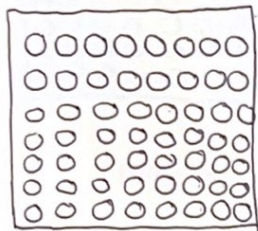


SHARING IDEAS

Danh Nguyen
CS 485-3
10-02-24

SEMESTER PROJECT 10+10

1 "digital dice"



8x8 LED matrix



button

button press → display random number 1-6

2 "mood light"



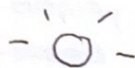
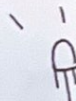
RGB LED



potentiometer

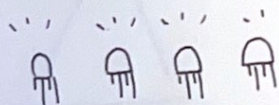
turn → change color gradient manner

3 "nightlight"



light sensor
turn on if dark

4 "timer"



on

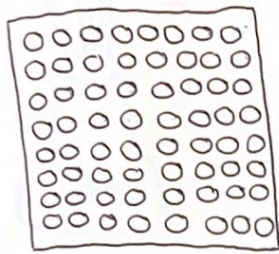
set timer (~1 min)

→ all on at start


gradually turn off as a function of time

off

5 "mini piano"



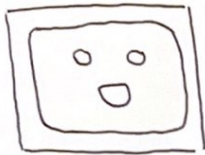
8x8 LED
matrix

touch sensor → each LED has
different sound 

↳ could make into memory
mini-game

↳ i.e. repeat pattern

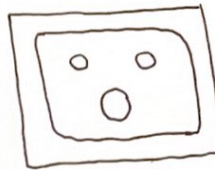
6 "desk robot companion" *



happy



angry



curious

cycle through moods for the day

↳ make display do small activities (play w/ ball, look at sunrise, ...)

↳ pixel display

↳ time-based

↳ scheduled sleep

7 "projector" *

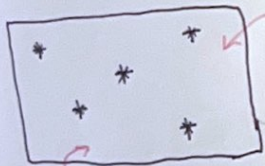
mini projector



nighttime activation

+ heart rate monitor (pulse sensor)

↳ mood-based sleep assist

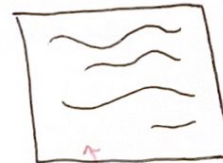


ceiling/wall

stars

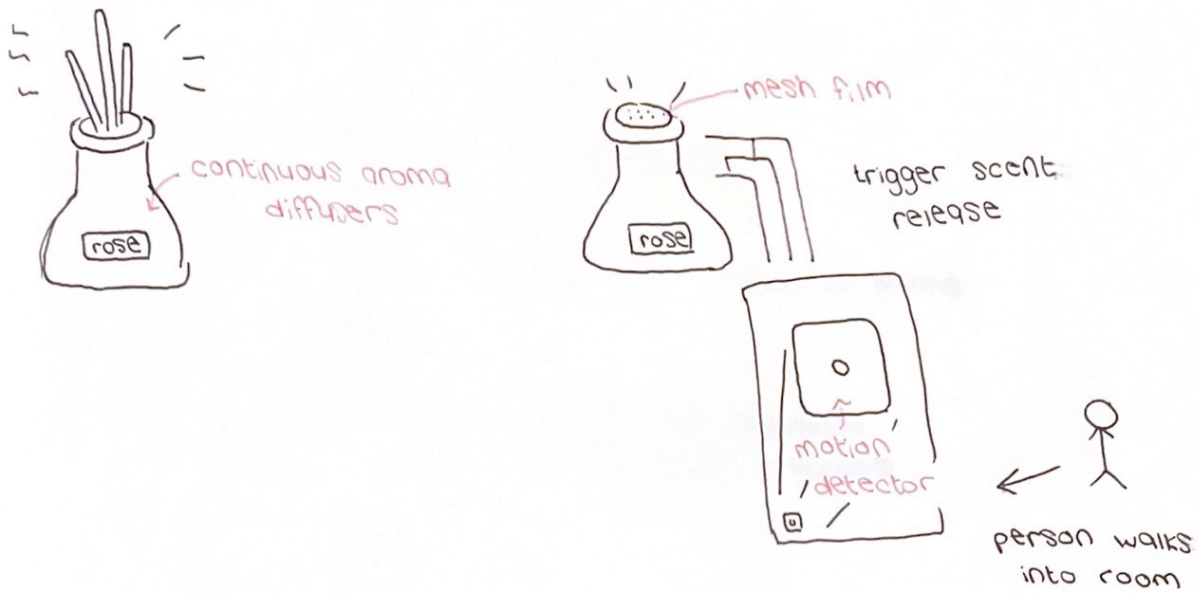


clouds

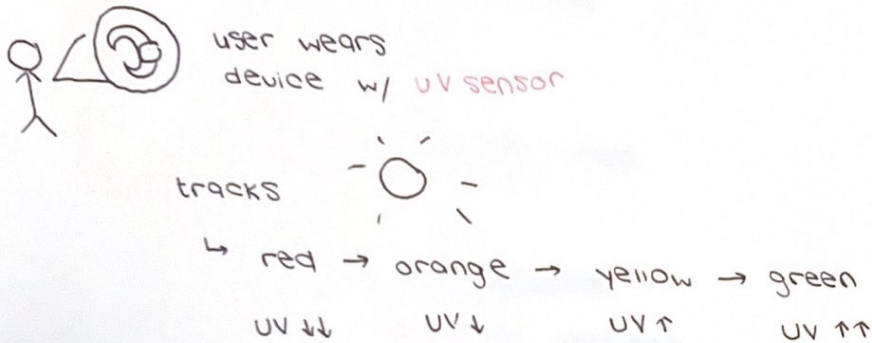


waves

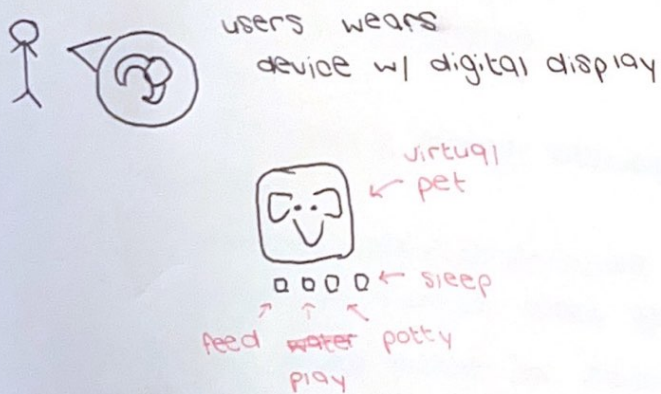
8. "automatic aroma diffuser"



9. "sunlight tracker"



10. "virtual pet"



SLEEP ASSIST SENSOR LIGHT

1. mood detection → pulse detection

↑ heart rate = stress

potentiometer for manual user input of mood

2. dynamic lighting

↳ calm = oranges

↳ anxious = blues

↳ stress = purples

} based off research
on color + stress

3. visual projections

↳ calm = static stars

↳ anxious = waves / clouds

↳ stress = leaves

4. audio feedback

↳ soft rustling / waves / rain

5. biofeedback

↳ mimic breathing patterns

↳ sync w/ LED light settings

6. sleep transition

↳ responsive

↳ fade lights + noises

↳ turn off projection

7. user input

↳ can manually change settings / turn off

8. schedule

↳ configure when projections turn on / off
based on target sleep goals

9. sync w/ sleep mode on iPhone

10. ceiling projection for direct access to user
visual field in sleep position

BUSINESS CARD V2 — USER TESTING

Danh Nguyen

CS 485-3

09/18/24

U1: increase text color contrast w/ background
for readability

dragon design noticed before name

3D element of star holes add dimension

too much white space

uneven spacing b/w contact info.

U2: hard to read text

name does not stand out enough

star holes add 3D detail

white space is off-putting

dragon is cool

U3: not too distracting, info. visible + relevant

creative + original

legible font + good size

dragon design could be clearer

text color hard to read

U4: dragon design is nice

good layout for info.

need darker font

holes add dimension but lose integrity

font clean + legible

U5: holes for info. is cool idea

dragon is favorite / coolest part

nice clean new font

major info. is good addition

excessive address info.

V1 | Original

As mental health issues continue to seep into the fabric of our reality, sleep becomes a highly impacted factor which creates a positive feedback loop in that poor sleep quality can perpetuate difficulties in controlling stress and anxiety. CoZ is an intelligent and interactive sleep assistance device curated for the improvement of sleep quality in college students and business professionals. By combining efforts to track your pulse and mood, CoZ can project calming visuals and adjust light settings to moderate your sleeping environment, promoting a personalized experience designed just for you. Whether you are feeling anxious, stressed, or calm, the projector adapts to real-time responses in order to promote relaxation, guiding you through a better sleep experience and building a peaceful journey through the obstacles of everyday life.

V2 | Business Major

Tired of chunky projectors that take up your desk space but still want interesting room decoration? Introducing CoZ, a sleek, tech-forward sleep aid for the modern professional or student seeking to elevate their personal spaces without the sacrifices of physical space. Making the most of virtual projection, CoZ will personalize your experience by providing visuals and ambient lighting to create an ideal sleep environment. By combining efforts to track your pulse and mood, CoZ can project calming visuals and adjust light settings to moderate your sleeping environment, making your space truly yours. Whether for productivity, efficiency, or sleep quality, CoZ offers an automated sleep solution to enhance the quality of life through personal responsiveness and integration techniques.

Peer Details:

- ★ experienced with business proposals and pitches
- ★ knows how to appeal to a broader audience to sell the product
- ★ two years younger than me → will be in college for longer and appeals to benefits for students
- ★ no experience with prolonged poor sleep quality or any sleep conditions

V3 | Psychology Major

As mental health issues continue to seep into the fabric of our reality, sleep becomes a highly impacted factor, implicating stress and anxiety management. CoZ is an intelligent and interactive sleep assistance device curated to enhance sleep quality for college students and business professionals. By seamlessly tracking your pulse and mood, CoZ can project calming visuals and adjust light settings to moderate your sleeping environment, promoting a personalized experience designed just for you. Whether you are feeling anxious, stressed, or calm, the projector adapts to real-time responses to promote relaxation, enhancing emotional well-being and establishing a routine for long-term benefit. As CoZ guides you through the mundane and unknown facets of life, a better sleep experience at the end of each day can help build resilience, making itself an essential companion for the betterment of mental health.

Peer Details:

- ★ experienced with factors that impact sleep quality, especially mental health and emotional well-being
- ★ understands how real-world experiences and environments translate and reflect mental health and psychological state
- ★ conducting research on how environments can be mood modulators
- ★ two years younger than me → will be in college for longer
- ★ no experience with poor sleep quality but is well-versed in different sleep disorders and current methods to alleviate symptoms