



Whani Kim

UX Research Portfolio

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About Me

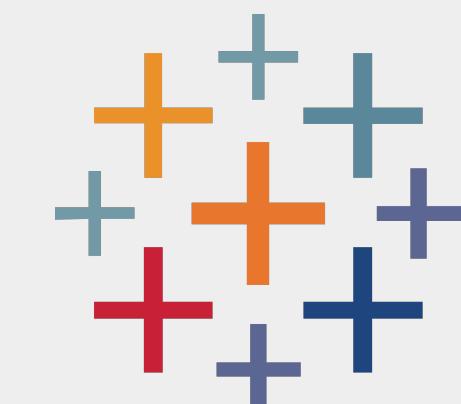
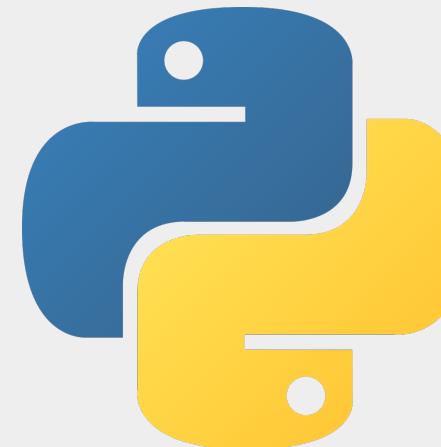
I recently graduated with a Master of Arts in Cognitive Psychology from Seoul National University. During my academic training, I've utilized variety of methods to conduct qualitative and quantitative research.



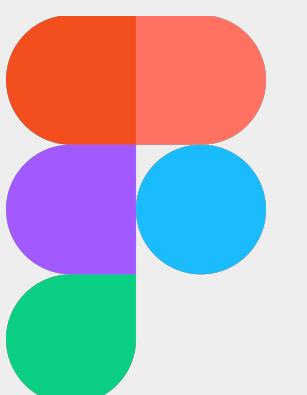
My understanding of programming and design also helped me successfully work with developers and designers to deliver successful project outcomes.

Below are some skills and tools that I have utilized in my past projects.

Programming & Data Analysis



Web Development & Design



PROJECT 1

Role of Robot Body Language on Perception of Social Qualities and Human-likeness

Research Period: 2019.03.01 - 2021.02.26.

My Role: Principal Investigator (Master's Thesis)

Objective: Explore the effects of robot body language on the perception of social qualities and human-likeness of robots.

Participants: Total n = 177

Experiment 1 = 58 (Within-Subjects)

Experiment 2 = 119 (Between-Subjects)



Adapting to Changes



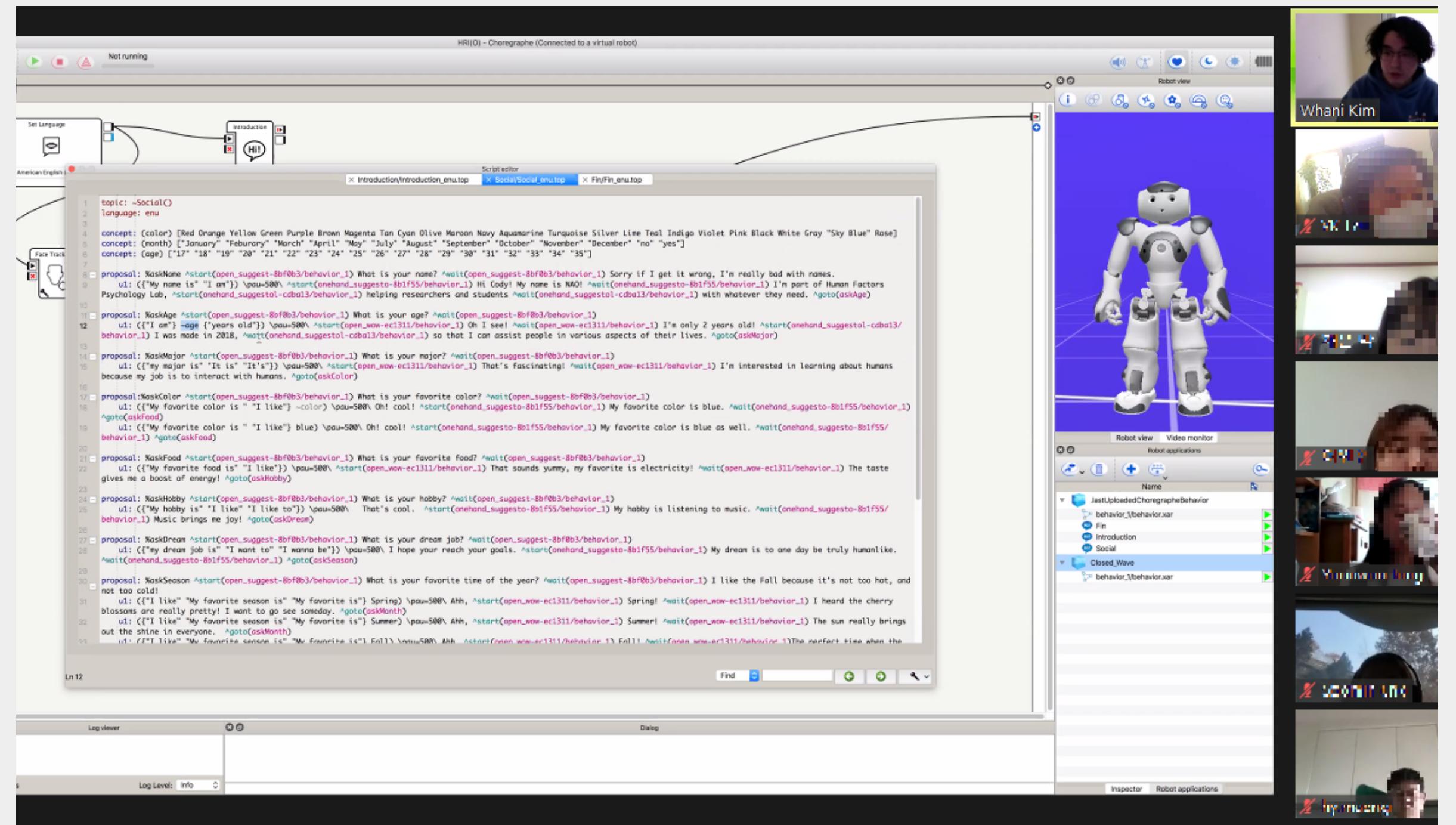
Wizard of Oz



Online Survey

The height of the COVID-19 pandemic was going on when the experiments were ready to go.

We swiftly adapted and made changes from Wizard of Oz paradigm to fully online experiments.

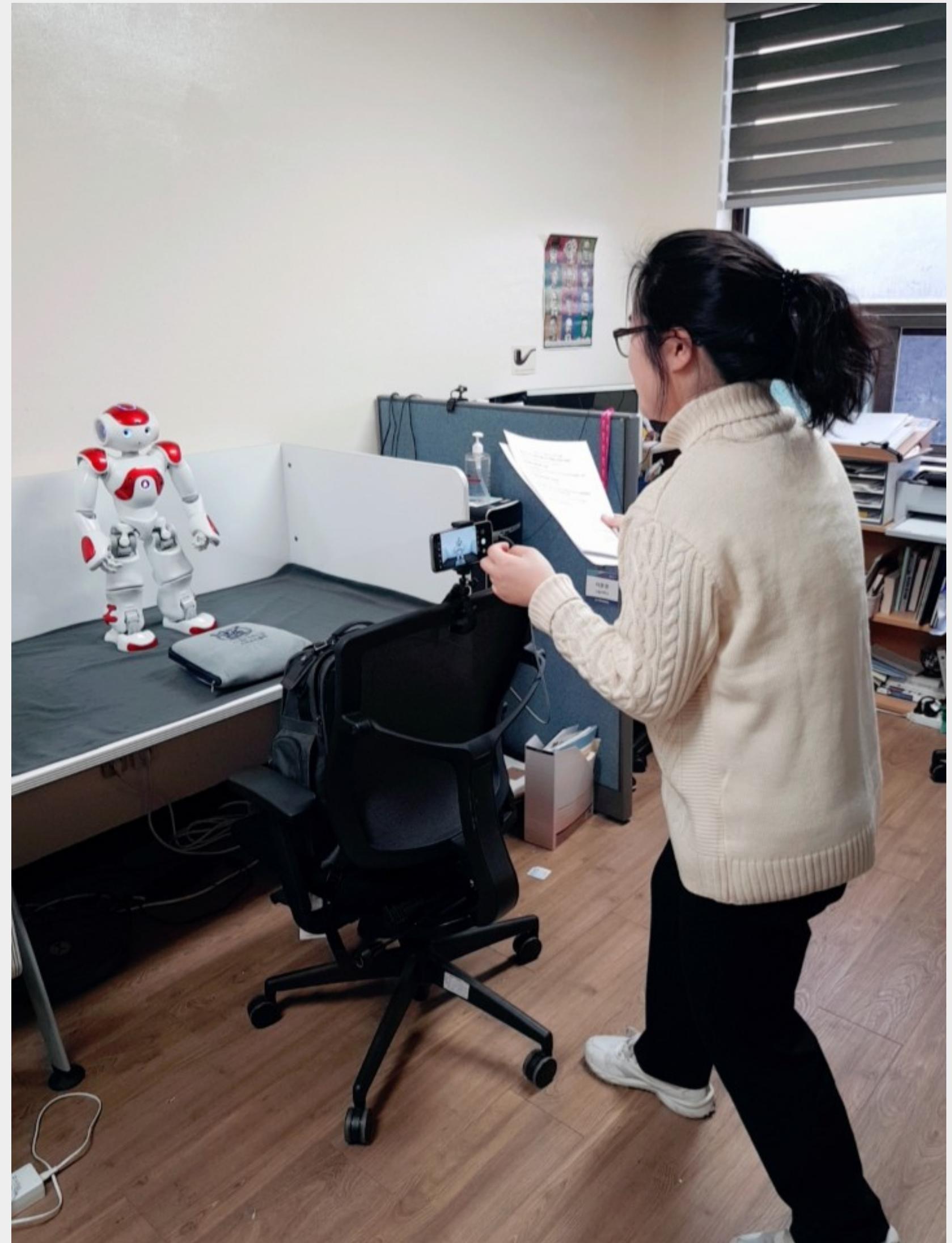


Usability Testing with Pilot Studies



Pilot studies revealed that NAO's responses were sometimes too fast which made the responses feel like it was pre-determined.

Thus, we manipulated NAO's responses to be delayed 1 second to 1.5 seconds.



Quantitative ≠ Qualitative Results



Quantitative results showed that open body language NAO was rated higher in terms of social qualities.

Qualitative results indicated that closed body language might be favored in situations where humans need comfort.

Figure 5

Mean scores of social qualities of NAO between body language conditions. Error bars represent 95% confidence intervals.

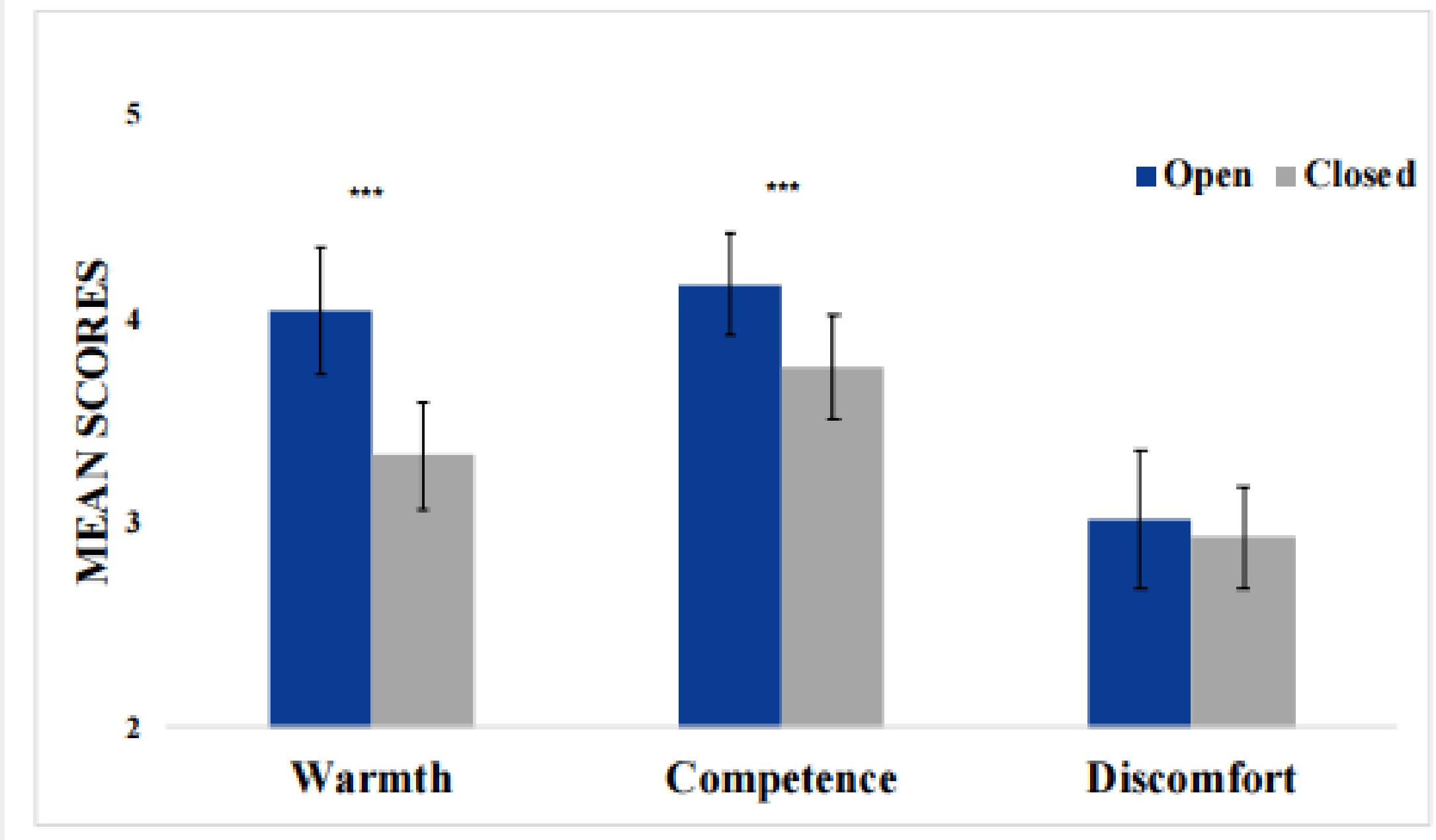


Table 7

Post-experiment interview regarding expected functions of robots

Theme	N	Sub-categories(N)	Example
Companion	18	Advice (7)	“To comfort and sympathize with me when I talk about my hardships.”

PROJECT 2

Effect of Newspaper Reading on Cognitive Processes

Funded by Korean Newspaper Association

Research Period: 2019.05.15 - 2019.11.15.

My Role: Project Manager

- Research Proposal/ Final Report
- Participant Management
- Developing Tasks/ Running Experiments

Objective: Explore the effects of reading newspapers on cognitive and social processes.

Participants: Total n = 45 (Repeated Measures)

Control group = 16 (5 drop-outs)

Experimental group = 29

사회 미디어

“신문 꾸준히 읽으면 주의력 높아진다”

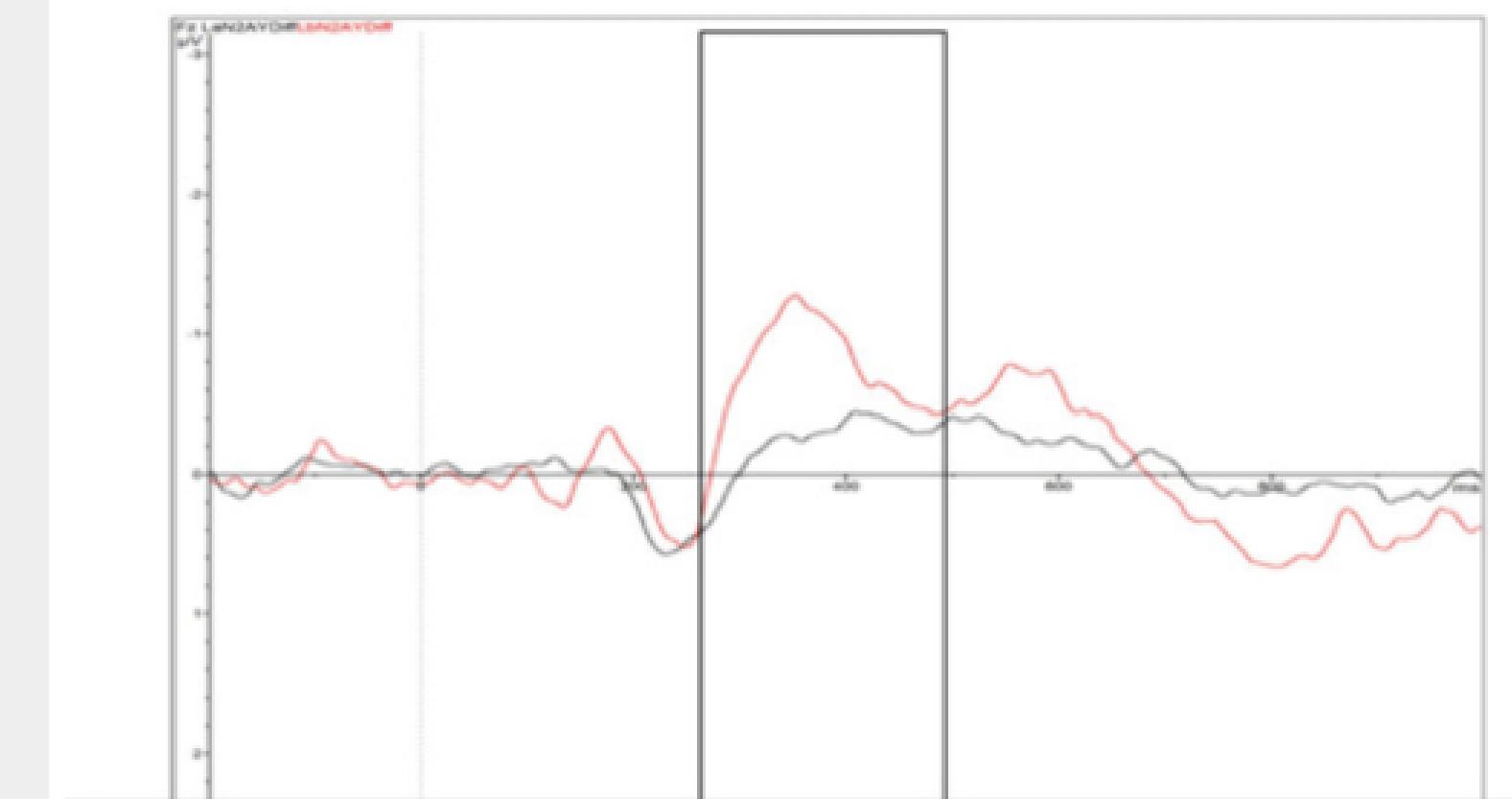


+ -

한소원 서울대 교수팀 '뇌 활성화 상관관계 분석'

신문협회, 신문의 날 맞아 신문 읽기 효과 공개

실험집단의 신문읽기 전(검은색)과 후(빨간색)의 뇌파 변화



신문협회 제공.

신문을 매일 꾸준히 읽으면 주의·집중력이 향상된다는 사실을 뇌과학적으로 증명하는 연구 결과가 나왔다.

Taking Culture into Consideration



I was in charge of creating a Korean version of the Reading the Mind in the Eyes (RMET) using PsychoPy.

In addition, we translated Faux Pas Recognition task taking culture into consideration.

jealous



arrogant

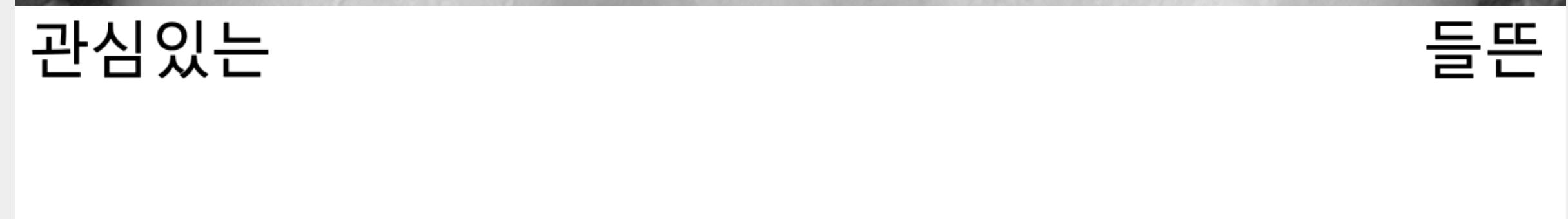
hateful

재미있는



관심있는

기대하는



들뜬

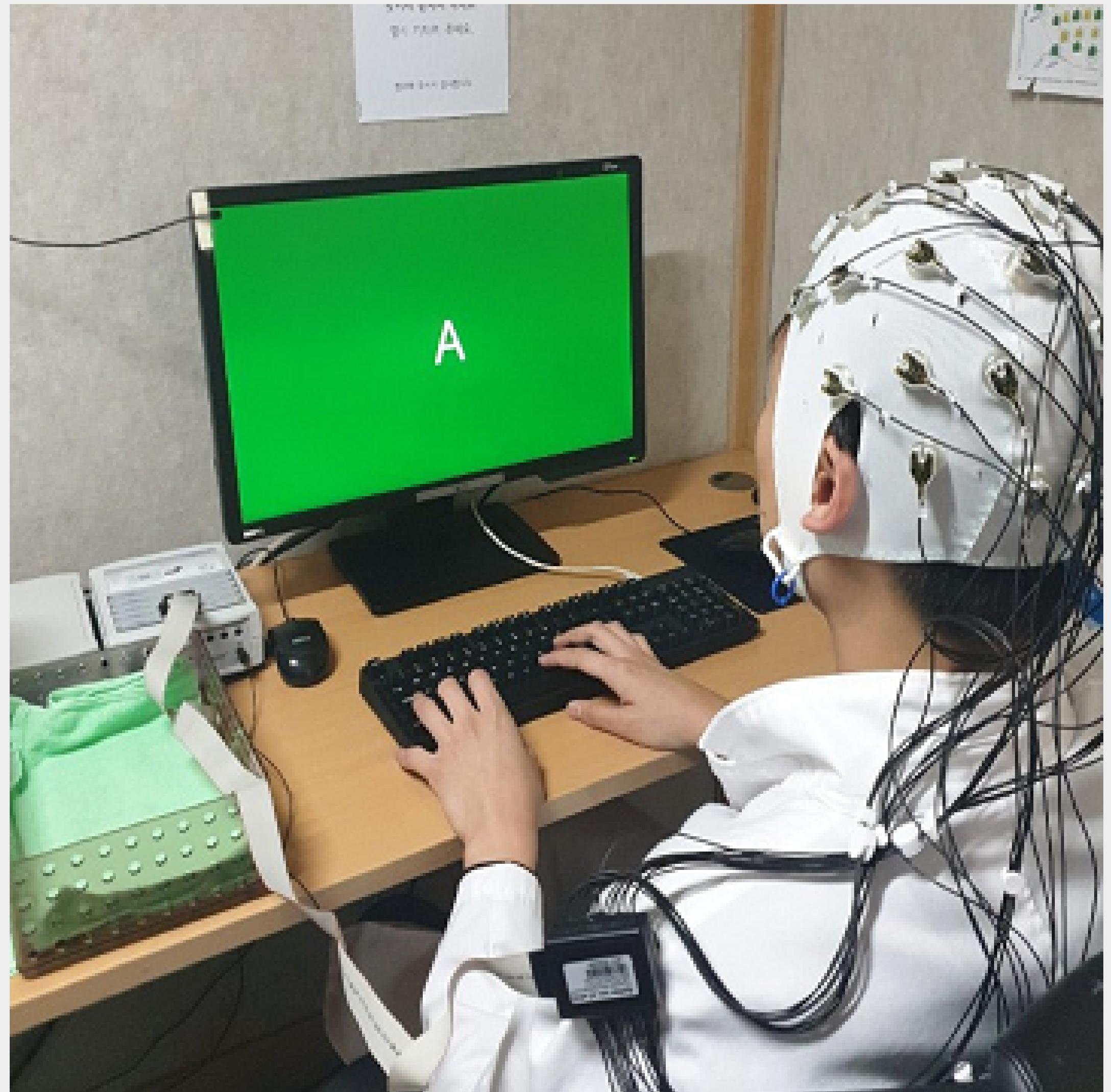
Experiment Experience



Post Experiment Interview

Participants were getting fatigued during the EEG session due to performing a repetitive task with uncomfortable equipment on.

So we reduced the time of the EEG session to 50% and reduced participant fatigue.



Final Report



After collecting data, I played an important role in analyzing survey data and writing up the report with strict deadlines.

This resulted in a successful outcome and the project was reported in several news media outlets.

한국언론진흥재단 지정주체 연구보고서 2019-12

종이신문과 뇌활성화 상관관계분석 - 뇌파측정방법론을 활용한
신문읽기가 뇌인지 과정에 미치는 영향 연구

책임 연구 | [민수현](#)(서울대학교 심리학과 교수)

공동 연구 | [이상근](#)(서울대학교 독어독문학과 교수)

[이경숙](#)(서울대학교 언론정보학과 교수)

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[이경숙](#)(서울대학교 심리학과 석사과정)

[김민안](#)(서강대학교 영어영문학과 박사과정)

[김민정](#)(서강대학교 영어영문학과 박사과정)

발행인 | [한국언론진흥재단](#)

편집인 | [최병호](#)

발행일 | 2019년 12월 일 초판 제1쇄 발행

한국언론진흥재단

04520 서울특별시 중구 세종대로 124

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[www.kpf.or.kr](#)

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비매품

PROJECT 3

Development of AI-based Service Platform for Psychological Self-Test and Management

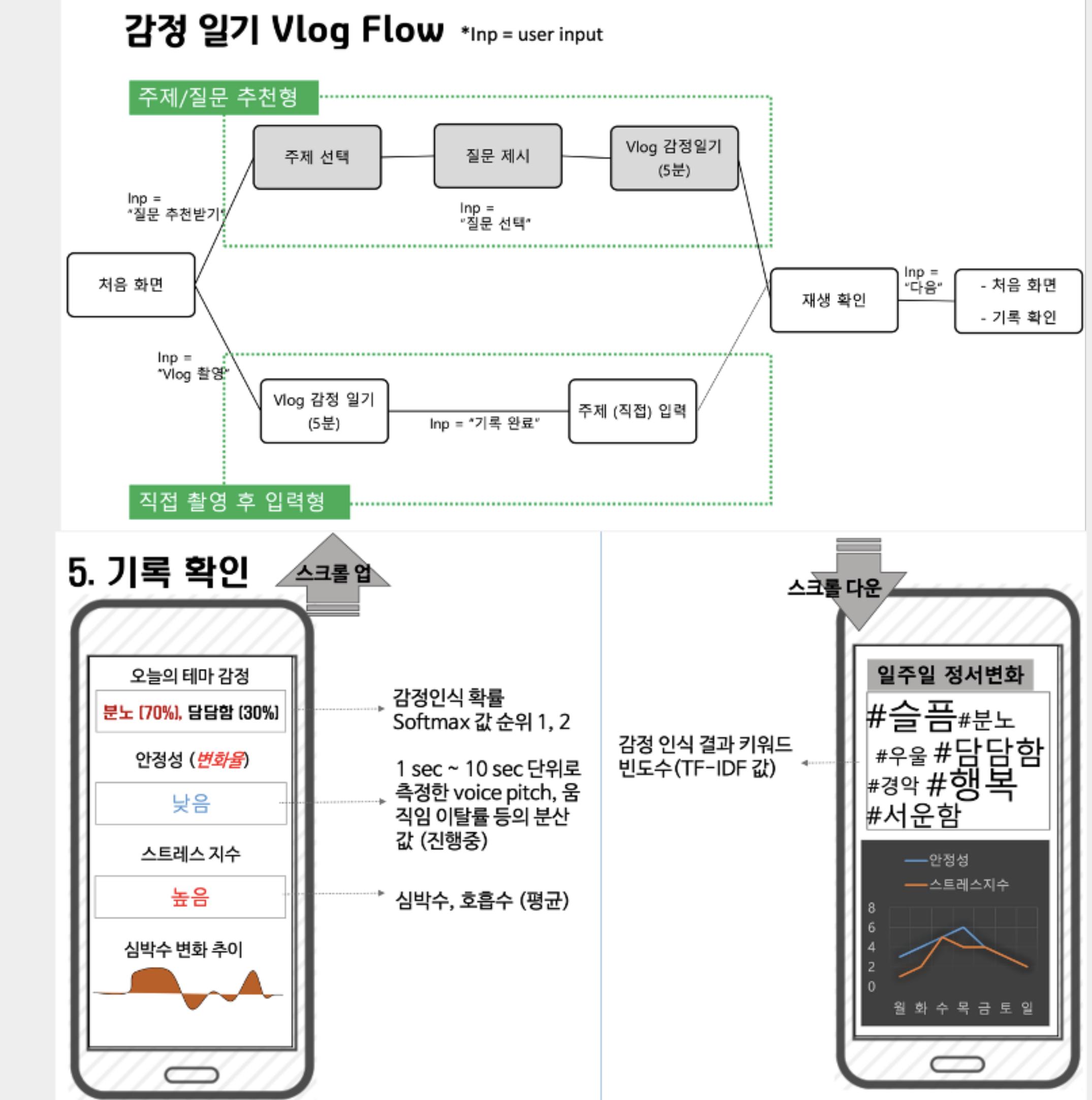
Funded by Ministry of SMEs and Startups

Research Period: 2019.12.09 - 2020.12.08.

My Role: Fiscal Manager & Researcher

- Budget Management
- Developing Psychological Models
- Wireframing

Objective: Create a self mental health assessment application aimed to make mental assessments more accessible to the general public.



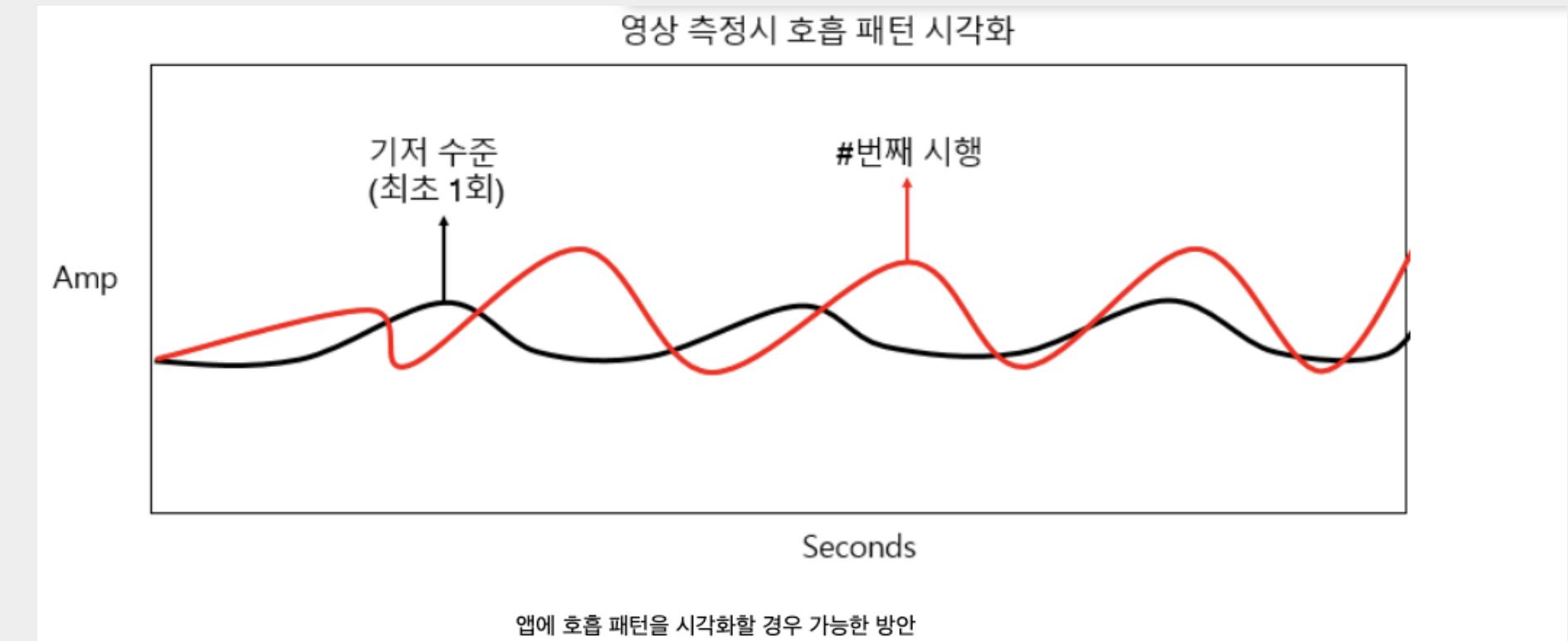
Communication is Key



Collaboration

We collaborated with developers to create psychological models that aimed to diagnose users' mental health.

I was specifically in charge of creating a model based on breathing patterns referencing past research.



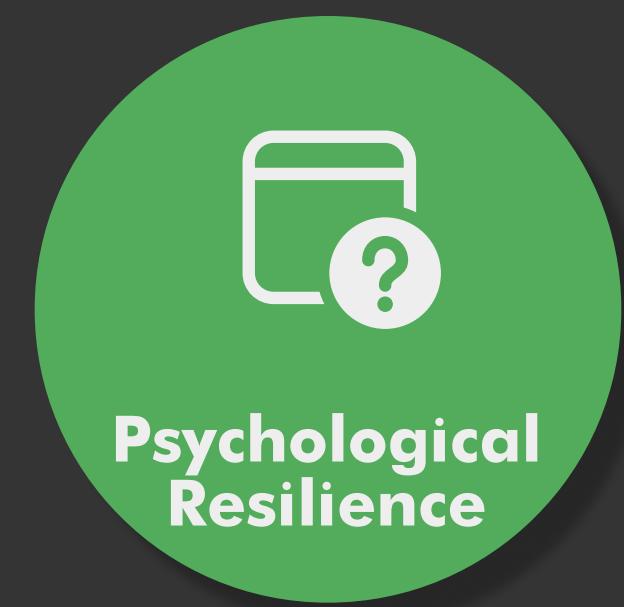
ii. 감정 별 호흡 패턴 (Philippot, Chapelle, & Blairy, 2002)

1. 즐거움 - 코를 통해 규칙적이고, 적당히 깊으며, 천천히 호흡함. 흉부 긴장, 떨림 및 한숨은 최소화됨. 호흡은 횡격막 또는 흉부와 횡격막 둘 다인 경향이 있음.
2. 분노 - 빠르고 불규칙하며 깊은 코 호흡. 흉부 긴장, 최소의 한숨, 약간의 떨림 등이 나타남
3. 두려움 - 빠르고 불규칙하며 다소 얕은 호흡으로 흉부 긴장이 많고 약간의 떨림과 최소한의 한숨이 있음. 다른 어떤 감정보다 더 많은 흉부 호흡을 함.
4. 슬픔 - 평균 진폭과 주파수를 가진 코 호흡. 또한, 한숨과 떨림 그리고 약간의 흉부 긴장과 호흡 불규칙인 경향을 가짐.

iii. 한숨

1. 부정적 및/또는 자극적인 그림 시청은 한숨 수를 증가하게 만듬.
2. 중립 및 안정 imagery에 비해 공포, 우울, 욕구 imagery에서 한숨 쉬는 비율이 높음.

Creating Questionnaires



I was in charge of surveying existing questionnaires to create a new questionnaire.

We created a 6 item “Psychological Resilience” questionnaire by referencing 3 existing stress questionnaires.

※ 심리 회복 탄력성

문항 및 척도

1	오늘 하루 동안 얼마나 일이 당신의 뜻대로 진행되었다고 느꼈나요?	1: 전혀 뜻대로 되지 않았다 5: 매우 내 뜻대로 되었다
2	오늘 하루 동안 당신은 얼마나 어려움이 극복하지 못할 정도로 높이 쌓이고 있다고 느꼈나요?	1: 매우 낮다, 5: 매우 높다
3	나는 힘든 시간을 보낸 후 빠르게 회복하는 경향이 있다.	1: 전혀 아니다, 5: 매우 그렇다
4	나는 스트레스 받는 일을 극복하는 것이 힘들다	1: 전혀 힘들지 않다, 5: 매우 힘들다
5	전반적으로 나의 인생은 내가 이상적으로 여기는 모습에 가깝다.	1: 전혀 아니다, 5: 매우 그렇다
6	나는 나의 삶에 만족한다	1: 전혀 아니다, 5: 매우 그렇다

진단 결과 및 기준

25점~30점	최상
19점~24점	상
13점~18점	중
7점~12점	하
~6점	최하

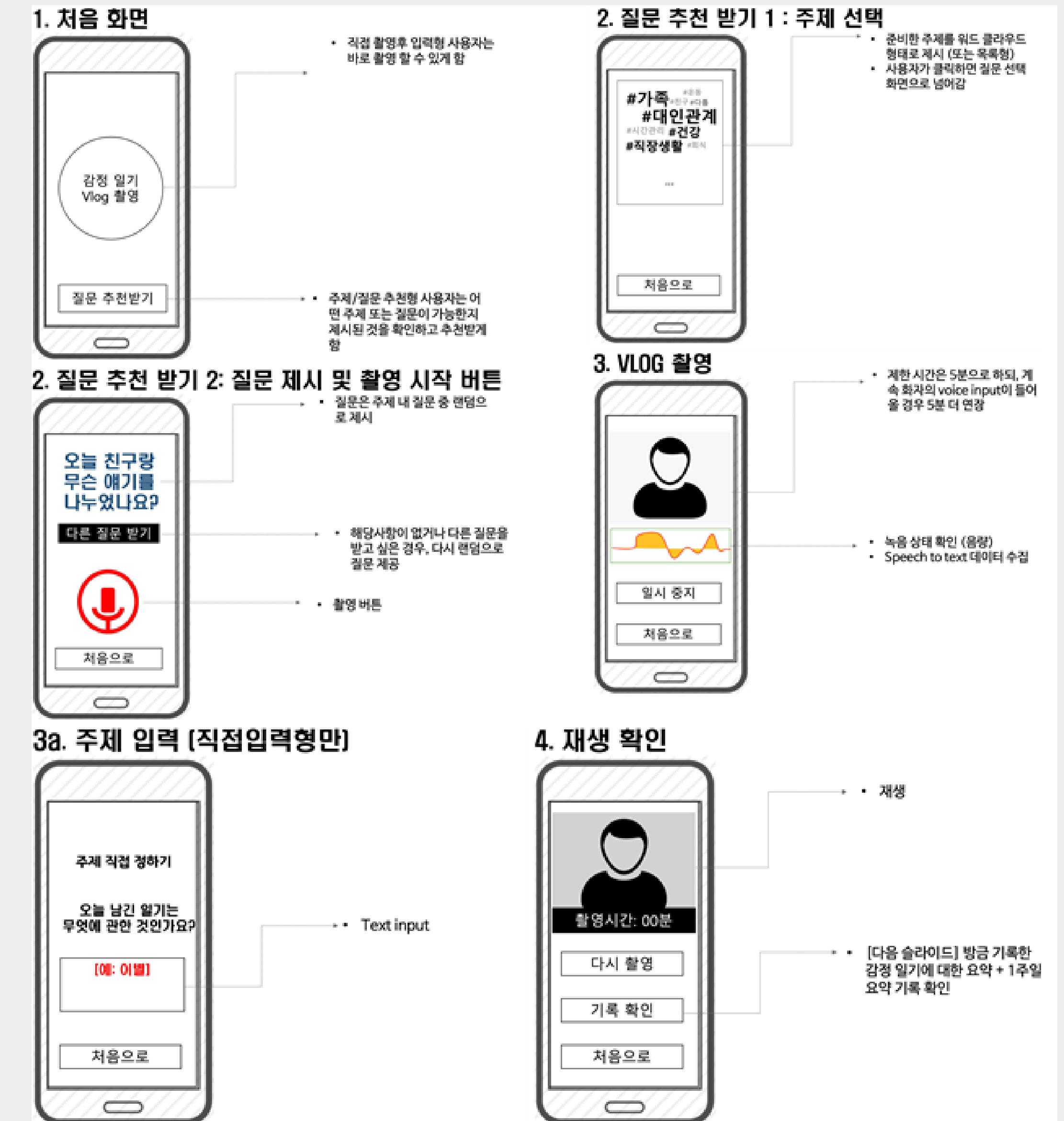
Setting the Tone



Wireframing

We created wireframes of the application to guide the application building process.

Despite later changes, this helped set the tone on how the application should interact with the user.



PROJECT 4

Development of Immersive Tourism Technology Utilizing 4D Technology and Affective Modeling

Funded by Korean Institute of Culture and Tourism

Research Period: 2019.03.15 - 2019.12.31.
(Start Date: 2018. 05.01)

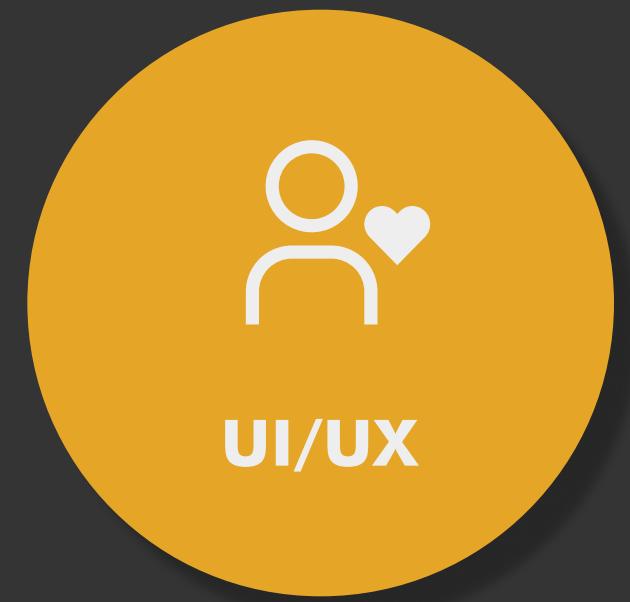
My Role: Researcher

- UX/UI
- Drafting Report

Objective: Create a unique experience that
seamlessly integrates with nature and enhance
de-stressing effects of nature using 4D technologies



UI is also UX



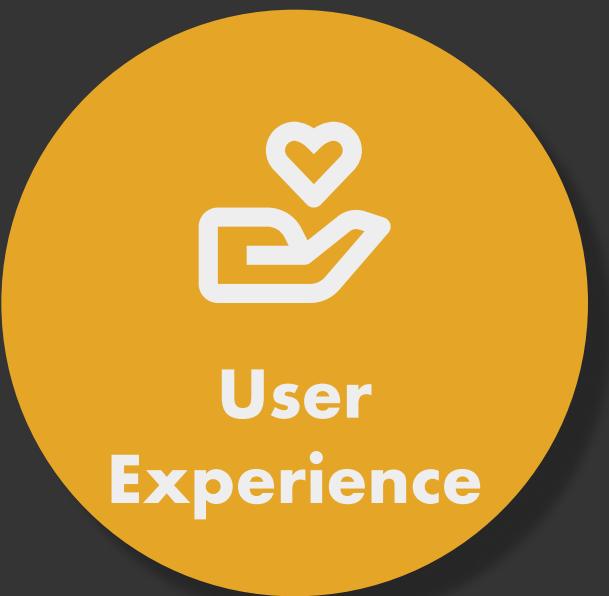
I assisted in creating a better user experience in the form of user interface.

Giving guidance on what colors, shapes, textures, and animations should be used to create an immersive experience.

The image displays three screenshots of a user interface for creating trees, likely from a software called "나만의 숲".

- Top Screenshot:** A parameter panel titled "감정 나무" (Emotional Tree) showing numerical values for various emotions: Happiness (0.992), Surprise (0.00009), Fear (0.001), Sadness (0.0), Neutral (0.071), Disgust (0.0005), Contempt (0.002), and Anger (0.00131). It includes sections for "Tree Shape" (with a preview image of a green tree), "Color Texture" (with a pink square), and "Main Color" (with a grayscale gradient).
- Middle Screenshot:** A control panel titled "나만의 숲" (My Forest) with various buttons and sliders. Labels with arrows point to specific controls:
 - Pen Width
 - Transparency
 - Color
 - Send from Client
 - Clear
 - Status Page
 - 네트워크 IP 주소 및 연결 상태 (Network IP address and connection status)
 - 나만의 그림 그리기 (Draw my own picture)A preview window shows a 3D forest scene with a path and a character.
- Bottom Screenshot:** A map titled "감정 지도" (Emotional Map) showing a forest area with various locations labeled in Korean, such as "100년의 나무" (100-year-old tree), "나만의 숲" (My Forest), "나만의 숲" (My Forest), "나만의 숲" (My Forest), and "나만의 숲" (My Forest). A color bar at the bottom indicates emotional levels from red (anger) to blue (happiness).

Providing Experiences



Through our program, visitors were able to check their stress levels before and after.

We were able to provide meaningful experiences and memories.

