

CAROLYN NGUYEN

P r o d u c t   D e s i g n   P o r t f o l i o

# CURRICULUM VITAE

## About Me

Engineer by title, human-centered problem solver at heart. I solve for human needs in a scientific way by simplifying the experience of complex technologies for end users.

## Contact Information

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www.carolyn-nguyen.com

## Experience

### Product Design

**Intuit / Product Design Intern** | May '22 - Aug '22  
Developer experience of integrating Reusable AI  
*Received Spotlight Recognition*

### Consulting

**Gallivant / Design Consultant** | Sep '22 - Present  
Innovating how travelers can plan their trips efficiently

**Pandora Music / Product Design Consultant** | Jan '22 - May '22  
Incorporating Pandora's suggestion algorithm, My Genome Project, into the listener's experience

**Salesforce / User Research Consultant** | Feb '22 - May '22  
Identifying challenges that Small to Medium Businesses face to reach Net Zero carbon emissions

**Chess Palace / Design Consultant** | Nov '21 - Dec '21  
Transforming a paper - managed tournament into an digitized tournament

**Substantial Classrooms / Design Consultant** | Oct '22 - Nov '22  
Guiding substitute teachers through work onboarding

### Engineering

**Blue Origin / Assembly & Integration Engineer** | Nov '19 - Apr '21  
Building rocket engines to suborbital space and the moon  
*Contributed to NASA's Human Landing System Contract*

**Pratt & Whitney / Manufacturing Engineer** | Jun '17 - Oct '19  
Developing repairs for jet engines cases, blades, and turbines  
*Received Supplementary Award and Team of Quarter Award*

**Boston Scientific / Operations Intern** | May '16 - Aug '16  
Improving human factors and time for sterilizing medical devices

## Education

Aug 2021 - Dec 2022 UC Berkeley  
Master of Design

Feb 2015 - Jul 2015 Technichse  
Universitat Dresden  
Study Abroad

Sep 2013 - May 2017 Boston University  
B.S., Mechanical  
Engineering

## Skills

|               |                          |
|---------------|--------------------------|
| Figma         | Fusion360                |
| InVision      | Creo Parametric          |
| Miro          | SolidWorks               |
| Illustrator   | Root Cause Analysis      |
| InDesign      | Design for Manufacturing |
| Prototyping   | Additive Manufacturing   |
| Wireframing   | GD&T                     |
| User Research | Lean Manufacturing       |

## Awards

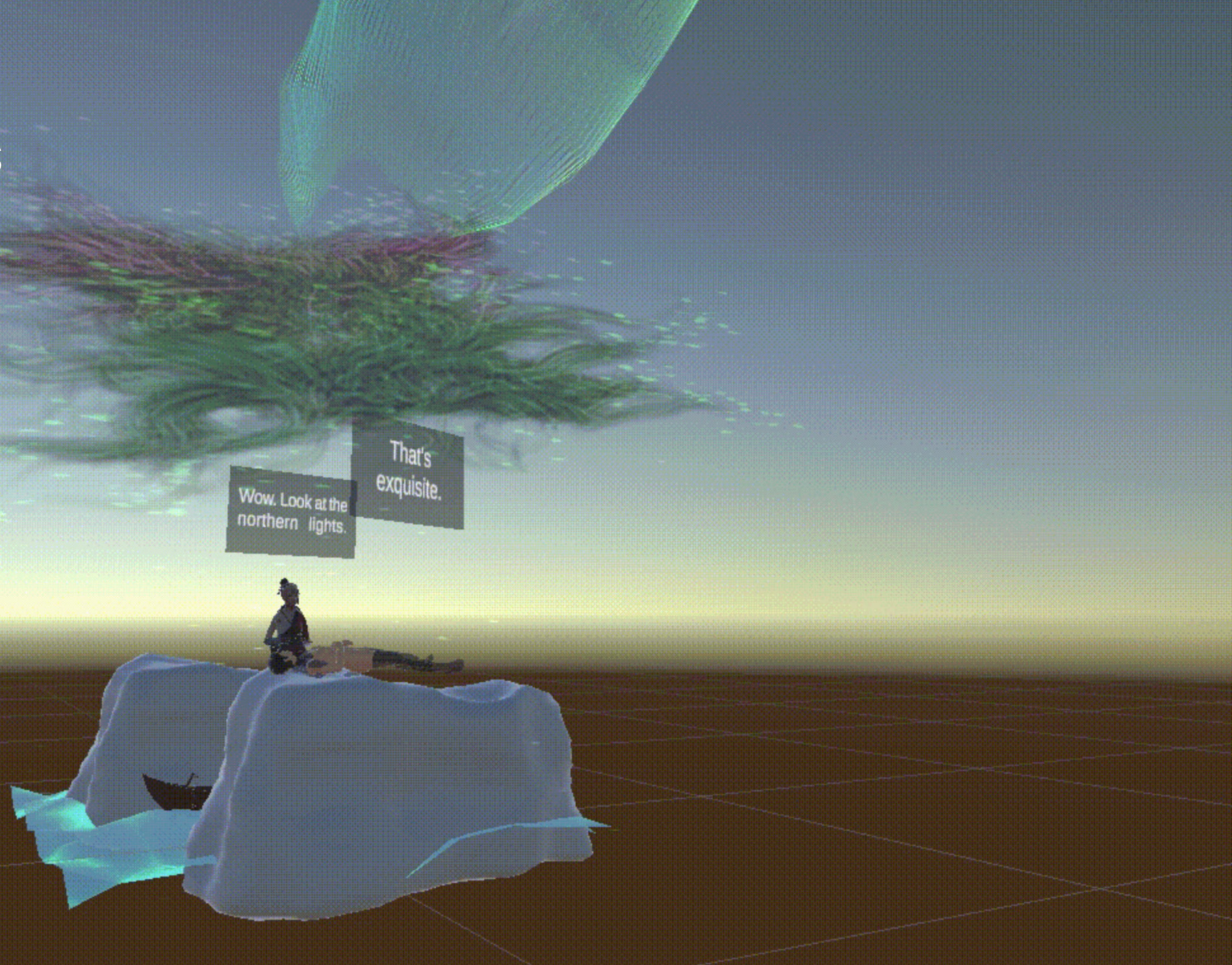
**MDes Distinguished Scholar Award:** \$10,000 scholarship from UC Berkeley  
**Opportunity Grant:** \$7,500 scholarship from UC Berkeley  
**MSE Innovation Grant:** \$10,000 in collaboration with Professor Keith Brown  
**Boston Community Service Program:** \$176,200 from Boston University BPS Community Service  
**Student Success Jobs Program:** \$16,000 total scholarship from Brigham & Women's Hospital

# ETHEREAL LIGHTS

Bringing Northern Lights  
to anyone, anywhere

**Medium**  
Augmented Reality

**Theme**  
Abstract, Soothing Technology



# Factors that affect the northern light experience

Light pollution



Cloud conditions



Equipment & Gear



Patience

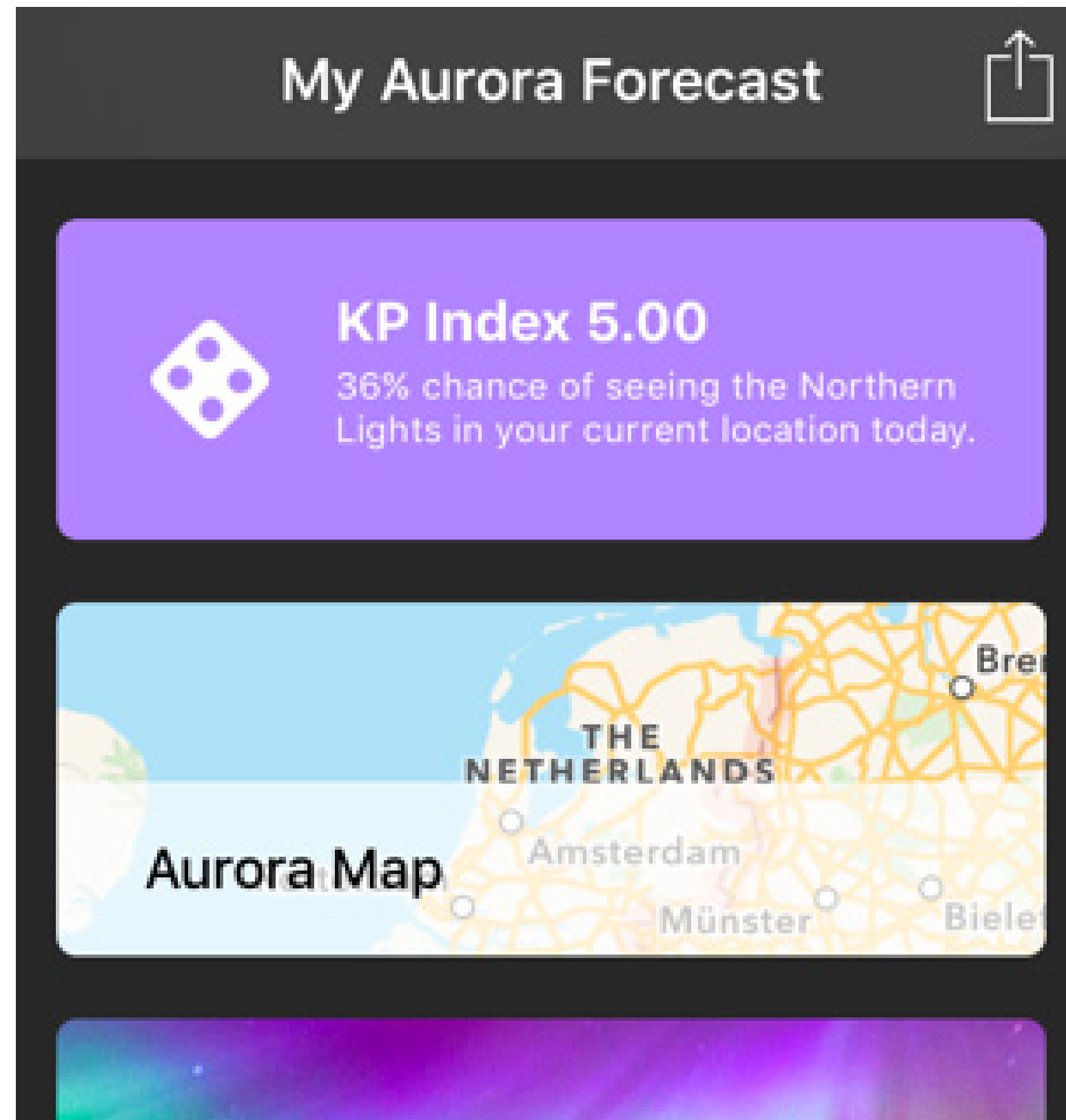


# What are current interventions to see northern lights?

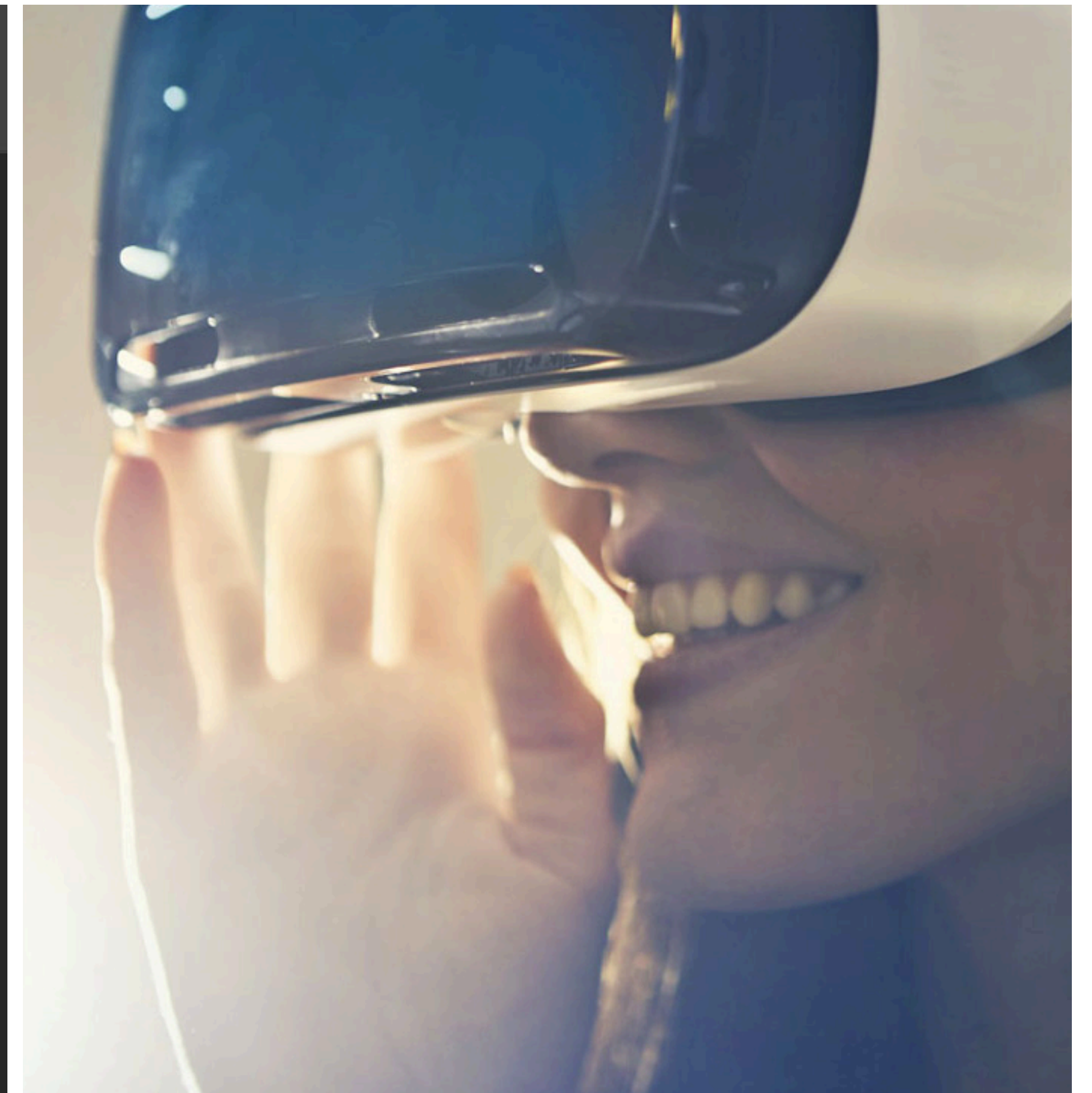
Camping



Mobile Apps



Virtual Reality

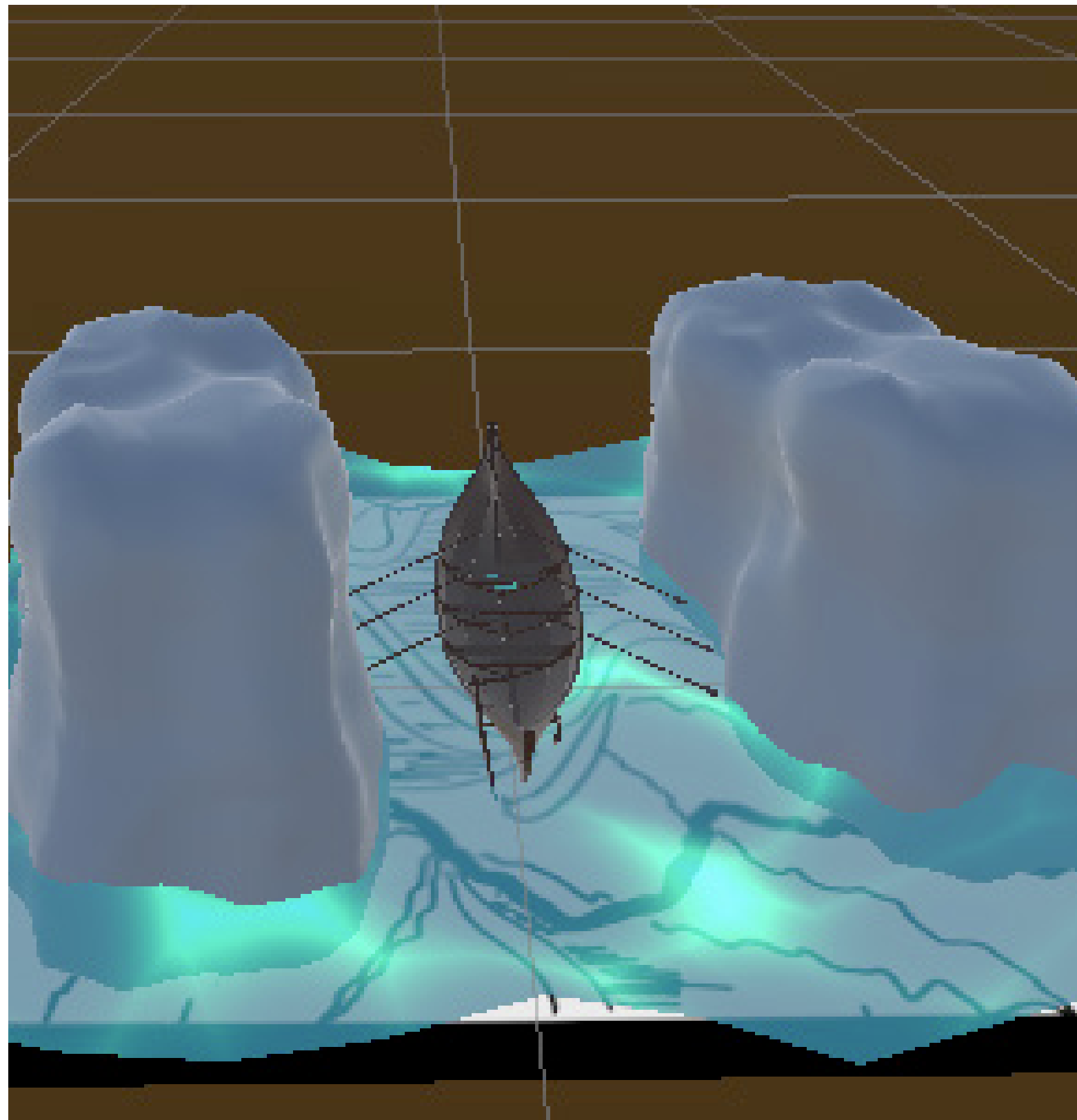


piration for northern lights AR experience



# 3D assets imported from Mixamo

Rowboat and glaciers



Sitting and pointing friend



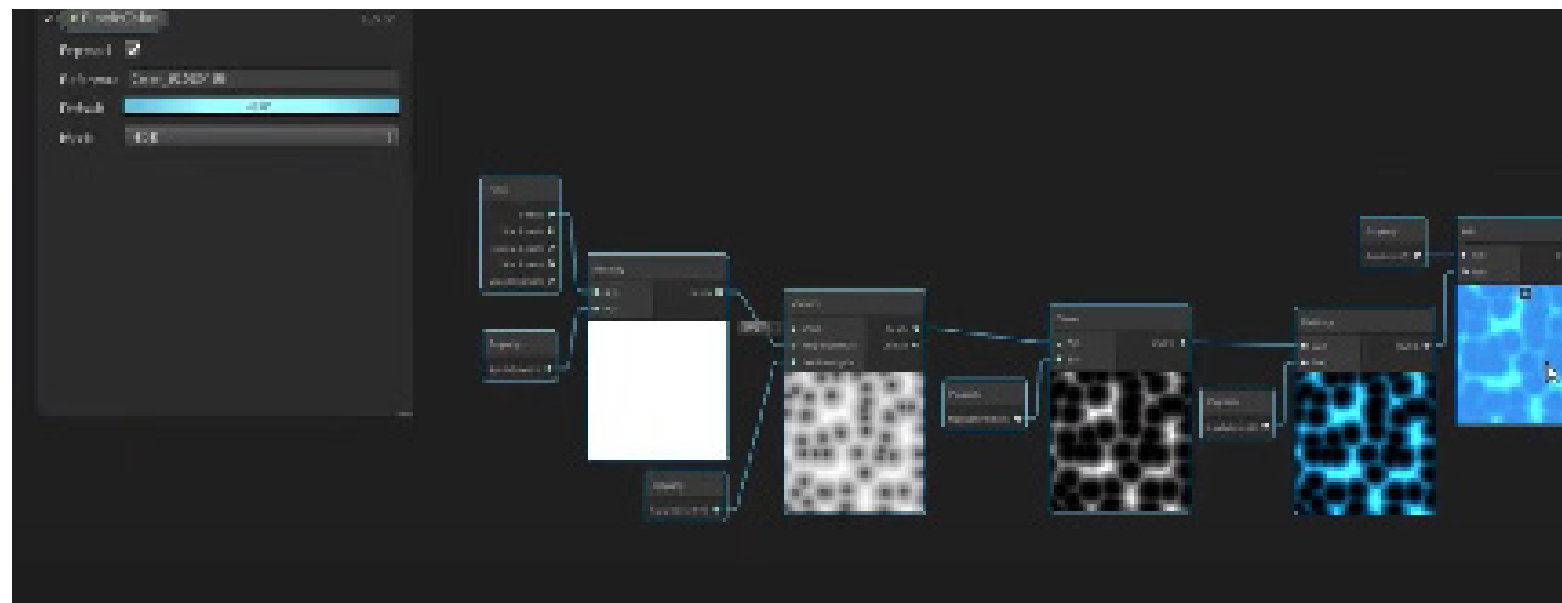
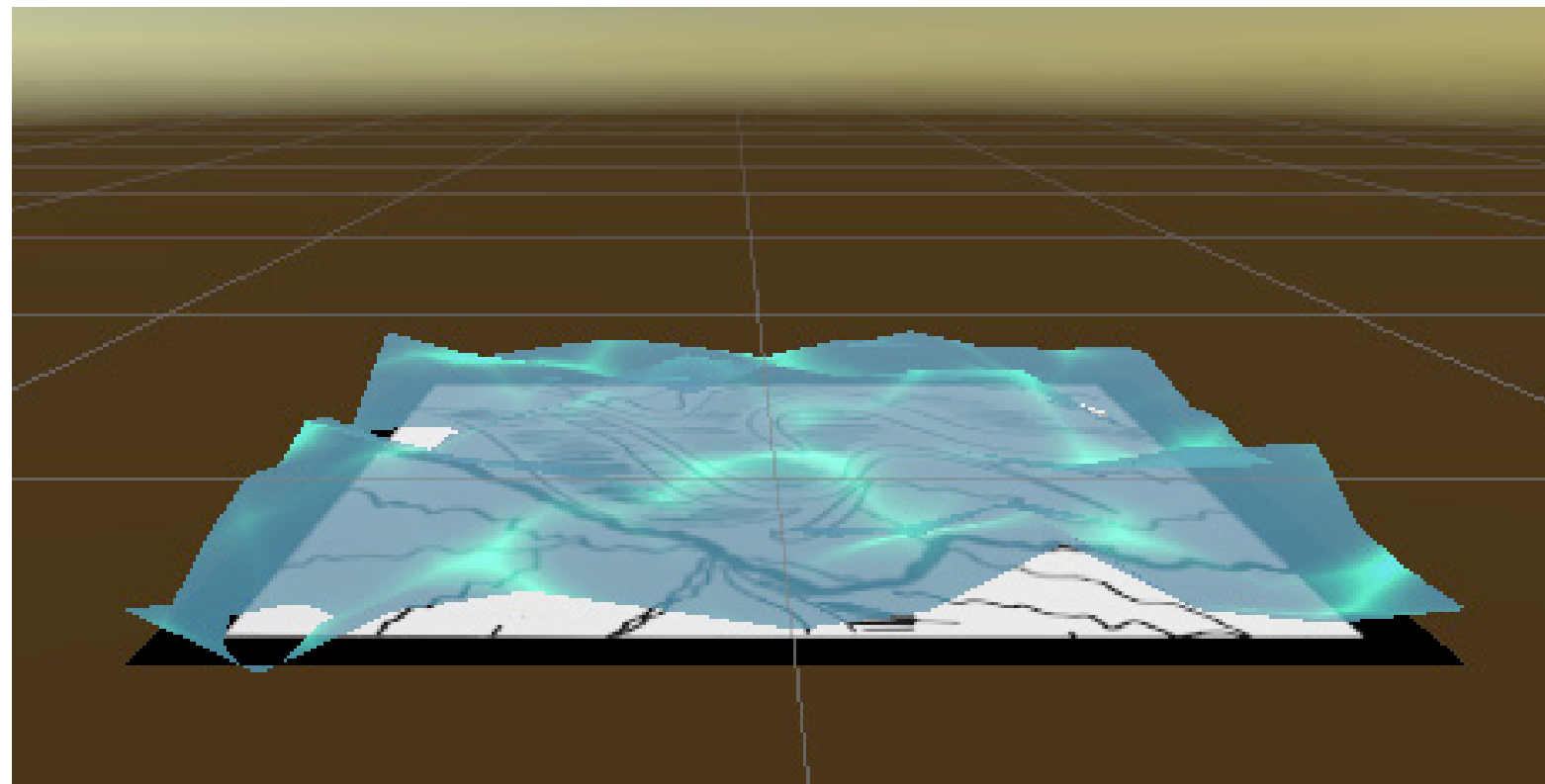
Gazing up friend



# Custom 3D Assets

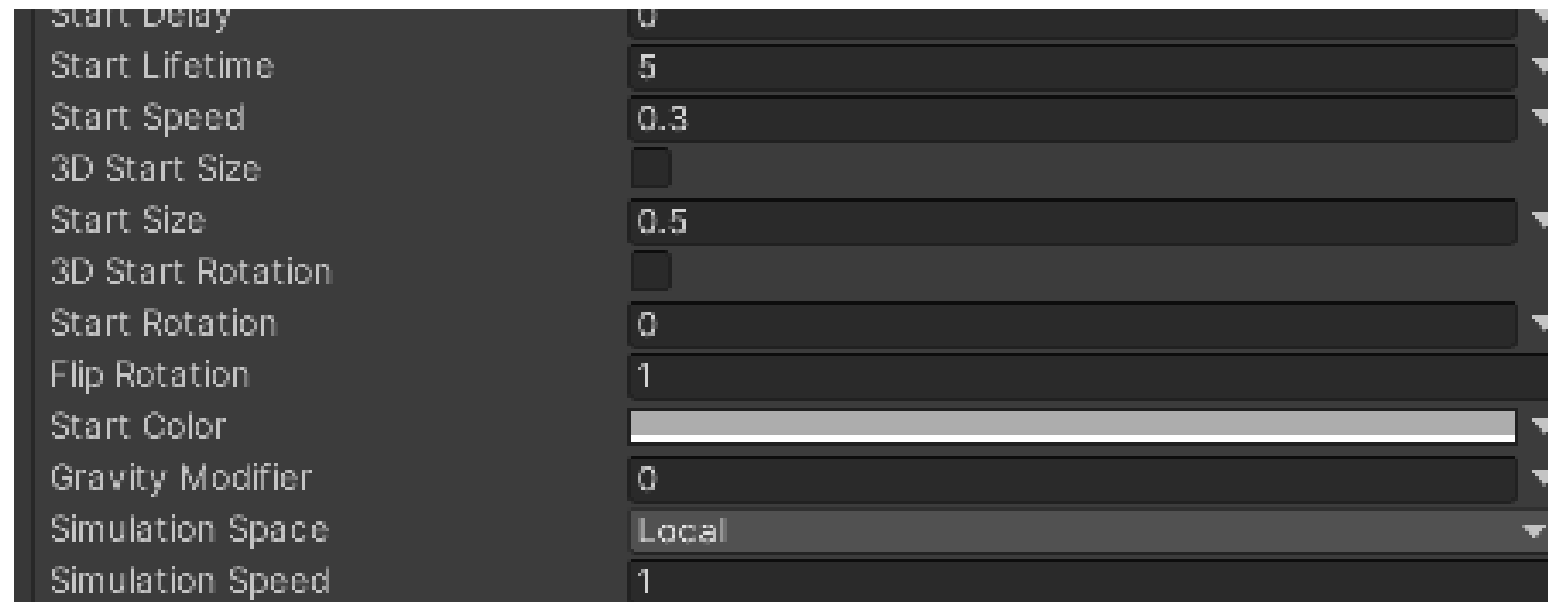
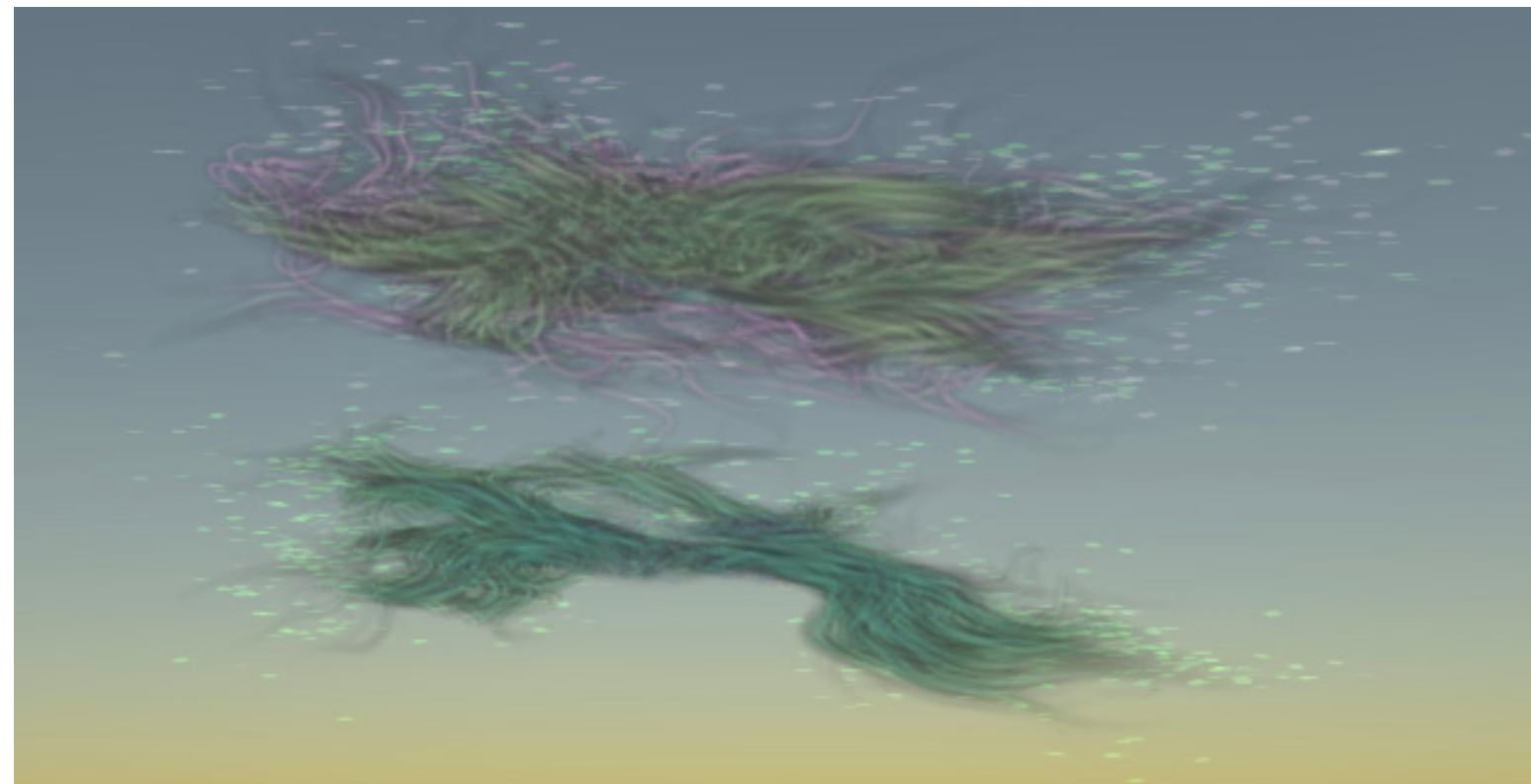
To make the experience feel relaxing, I wanted to make fluid materials flowy and dynamic. This adds the “awe” factor when the user sees it.

## Rippling water



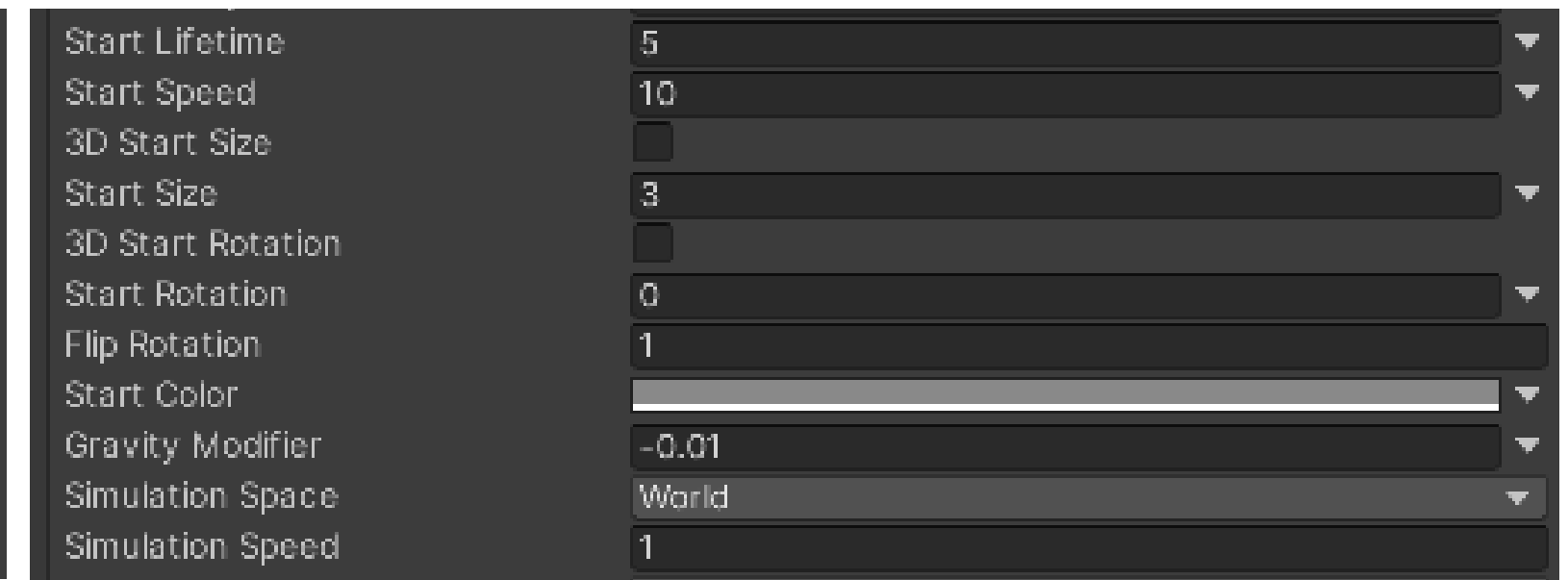
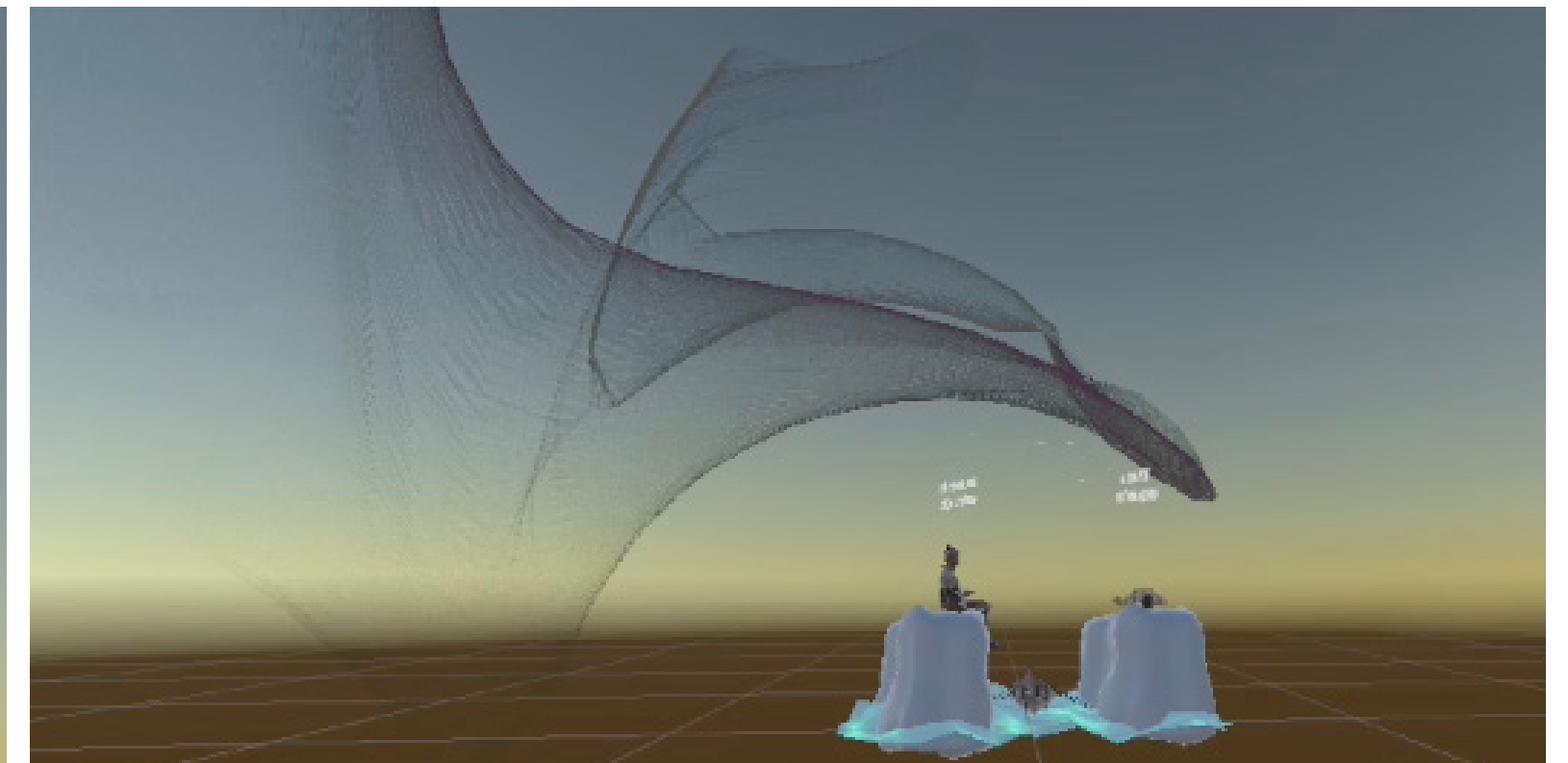
Reflective and moving water created with nodes.

## Northern light “cloud”



Particle system effect used to make first iteration.

## Northern light “ribbon”



Tweaking parameters of the cloud to flow motions.



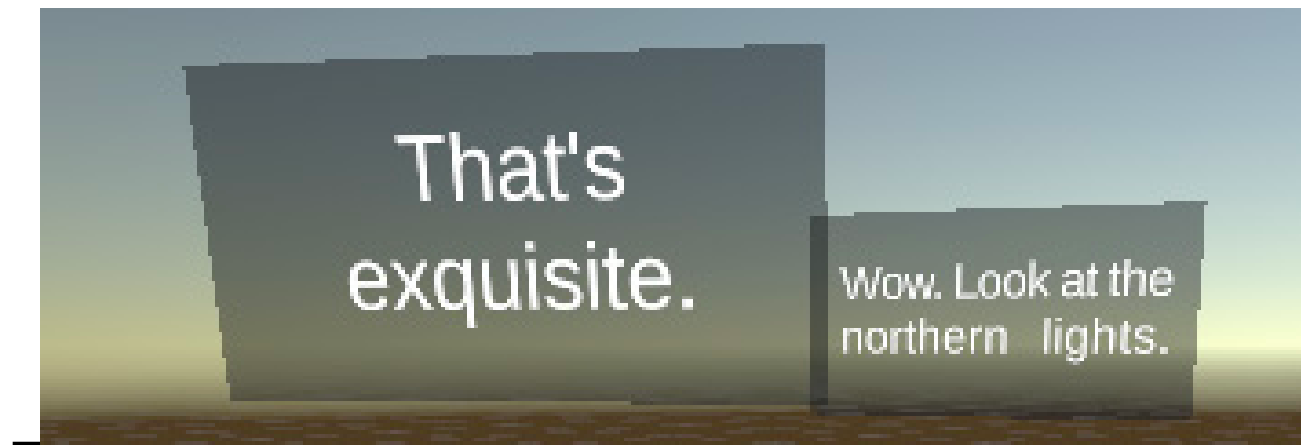
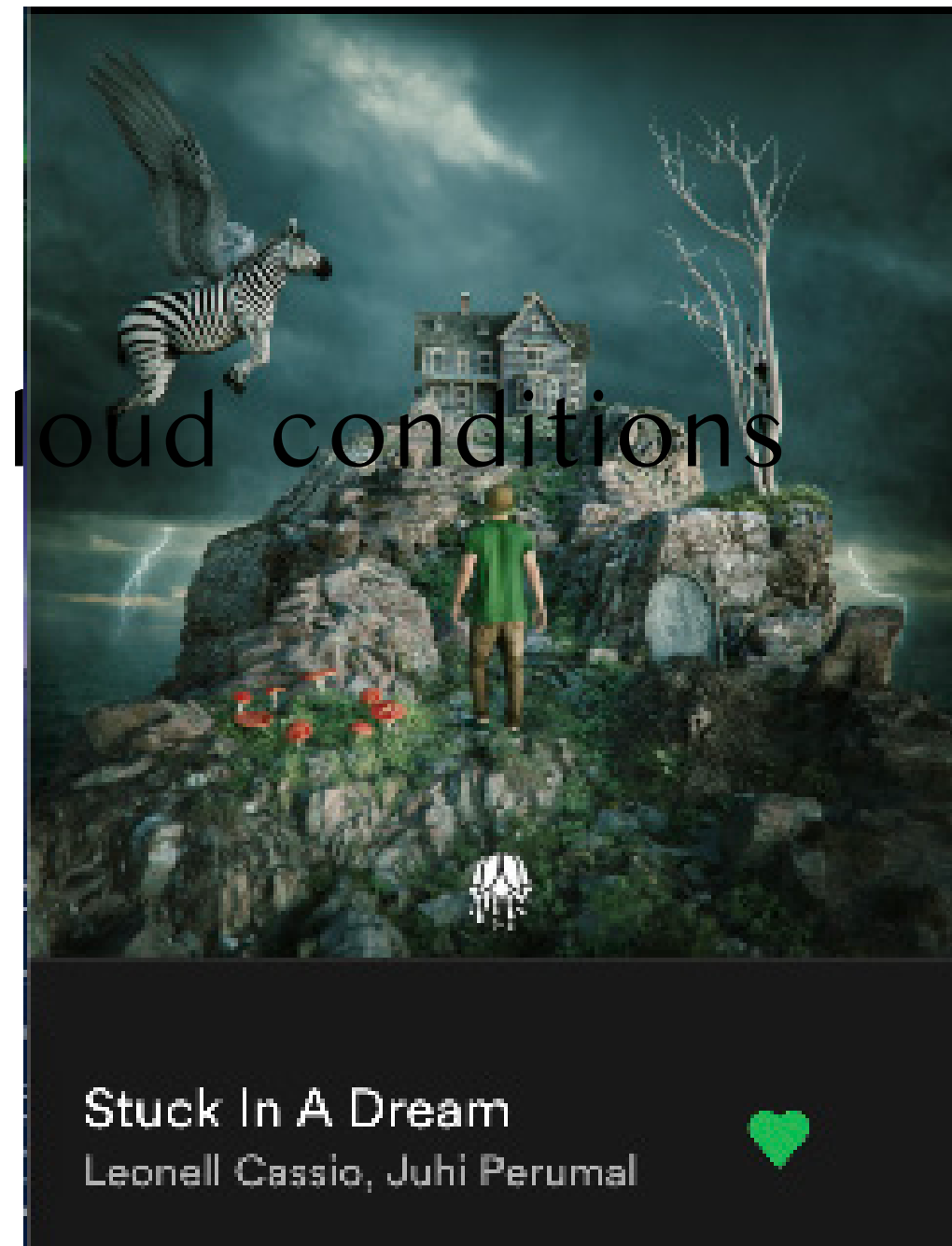
# Slide Title

Light pollution  
Light pollution

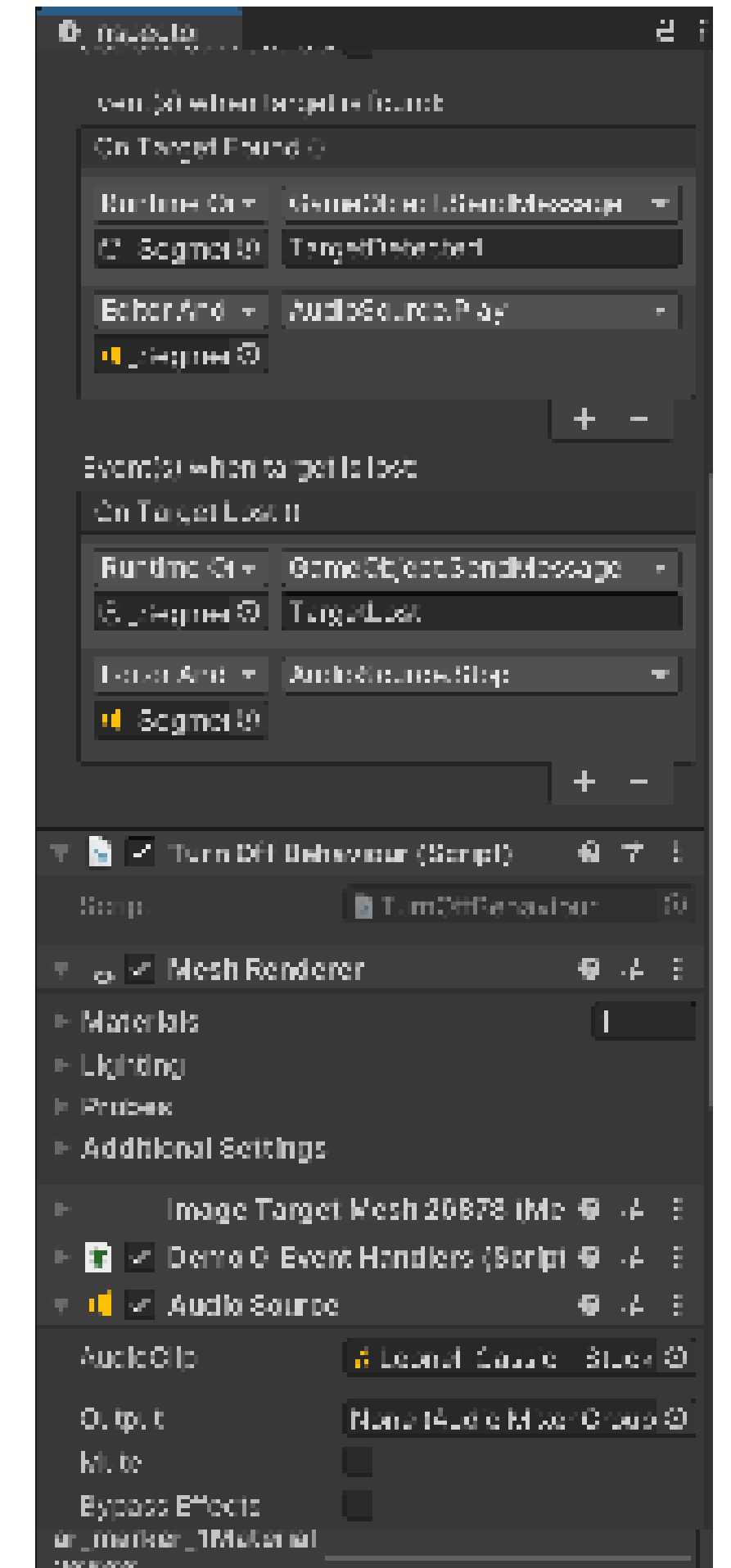
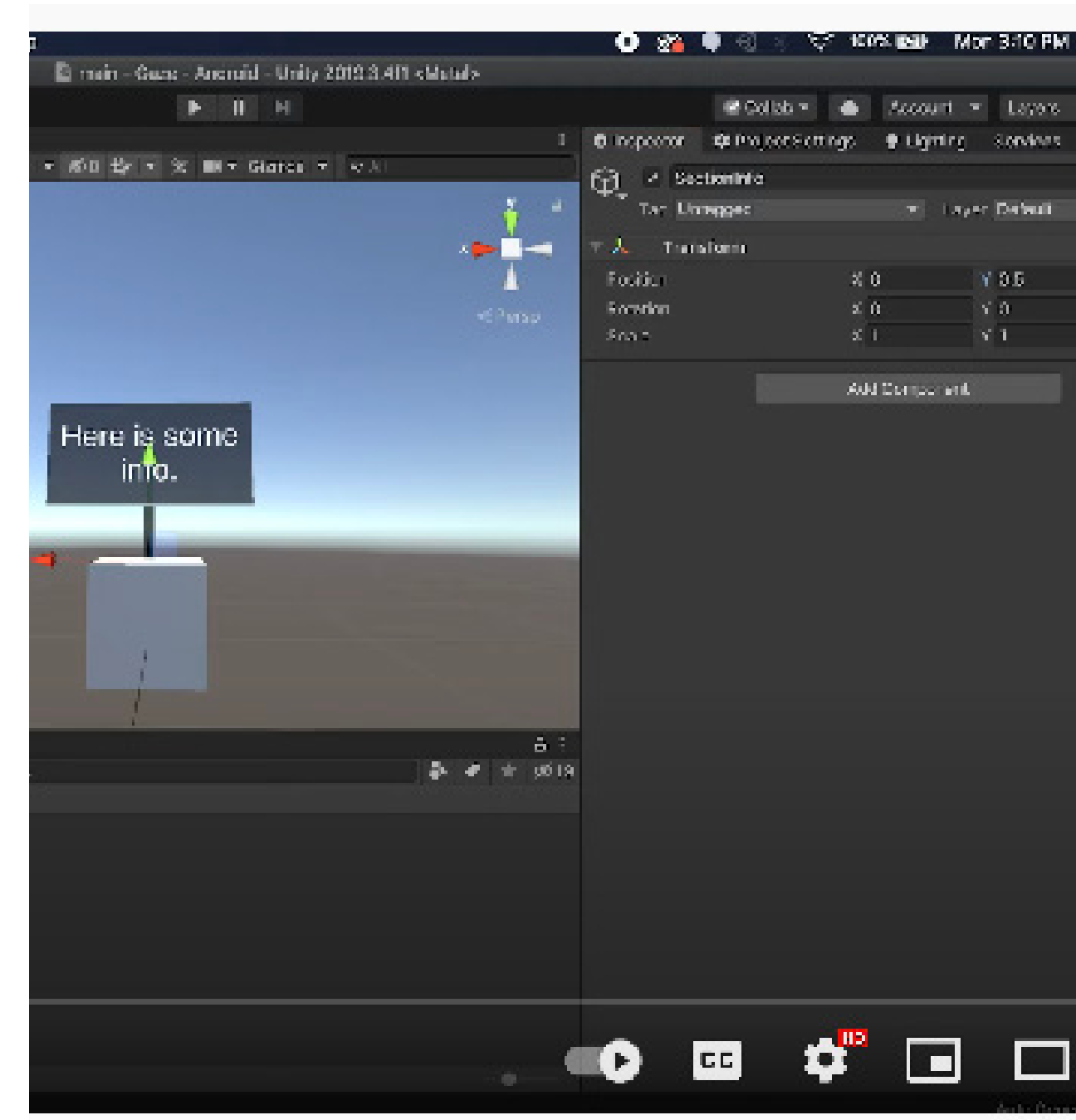
## PROGRAMMED INTERACTIONS

When the image marker is detected by the camera, music will start playing and the text will follow the camera angles.

Cloud conditions



Equipment & Gear





# LIVE CAPTIONING

Captions to assist conversations real time, without the lip reading

**Medium**  
Electronics, hardware

**Theme**  
Accessibility

# Masks: a barrier for the virus and communication

The transition from remote interactions to hybrid communities was a glimmer of hope for individuals spent holidays apart from family and fanned birthday candles to keep loved ones safe.

Masks allowed people to collaborate while reducing the risk of COVID contamination. Many began to experience the “verbal tango”. It played out something like this:

**Person 1:** -incoherent muffles-

**Person 2:** “Sorry, can you say that again?”

**Person 1:** -louder- “What?” -exposes ear-

**Person 2:** -repositions mask- “I CAN’T HEAR YOU”



# Inspiration from watching too much Netflix during the pandemic

With the power of subtitles and streaming services, audiences connected beyond cultural borders.

Everyone watched the rat race in the Korean show “Squid Game.”

## Subtitles for Korean media



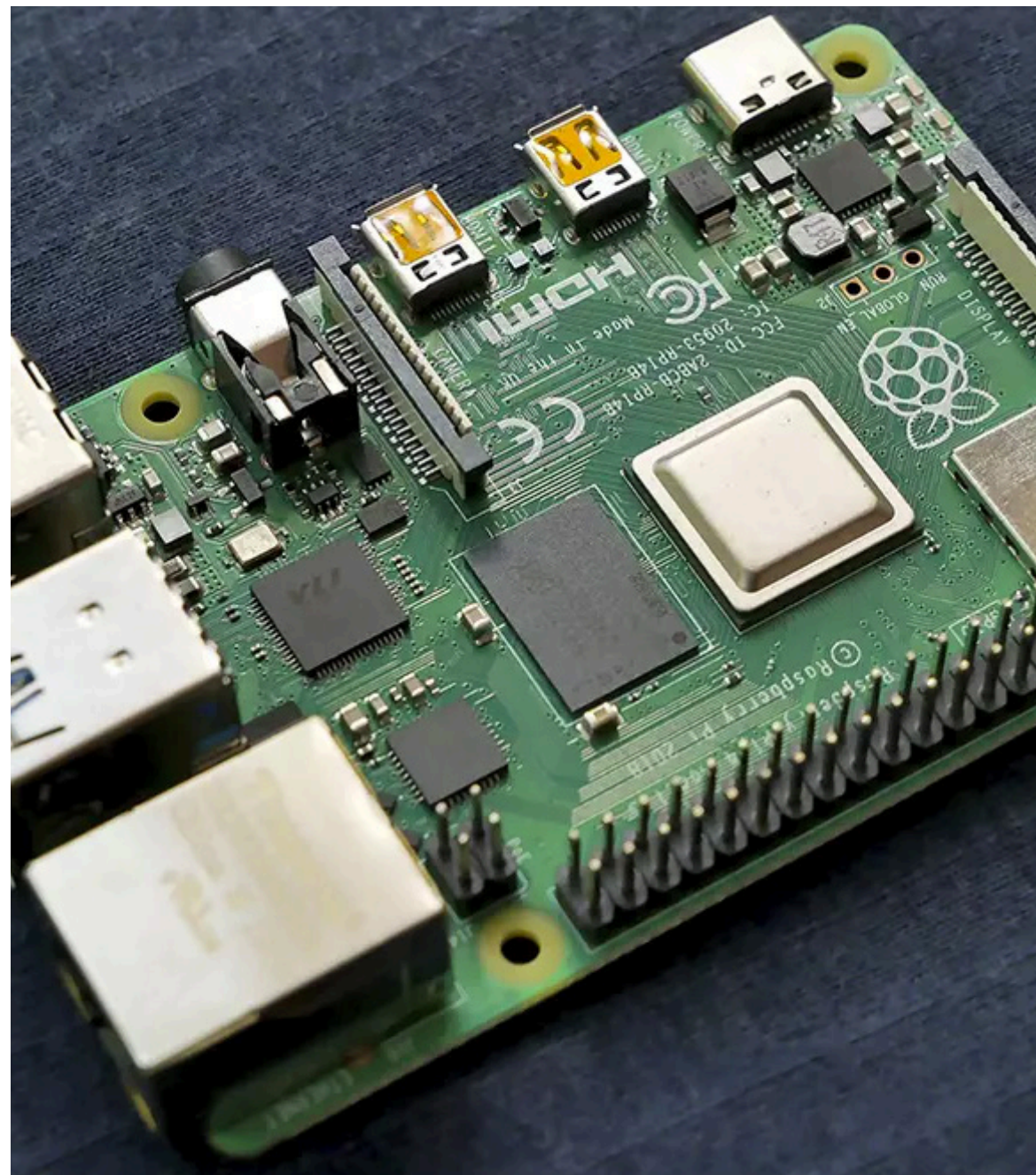
The outrageous documentary “Tiger King” kept fanatics watching throughout the night at low volume without disturbing the neighbors.

## Subtitles for English media



# Integrated parts and features

Raspberry pi



Neopixel LED Light



Analog Button



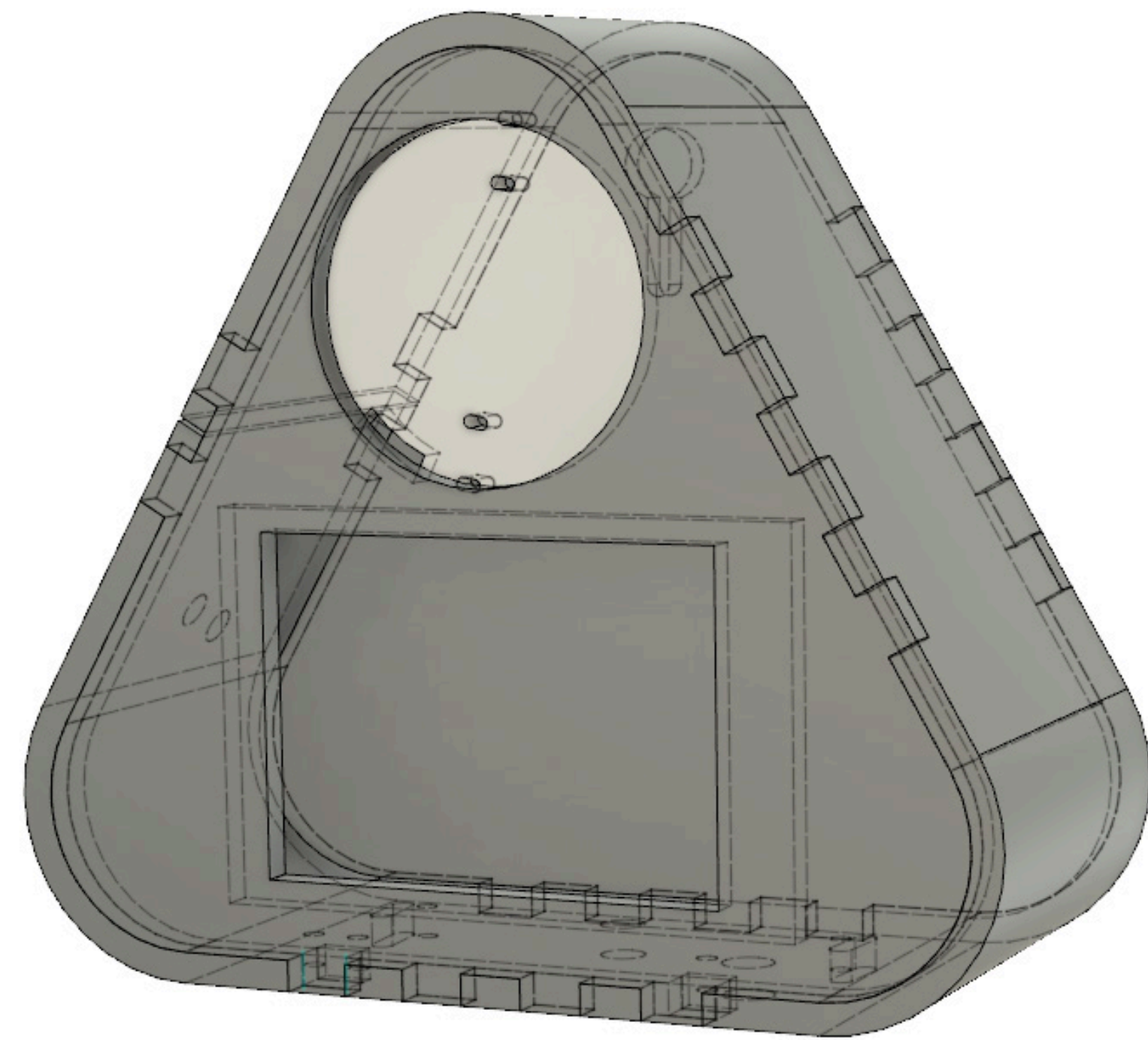
STT Google API



# Easy assembly

Total of 6 joined pieces

- 3 plywood pieces for external enclosure
- 3 acrylic pieces for support

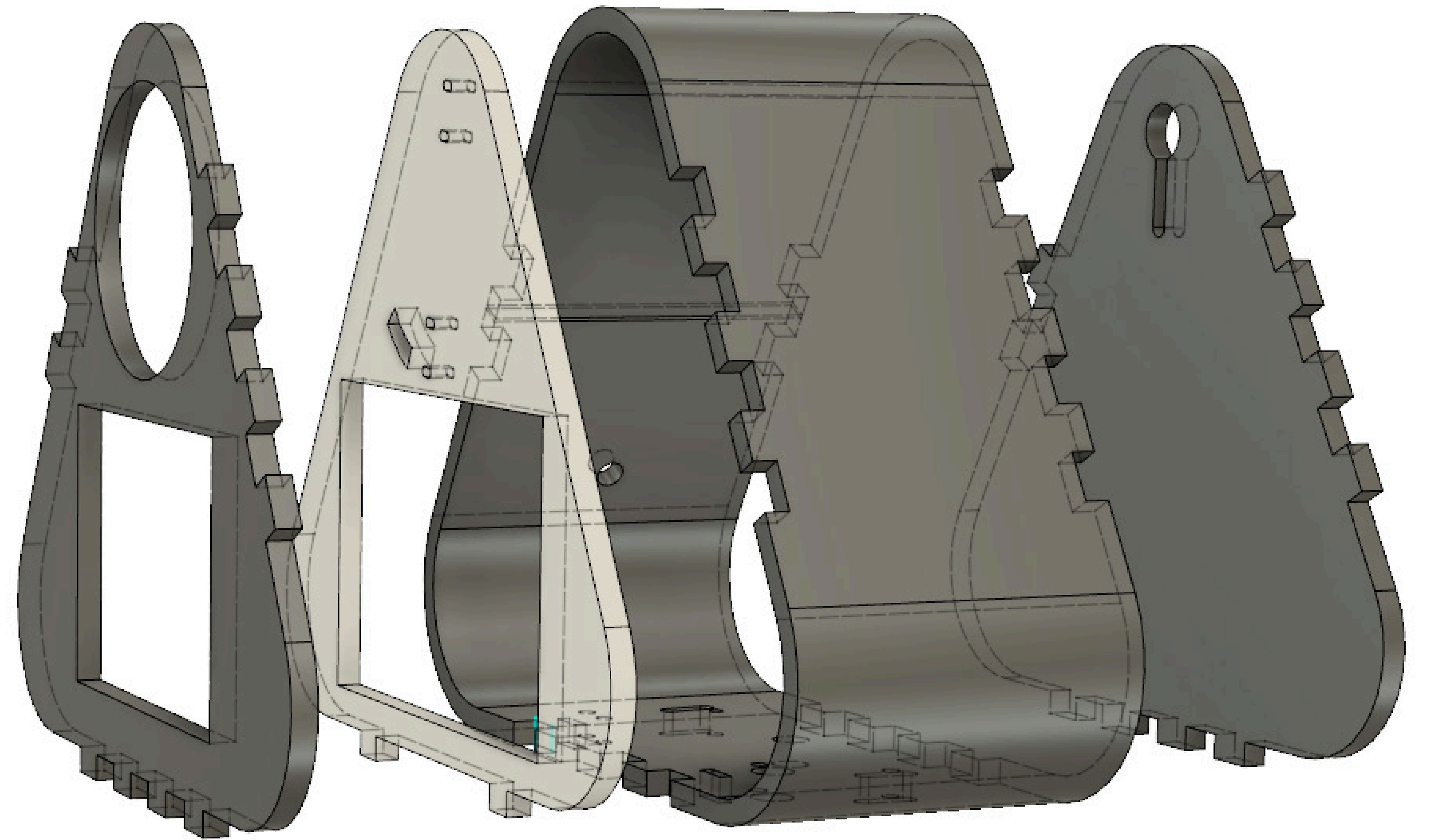


Light pollution

Cloud conditions

Equinox

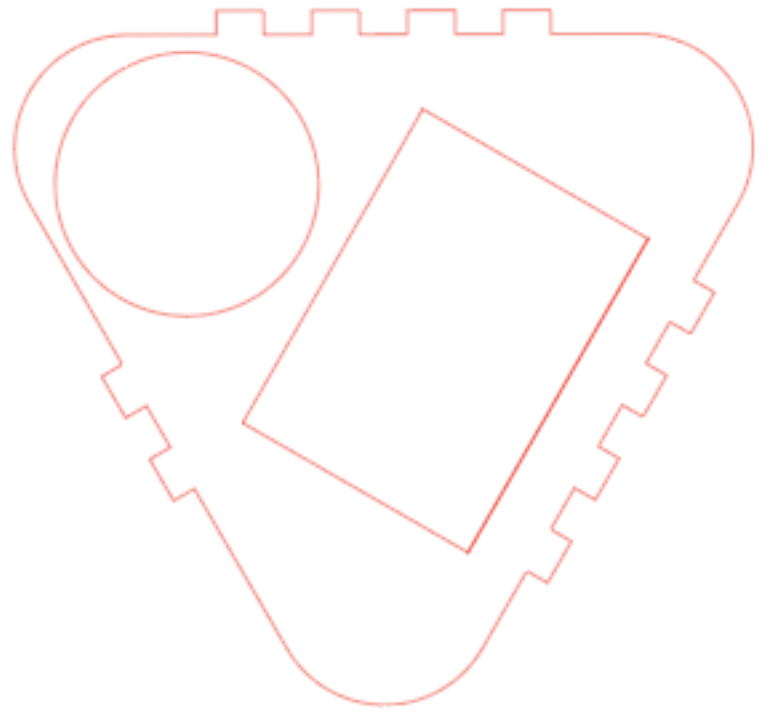
Patience



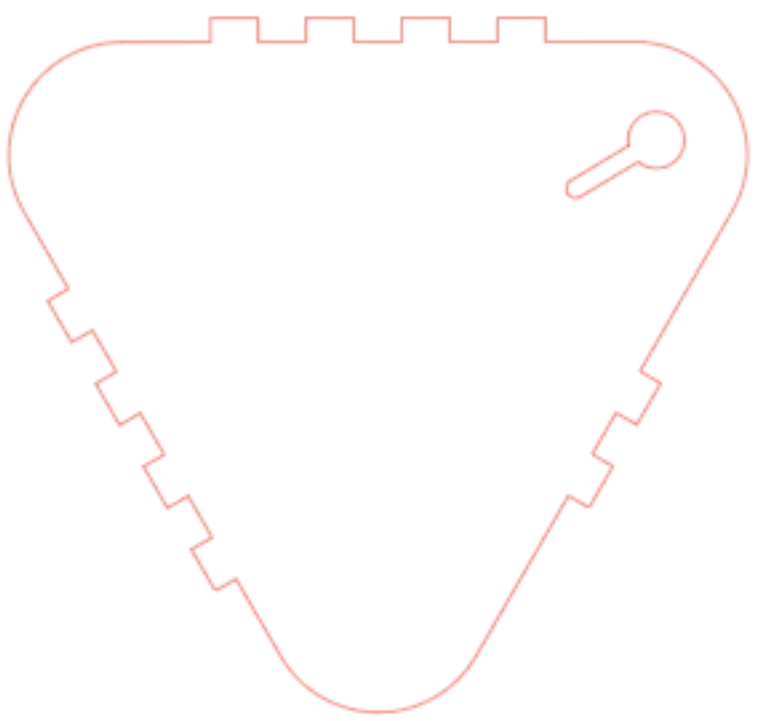
# Lasercutting

- 1/4" thick plywood
- living hinge for bends

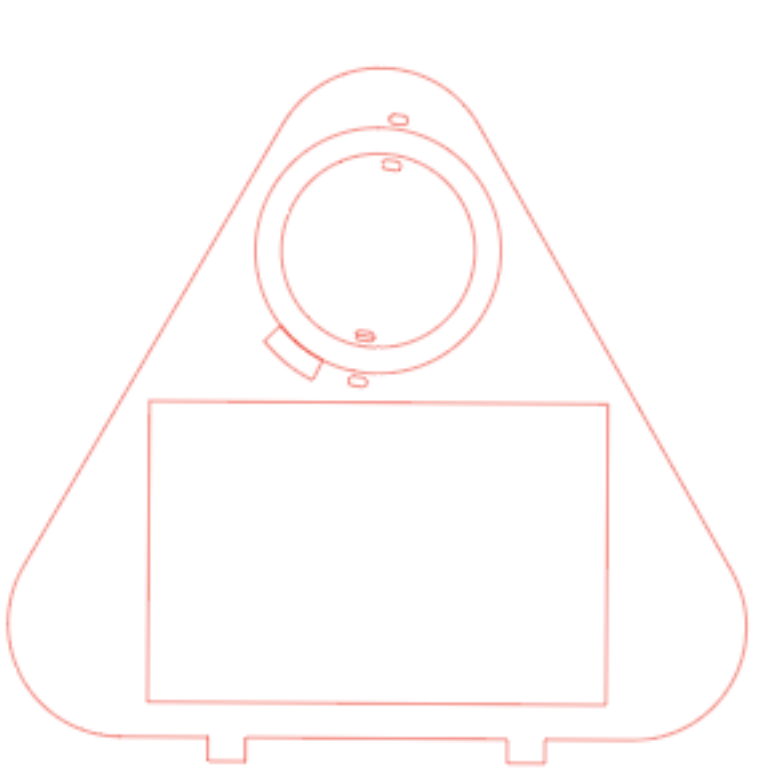
Light pollution



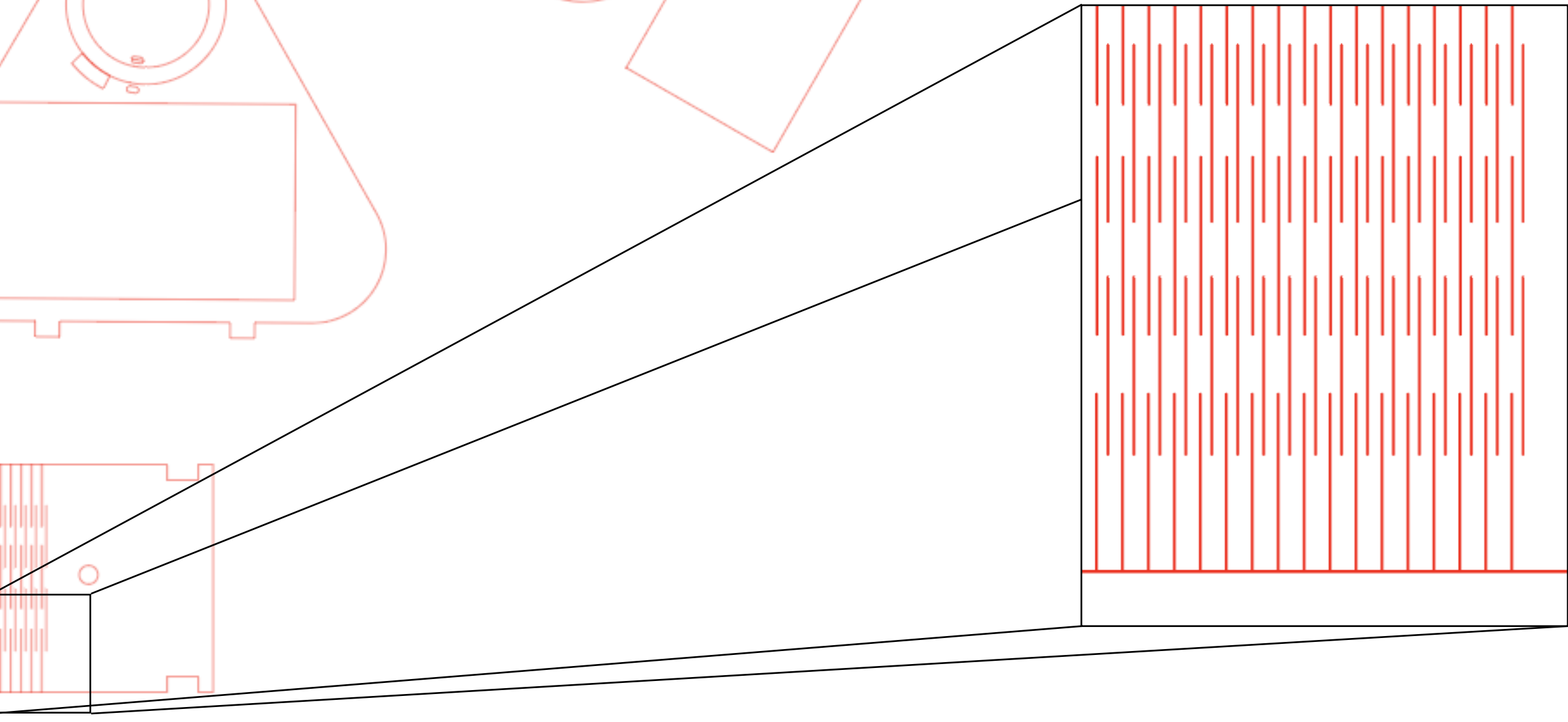
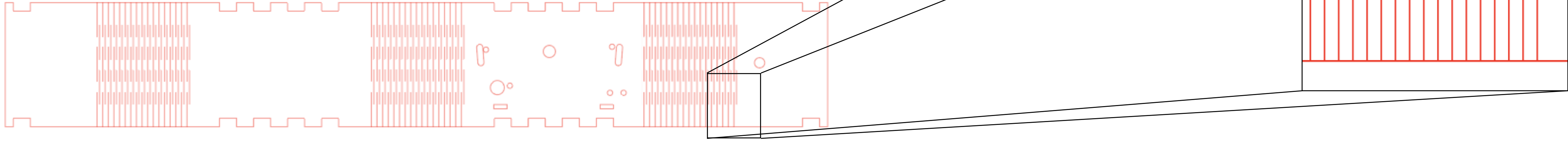
Cloud conditions



Equipment & Gear



Patience



Video Demo

[Link](#)







# AI PLAYGROUND

Empowering front end developers to discover and integrate modular AI

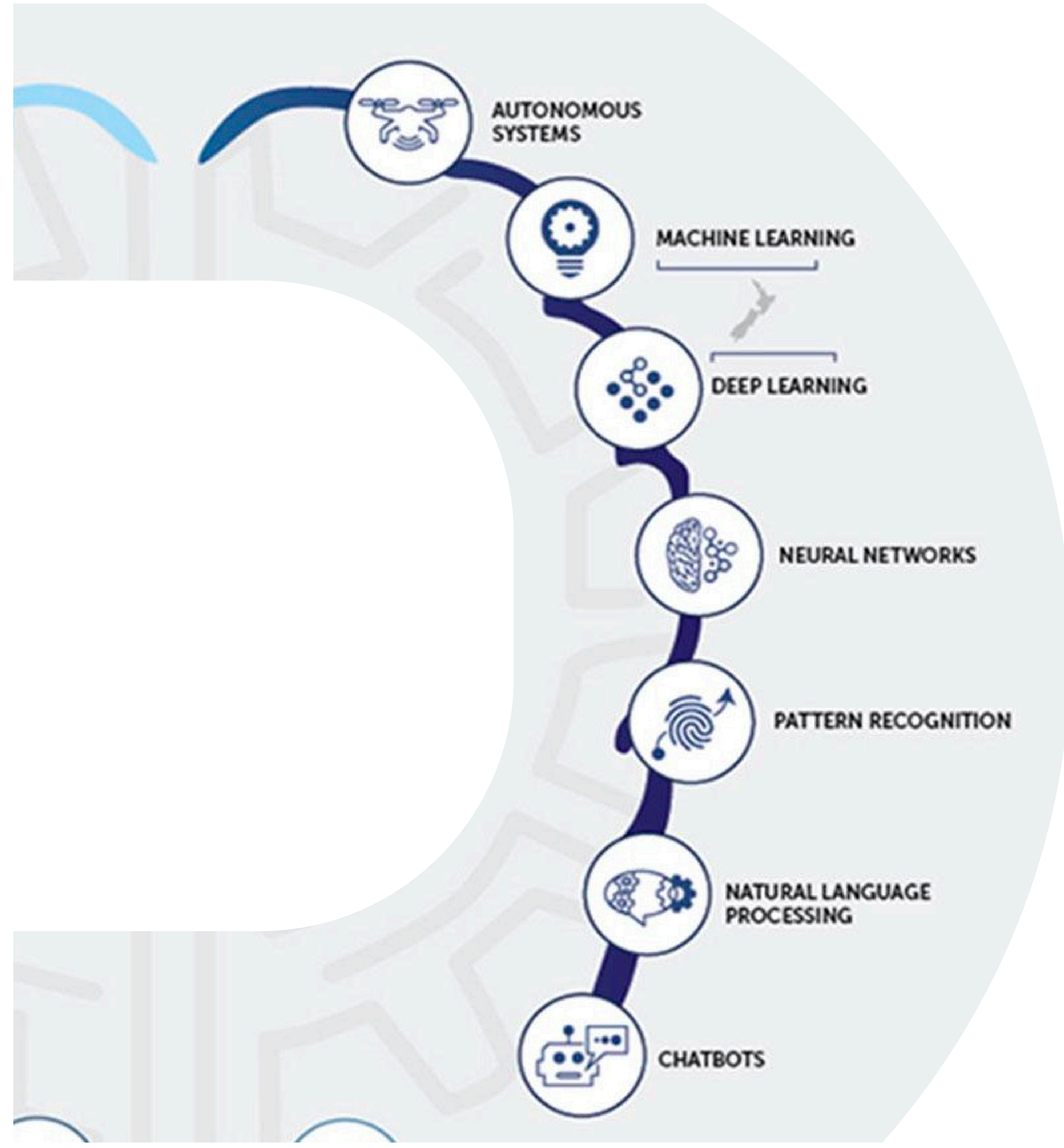
**Medium**  
Web

**Theme**  
Developer Experience

The impact of AI is well known, but few understand the magic under the hood.

Front end developers know that AI will improve their products and want to integrate them, but they are not AI experts.

They rely on experts from multiple disciplines to understand how dynamic layers of data can be translated to the machine learning model they envision.



# The effort and coordination stifles innovative products and employees.

Front end developers need to juggle:

- their current projects
- coordination with stakeholders (PMs)
- coordination with technical experts (Data scientists and machine learning engineers)
- split work with another engineer

Projects / Beyond Gravity  
Board

⚡ ⌚ 4 days remaining Complete sprint ⋮

SEARCH [ ] [Avatar] [Avatar] [Avatar] [Avatar] +3 Epic ▾ GROUP BY Choices ▾

| TO DO 12   | IN PROGRESS 4   | IN REVIEW 4  | DONE 4  |
|--|---|--|---|
| <p>Implement feedback collector<br/>NUC-205 9 [Avatar]</p>         | <p>Update T&amp;C copy with v1.9 from the writers guild in all products that have cross country compliance<br/>NUC-213 1 [Avatar]</p> | <p>Multi-dest search UI web<br/>NUC-338 5 [Avatar]</p> | <p>Quick booking for accomodations - web<br/>NUC-336 4 [Avatar]</p>               |
| <p>Bump version for new API for billing<br/>NUC-206 3 [Avatar]</p> | <p>Tech spike on new stripe integration with paypal<br/>NUC-215 3 [Avatar]</p>  |  | <p>Adapt web app no new payments provider<br/>NUC-346 3 [Avatar]</p>              |
| <p>Add NPS feedback to wallboard<br/>NUC-208 1 [Avatar]</p>        | <p>Refactor stripe verification key validator to a single call to avoid timing out on slow connections<br/>NUC-216 3 [Avatar]</p>     |  | <p>Fluid booking on tablets<br/>NUC-343 5 [Avatar]</p>                            |
|  | <p>Change phone number field type to 'phone'<br/>NUC-217 1 [Avatar]</p>   |  | <p>Shoping cart purchasing error - quick fix required.<br/>NUC-354 1 [Avatar]</p> |

# ETHEREAL LIGHTS

Bringing Northern Lights  
to anyone, anywhere

How can we reduce the time to integrate AI to 1 day?



**Medium**  
Augmented Reality

**Theme**  
Abstract, Soothing Technology

# ETHEREAL LIGHTS

Bringing Northern Lights  
to anyone, anywhere



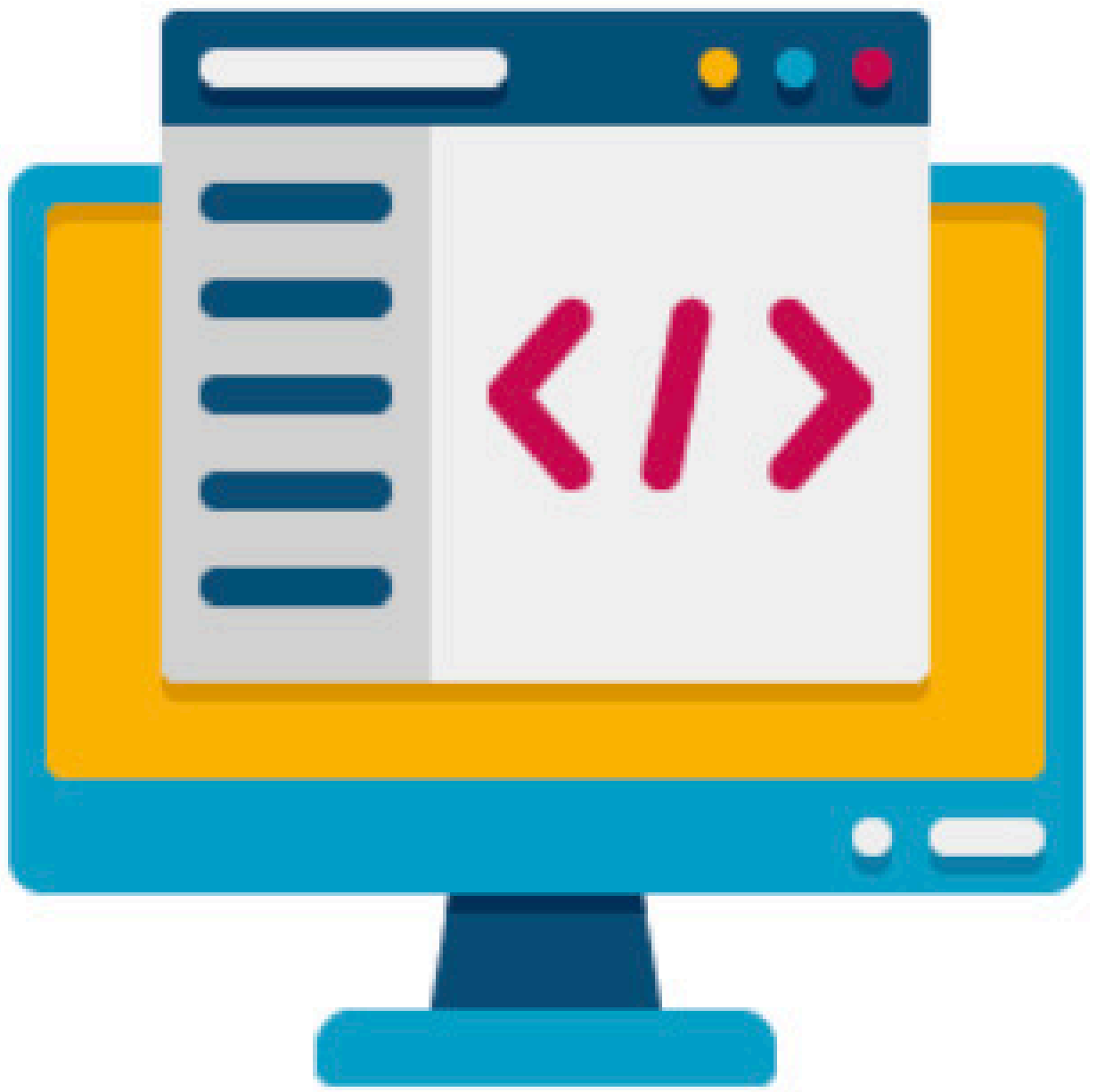
**Medium**  
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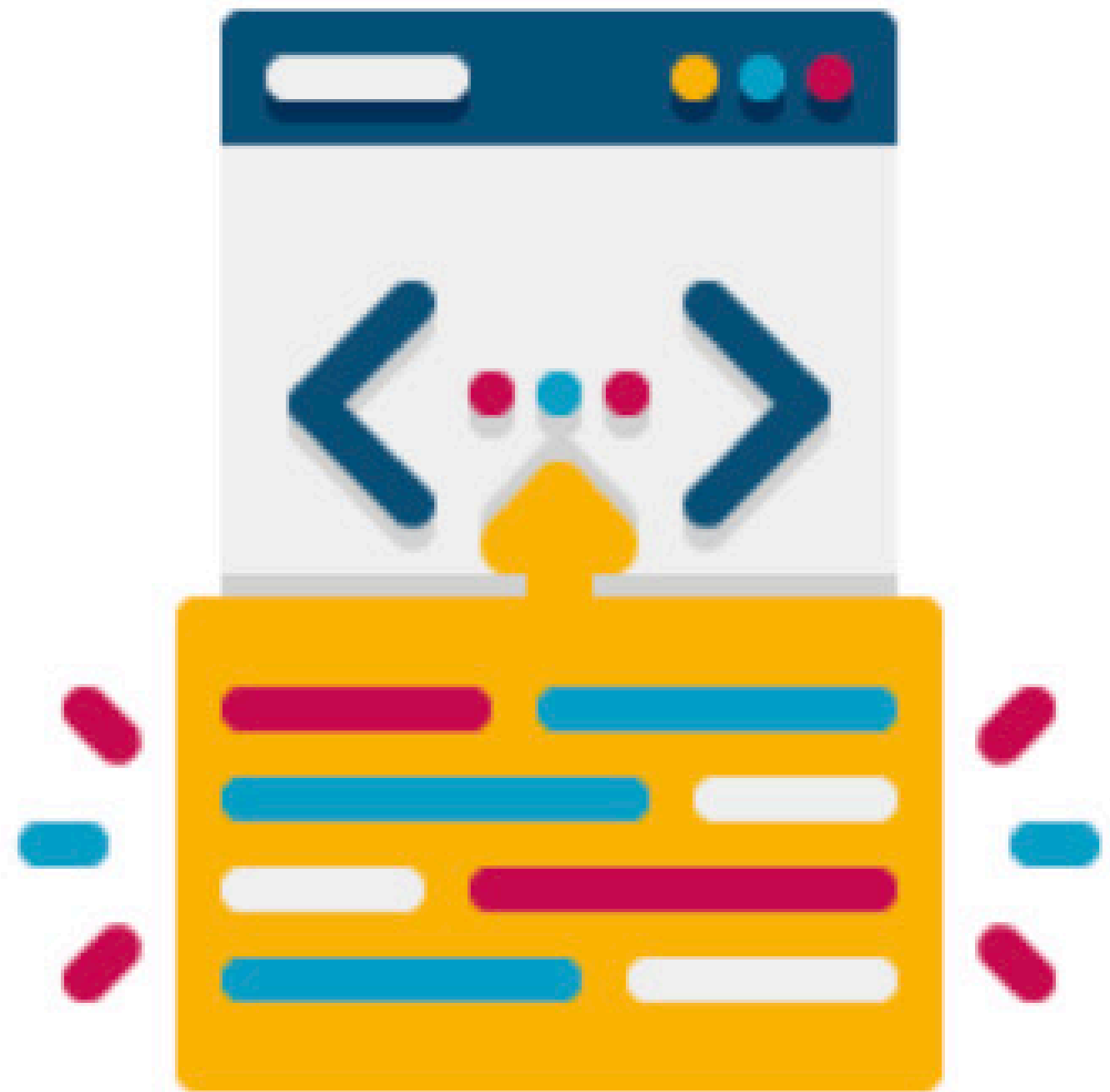
# Testing usability of low-code and code integration methods

- Goals:
- understand AI model
  - integrate into products
  - demonstrate integration method

Code method



Low-code method



## Finding #1: Customers weren't sure about fit

- Confused about product use case
- Pre-requisite barriers
- Low-code outcome difficult to understand

*"Where is the suggestion  
coming from?"*

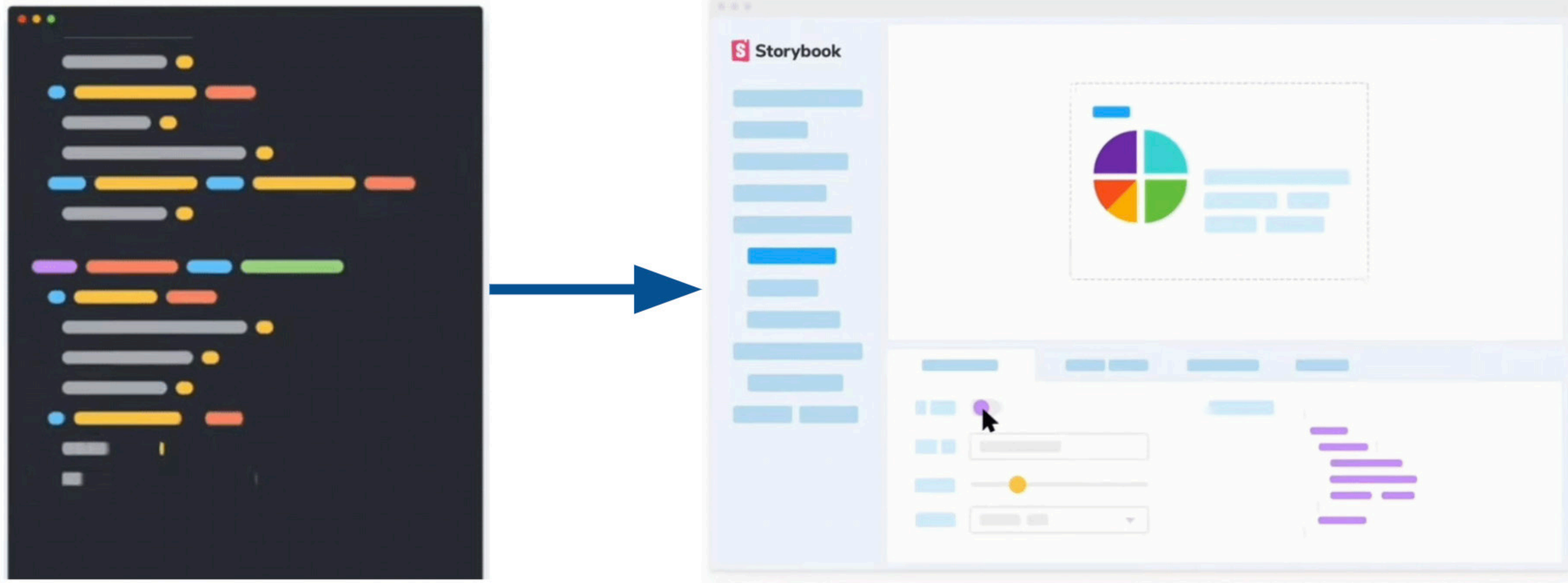
*"Does this fit my use  
case?"*



Finding #2:  
Users are split into  
multiples source of  
information



Insight 3:  
Learning should be hands-on, not reading and regurgitating

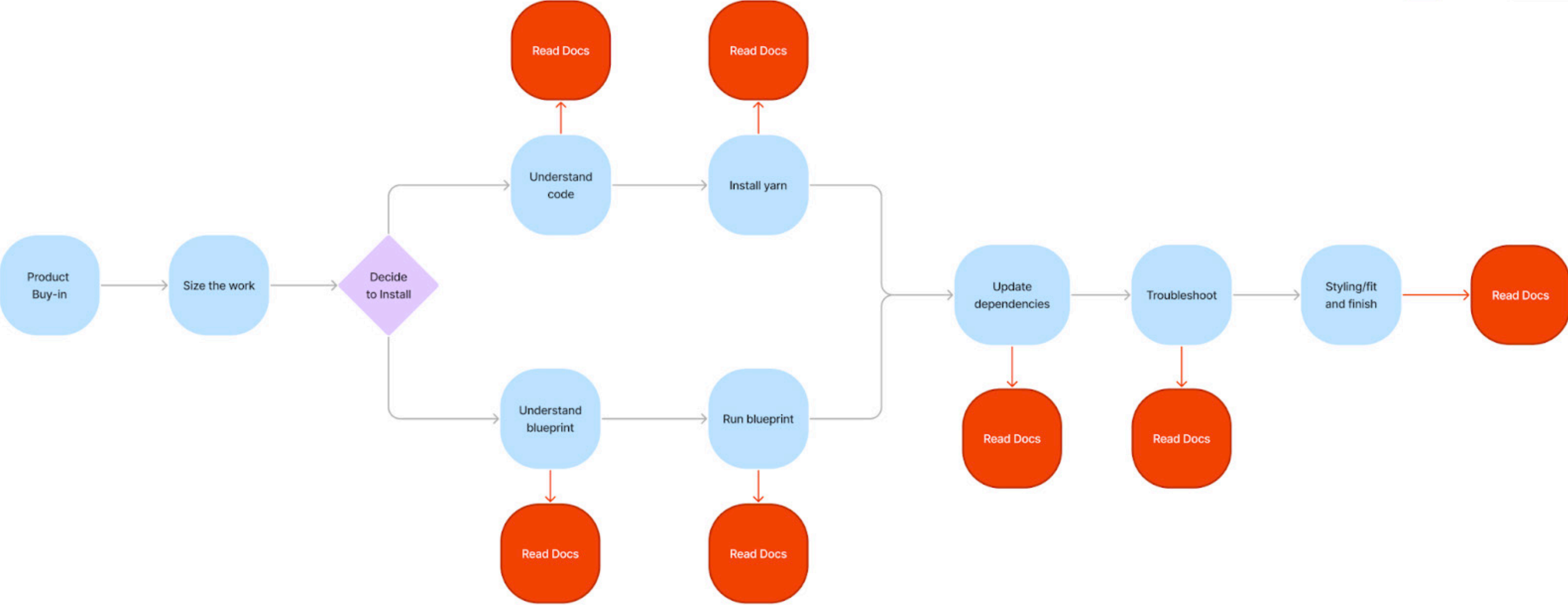




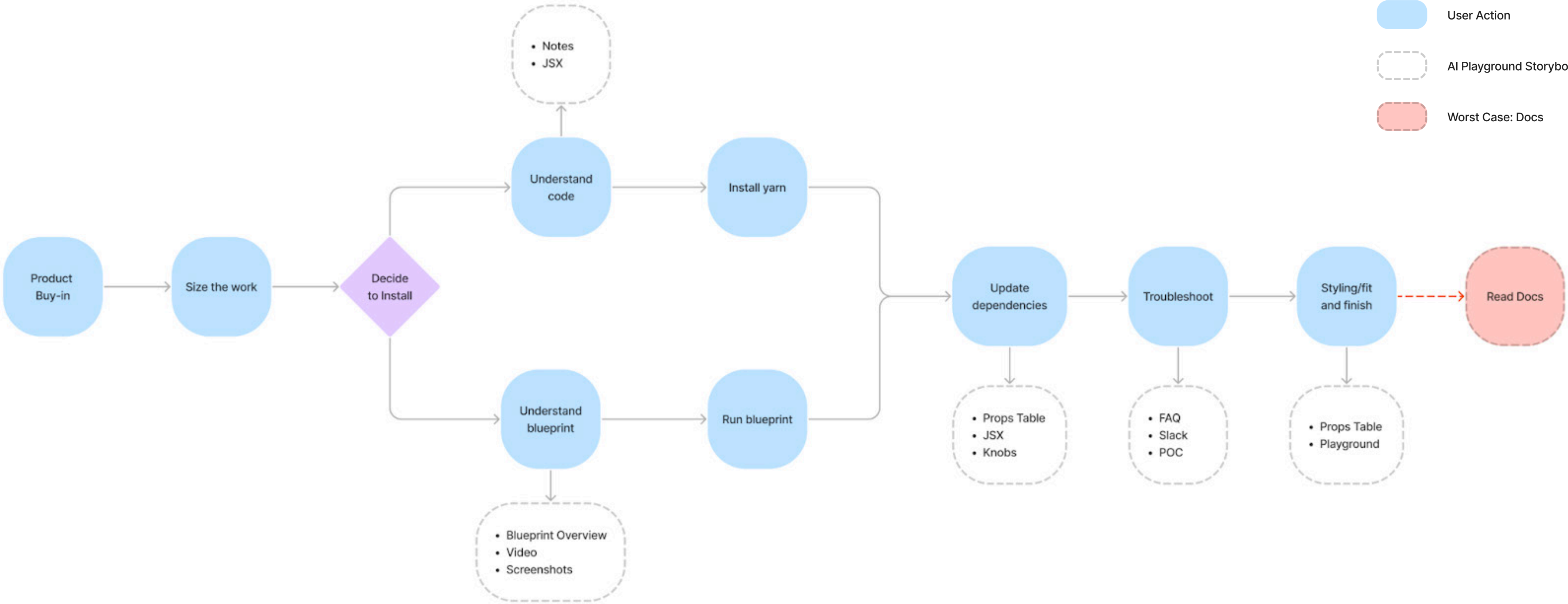
# Current user flow leads to documentation

Legend:

- User Action
- Worst Case: Docs



# Improved user flow



# Improved integration by 98%.

Before



After



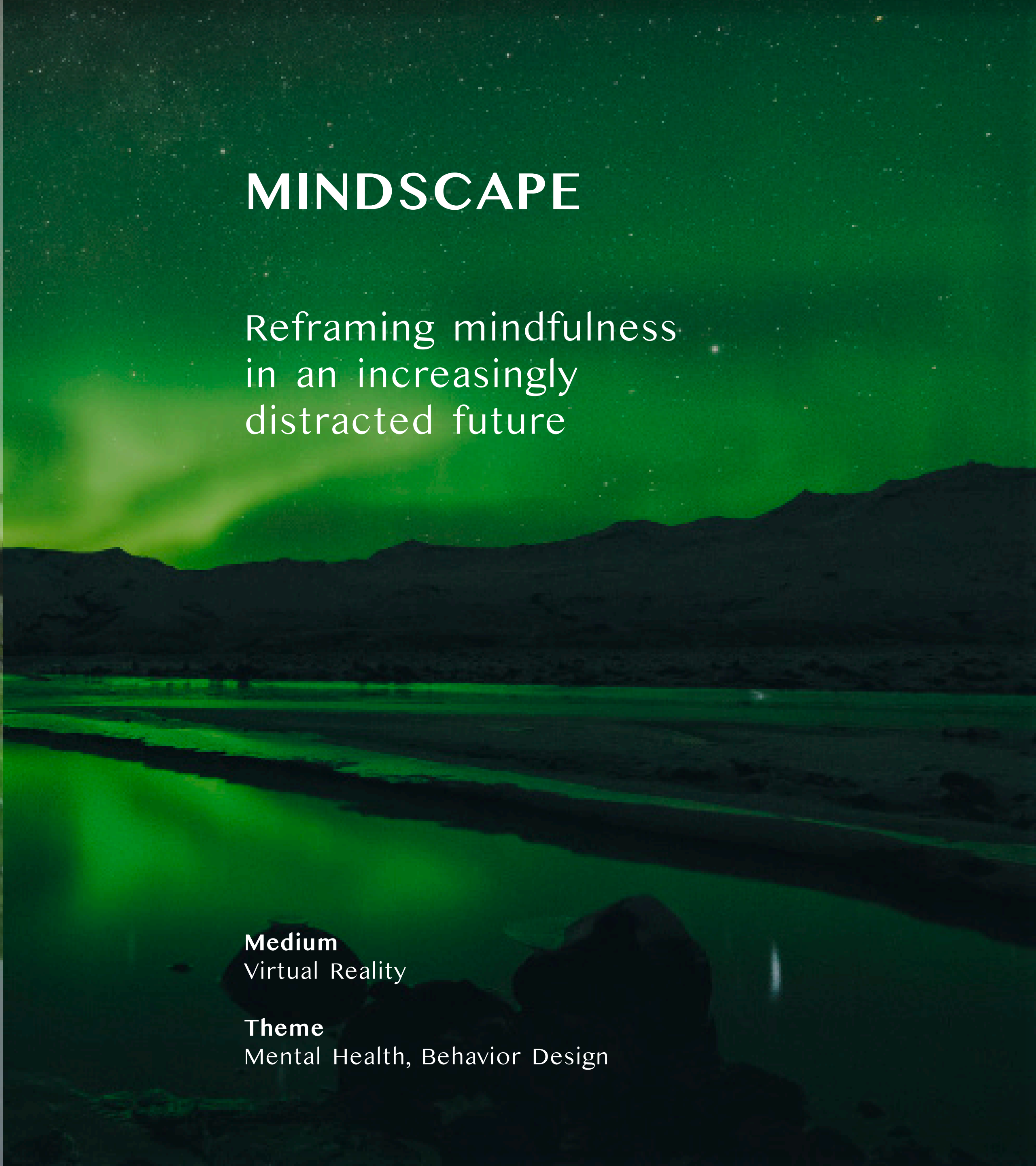


# MINDSCAPE

Reframing mindfulness  
in an increasingly  
distracted future

**Medium**  
Virtual Reality

**Theme**  
Mental Health, Behavior Design



# The mental health of college students are continuously neglected

OPINION / EDITORIALS

## Stop glorifying UC Berkeley's workaholic stress culture



## Impact

- 1 in 4

## Obstacles

- not enough data to build case for more funding