PORTFOLIO

2023

USER EXPERIENCE DESIGN

YANYI MAI

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EXPERIENCES

Cisco

UX Design Intern — Remote | May 2023 - Present

- Led the independent user research and experience design on Cisco's service mesh management product that aims to provide observability, scalability, and security and improve overall developer experience
- Conducted 9 comprehensive user interviews and synthesized interview data into key insights on CLI and GUI pain points, and workflows using Miro, Dovetail, and LogRocket
- Contributed to product vision and interaction flows for 3 primary features: dashboard, alert and troubleshooting, and team collaboration, and produced detailed wireframes, UI mockups and interactions
- Designed and tested feature prototype that resulted in reducing troubleshooting time by 23% and lowering tool learning curve by 14% for new DevOps and ITOps

Beijing Tian Yan Cha Tech

Senior UI Designer — Beijing, China | Apr 2021 - May 2022

- Led the design and user experience of company's new CRM product "Tian Yan Business Lead CRM" and resulted in 230% user growth rate in 3 months
- Worked to build Tian Yan Business Lead CRM's product design efforts from the ground up by delivering thoughtful user flows, journeys, and design specifications
- Created a comprehensive design component library with over 30+ categories and 200+ symbols and unified UX and visual guidelines for teams across the product
- Collaborated closely with cross-disciplinary designers, developers, test engineers, and product managers on strategizing goals for each version

YonYou Cloud (Hong Kong)

UI Designer — Shenzhen, China | Jul 2019 - Apr 2021

- Independently designed and implemented ERP, CRM, and HRM softwares for company's core clients
- Executed user journey maps, wireframes, interactive prototypes iteratively for a seamless OA experience for clients' International teams
- Partnered with PMs and developers to drive the product's efficient and streamlined user experience
- Resulted in a 23% increase in logistics efficiency and a 12% decrease in OA errors

EDUCATION

University of California, Berkeley

Master of Design — Dec 2023

- Master of Design Student Association - Academic Officer
- MDes Distinguished Scholar Award: $6000 scholarship from UC Berkeley

University of California, Berkeley

BA in Art Practice — May 2019

- The Berkeley Certificate in Design Innovation

SKILLS

Skills: User interface design, user experience design, interaction design, user research, user persona, user journey map, information architecture, user workflow interface prototyping, usability testing, design systems, design guidelines

Tools: Figma, Sketch, InVision, Axure RP, Atlassian Jira, Adobe Photoshop, Adobe Illustrator, Adobe XD, Adobe After Effects, Adobe Premiere Pro, Cinema 4D, Keynote

Language: Chinese

OKTO

BIONIC CAMOUFLAGING ROBOT

Okto is an octopus-shaped, camouflagic bionic robot. As soft robotics, Okto can simulate the way octopus camouflages as a response to danger as part of its resilient and persistent nature.

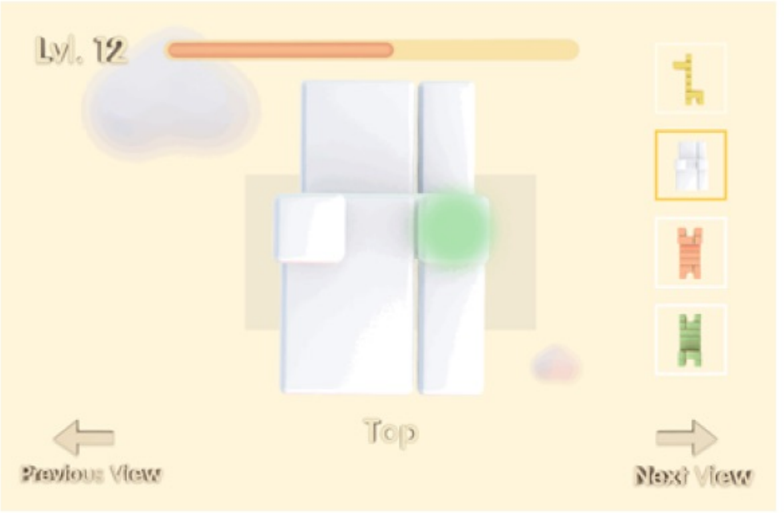
Table Safari

Reimaging the Future of Interactive Play

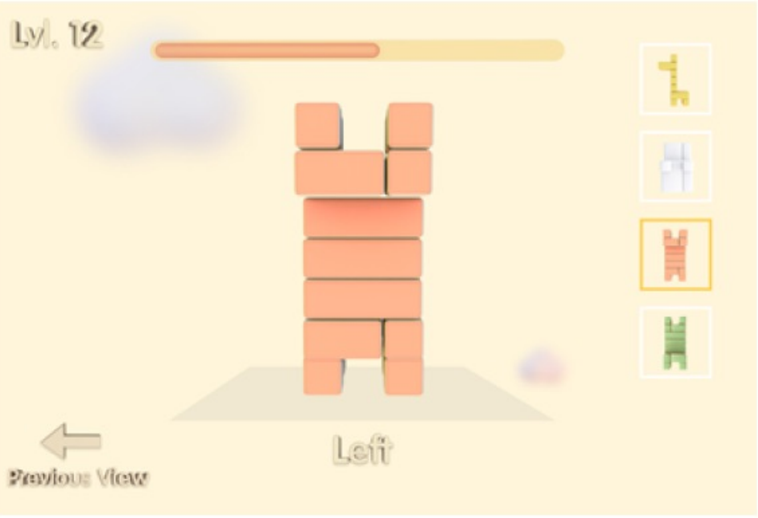
Table Safari is a phy-gital entertaining experience bridges 2D perspectives with 3D blocks designed for children. Through the lens of game based learning (GBL), Table Safari improves young users (age 5-7) spatial awareness skills through the visual-spatial correlation between the 3-dimensional building blocks and 2-dimensional views.

Digital Gameplay

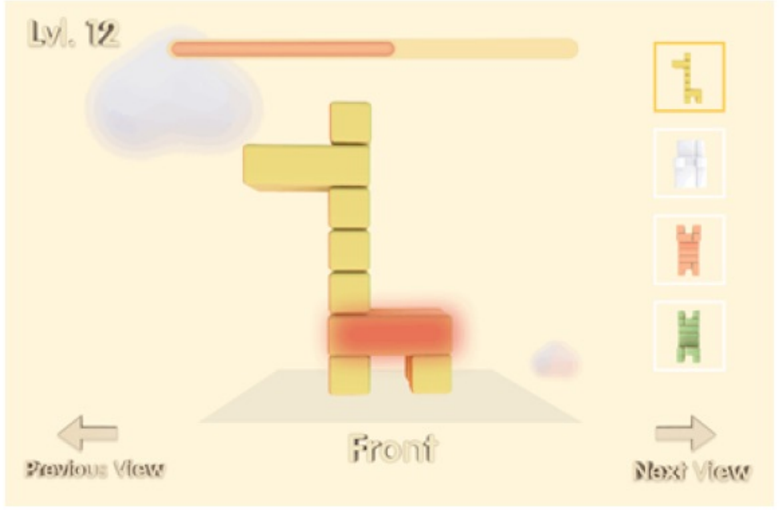
Start



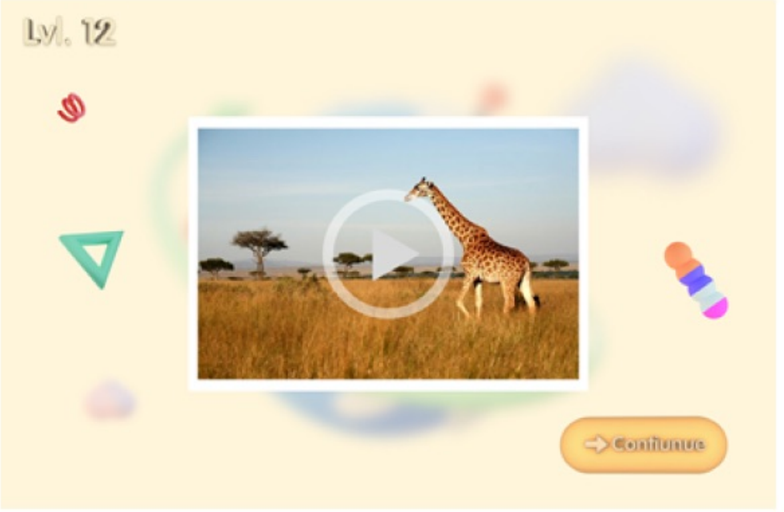
Correct block being placed



Switch views: Top, Left, and Front



Incorrect block being placed

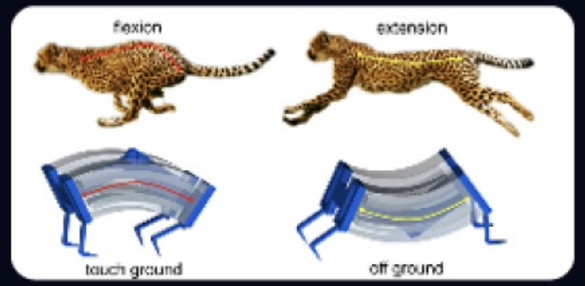


Facts about this animal reveal as correct blocks being placed

Completion

BACKGROUND RESEARCH

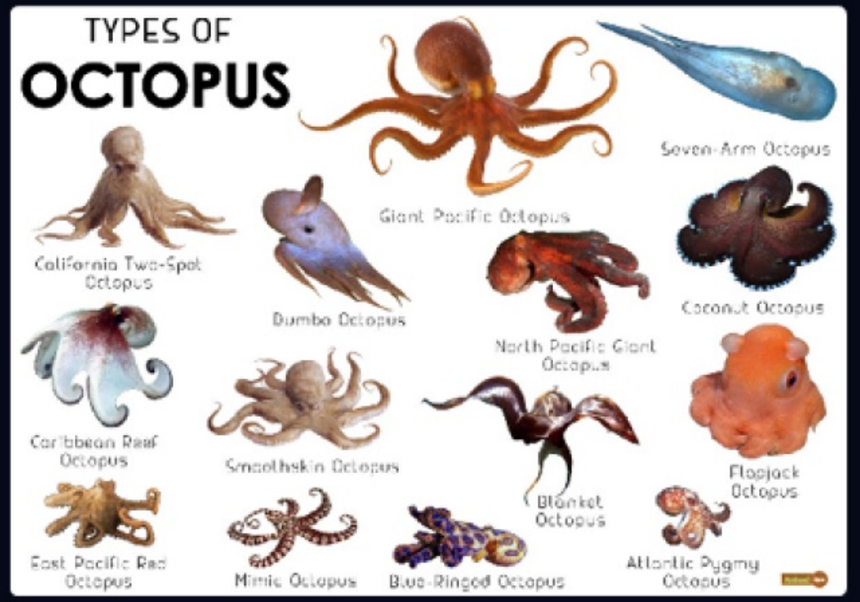
1.Bionics (animal & plants)
Show the persistence and resilience of animals



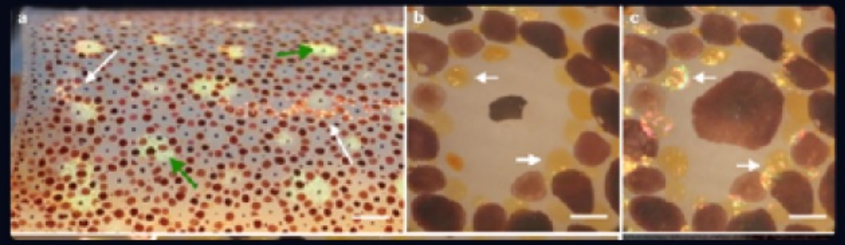
2.Material focus
Show the persistence and resilience of material itself

ABOUT OCTOPUS

An octopus is a soft-bodied, eight-limbed mollusc of the order *Octopoda*. They have squishy bodies that can squeeze through tiny cracks and eight sucker-covered arms that can be regrown.

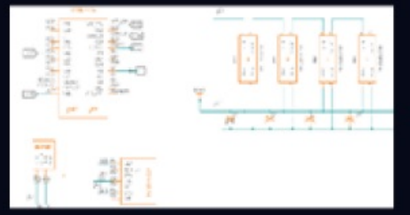


Octopuses can shift hues because they have chromatophores – tiny, color-changing organs that are dotted throughout an octopus's skin. At the heart of each chromatophore are tiny sacs filled with nanoparticles of a pigment called xanthommatin.



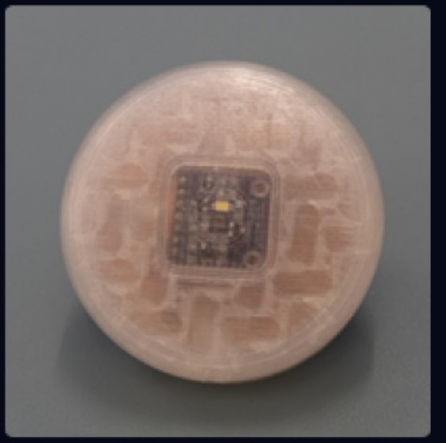
PROTOTYPING PROCESS - CIRCUIT BOARD DESIGN

We choose to make a PCB because it helps us to better scale the project and make it less prone to human error. Utilizing the existing sensor break-out boards, we did not have to start fromscratch. Quick validation of the function of each component on the breadboard, we use Fusion 360's electronics workspace to create a custom components library, schematics, layout, and 3D model accordingly.



PROTOTYPING PROCESS - MILLING & INSTALL PROCESS

Due to our time budget, we choose to manufacture the PCB by ourselves using Othermill down in the maker space. The PCB comes out nicely.
Soldering SMD components is not as hard as we thought. Everything comes along nicely in the end.



Concept Definition
Define

Spatial awareness & Block-E

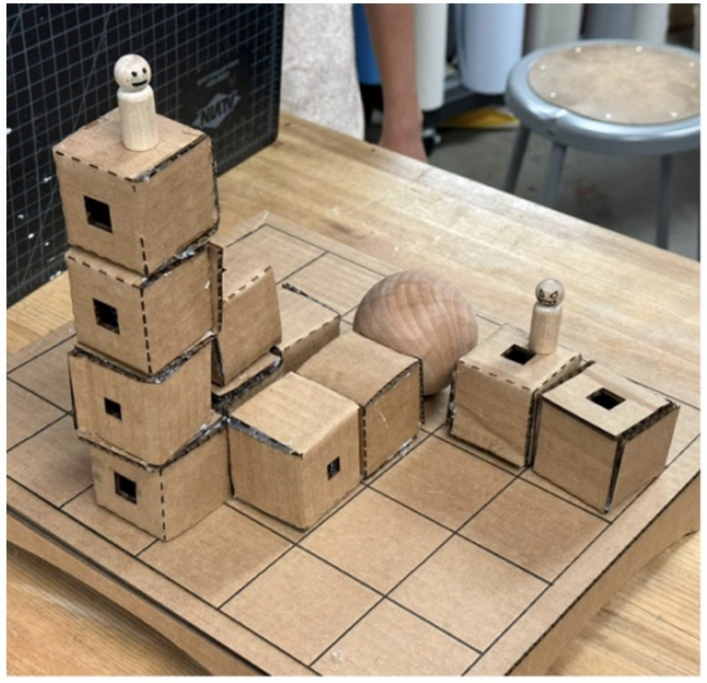
While doing the secondary research to solidify our concept, we found out that spatial awareness is an significant part of the cognition skills we are focusing on. It develops from toddlerhood until early school age. As an important skill that allows children to understand the relative location of objects in space and the impact of their interactions, it bolsters the foundation of 3-dimensional perception and thinking.

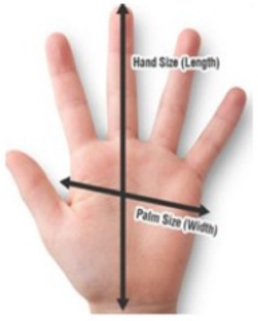
We came up with two divisions of "Block-E", and one of them is based on research about spatial awareness. As traditional approaches to developing spatial awareness typically lack proper guidance and constraints, we saw an innovation opportunity in this field. We decided to shape our project into game-based learning (GBL) for spatial awareness.

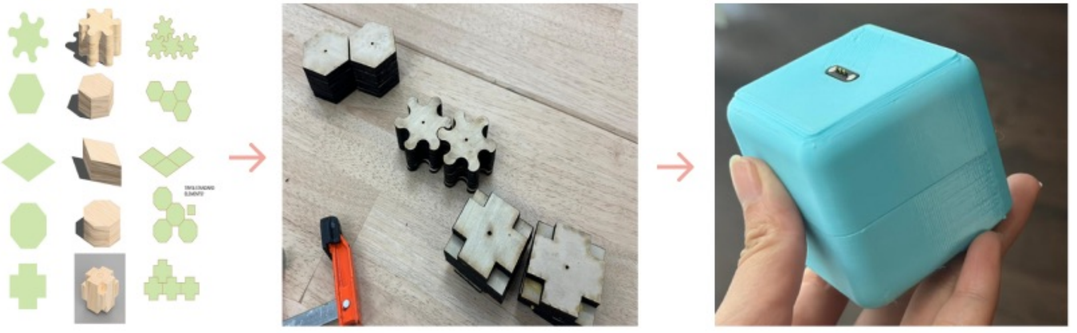
How might we improve children (age 5 - 7) spatial awareness skills through game based learning?

A gamified experience that encourages children reconstruct 3D animal models with a set of building blocks, following 2D instructional views.

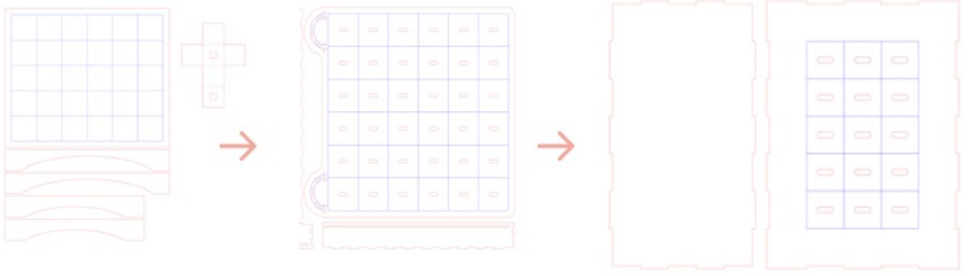
Usability Testing
Develop







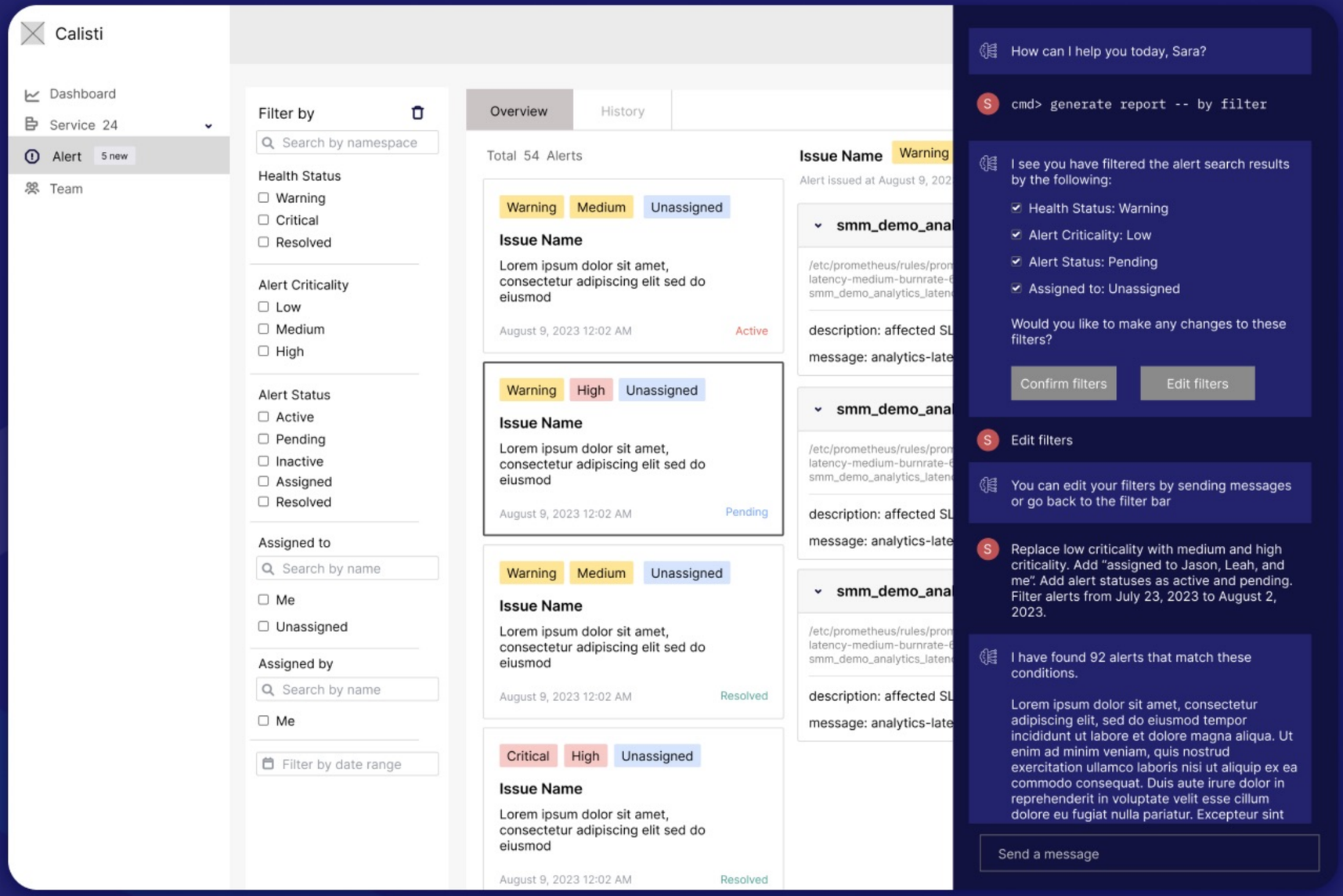
Form ideation



Cisco Outshift

Calisti: Reimagine the Future of Service Mesh Management Tools As Hybrid Interface

Led the independent user research and experience design on Cisco's service mesh management product that aims to provide observability, scalability, and security and improve overall developer experience



Calisti/SMM User Research

Kai's JBTD: Minimize the time it takes to track, observe and log the health of the service mesh and apps running on it

Problems:

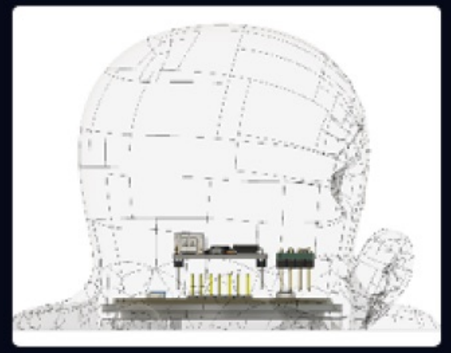
- Too many clicks to get to the actual critical microservices and their following reports
- Link to Prometheus is too inconspicuous
- Timeline under 'Services' is too small and difficult to navigate
- Filtering bar doesn't filter out the timeline

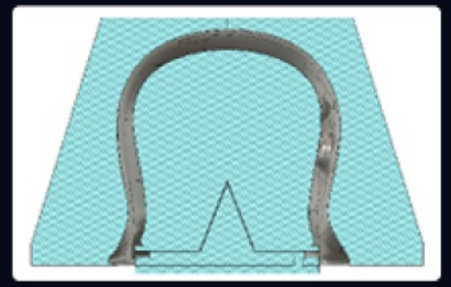
PROTOTYPING PROCESS - 3D MODELING & 3D PRINTING

Making them mold has two main challenges: First, We want to cast Okto with very thin skin to form an empty space inside and save material. Second, the product has to become air-tight after assembly. These requirements made our mold design extremely hard.

The final mold is designed in 3 parts due to the negative shape of the Okto. Two parts on top form the outer mold, and one part in the middle form the inner mold. We tried multiple casting directions and three different skin thicknesses just to find out casting from the open bottom was the best option, and 5mm skin thickness provided the balance between the structural rigidity and squishiness.

3D printed mount and laser cut disk were also implemented in stead of the 3d printed one from the V1 design to form air-tight enclosure as the design needed it to function, but we still could not figure out to make it work perfectly.





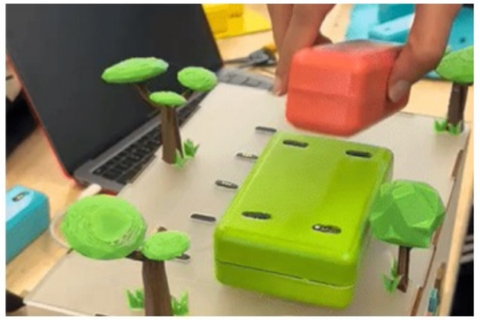
PROTOTYPING PROCESS - SILICA GEL CASTING

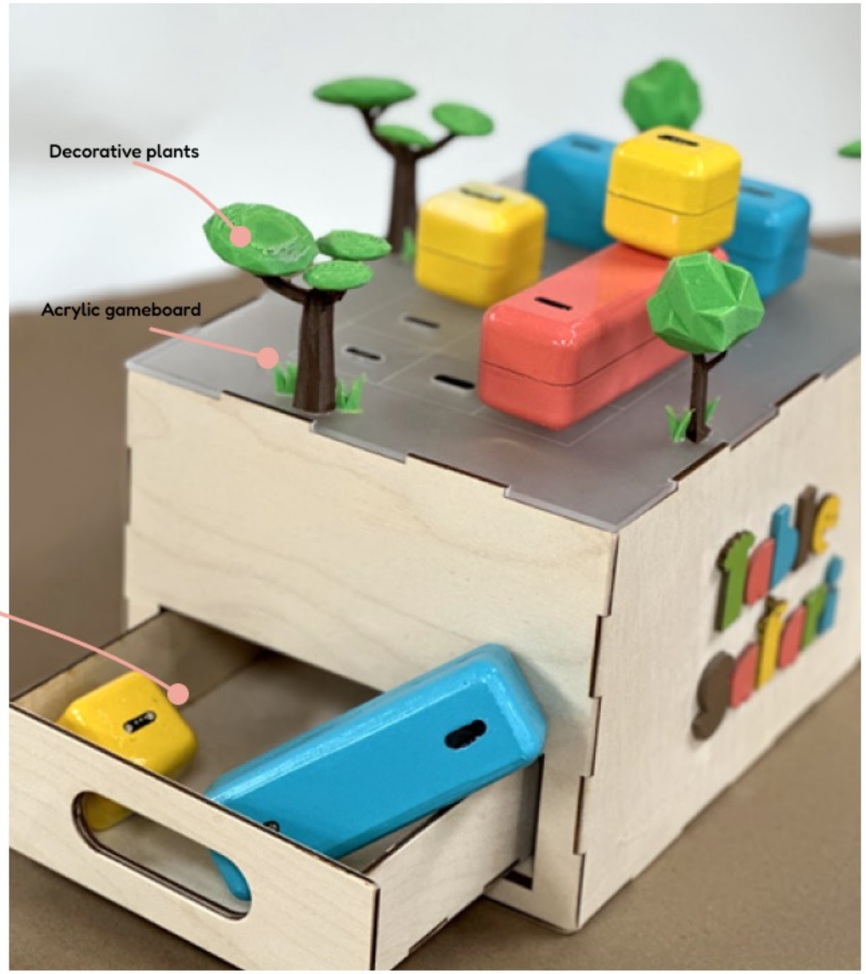
After two failed castings, our third casting finally succeeded. And here is the process: we first seal the edges of the mold with a glue gun to avoid leaks. We fixed the 3D-printed mold with pliers. Then we fuse the A/B gel 1:1 at a ratio of 400g each. And a funnel was made on the top of the 3d mold to facilitate the pouring of silicone.

After slowly pouring silica gel through the hole, we put the mold filled with silica gel into the vacuum machine to extract the excess air bubbles in the silica gel. After resting for another 1.5 hours, we took the model out and carefully cut off the edges with scissors. Finally, we put the circuit board into the bottom of the octopus, and adjust the position for usable testing.

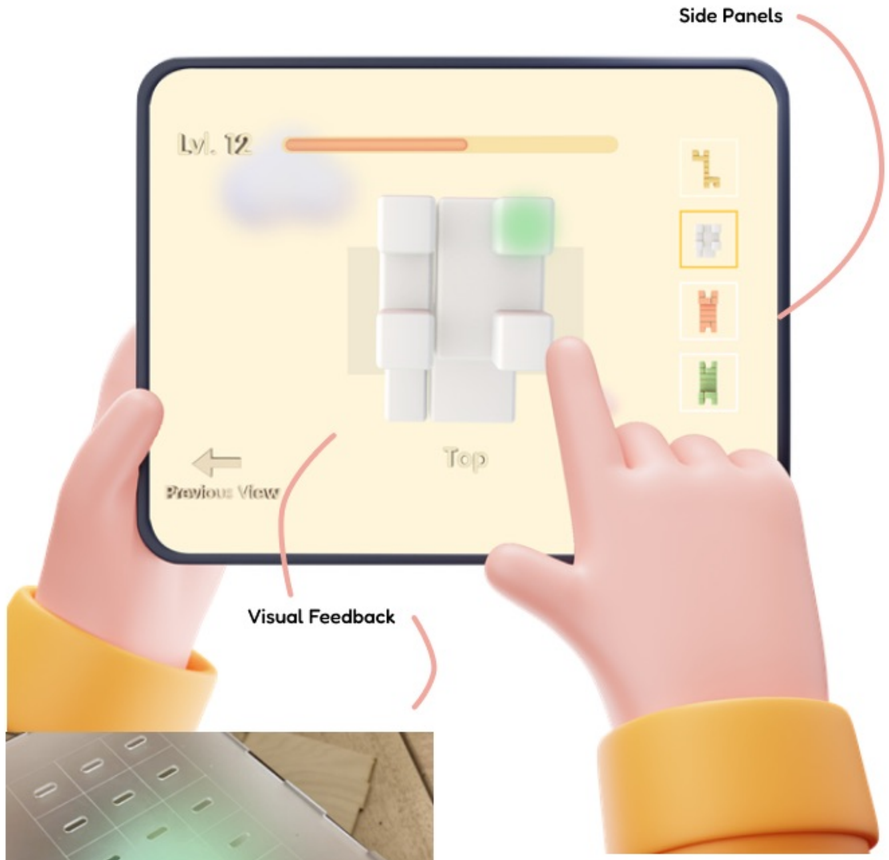
Final Product
Deliverable

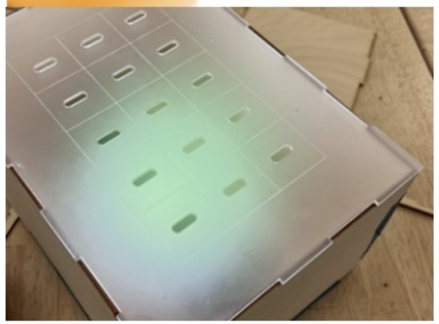
We kept iterating and refining our prototype based on feedback from rapid prototyping. The final game-board is a chamfering wood box featuring decorative plants on top and a storage drawer on the bottom. The game board has magnetic pogo pin grids.





We used Processing to build a prototype for functionality test. Later, we extended this prototype to a more elaborate user interface that consists of all 2D instructional views and real-time feedback for building actions.

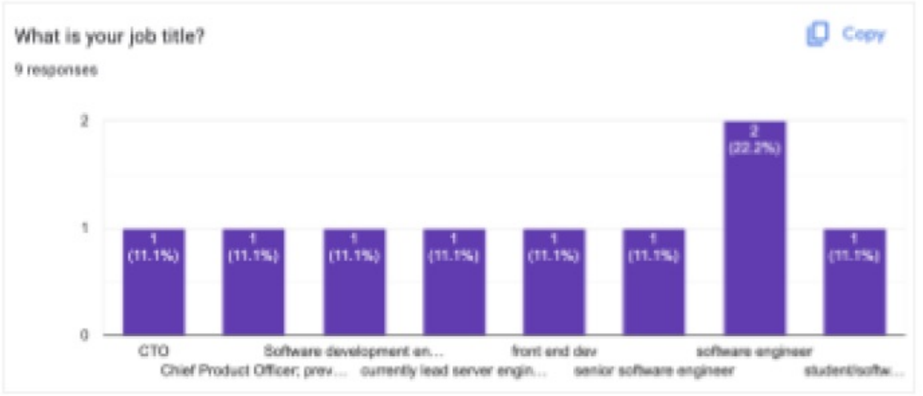


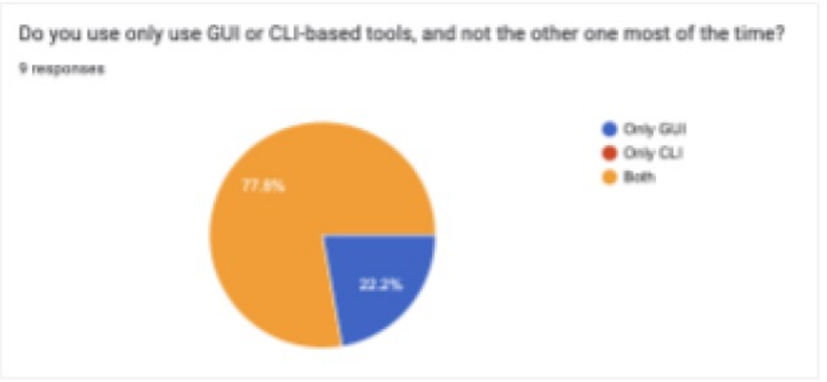


It will work together with the game board to notify player digitally and physically.

Hybrid Interface User Research

- ~70 questions
- 3 sections
  1. User background, device info, and JBTD
  2. Preference for CLI vs GUI, learning process, library/script management
  3. Leisure, personal, creative usage of CLI tools
- Intended to understand typical workflow and pain points in order to identify opportunity area for hybrid interface

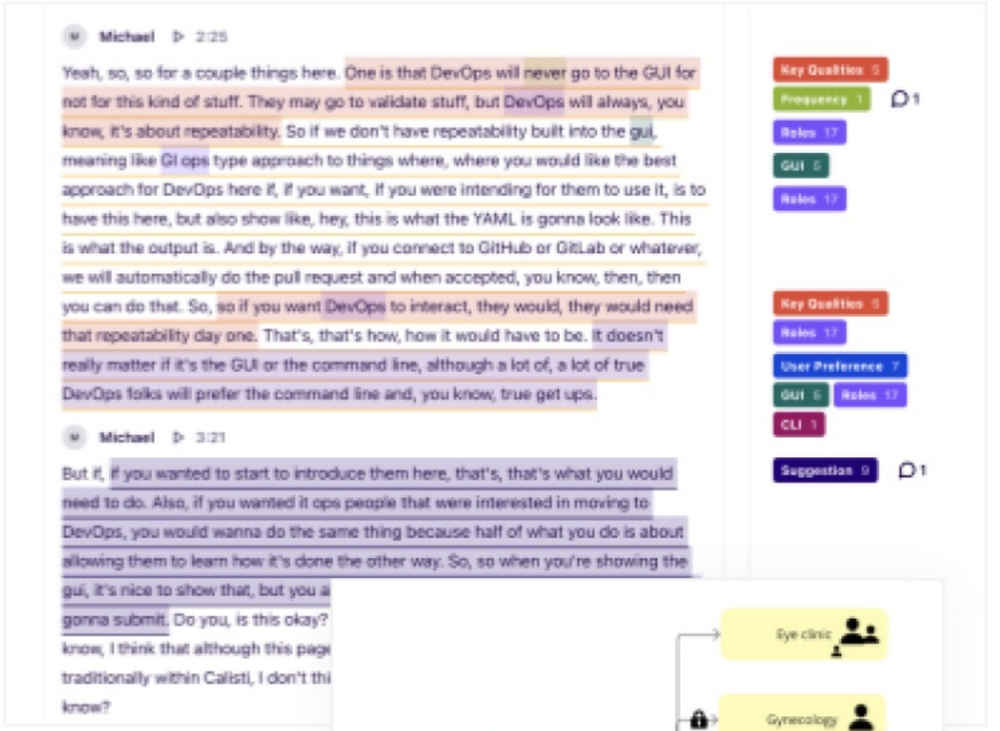


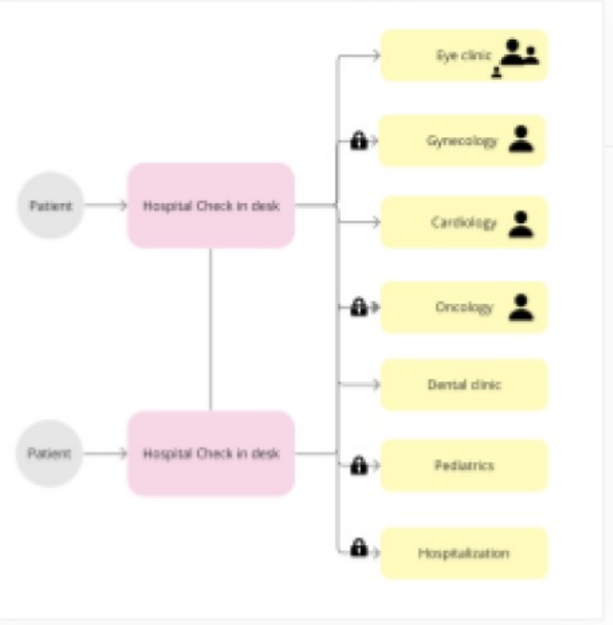


Calisti/SMM User Research

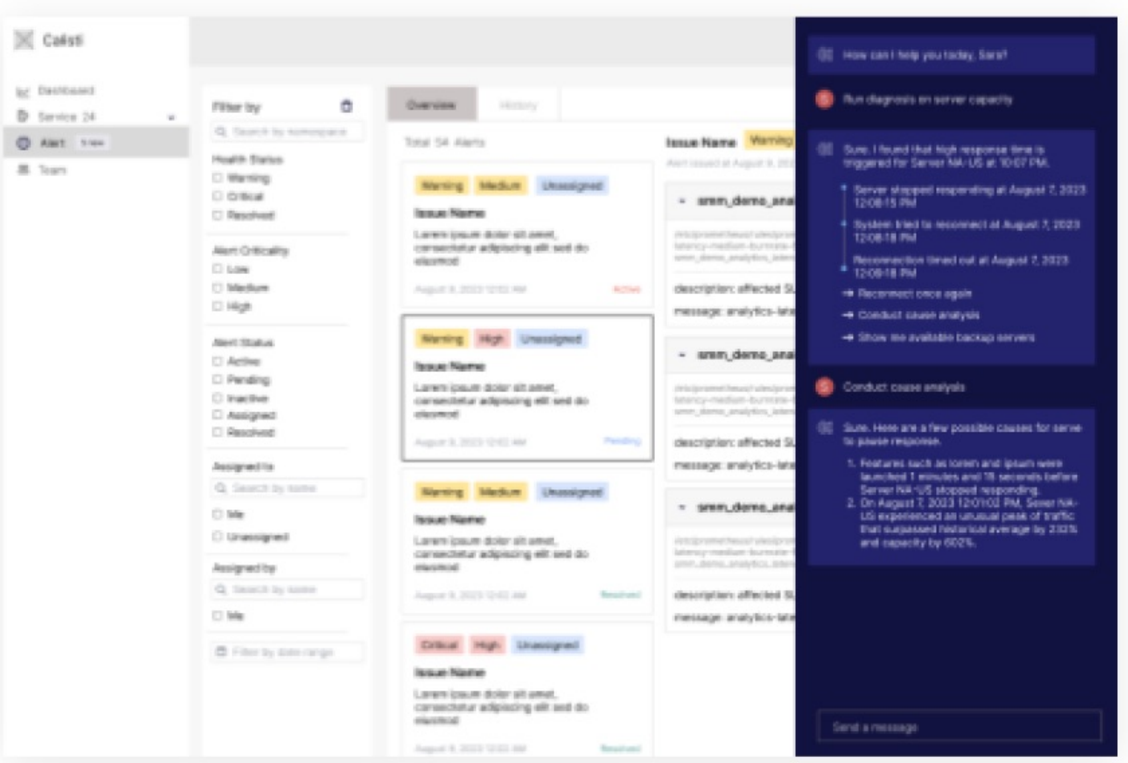
- Used JTBD research as baseline
- My JTBD: *how to minimize the time it takes to set up ingress gateway*
- Spoke to 4 users to:
  - Verify the significance and pain points around the JBTD
  - Build narrative around their typical workflows around this JBTD
  - Understand how error cases and team collaboration happen during the workflow

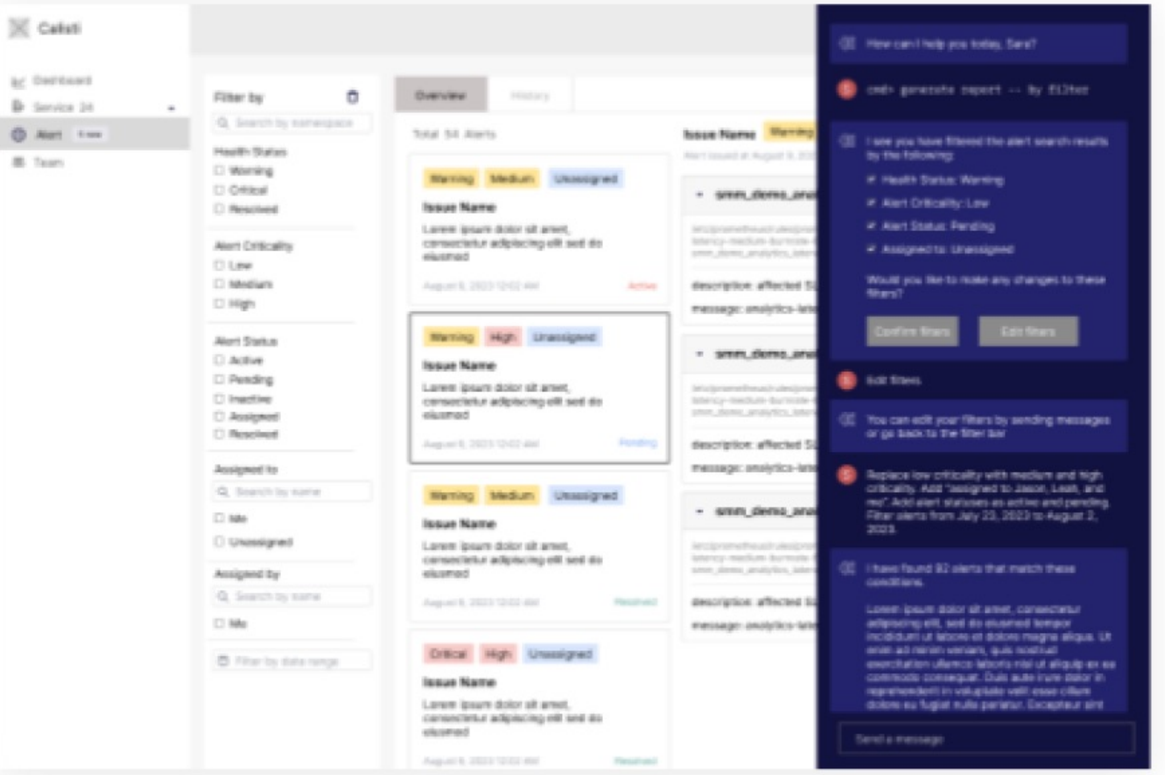
Conclusion: ingress gateway setup isn't an actual problem that bothers users!





Calisti Redesign





Generative AI Interaction

ChowBot

ChowBot is an innovative diet companion robot that aims to promote healthier eating habits in children by combining educational and entertaining elements. It uses interactive features and a story-driven approach to make mealtime engaging, assessing nutritional values and transforming eating into a game that encourages better food choices.

Motivation

The motivation behind ChowBot stemmed from personal observations of children's struggles with meal engagement and the changing dynamics of family meals. The project seeks to transform mealtime into a positive, educational experience, alleviating the stress on adults to encourage healthy eating habits. ChowBot, as an MDes thesis, intersects design, technology, and human behavior, venturing beyond conventional approaches to children's nutrition.

Methods

The development of ChowBot involved user research, design conceptualization, and prototype testing. Initial user interviews focused on understanding children's eating habits and preferences. The design process included brainstorming the robot's physical aspects, creating a smart dining mat with integrated weight sensors, and conducting observational studies to refine the prototype. User feedback played a crucial role in the iterative design process.

User Research

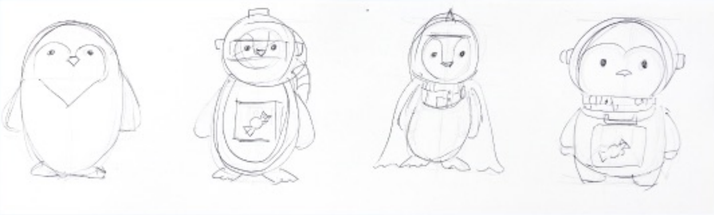
Objective: To understand children's eating habits and explore the potential impact of ChowBot, an interactive eating companion robot.
Participant Profile: A 33-year-old mother from China with a 5-year-old son.

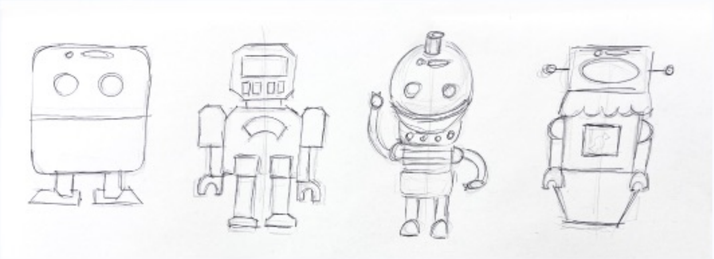
Interview Insights

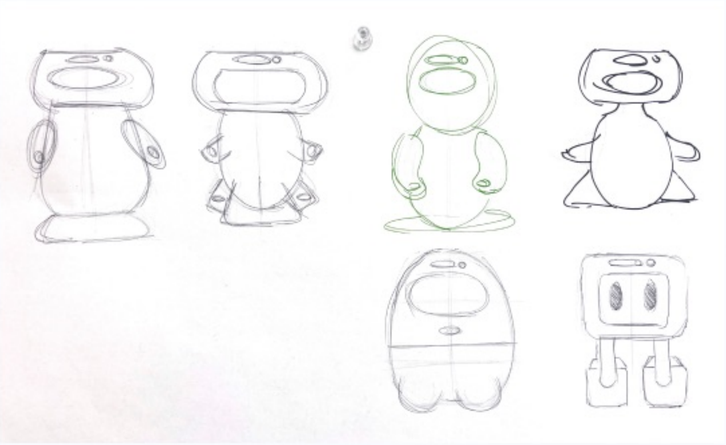
1. Child's Dietary Habits: Three main meals plus a fruit snack daily, with a focus on balanced nutrition involving adult food items.
2. Meal Preparation Evolution: Transition from varied food preparation in early childhood to more adult-like meals, emphasizing self-feeding and variety.
3. Eating Behavior: Positive habits include proper hand washing and utensil use, but occasional resistance to certain foods is noted.
4. Parental Strategies: Introduction of self-feeding with finger foods, consistent eating routines, and storytelling to encourage diverse food intake.
5. ChowBot Feedback:
   - Positive response to integrating entertainment with mealtime.
   - Desire for features that encourage independent and healthy eating habits.
   - Interest in ChowBot providing interactive storytelling and companionship.
6. Suggested ChowBot Features:
   - Interaction and conversation about mealtime habits.
   - Meal duration reminders and disciplinary prompts.
   - Parental notification system for meal progress.

Technical Innovation and Development

Key innovations in ChowBot include its advanced food recognition system and the integration of weight sensors in a smart dining mat. The robot's design process involved 3D printing and meticulous finishing to ensure safety and durability. Technical challenges, such as optimizing food identification and refining the projection system for different lighting conditions, were addressed through iterative design improvements.







User Interface and Interaction

ChowBot's user interface was designed to be intuitive for children and easy for parents to manage. The robot uses voice commands for interaction, and its body serves as both an interactive display and a reward compartment, unlocking incentives for children as they progress in their meal-related game.

Final Prototype