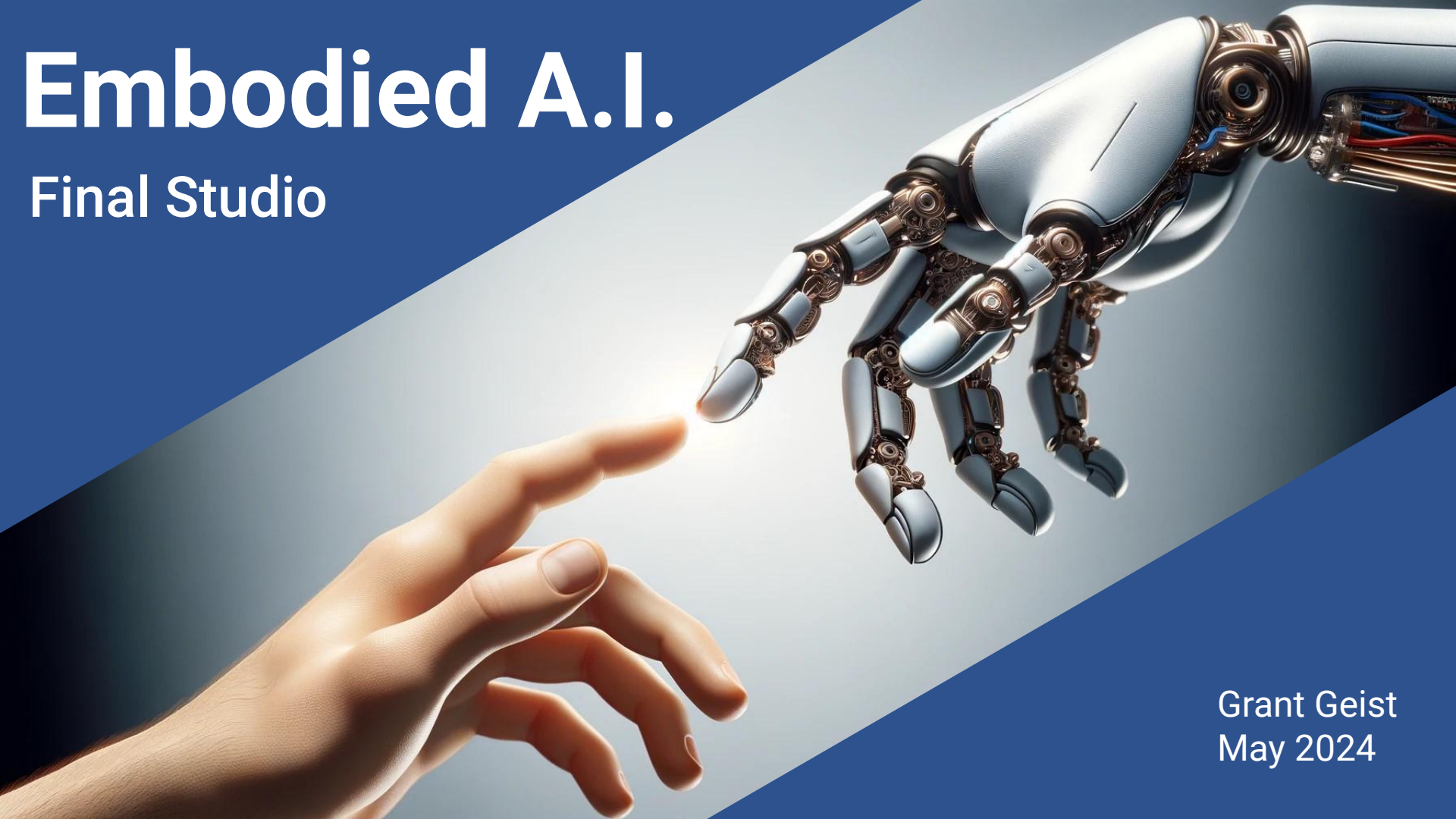
Embodied A.I.

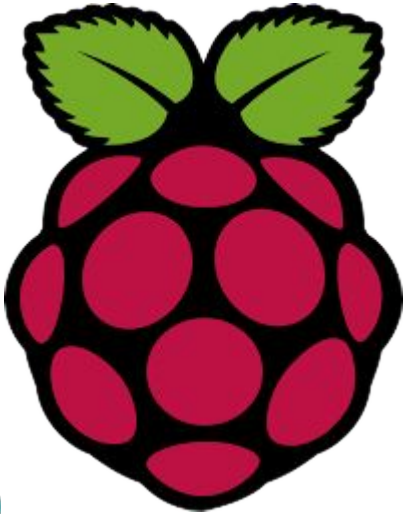
Final Studio



Grant Geist
May 2024

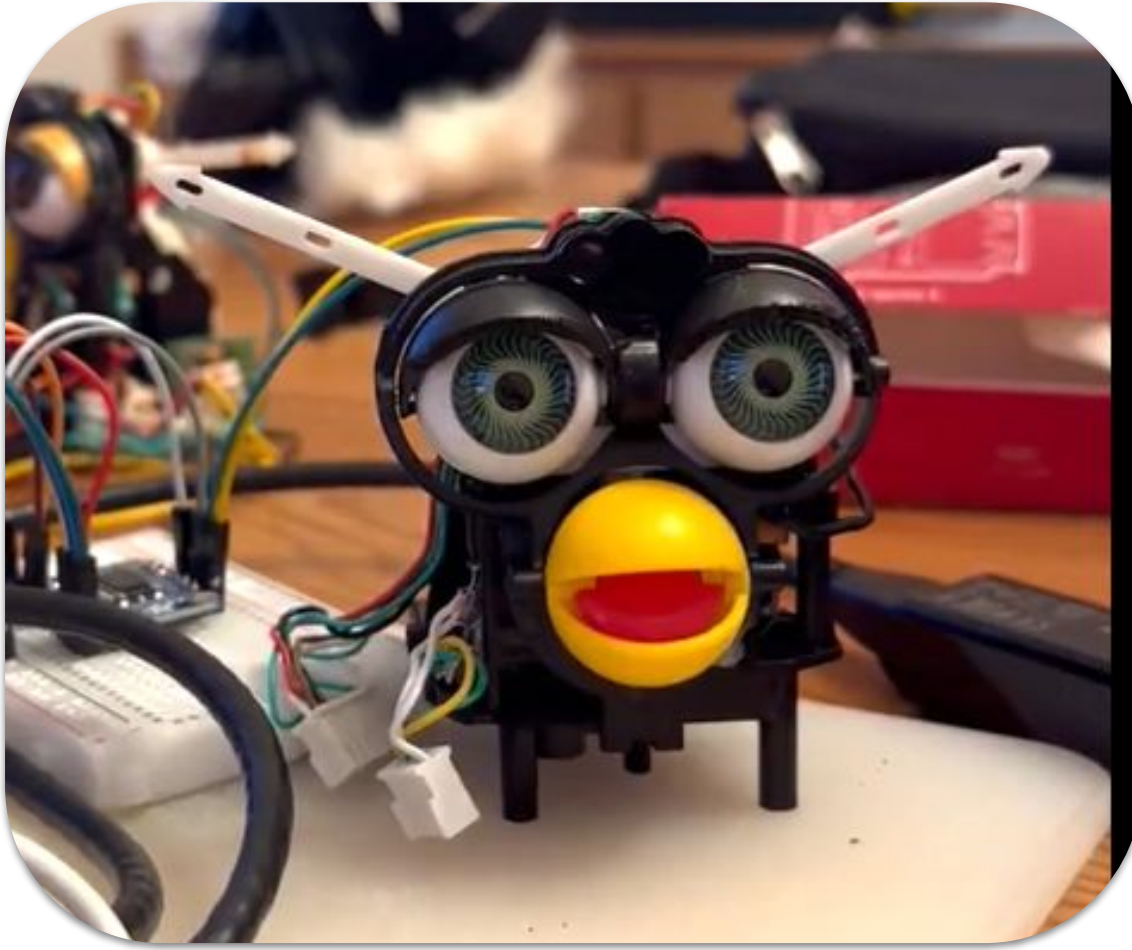
Overview

- The AI and consumer robotics fields are growing fast
- ChatGPT and other generative A.I. models are extremely user-friendly and affordable
- Open source electronics like Arduino and Raspberry Pi are readily available



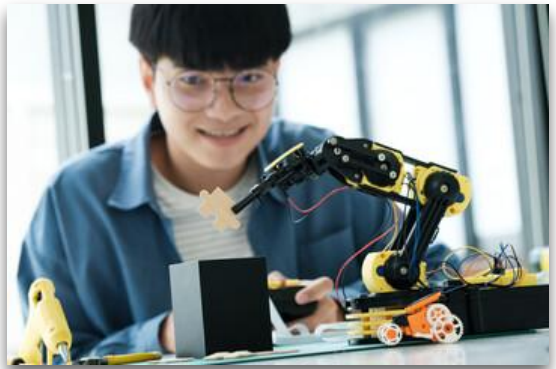
The Opportunity and Challenge

- Creatives are starting to combine generative A.I. with open source hardware in new ways
- Projects require programming, hardware and design skills that put them out of reach for most people.



Persona

- Curious and creative. They are looking to explore the design space where hardware meets software
- Excited to gain a basic understanding of programming, hardware and design
- Looking for a product that encourages customizability and creativity

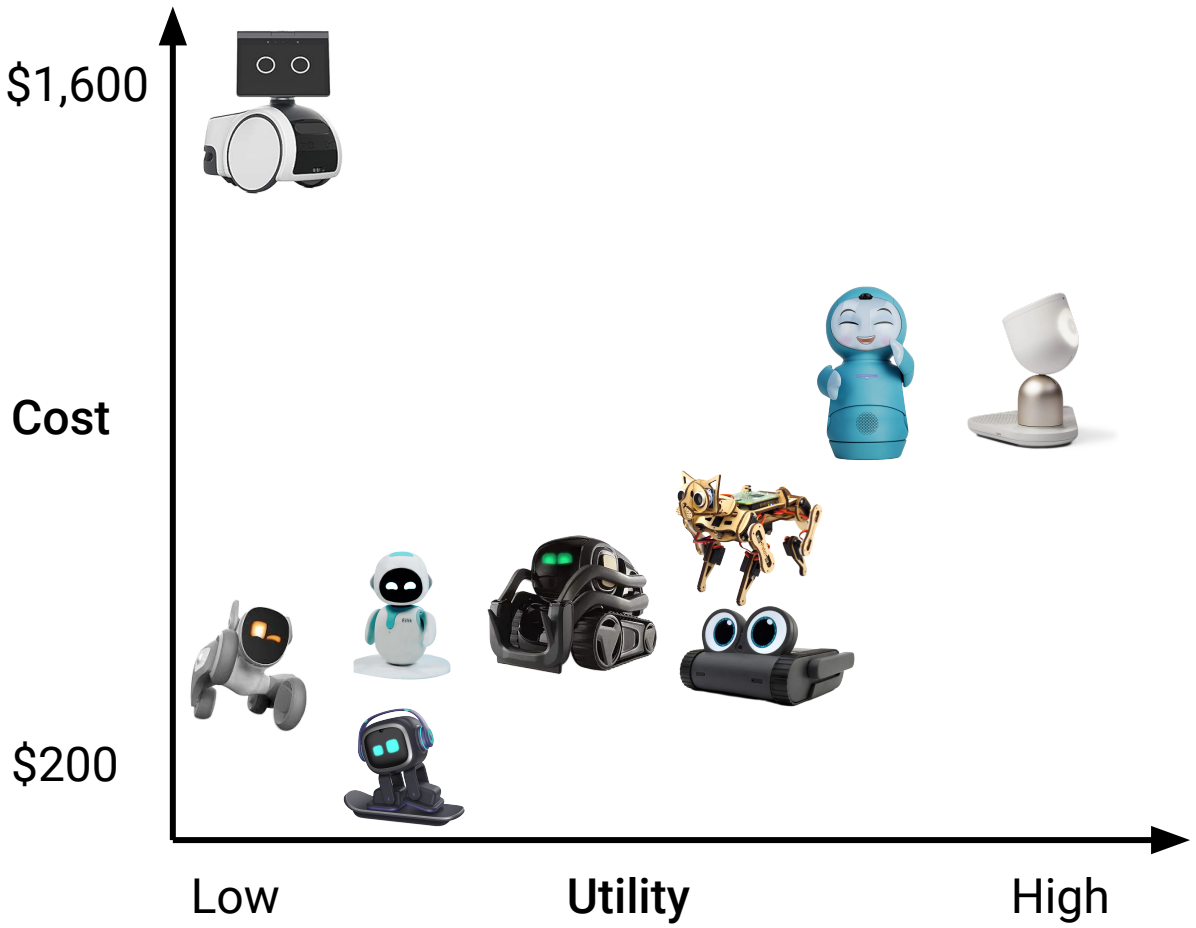


Market Analysis

- The most common embodied A.I. devices are smart speakers such as Amazon’s Echo
- Customization is limited, and the design lacks personality

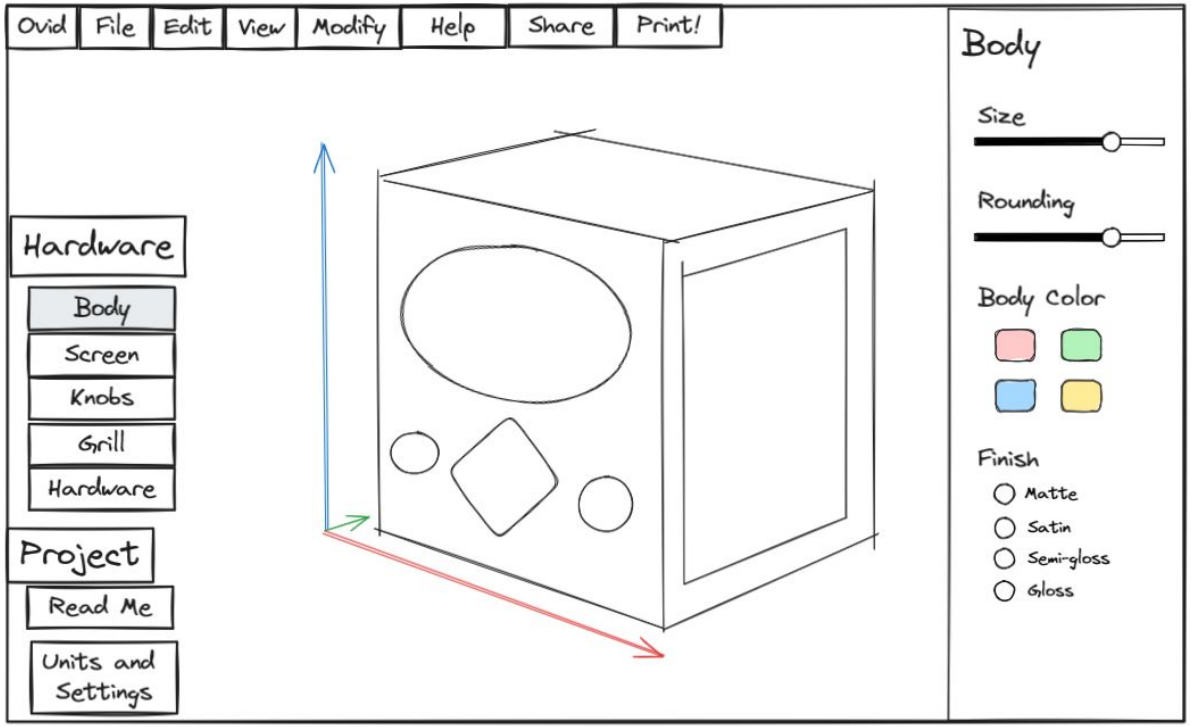
Market Analysis

- Outside of smart speakers, there are three general categories of embodied A.I. systems:
  - Toys
  - STEM toys
  - Companion robots
- Products with high utility and customizability at a reasonable price point ($200 - $300) are missing from the market



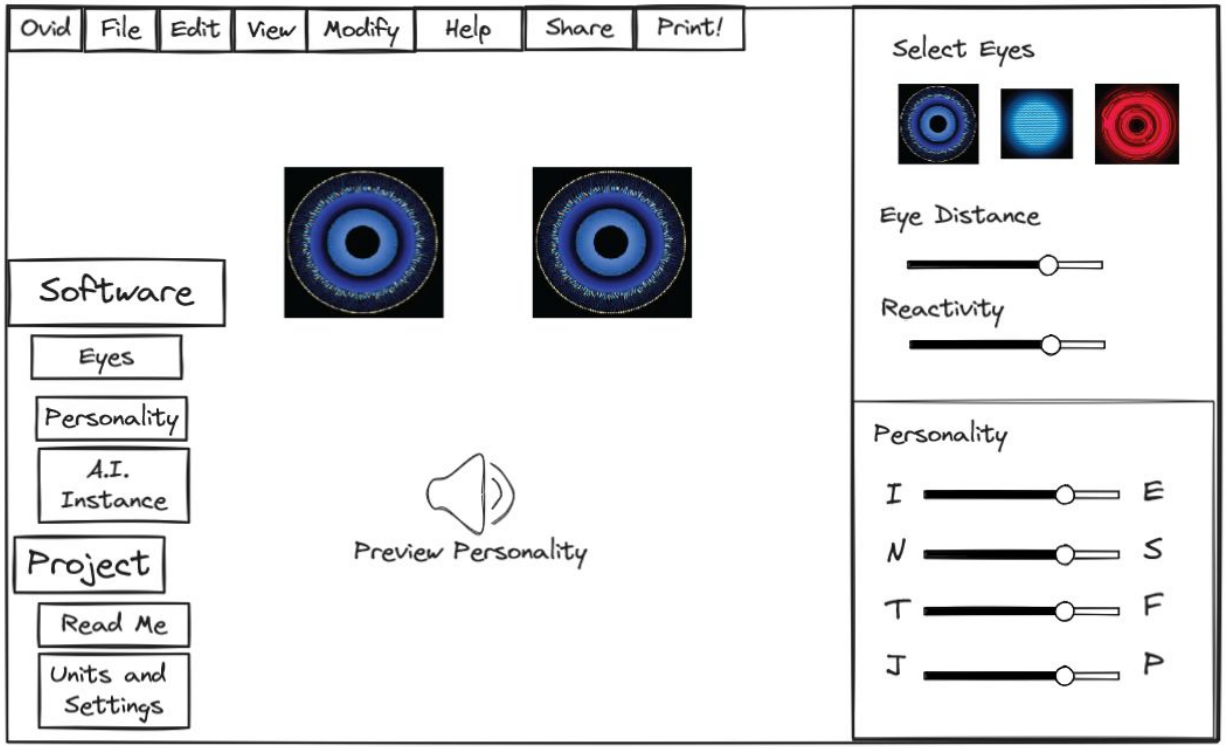
The Idea (Part 1)

Customers use a simple parametric design tool to customize their 3D printed embodied A.I. shell



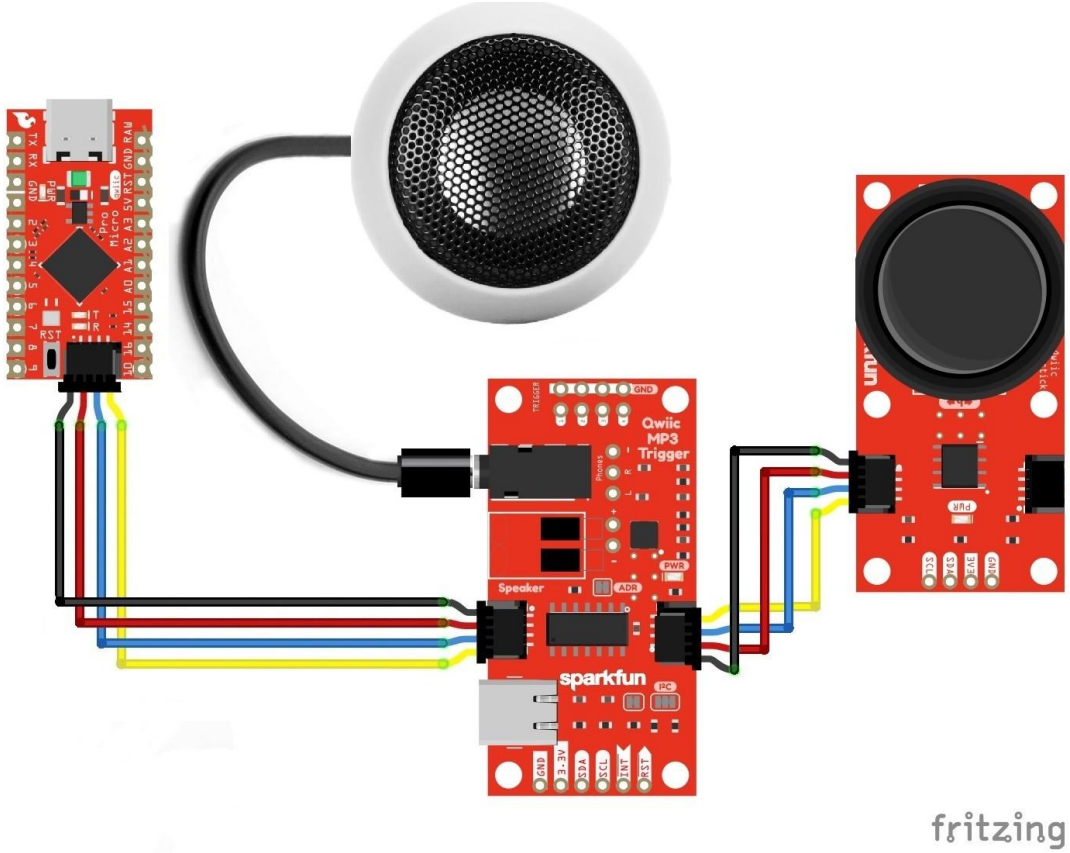
The Idea (Part 2)

Customers create their personalized A.I. assistant via a no-code interface



The Idea (Part 3)

The hardware in the embodied A.I. system leverages Qwiic connectors which eliminates the need to worry about wiring and soldering



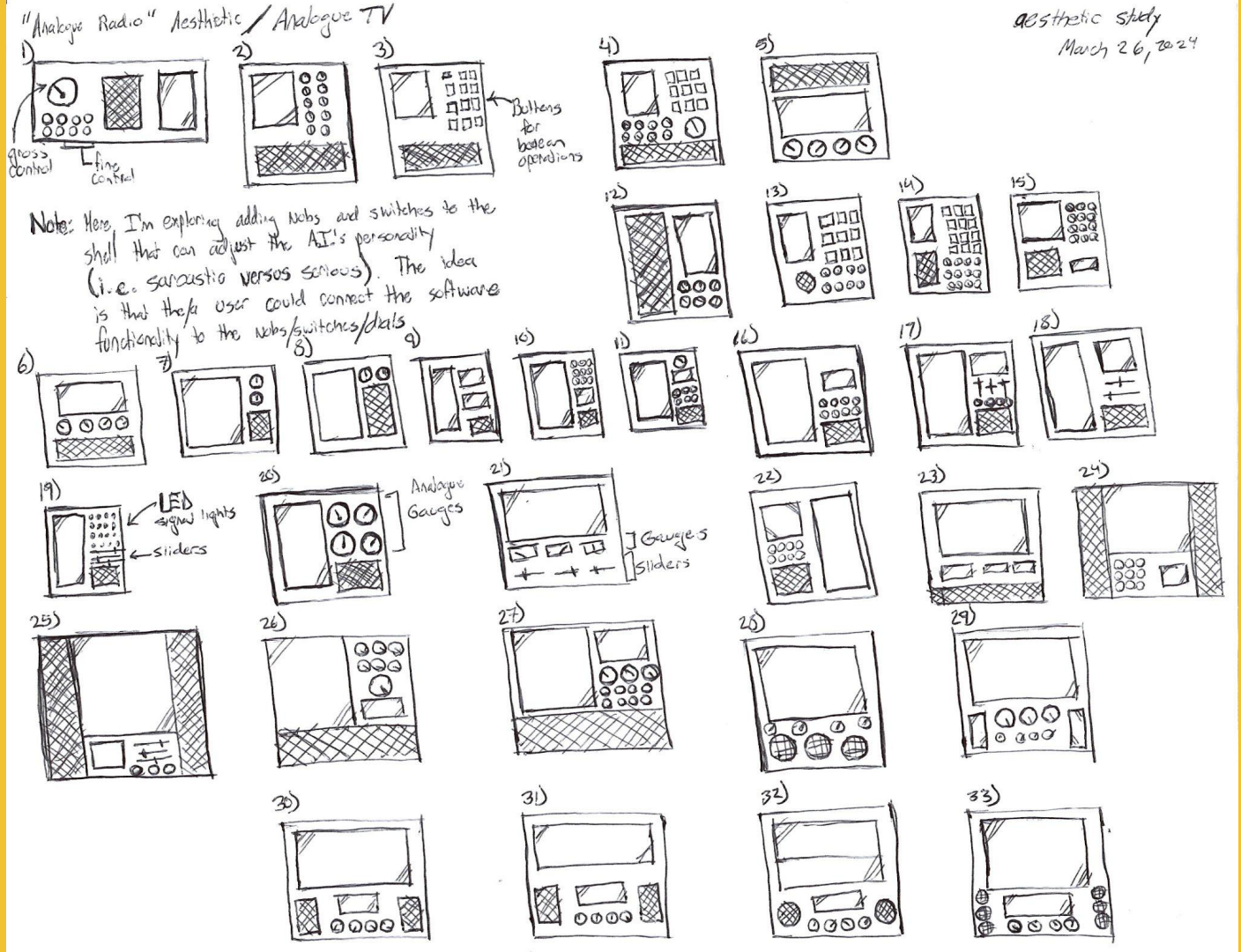
Designing the Embodied A.I. Shell

Embodied A.I. should be cool, not creepy or scary. Nostalgia and analog affordances might provide users with a sense of control over the technology. Think:

- Vintage Technology
- Retrofuturism
- Streamlining
- Geometric
- Fluidity

Ideation

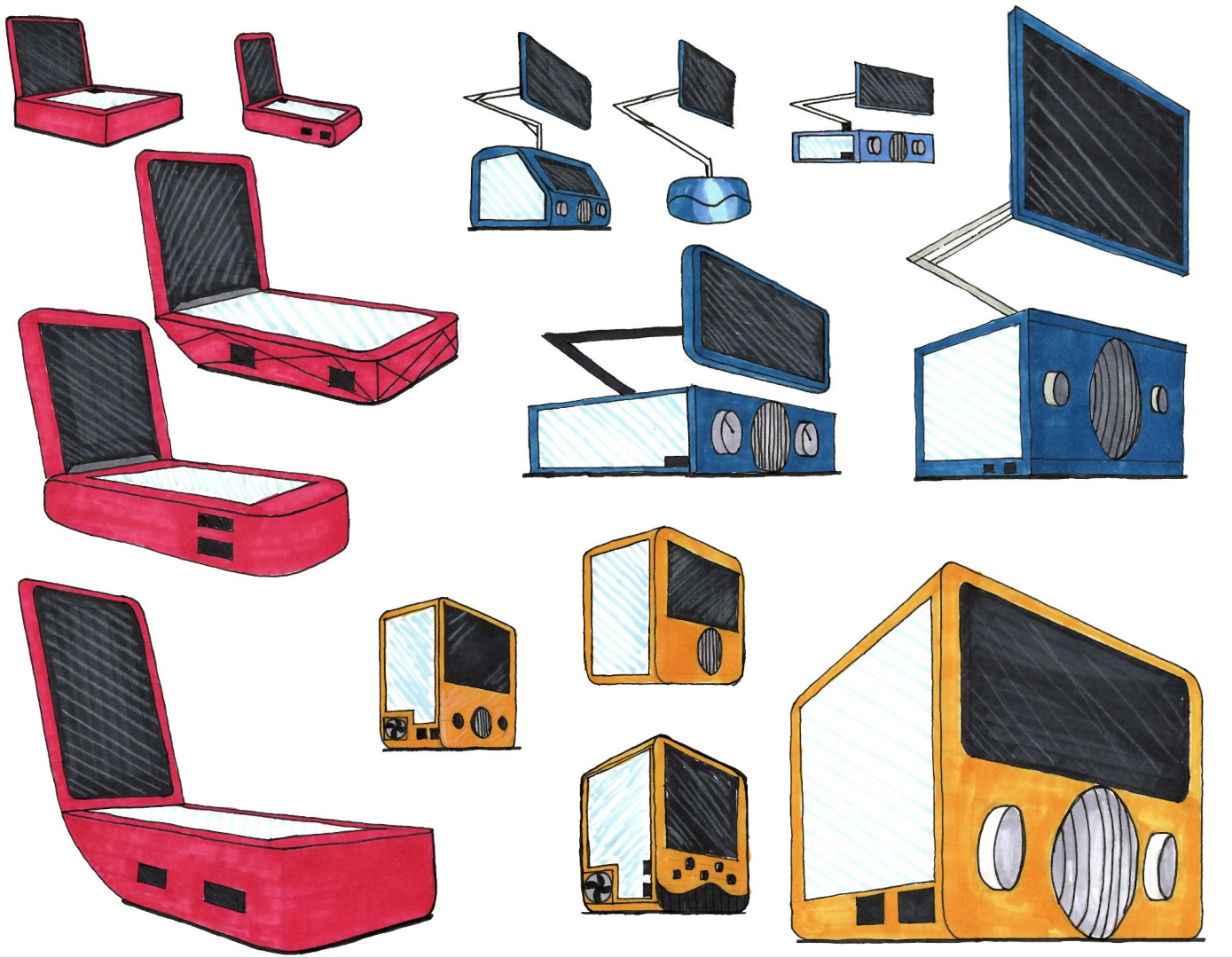
Two dimensional sketches to figure out the personality of the product



Ideation

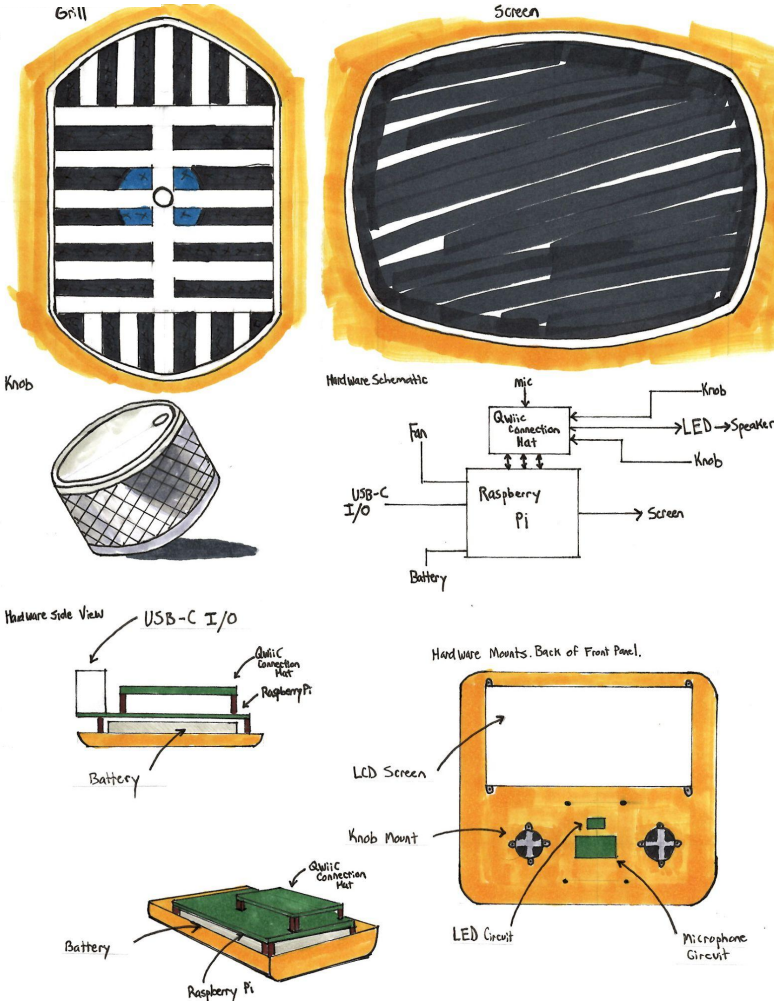
Aesthetic Experiments

- 90s flip phone
- Luxo L1 (lamp)
- 50s radio

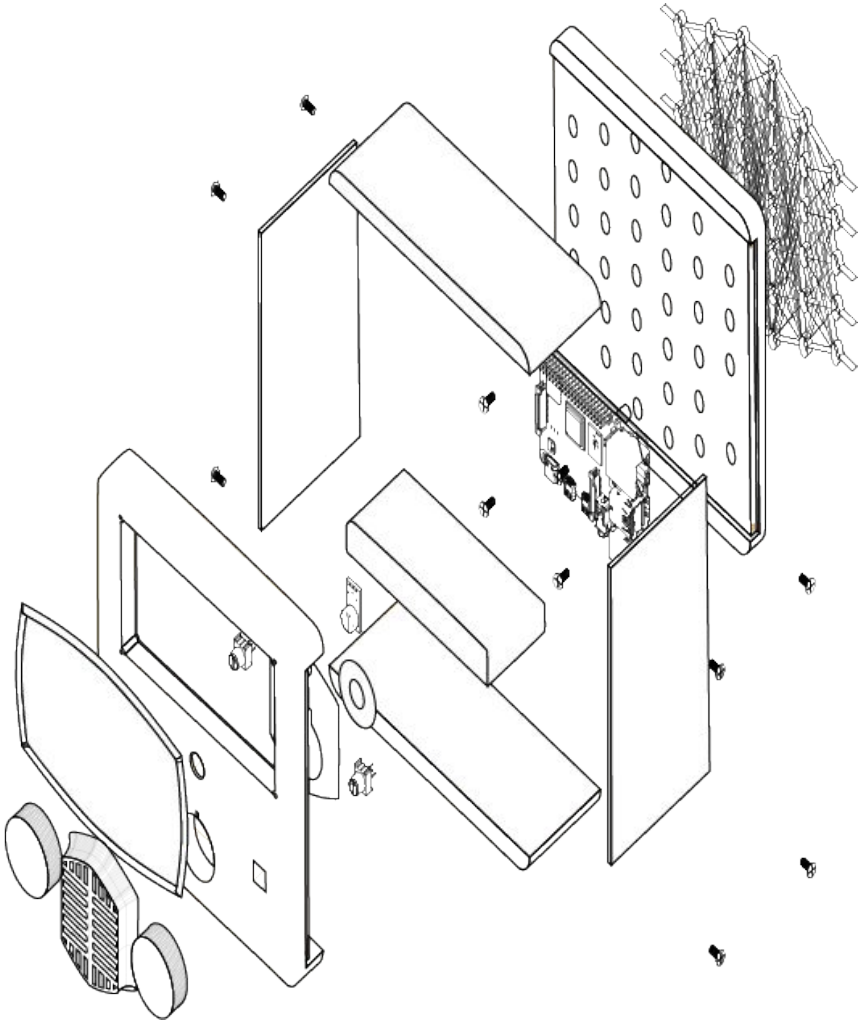


Ideation

Size and assembly exploration



Concept



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Thank you!