

Innerverse

A Cavern Project



Our Team

Faculty Advisors:



Heather Kelley

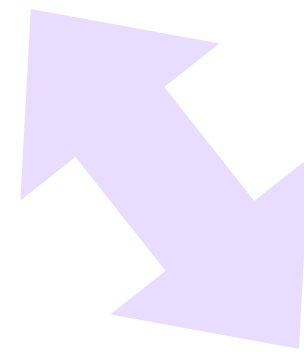
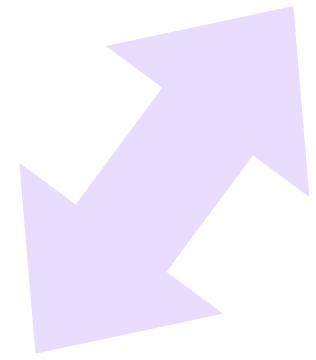


Ricardo Washington

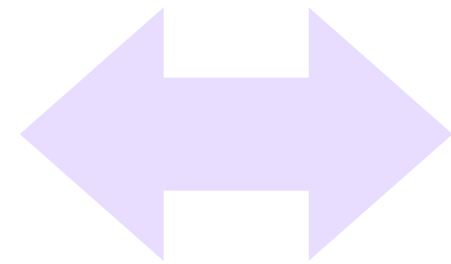


Ethan Wills, Christina Yin, Aiden He
Gamma Zheng, Nightray Zhou, Aya Al Sabahi

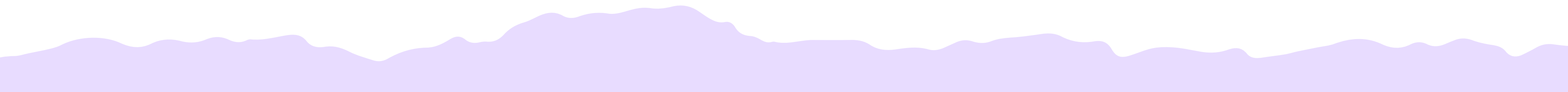
Connection

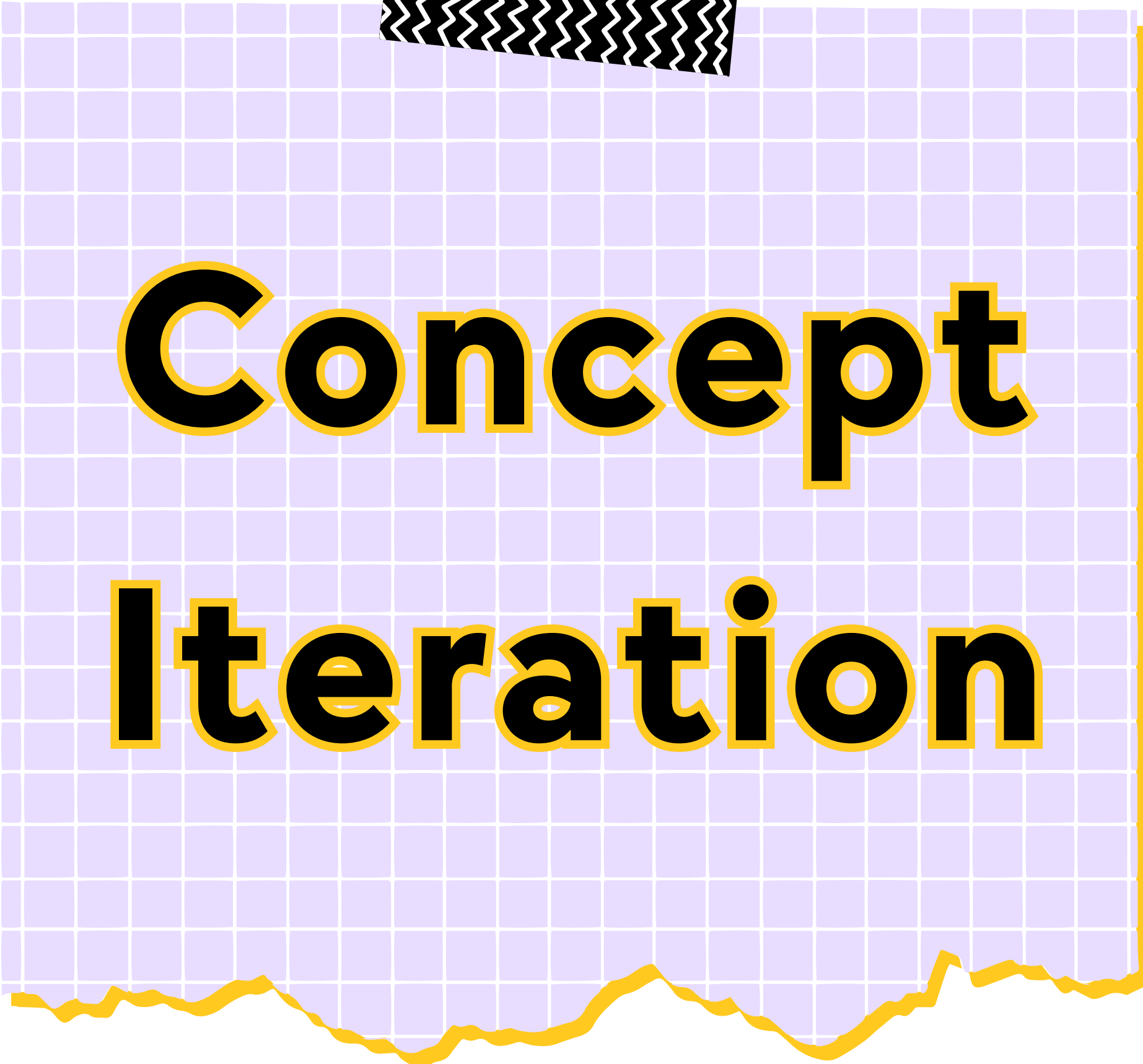


Vulnerability

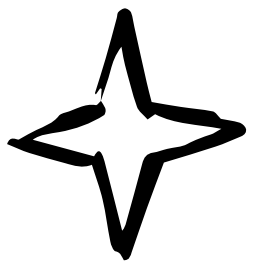
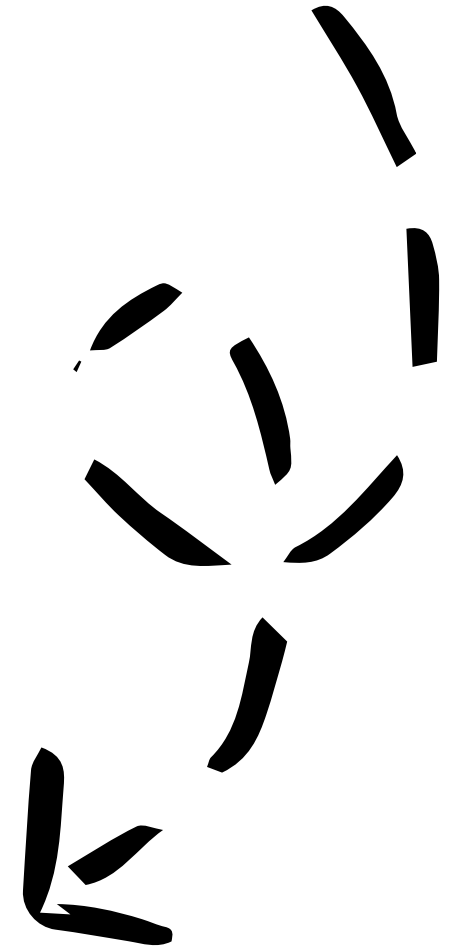
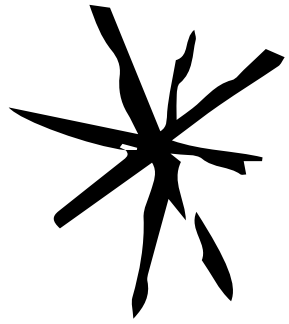


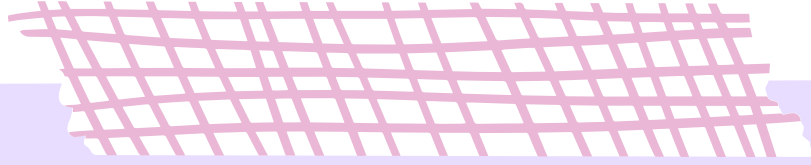
Courage





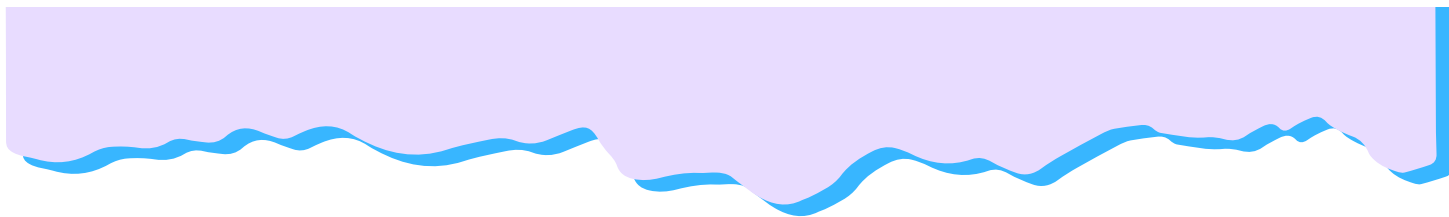
Concept Iteration

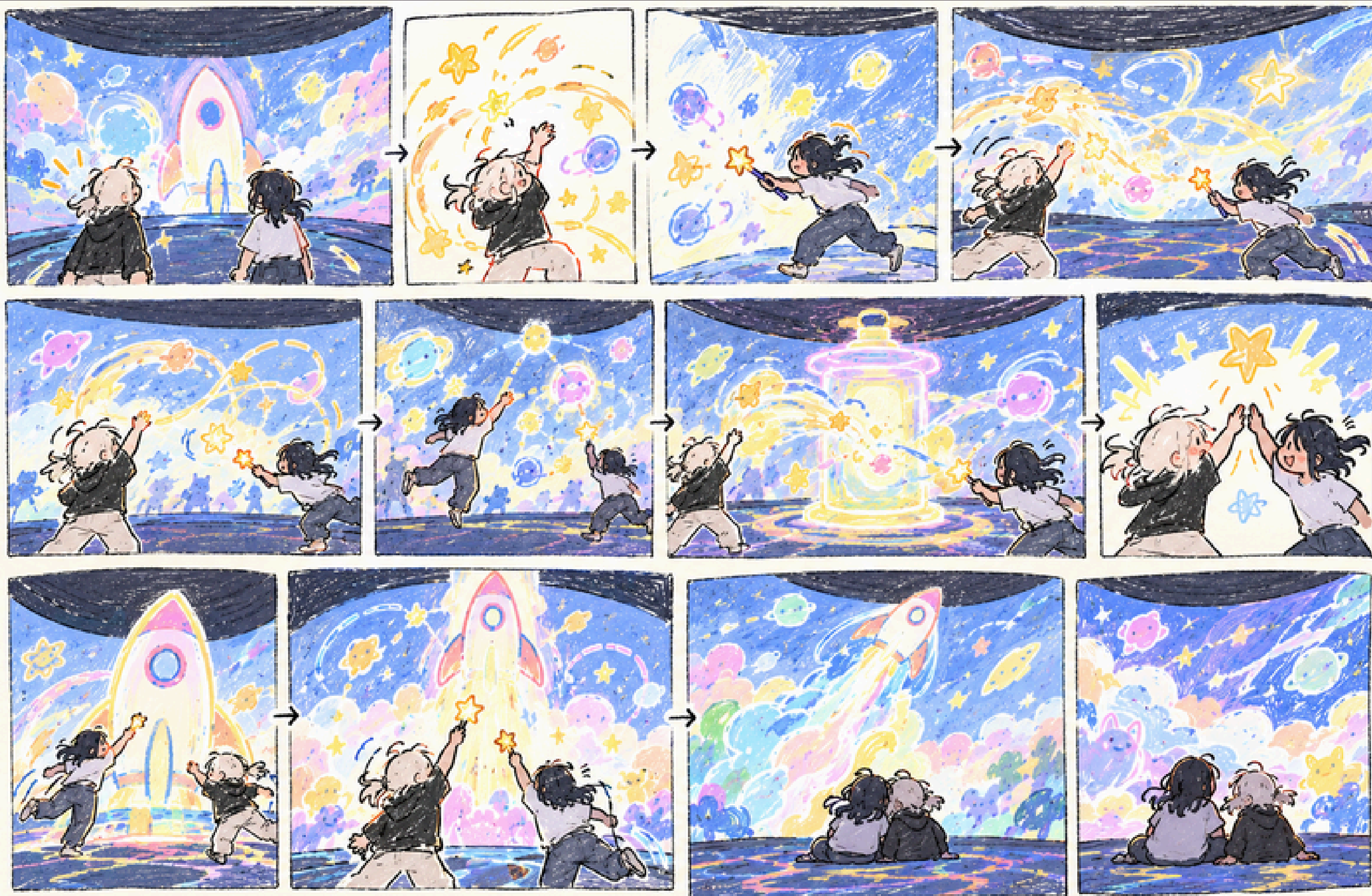




SOCIAL PLAYGROUND

- Physical playground
- Wellness happens naturally
- Social connection





SMEs

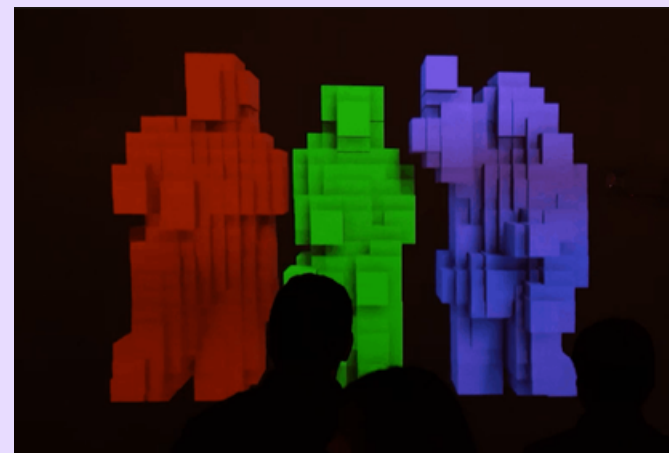
Sam Polglase

Engineer at Schell Games



Dylan Valev

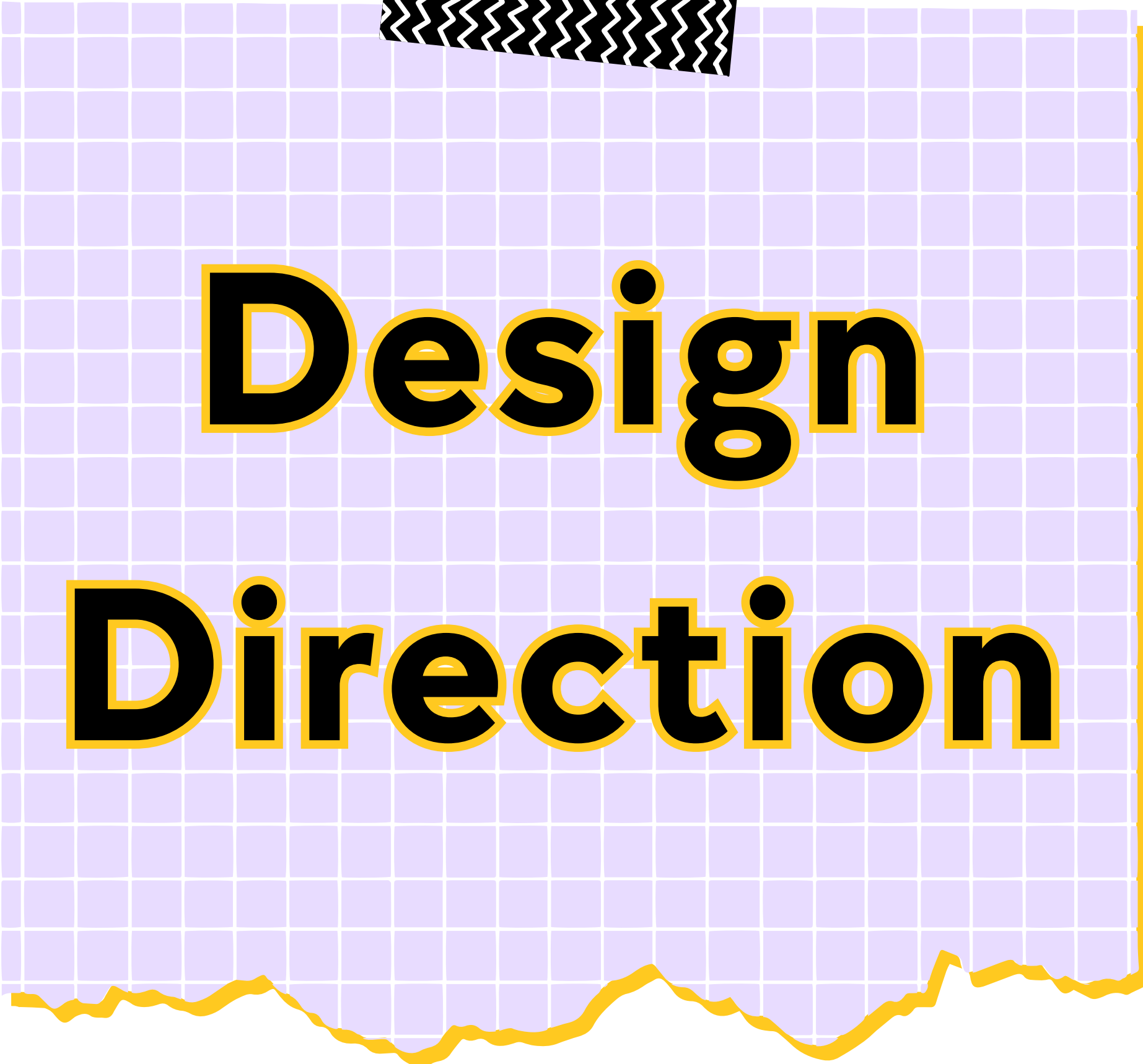
Interactive installation artist



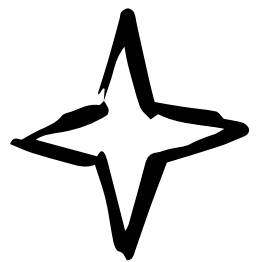
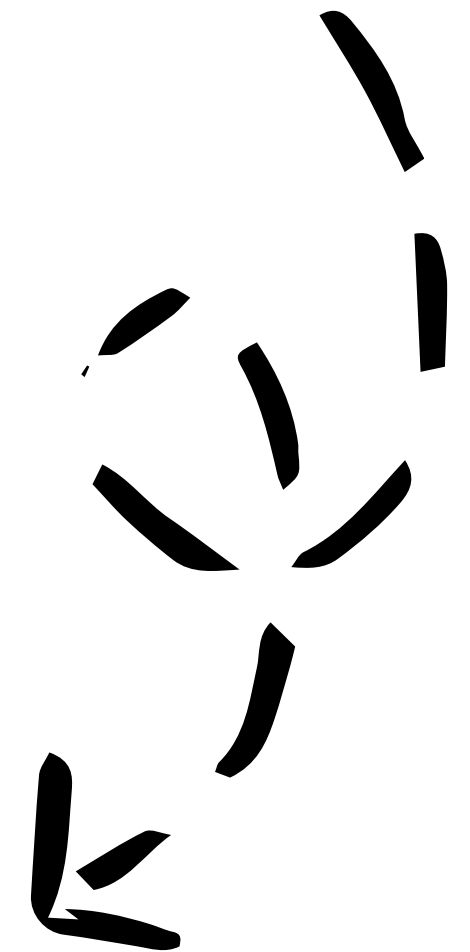
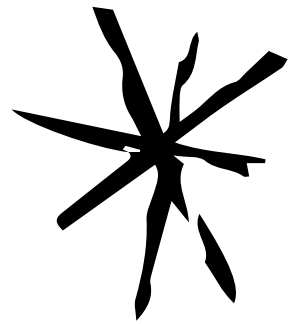
Shirley Ma

CMU computer vision PhD





Design Direction



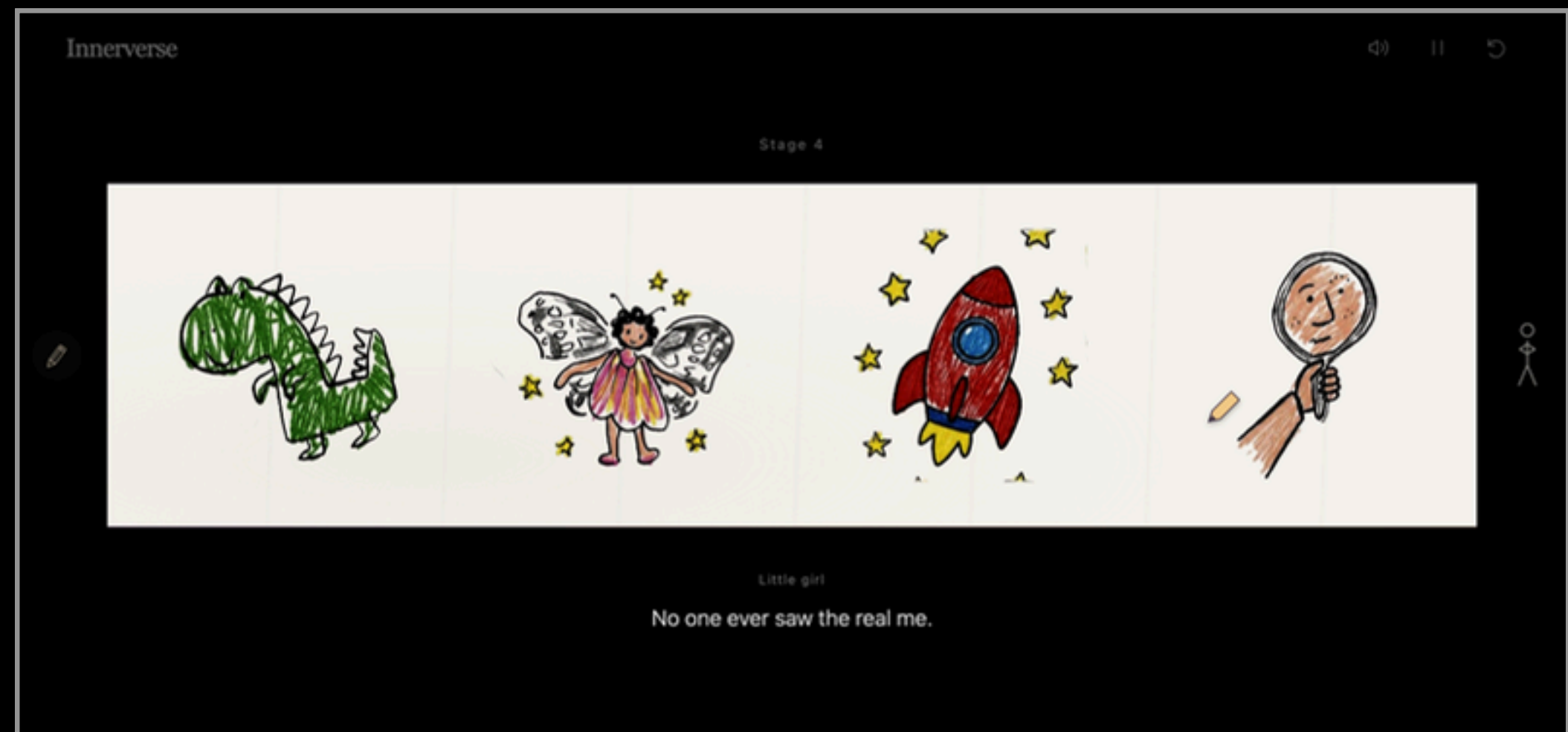
Goal, Who, What

10 minutes
Two players
CAVERN
Overworked CMU Students

Emotional Reset



Initial Prototype

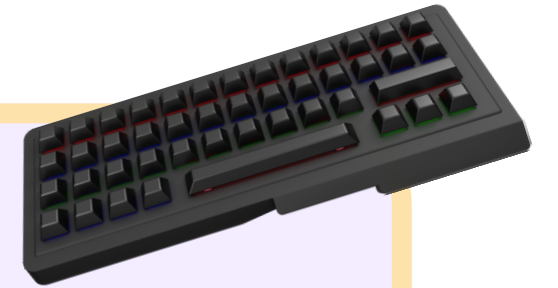
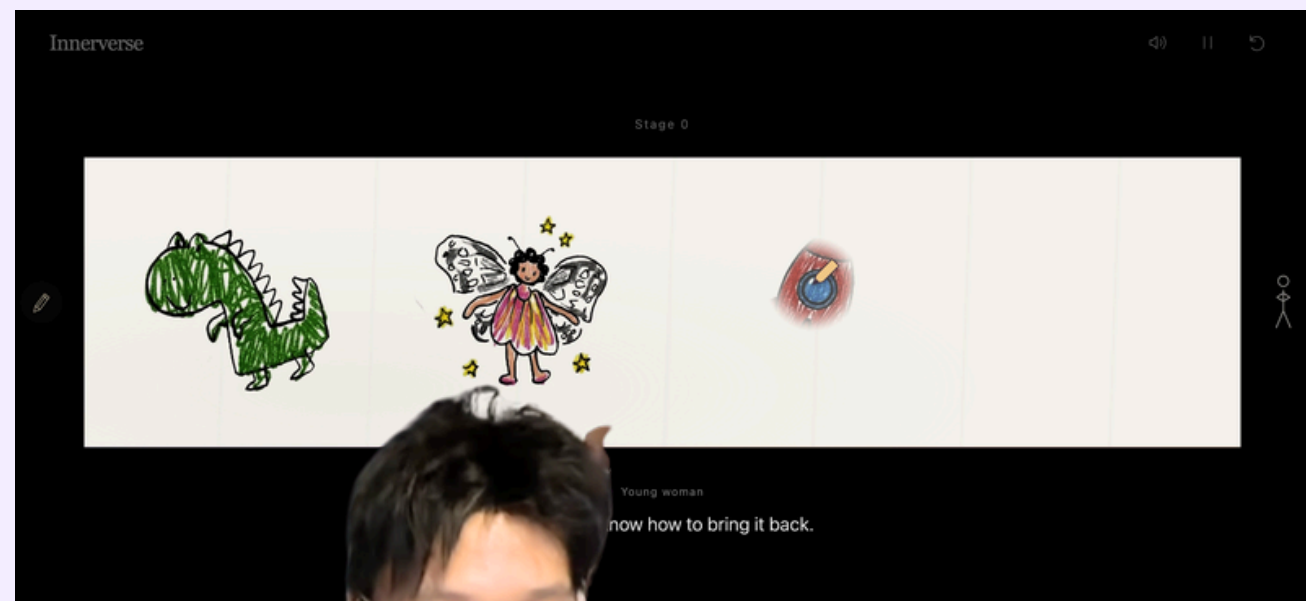


A safe, playful, immersive world

How did we start ?

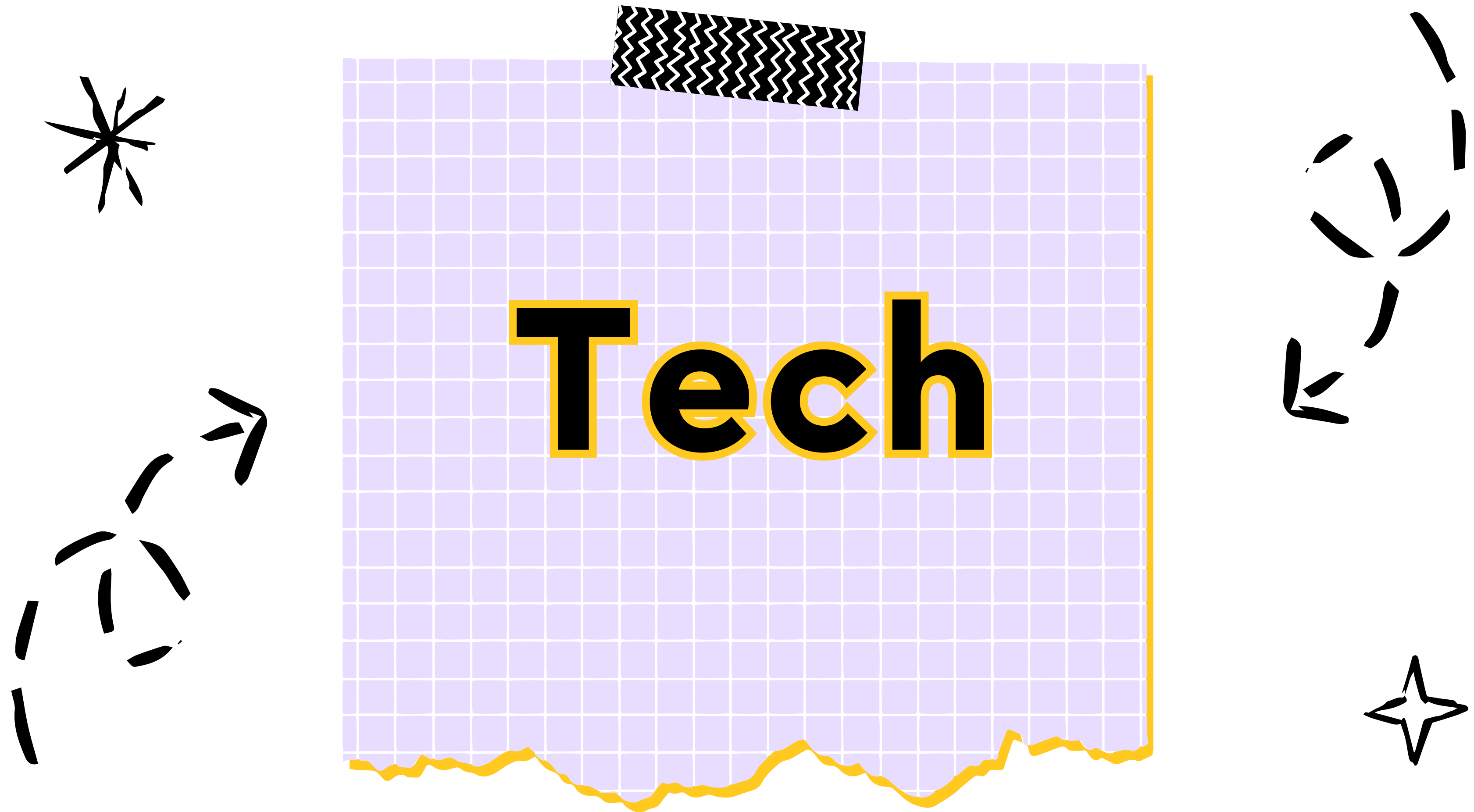


Rapid prototyping

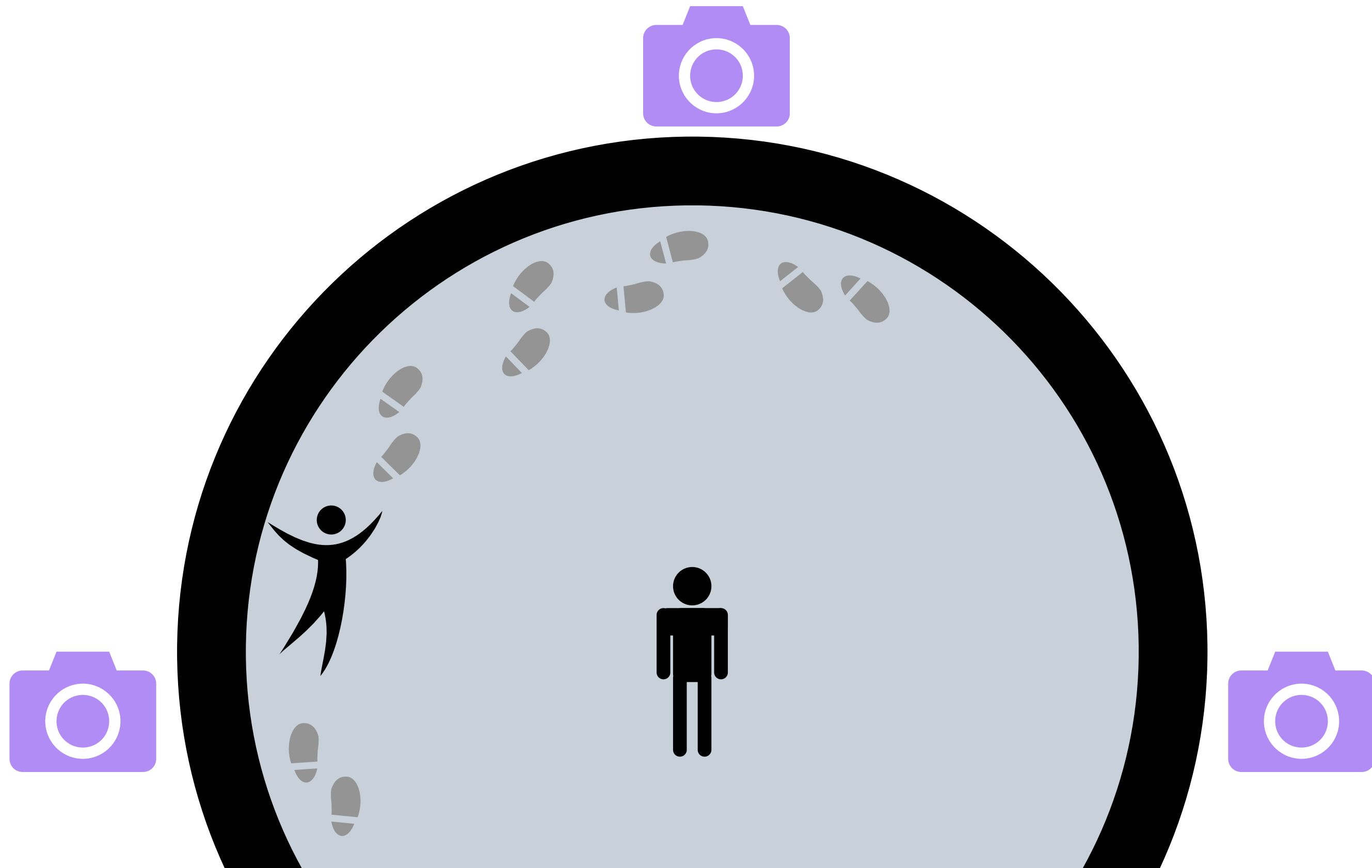


Wizard of Ozing it in Cavern





CAVERN experience





CAVERN multibody tracking

Body Movement
Player 1

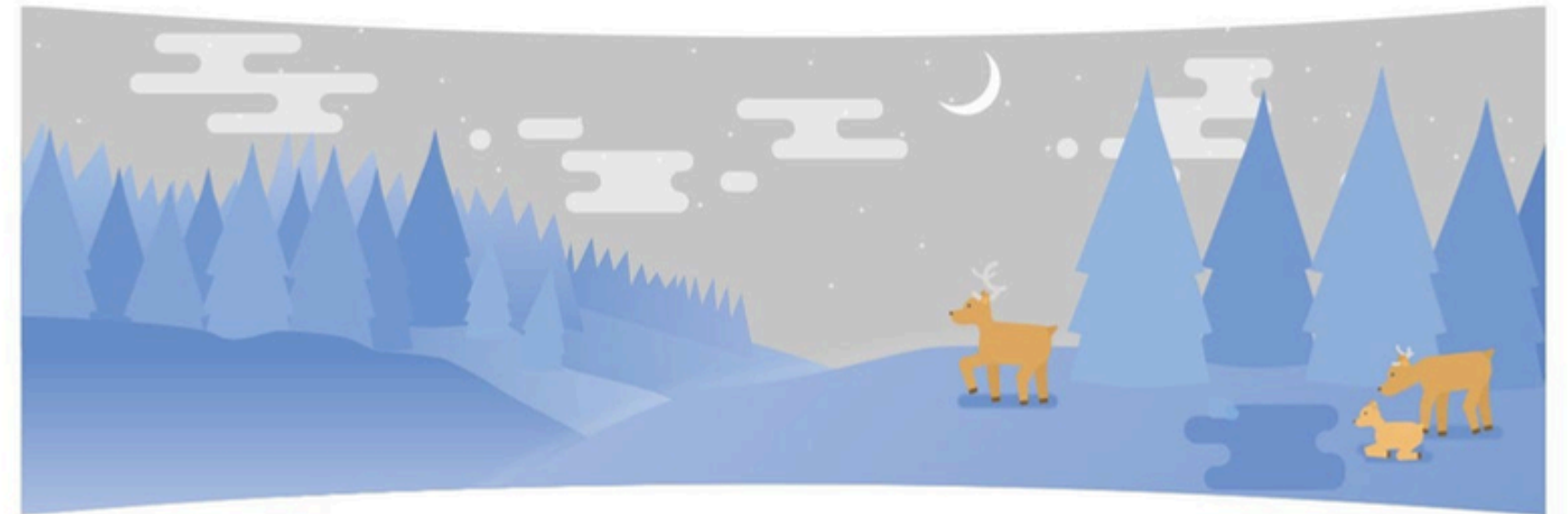


Vive Tracker
Player 2

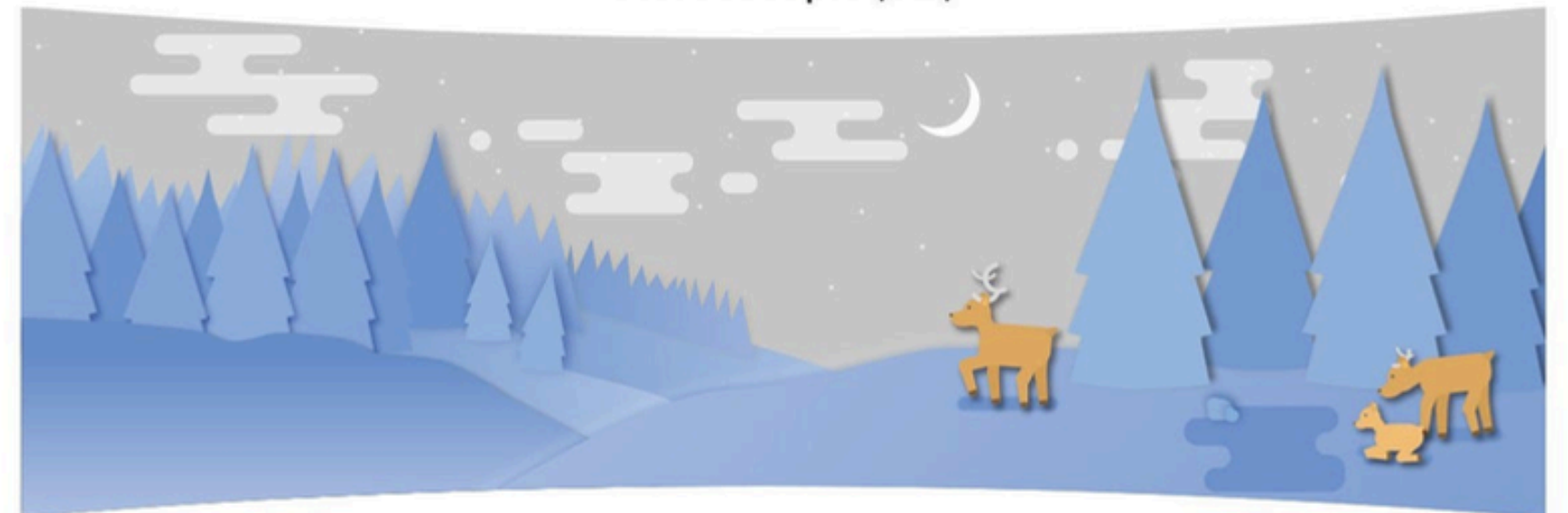
Monoscopic over Stereoscopic

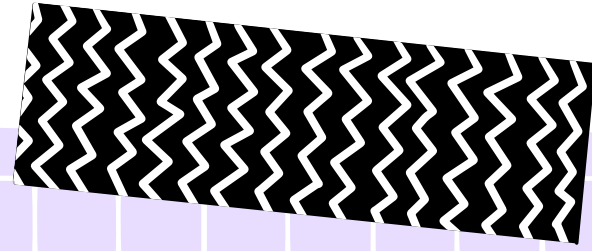
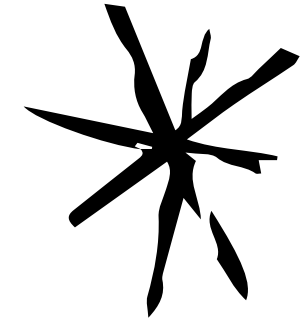


Monoscopic

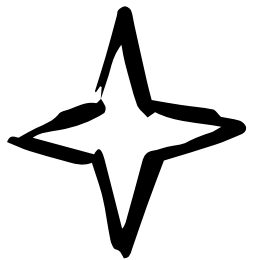
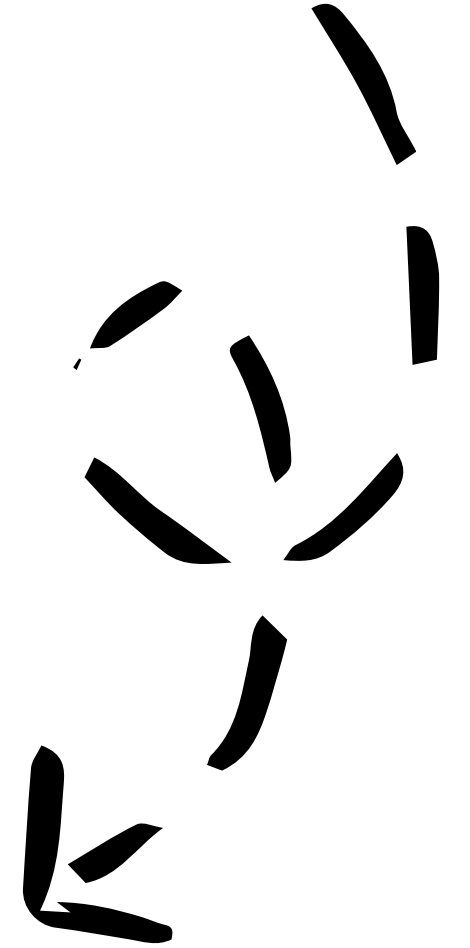


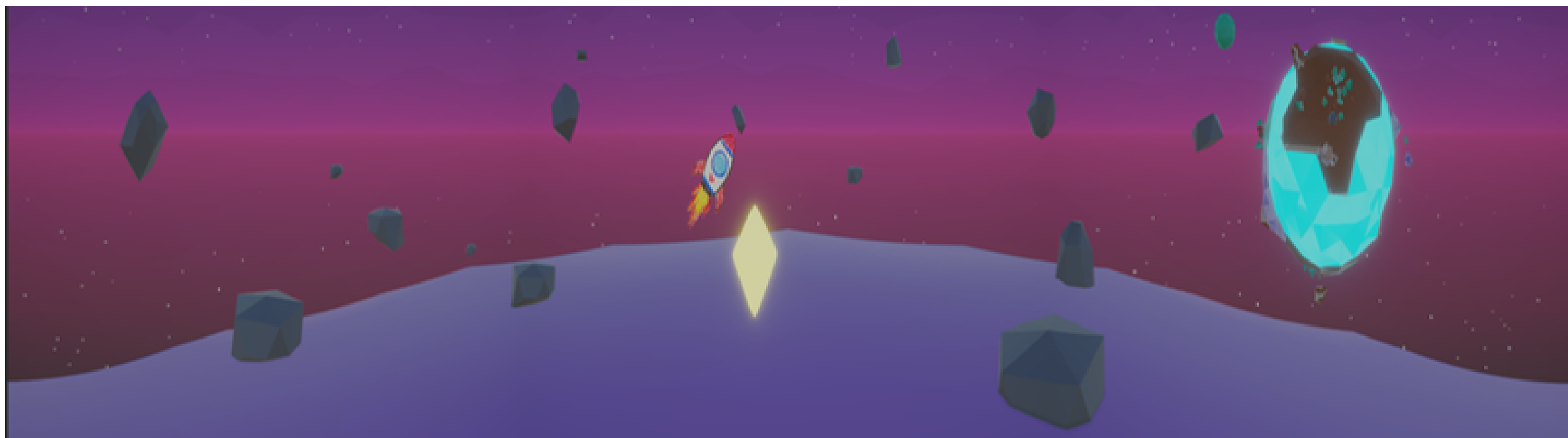
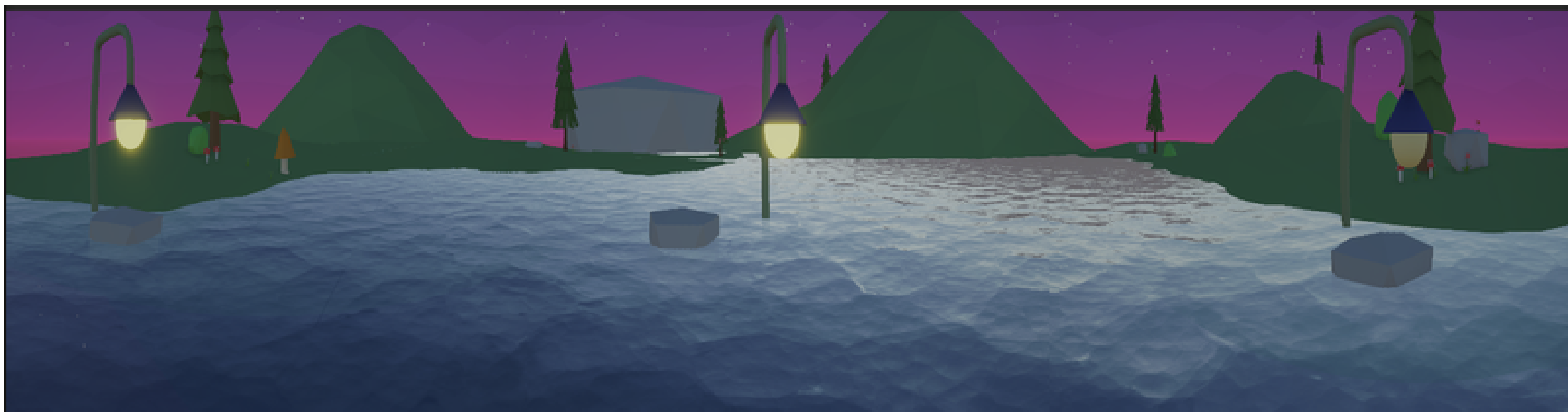
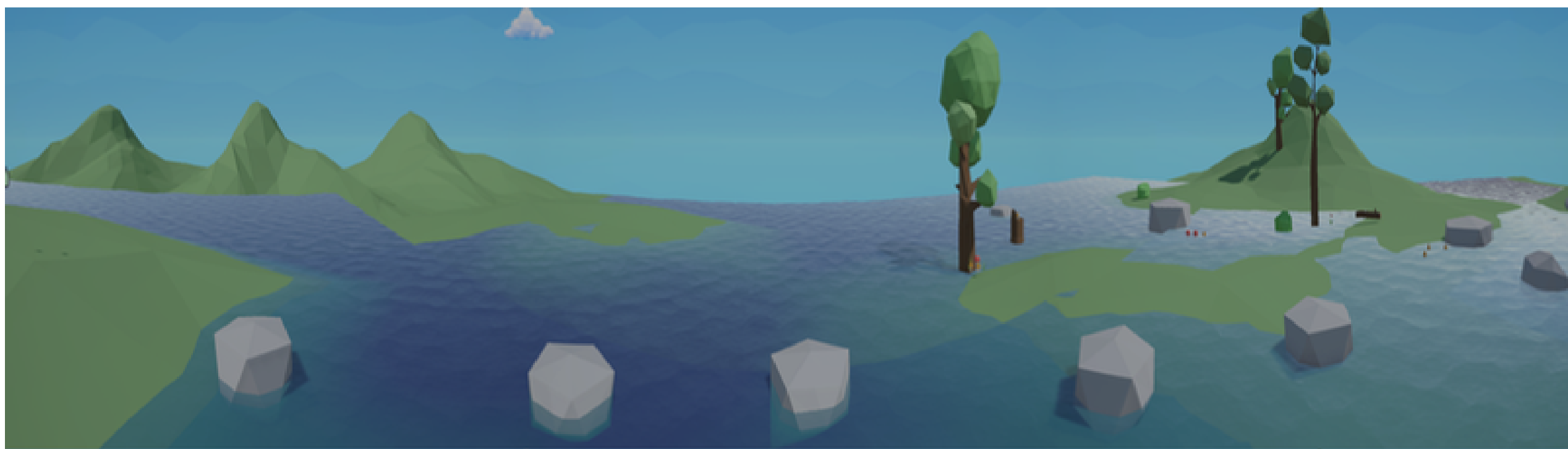
Stereoscopic (3D)





Art





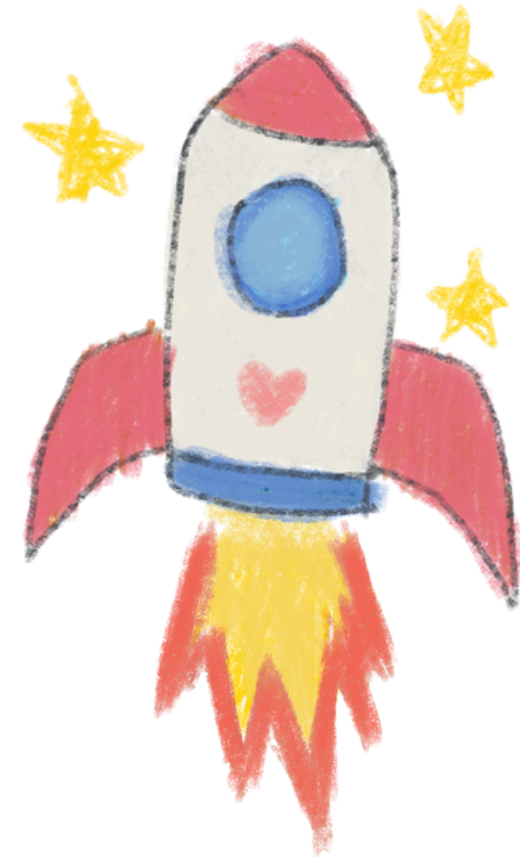




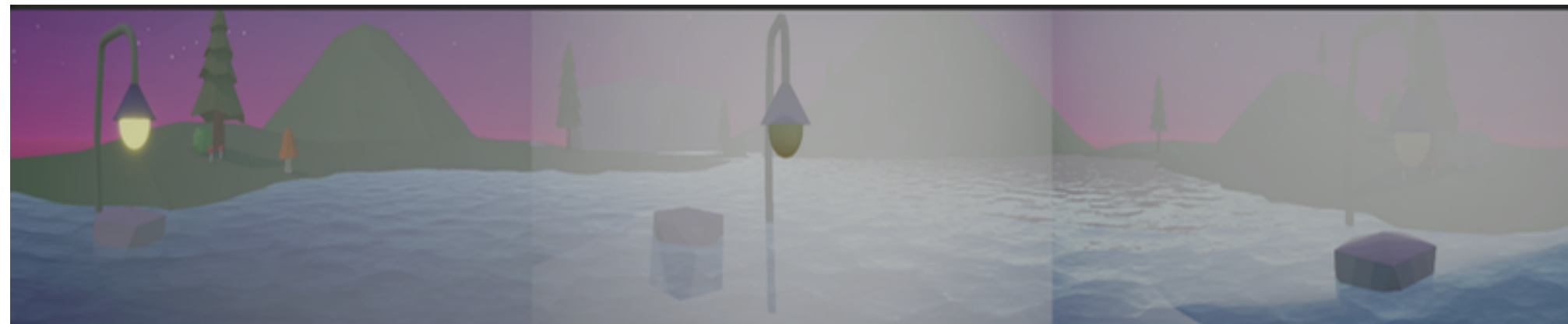
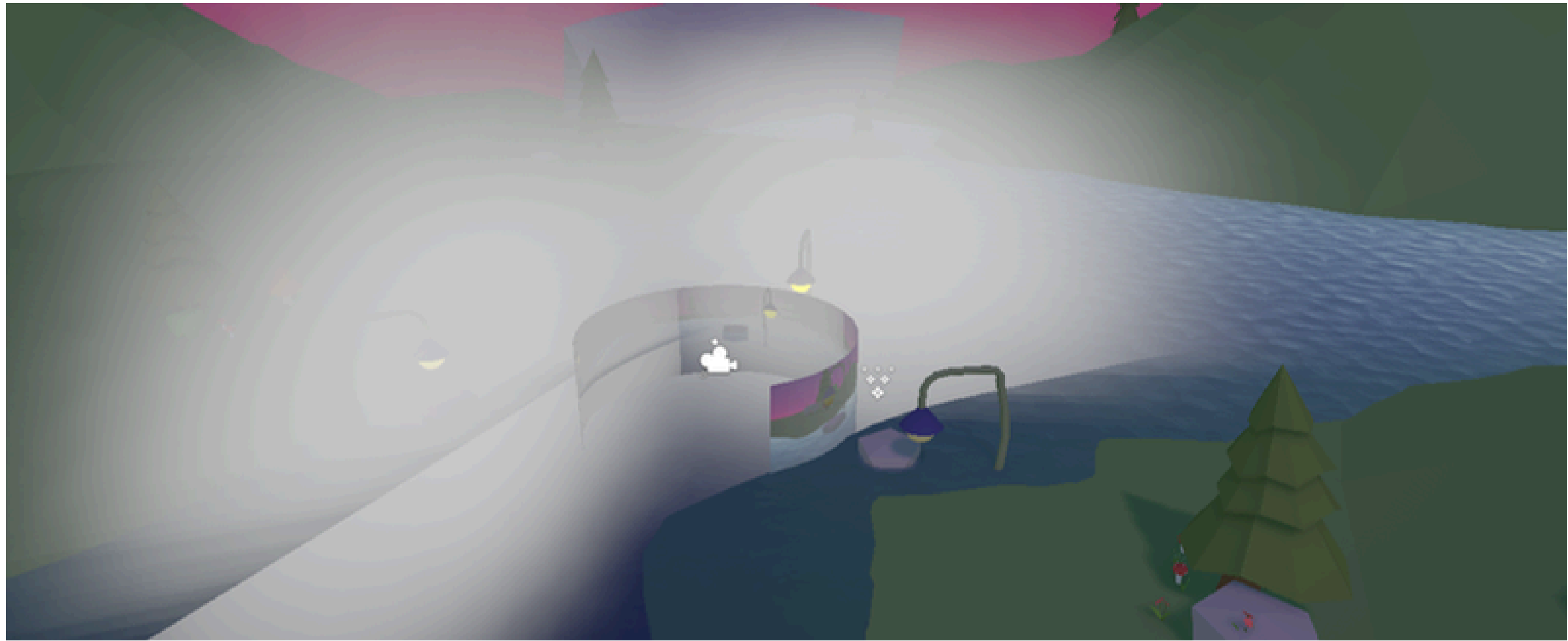
Vulnerability

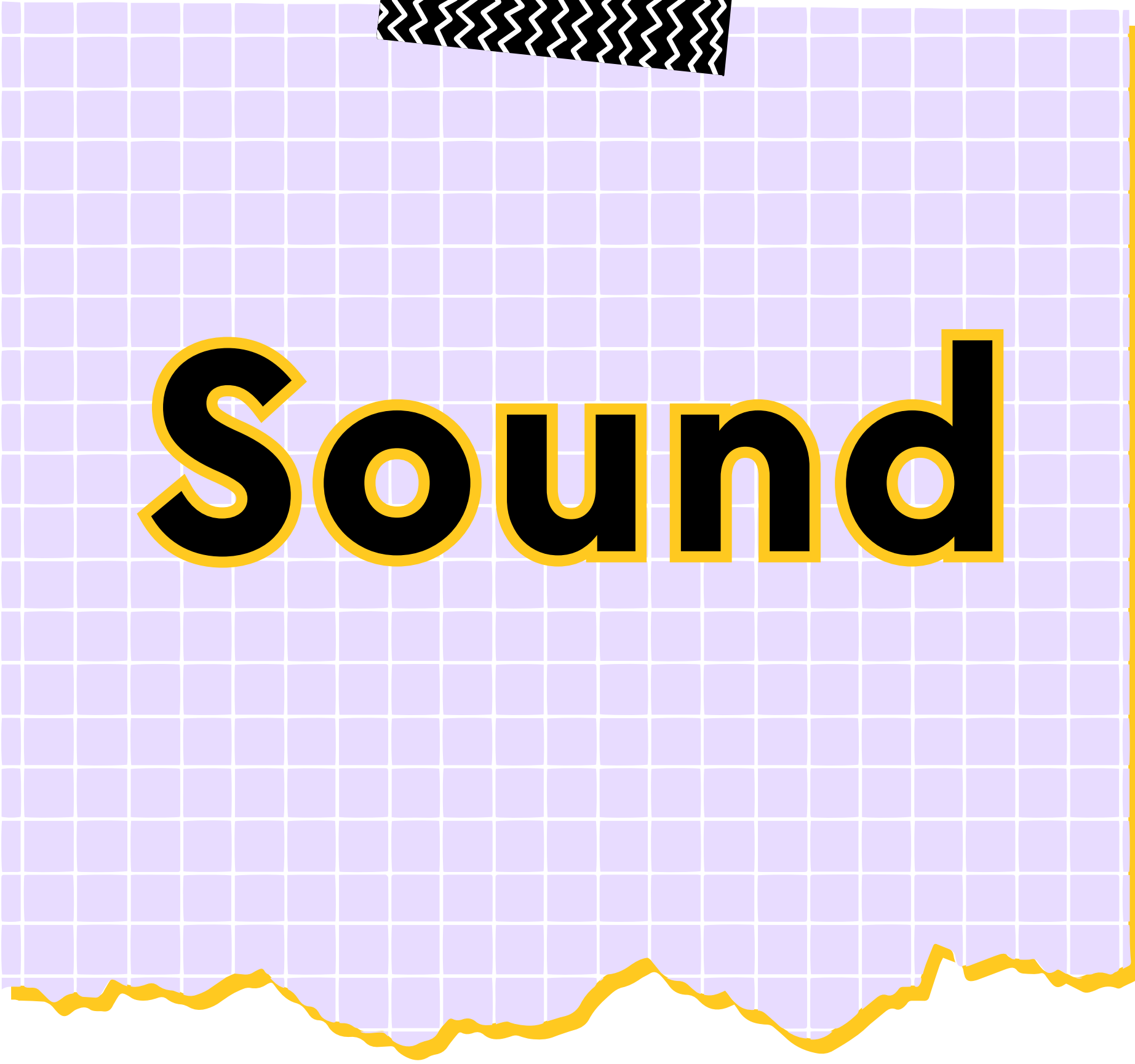


Courage

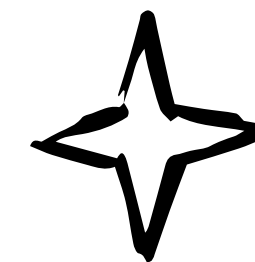
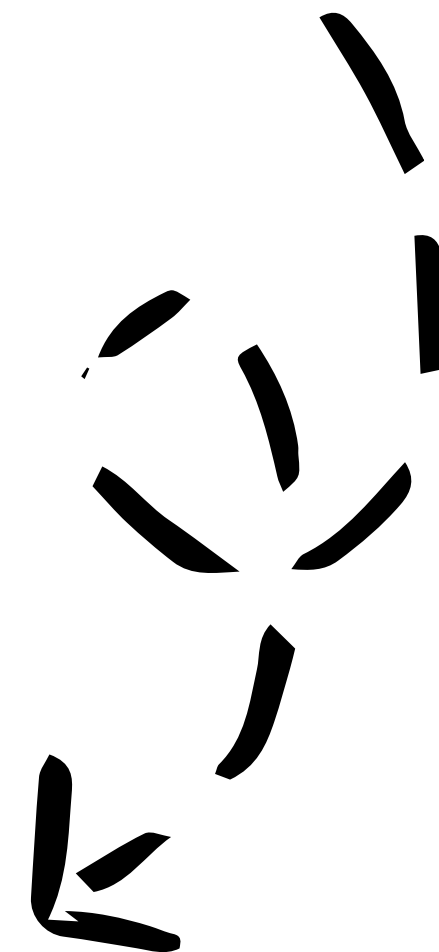
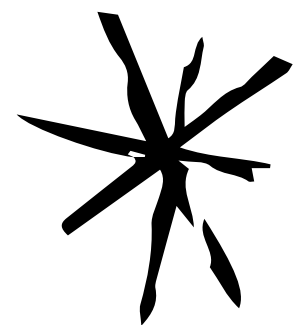


Connection

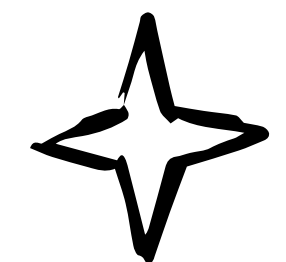
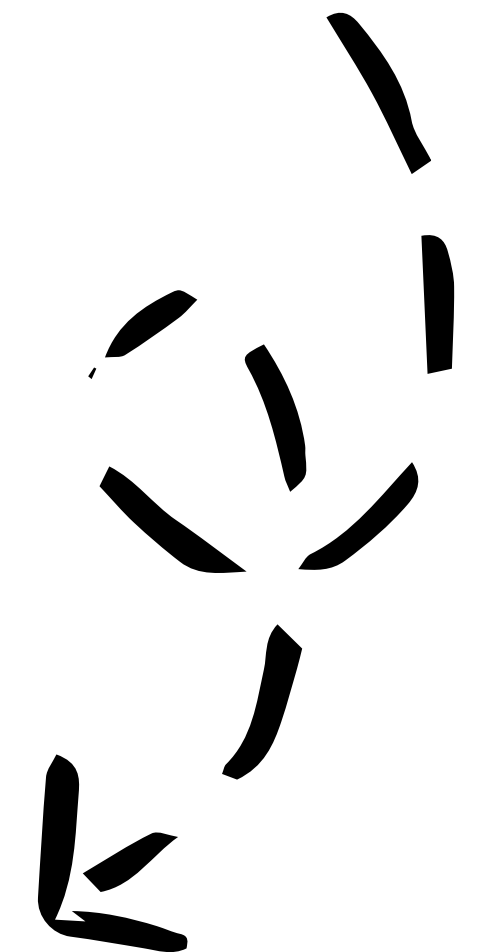
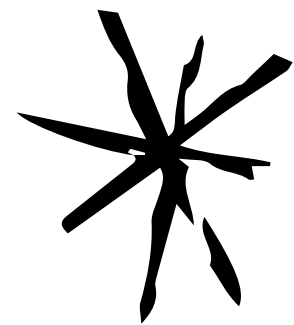




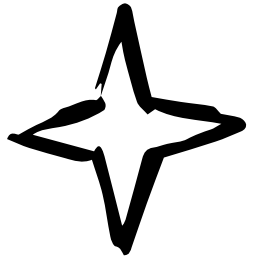
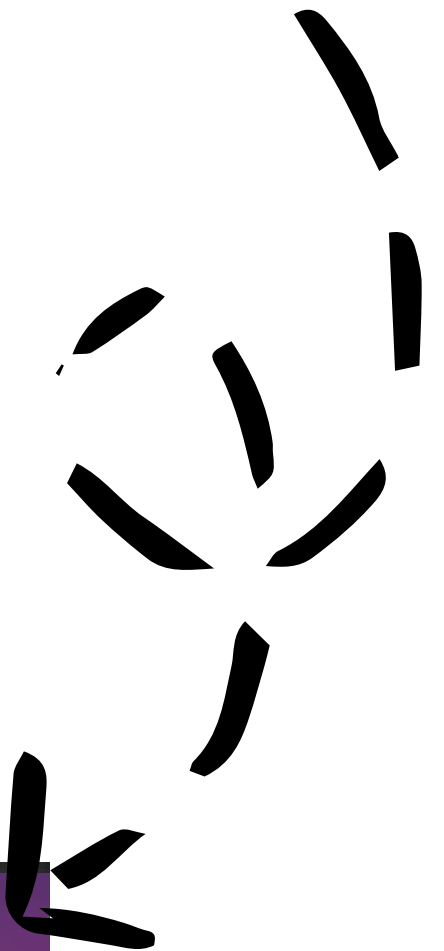
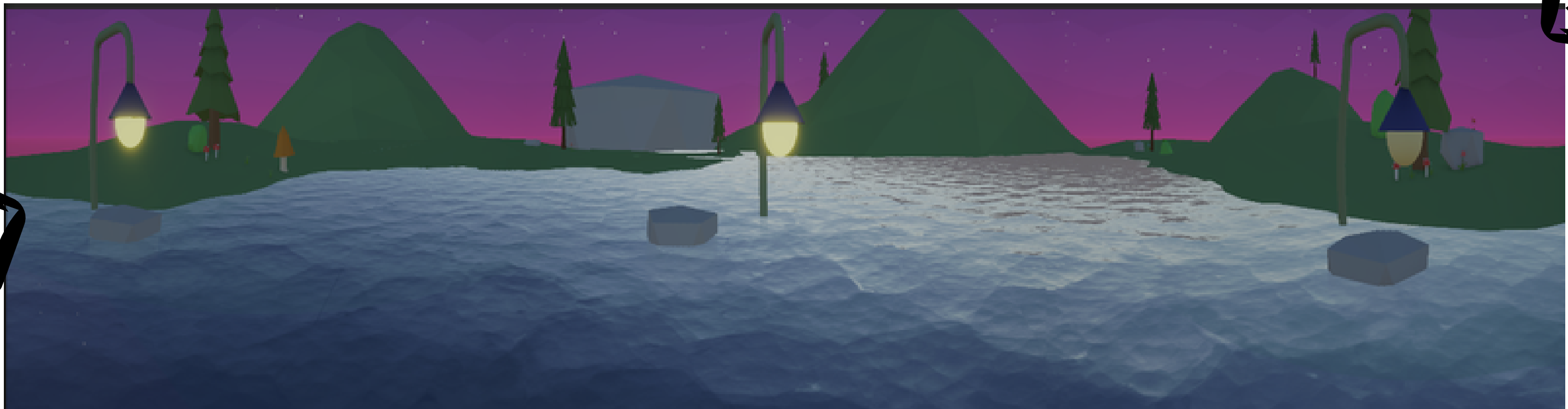
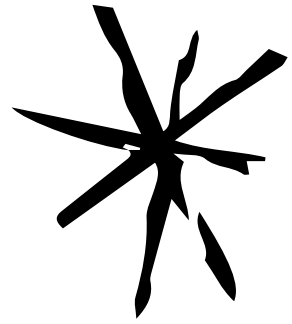
Sound



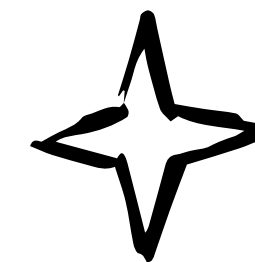
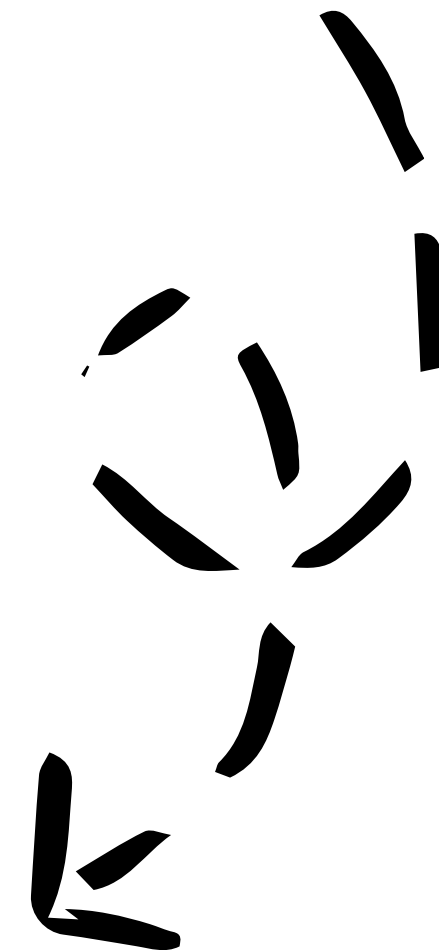
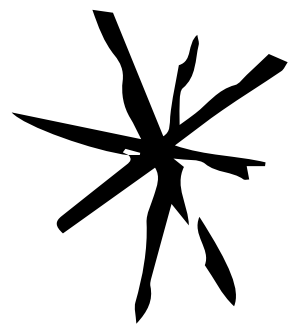
Paper Based Character SFX



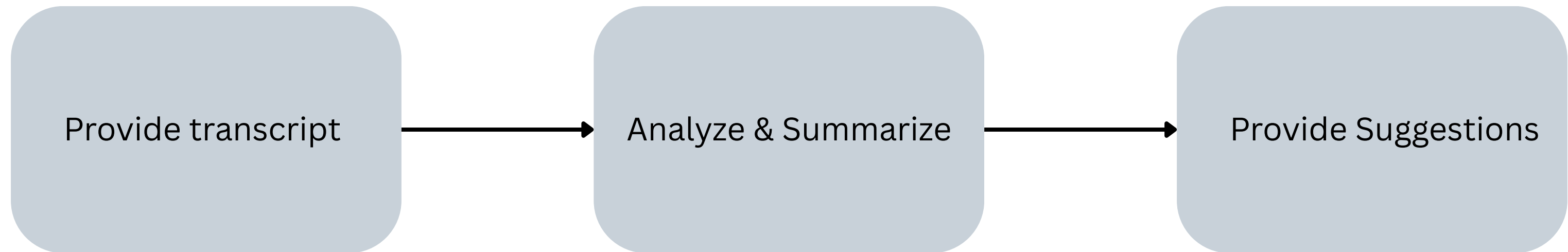
Bringing in the Ambience of Nature



**Playtest
&
Success**



Internal playtest tool



Gie

Internal playtest tool

LLM-powered Playtesting Analyzer

Anthropic

VIEWS

Dashboard

All Sessions

Ask

Suggestions

Add Session

SESSIONS

9.22-HeatherRicardo

9.24 Dave's Feedback

9.25-JesseNina

Design Suggestions

AI-synthesized recommendations from all playtesting sessions

All

UX

Narrative

Emotion

Mechanics

Fix inconsistent bridge/box hover interaction

HIGH

UX

Testers repeatedly couldn't tell whether hovering was required or how many times an action needed repeating, causing confusion in both sessions. Standardize the interaction rule and add subtle, consistent feedback (visual/audio cue) so users always know an action registered.

9.22-HeatherRicardo

Define the single primary design pillar

Mechanics

The project blends narrative, movement, and externalization without clarity on which drives the experience, making iteration unfocused and designers themselves to hesitate on basic questions like 'why movement?'. Explicitly choose one primary mechanism and treat the others as supporting backward from the desired end-state guest feeling (e.g., calm, contemplative).

9.24 Dave's Feedback

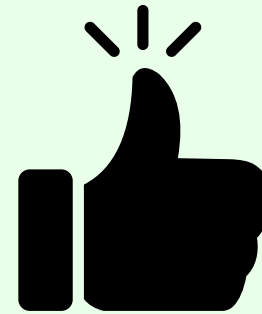


Before Cavern

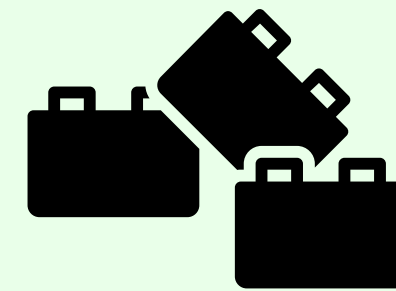
9 Rounds of Playtest with 18 people



Sample music
is working



The experience
core is landing



Playability



Thank you!

