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Overall Problem

A lack of awareness of the health implications of noise exposure
Initial Paper Prototype
Task 1

Perform Soundscape analysis on the current environment
You have exceeded the safe exposure limit! - 8 mins ago

At high exposure you can sustain permanent hearing loss!

High

150 dB

Overexposure limit

20 mins

Safe exposure remaining

40 mins

130 dB - <1 min
115 dB - 15 min
105 dB - 1 hour
95 dB - 4 hours
85 dB - 8 hours
70 dB - 8 hours
Zen
Task 2

View past noise exposure & analysis
GREAT JOB on level 34. Minutes per level is low but can still be higher.

LEVELS ARE NOT EASY. BE READY.

INCREASE INTENSITY as needed.

THE REWARD IS THE EXCITEMENT. BE CAREFUL!

YOU ARE EXCELLENT. REMEMBER TO INCREASE THE AMOUNT PER DAY. LOOK AHEAD 97% TO 100%.

AND 1977.

ALWAYS SET A HIGH INTENSITY. SLEEP SHORTLY.

28 minutes 05s
Testing Process
Usability Tests

UW Student
*Frequents loud environments*

Middle-aged User
*Lacks technological expertise*

Doctor (Radiologist)
*Provides a medical background*
Results
Syntax
Recognition Rather than Recall
Visibility of System Status

- 52 dB (Zen)
  - Time in Zen: 36 mins
  - Safe Exposure Remaining: ?

- 85 dB (Moderate)
  - Exposure: 4 hrs 20 mins.
  - Safe Exposure Remaining: ?

- 105 dB (High)
  - Exposure: 40 mins
  - Safe Exposure Remaining: ?

- dB Levels:
  - 30 dB (Zen)
  - 50 dB (Safe)
  - 90 dB (Caution)
  - 110 dB (Risk)
Affordances
Flexibility and Efficiency of Use

[Hand-drawn chart showing data for different months (JFMAMJJASOND) and time intervals (1hr, 2hr, 3hr, 4hr). The chart includes bars for zen and risk.]
User Control and Freedom

GREAT JOB! You are exceeding the recommended amount of Zen time per day. Look forward to increases in memory and attention!

CAREFUL! 28 minutes of high exposure seems low but your noise levels are high. Short exposures can still be harmful at high intensity.
TUTORIAL
Aesthetic and Minimalist Design
Visibility of System Status

- **Soundscape**: 52 dB
- **Time in Zen**: 36 mins
- **History**:
- **dBs Safe**:
- **R**
Final Paper Prototype
Great job, you are exceeding the recommended amount of zen time per day. Look forward to increasing memory and attention!

Careful! Even minutes of high exposure seem low but levels are still high. Short exposures can still be harmful at high intensity.
Digital Mockups
Tutorial

Soundscape helps you monitor the noise around you and minimize the health risks related to noise exposure.

Your goal is to maximize the "Zen" (quiet) bar and minimize the time spent in "Risk" (loud) environments everyday.

**ZEN**

30 dBs

By increasing your "Zen time" (<35 dBs), will help decrease your stress level while improving working memory and cognitive function.

**DANGER**

1 min safe exposure

10 dBs

When the noise around you exceeds 85 dBs, a time reading appears to let you know how long it is safe to stay without risking long-term damage.

In the history tab, tapping on a set of bars will allow you to see a more detailed breakdown of your noise exposure!
Soundscape helps you monitor the noise around you and minimize the health risks related to noise exposure.
Your goal is to maximize the "Zen" (quiet) bar and minimize the time spent in "Risk" (loud) environments everyday!
By increasing your "Zen time" (<35 dBs), will help decrease your stress level while improving working memory and cognitive function!
DANGER:
1 min safe exposure

110 dBs

When the noise around you exceeds 85 dBs, a time reading appears to let you know how long it is safe to stay without risking long-term damage.
In the history tab, tapping on a set of bars will allow you to see a more detailed breakdown of your noise exposure!
Task 1: Soundscape Analysis
Task 2: History & Analysis
Task 2: History & Analysis
Task 2: History & Analysis

Great job incorporating more Zen time into your schedule (avg. 0:48 in the past month)! Try to reach **one hour** of Zen time daily and you will start to notice improvements in your working memory, attention, and mood! Recently, you have met this goal, keep it up!

Careful - while minutes of risky exposure might not seem significant, it looks like your noise exposure is fairly intense. A loud concert every once in a while is OK, but try to limit your time in loud environments to under an **hour per day**.
Settings

Tracking

Noise Alerts

Week Starts

Sun  Mon

Sample Frequency

1 sec
5 sec
10 sec (recommended)
30 sec

Tutorial

Terms & Conditions

Soundscapes  History  Analysis  Settings
Summary
Questions?