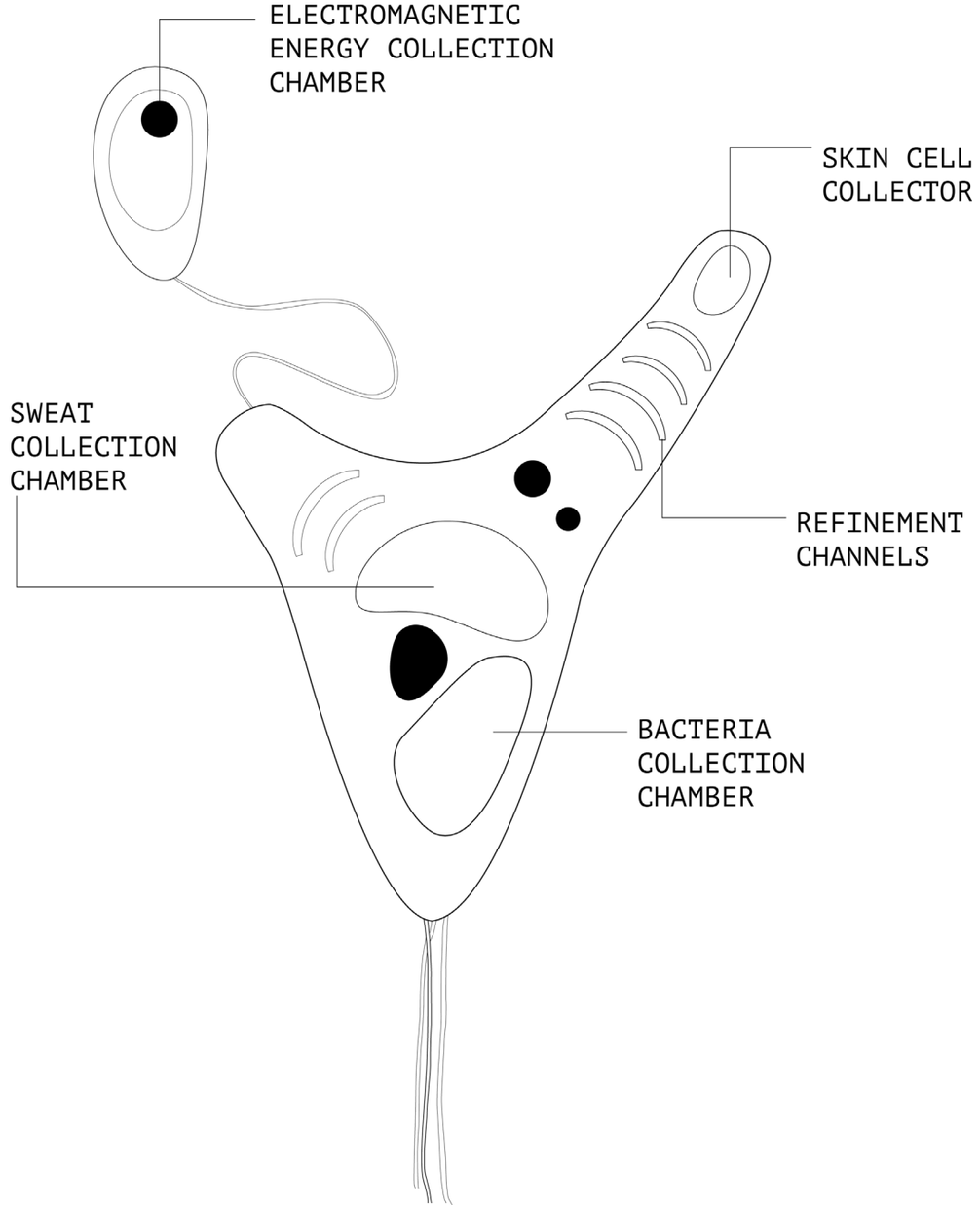
paper prototype of wearable

Paper prototype with chambers mocked up

Trying on the paper prototype



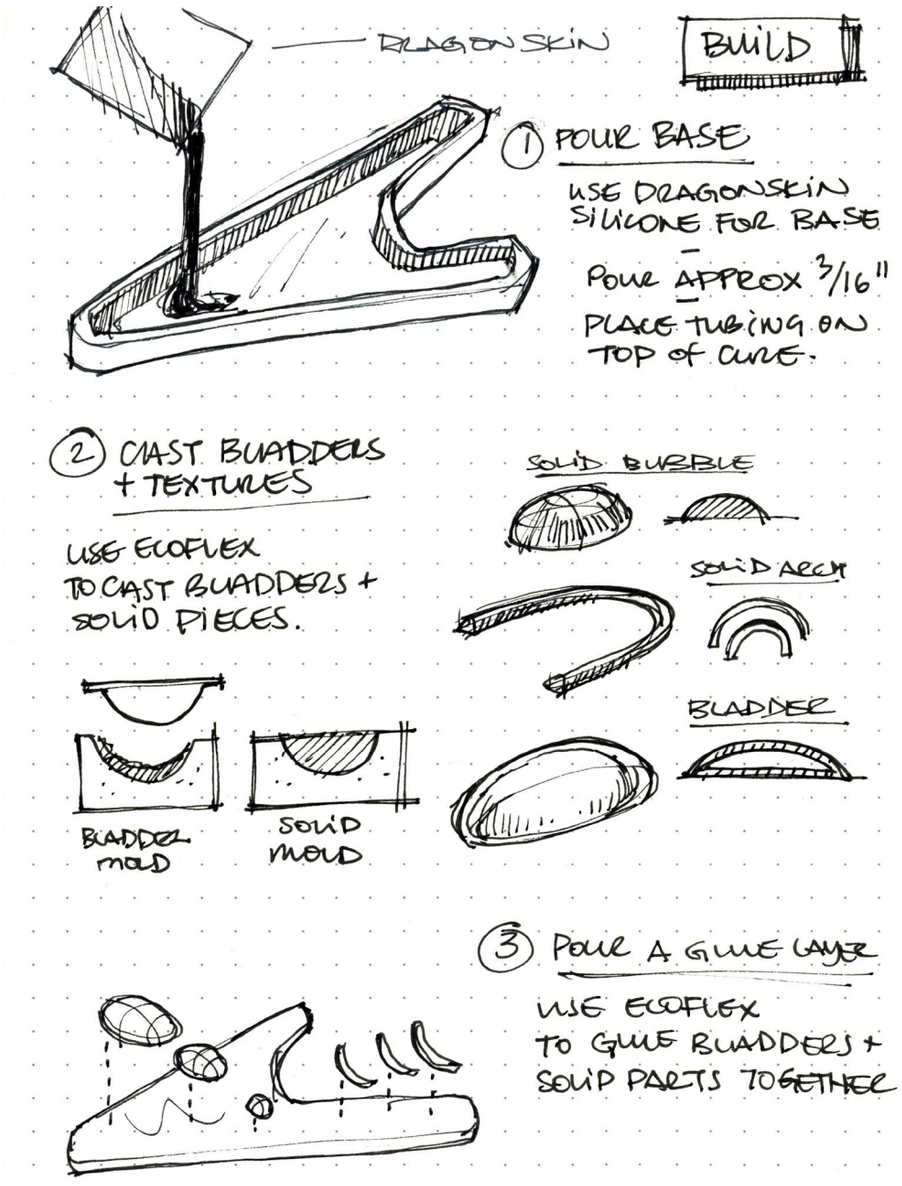
sketch of the overall form and interactions



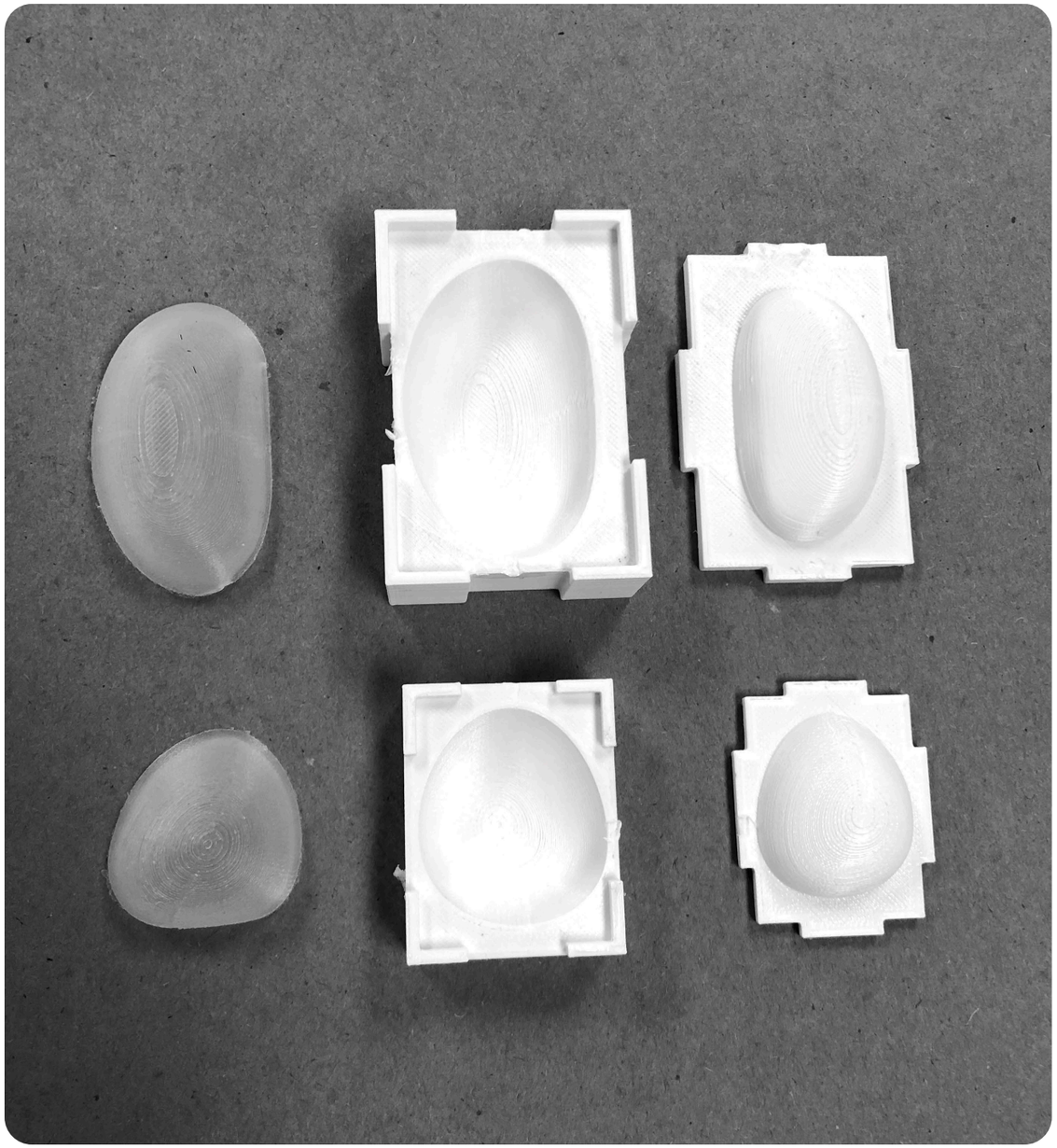
Adobe Illustrator layout of the different chambers

Making the design come to life

After the shape and interactions were formalized via iteration, I designed a series of custom molds to make silicone bladders that would inflate and deflate using an Arduino + an air pump. In addition, I worked out the method for casting each bladder into the mold base so that it could be worn.



drawing the process of casting the final wearable



custom 3-D printed molds to cast the silicone chambers

mocking up the various parts to prep for final casting

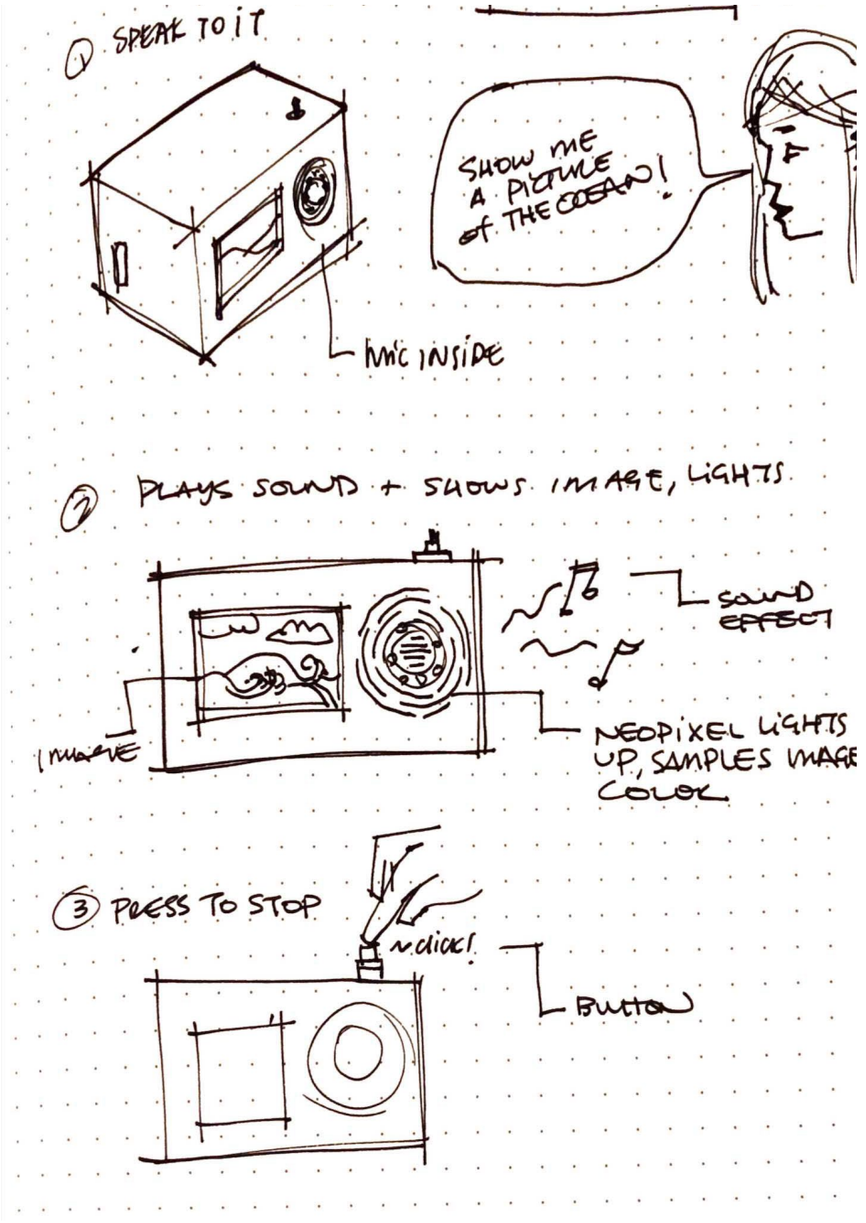
Reflect.io

Memories are not just images, but full experiences with sound, color, and imagery. How could we share memories with loved ones who are far away in a shared language? Reflectio creates an immersive memory sharing experience using a combination of light, sound, color triggered by distinct words.

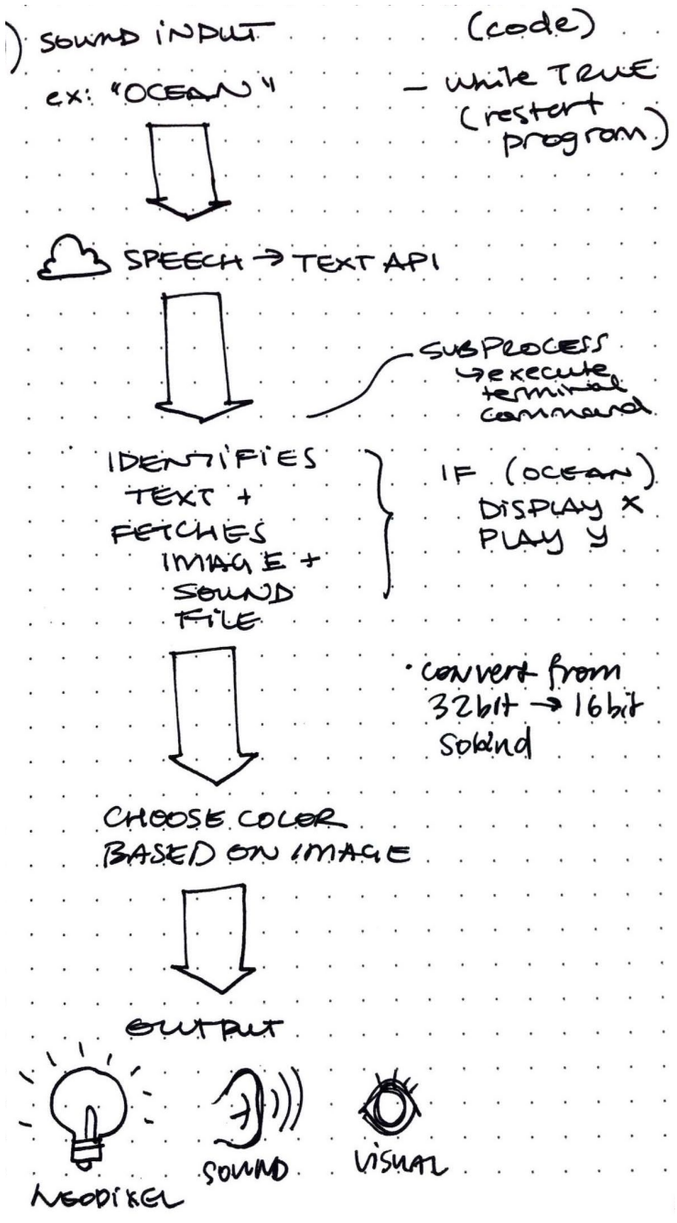
How do we share our memories with our loved ones far away?

Conceptualizing an immersive experience

When thinking how an immersive experience could manifest, I considered the factors involved in memory sharing beyond images alone and thought through how they combine.



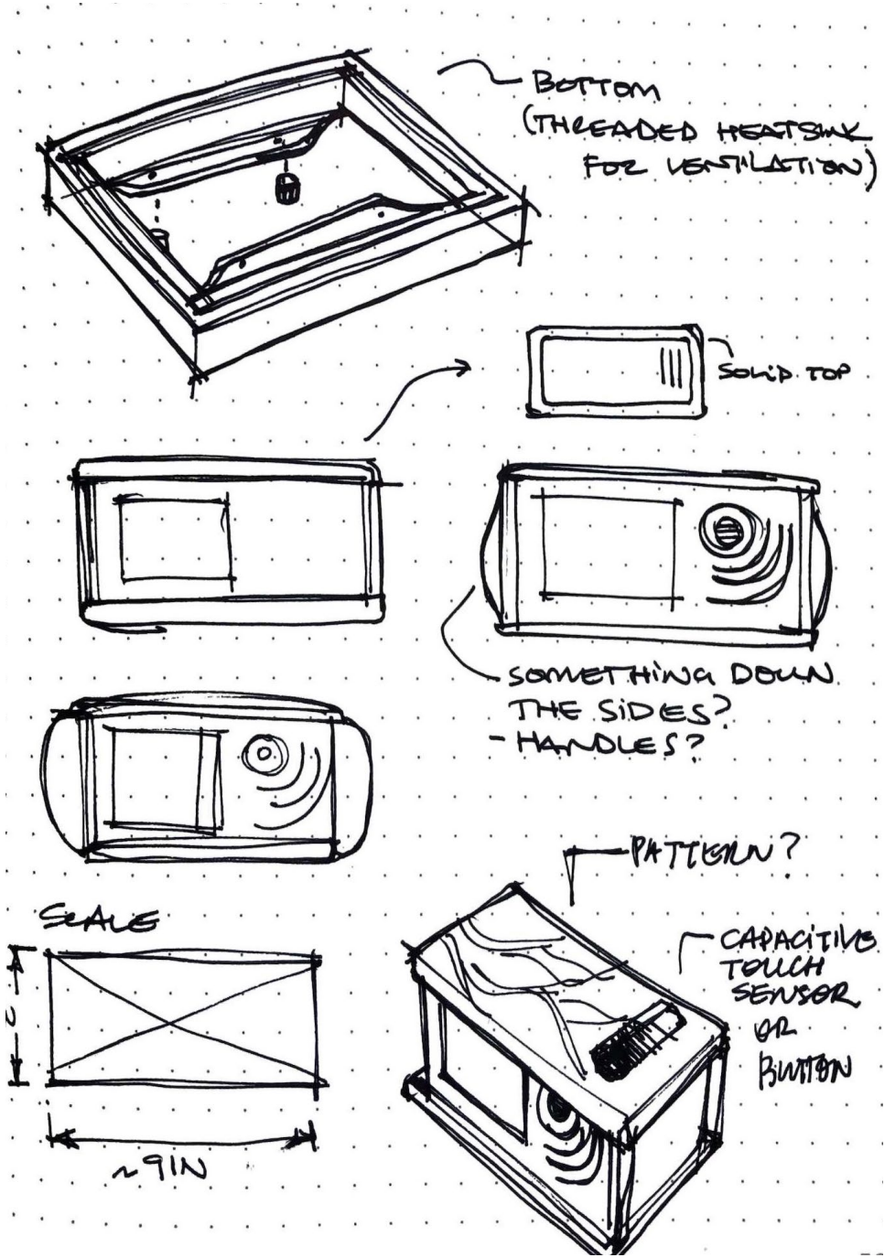
Considering a potential experience



Sketching out potential outputs

Considering build constraints

Once the interaction was finalized, it was time to build the reflection radio. I designed it to be a tabletop device that would provide a personalized experience based on utterances.



Drawing potential assembly method

Runda

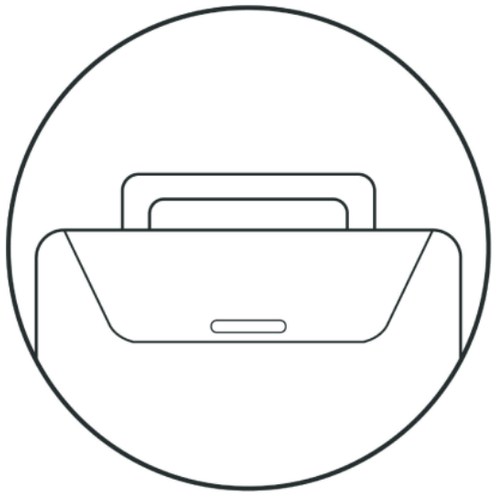
This project was largely spun up from my own needs - I live in a small studio that is strangely lit. I needed a beautiful tabletop lamp that could be flexible across contexts from entertaining guests to working late, all while maintaining a small footprint. The outcome is RUNDA - the lamp for small spaces.


hp
23er
DURGOD

Creating a beautiful lamp for small spaces.

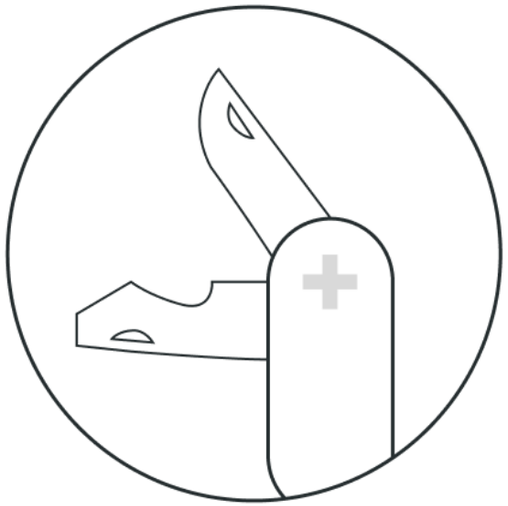
Defining the design criteria

I created a set of design criteria to guide my process through the development of specific constraints.



portable

beautiful



multi-purpose

Defining a branding language and style guide

I chose to brand this lamp using HAY design's brand language since their products celebrate beautiful objects in everyday contexts.

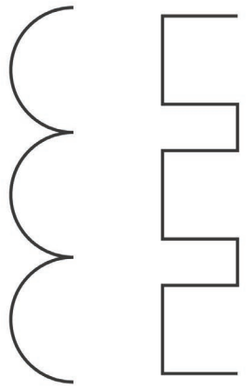
HAY

high-gloss glass

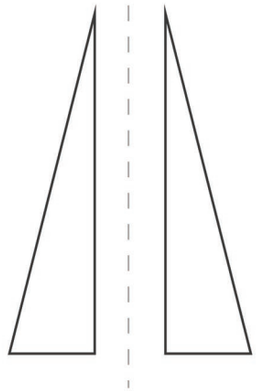
matte ABS plastic

Taking inspiration from Swedish cased-glass

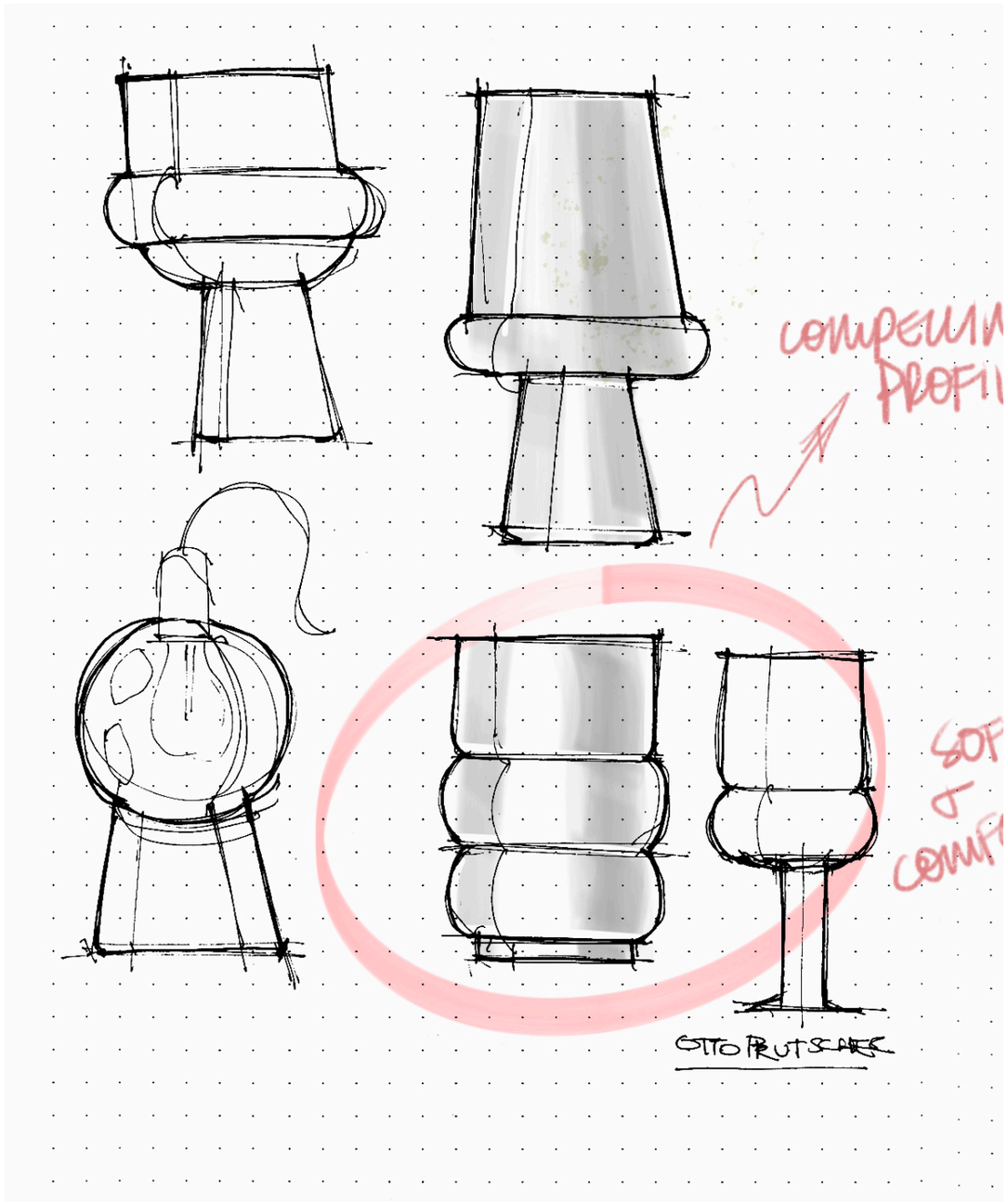
Swedish cased class is brightly colored, playful, and symmetrical, providing lots of fun shapes to work with and

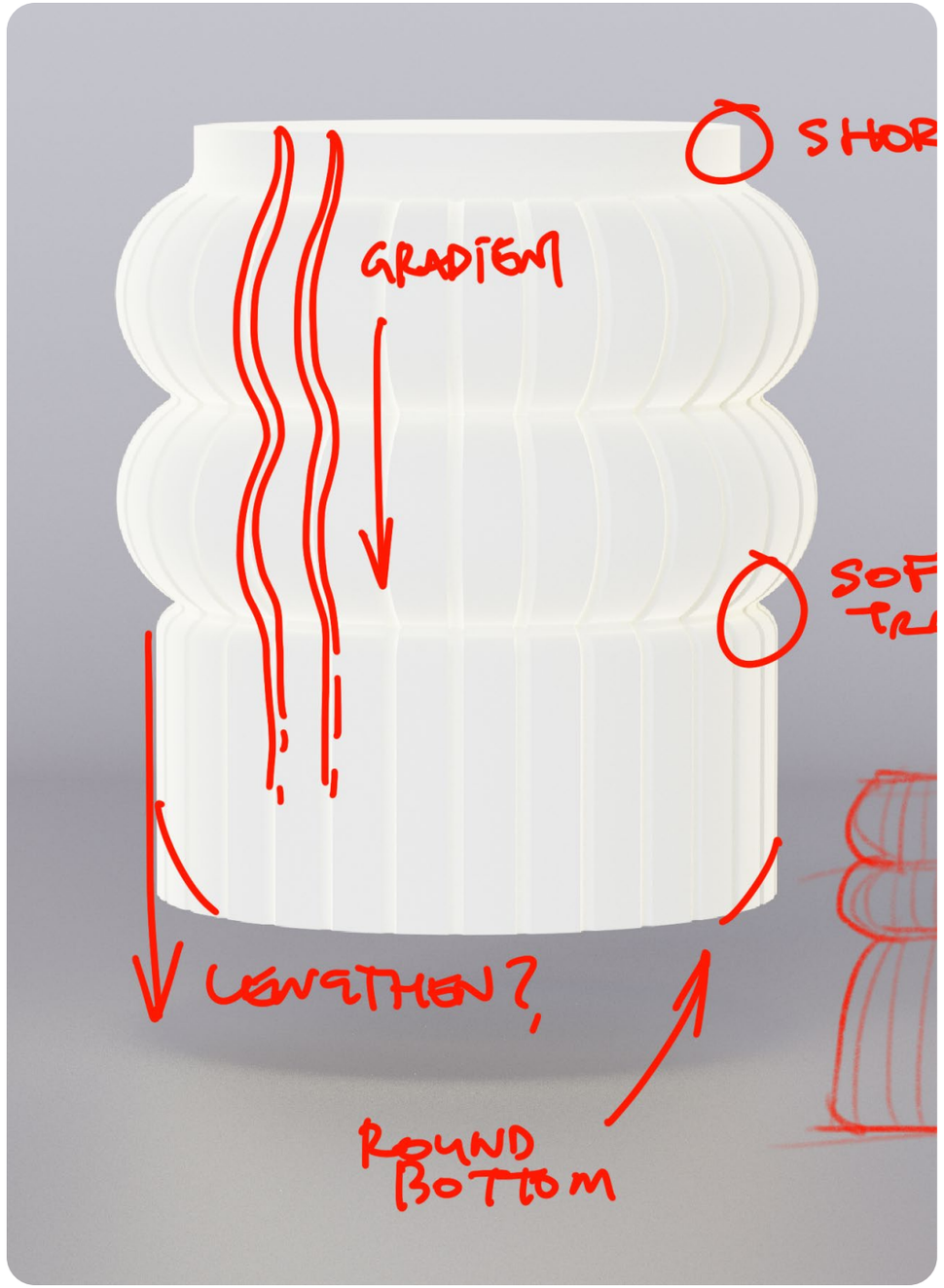


REPEATING GEOMETRY
Repeating square or round geometry, typically stacked.



SYMMETRY
All cased glass pieces are horizontally symmetrical.


COMPELLIN
PROFI
SOF
&
COMF
OTTO PRUTSCHER


SHOR
GRADIENT
SOF
TR
LENGTHEN?
ROUND
BOTTOM

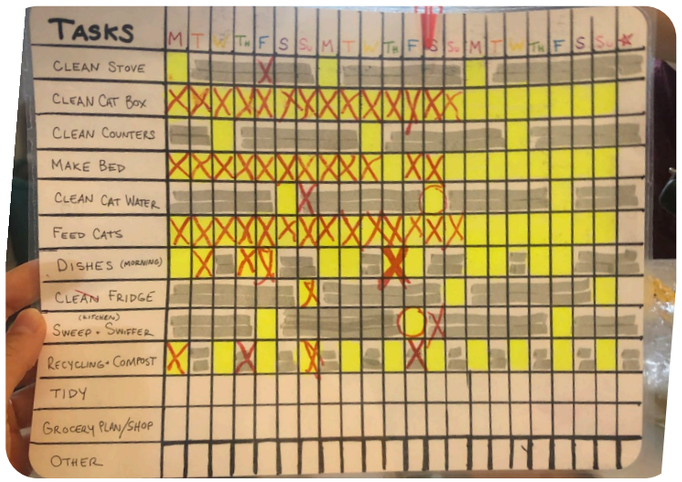
Poetic Technologies

How might our relationships with technology change if they were designed to be expressive with rich, embodied interactions?

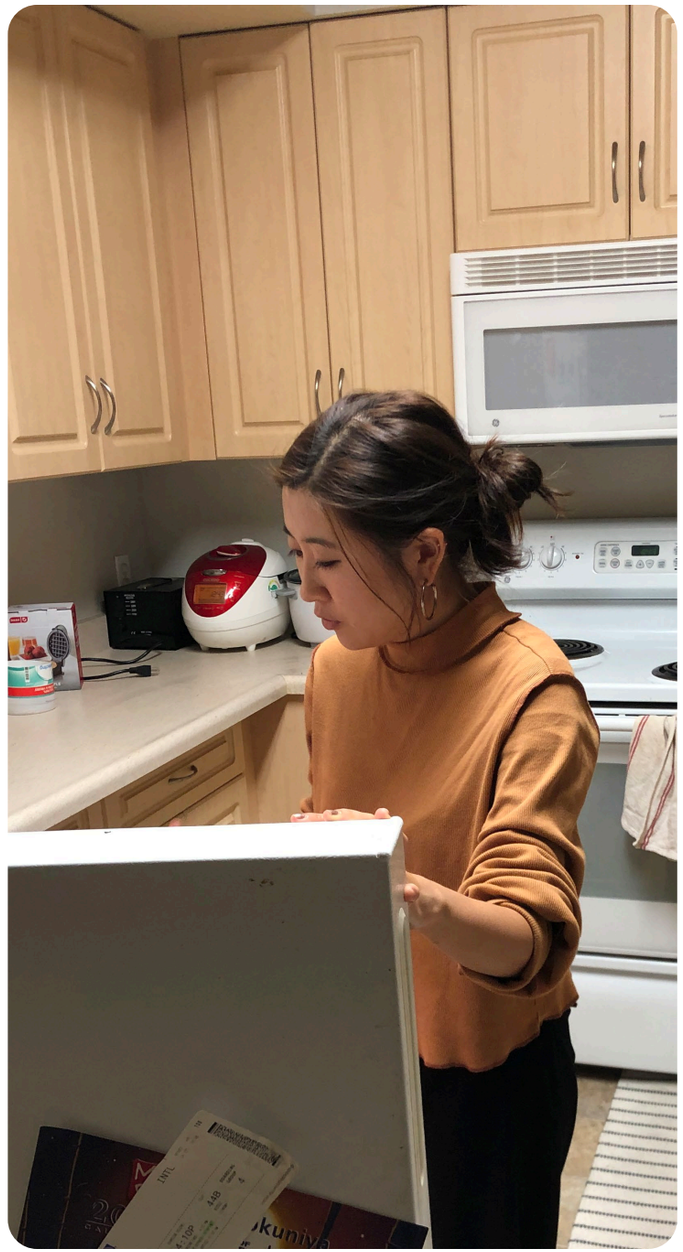
What if you connected with technology emotionally and tangibly?

Discovering human rhythms

I conducted contextual inquiries with several participants between the ages of 22 - 27 to determine participants' routines and daily habits.



A chore chart utilized by Eleanor

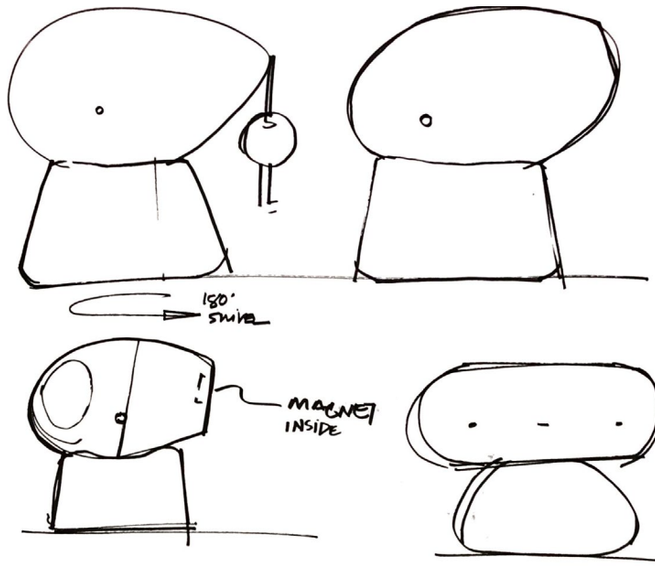


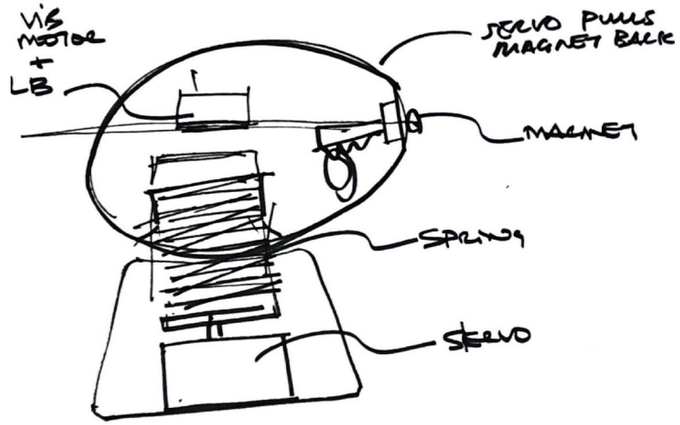
Jess at her home

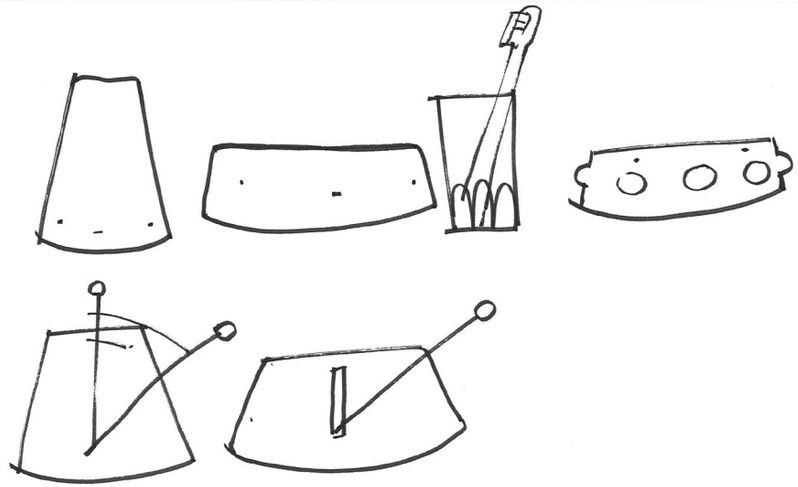
Eleanor in the studio

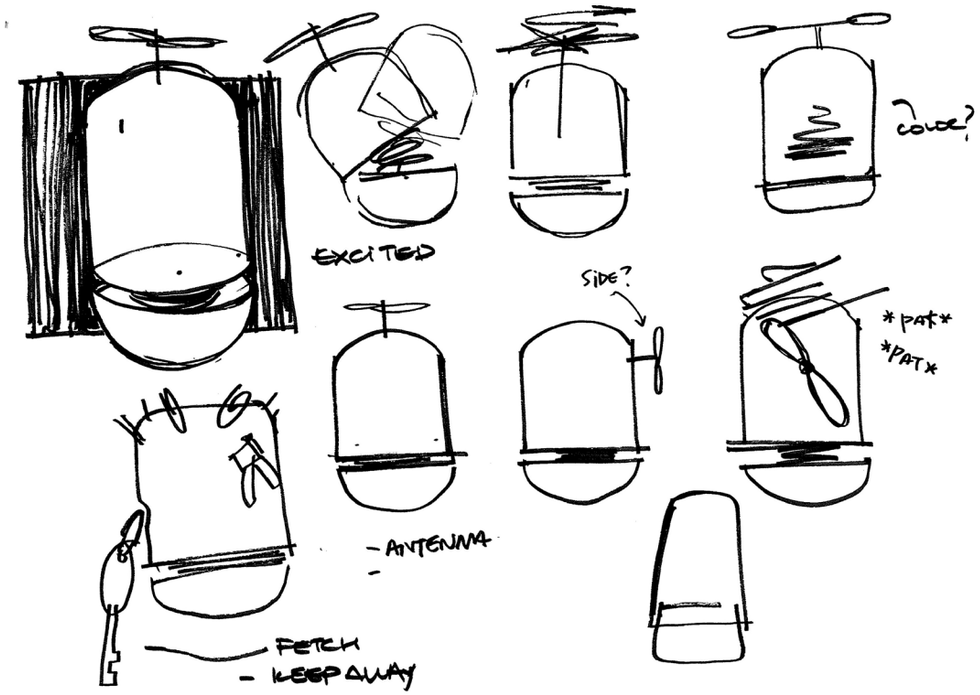
brainstorming different interactions

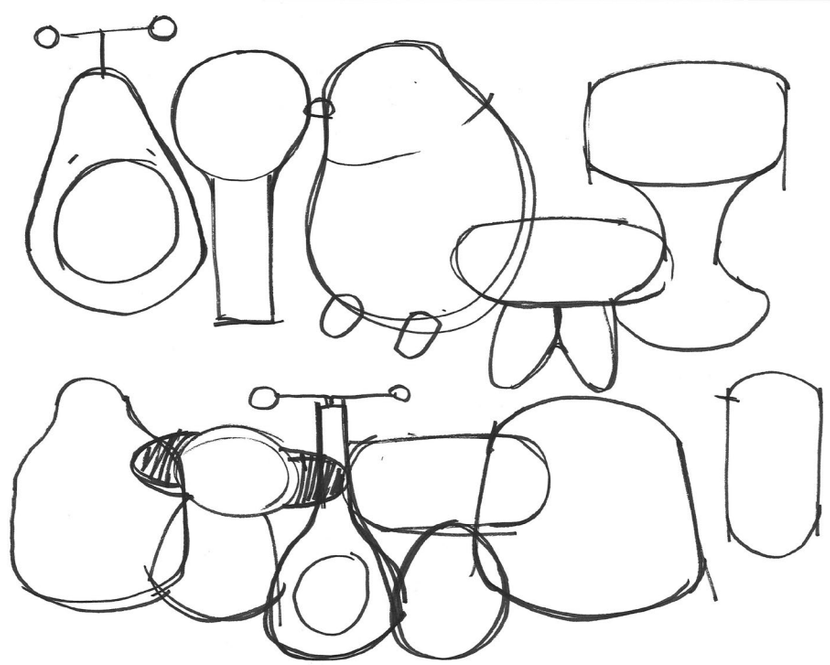
squishy interface interaction


180° SWIVEL
MAGNET INSIDE


VIB MOTOR + LB
SERVO PULLS MAGNET BACK
MAGNET
SPRING
SERVO




EXCITED
COLOR?
SIDE?
PAT
PAT
- ANTENNA -
FETCH
- KEEP AWAY

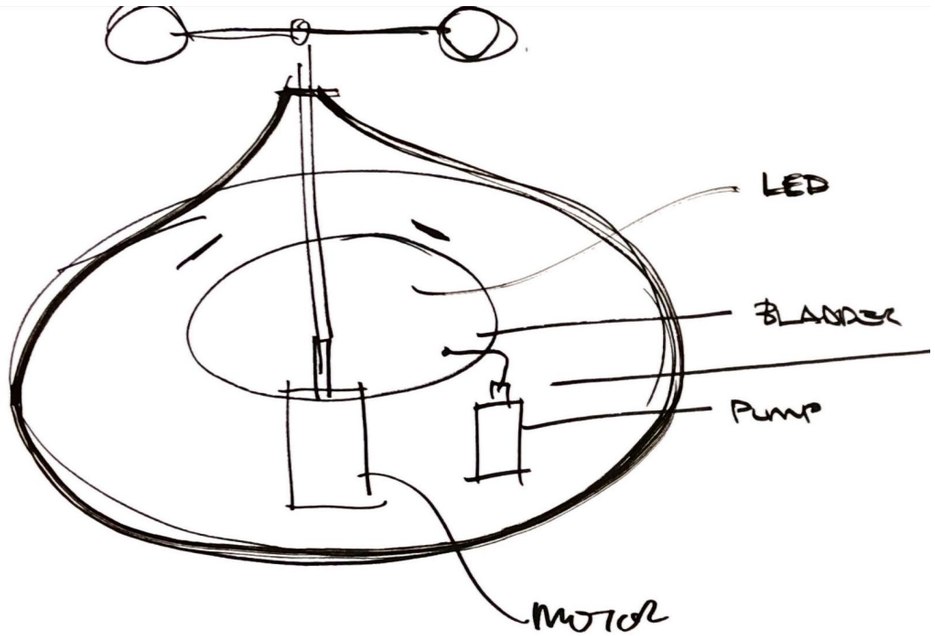


Refining emotive concepts

After several iterations, I zeroed in on a few forms and personalities that would be compelling to give a narrative to.

Mae, the motherly one.

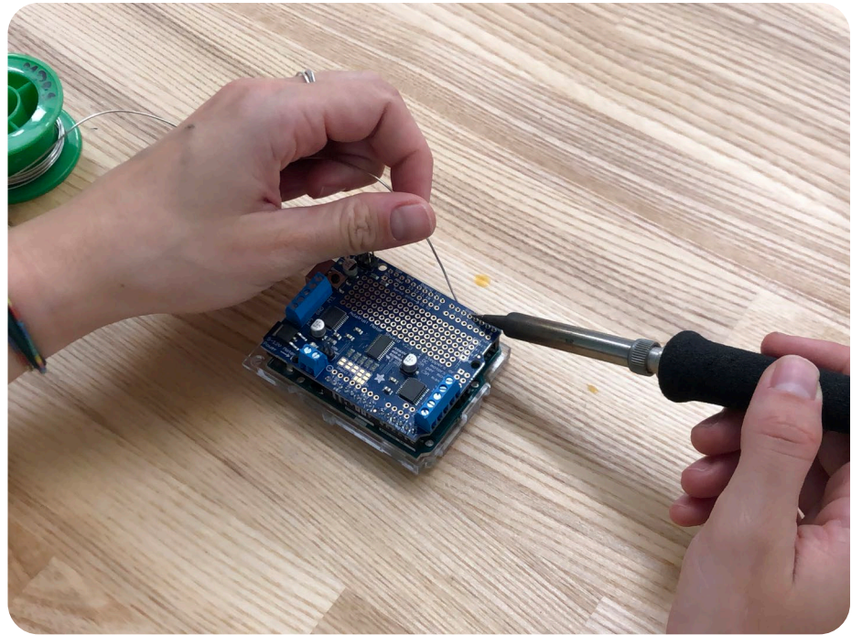
Tobi, the excited puppy.

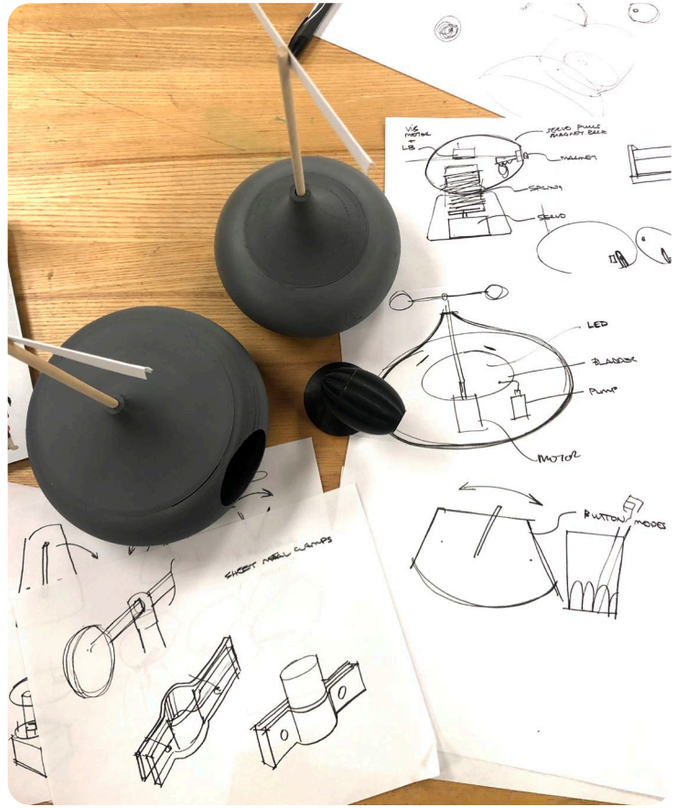


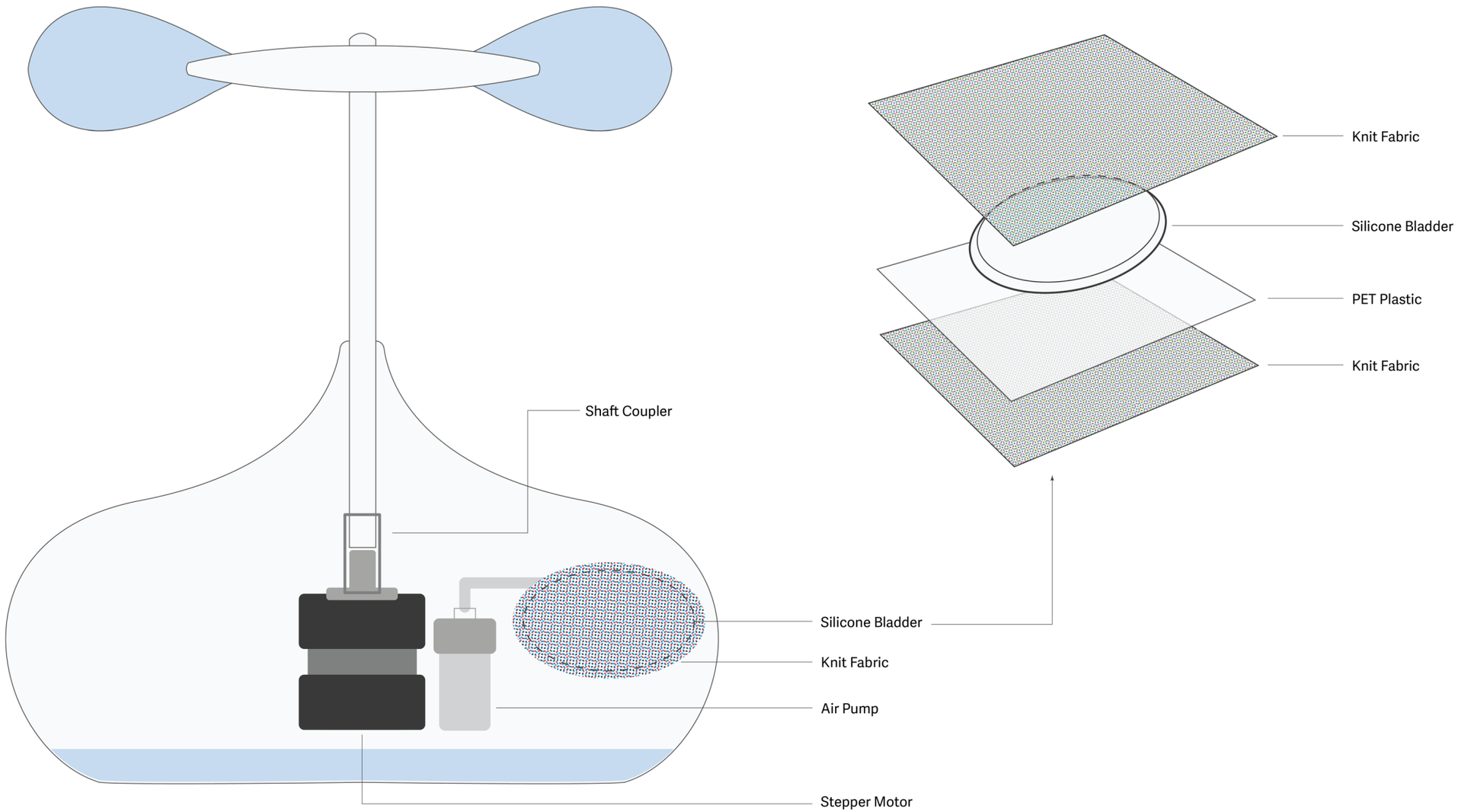
Snor, the sleepy one.

Designing mechanisms and rapid iteration

I got to work actuating each device using Arduino and iterating on the forms of each device. Lots of 3D printing and sketching was done to figure this stuff out.






Shaft Coupler
Silicone Bladder
Knit Fabric
Air Pump
Stepper Motor
Knit Fabric
Silicone Bladder
PET Plastic
Knit Fabric

Visualizing the forms through renders

I rendered each form in Keyshot to give each a branded appearance.