

# Minjung Park

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## RESEARCH INTERESTS

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Human-AI Interaction, Human-Centered Design, Human-Centered AI, AI in Healthcare

## EDUCATION

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### Carnegie Mellon University

Ph.D. in Human-Computer Interaction, School of Computer Science

Advisor: John Zimmerman, Jodi Forlizzi

Aug. 2023 - Jun. 2029(expected)

Pittsburgh, USA

### Korea Advanced Institute of Science and Technology (KAIST)

M.S. in Industrial Design | Advisor: Hyeon-Jeong Suk

Hyeon-Jeong Suk(Chair), Youn-Kyung Lim, Sangsu Lee

Thesis title : *Designing Facial Expression Guideline for Avatar-Mediated Communication*

Sep. 2021 - Jun. 2023

Daejeon, Korea

### Korea Advanced Institute of Science and Technology (KAIST)

B.S. in Industrial Design | Advisor: Youn-Kyung Lim

early graduation

Mar. 2018 - Aug. 2021

Daejeon, Korea

## PUBLICATIONS

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### Conference & Journal Papers

- [c.2] **Minjung Park**, Jodi Forlizzi, and John Zimmerman. **Exploring the Innovation Opportunities for Pre-trained Models**. In *ACM SIGCHI Conference on Designing Interactive Systems, DIS '25(submitted)*.
- [c.1] Keunwoo Kim, **Minjung Park**, and Youn-Kyung Lim. **Guiding Preferred Driving Style Using Voice in Autonomous Vehicles: An On-Road Wizard-of-OZ Study**. In *ACM SIGCHI Conference on Designing Interactive Systems, DIS '21*.
- [j.3] **Minjung Park** and Hyeon-Jeong Suk. **The characteristics of facial emotions expressed in Memojis**. In *Computers in Human Behavior Report (companion journal to Computer in Human Behavior, IF=8.3)*.
- [j.2] **Minjung Park**, Soyeong Min, Taesoo Kim, and Hyeon-Jeong Suk. **Investigating the Relationship between Vehicle Front-Images and Voice-Assistants**. In *Korean Society for Emotion and Sensibility*.
- [j.1] Taesu Kim, Gyunpyo Lee, **Minjung Park**, Homg min Lee, Ji-Woo Park, and Hyeon-Jeong Suk. **User Responses to Dynamic Light in Automobiles with EEG and Self-Assessment**. *IEEE Access*.

### Posters & Workshop Papers

- [p.3] **Minjung Park** and Abena Boadi-Agyemang. **Designing Interactive Agents to Support Emotion Regulation in the Workplace through Guided Art-Making**. In *the ACM/IEEE International Conference on Human-Robot Interaction 2024 (HRI'24)*.
- [p.2] **Minjung Park** and Hyeon-Jeong Suk. **New Mobile Adaptation System for Better Avatar-Mediated Communication: Facial Expression in Memoji**. In *the ACM international Conference on Mobile Human-Computer Interaction 2022 (MobileHCI'22)*.
- [p.1] Jaehong Kim, Chaeyoon Jeong, Mooyeol Oh, **Minjung Park**, Meeyoung Cha, and Wonjae Lee. **Emotions that Make Online Petitions Successful: A contrasting View of Private Signing and Public Sharing**. In *international Conference on Computational Social Science 2022 (IC2S2'22)*.

[w.1] **Minjung Park** and Hyeon-Jeong Suk. **Emotional Expression in Memoji**. In *CHI 2022 Workshop (Future of Emotion in HCI)*.

## PATENTS

<b>Unmanned Aerial Vehicle</b>	<i>Korean patent #1020150114725</i>
<b>Water Duster Cleaner with Water Supply Control Capabilities</b>	<i>Korean patent #1020150116542</i>
<b>Clean Tool Using Static Electricity</b>	<i>Korean patent #1020150116965</i>
<b>Cleaning Goods for Disinfection</b>	<i>Korean patent #1020200027776</i>

## EXPERIENCE

<b>Carnegie Mellon University</b> , Advised by John Zimmerman, Jodi Forlizzi <i>Research Assistant</i>	Pittsburgh, PA <i>Sep. 2023 - Present</i>
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- **How can we innovate with LLMs?**  
[c.2] Exploring innovation opportunities for pre-trained models by analyzing when, where, how, and for whom current LLM (Generative AI)-infused applications are designed. Supporting design innovators in identifying safe starting place for creating LLM-infused products and services by providing LLM capabilities and interaction design pattern.
- **Human-AI Research to Increase Adherence to Wakeup and Breathe in ICU**  
Support the clinical team for better collaboration and cooperation with AI-supported decision making in the context of Spontaneous Awakening Trials (SAT) and Spontaneous Breathing Trials (SBT), and develop a corresponding SAT/SBT dashboard.
- **Large Language Models in Diagnostic Reasoning**  
Current research indicates that ChatGPT demonstrates higher performance in generating accurate diagnoses compared to doctors using ChatGPT. This inspires me to explore the potential of human-centered AI approaches and investigate interaction design patterns for LLM-infused diagnostic applications.

<b>KAIST Colorlab</b> , Advised by Hyeon-Jeong Suk <i>Research Assistant &amp; Funded Project Manager (Hyundai Motors)</i>	Daejeon, Korea <i>Sep. 2021 - May. 2023</i>
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- **Emotion-enhanced Facial Expressions using Memojis**  
Utilizing Participatory Design(PD) method, explored the problems of the existing status quo and designed a guide for avatars' facial expressions in order to support reliable and accurate online communication.  
[p.2][w.1] Conducted the 5-Likert questionnaire to explore avatars' emotional conveyance level and confirmed the tendency and impact of one's nationality on the seven emotions.  
[j.3] Performed a human assessment and an AI-driven estimation to establish the baseline levels of seven basic emotions conveyed by Memojis.
- **Ambient lights in automobiles**  
[j.1] Served as Project Manager of a collaborative project with Hyundai Motors, provided surveys and VR(Unity+VIVE) workshops to improve the existing ambient lights in vehicles, performed digital ethnography, and conducted in-depth interviews with truckers.

<b>KAIST Creative Interaction Design Lab</b> , Advised by Youn-Kyung Lim <i>Undergraduate Researcher</i>	Daejeon, Korea <i>Jul. 2020 - Jul. 2021</i>
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[c.1] Explored user experiences with teaching guiding styles to the Autonomous Vehicle agents to reflect the users' driving-style preferences with driving study on real roads using a Wizard-of-Oz design strategy.

**CJ Livecity**

Seoul, Korea

UX designer

Nov. 2020 - Dec. 2020

Designed user scenarios for future attraction and was hired as an official UX designer.

**KAIST Colorlab**, Advised by Hyeon-Jeong Suk

Daejeon, Korea

Undergraduate Researcher

Jul. 2019 - Sep. 2019

[j.2] Conducted the survey, matching Voice Agent and Front car image, to explore the most aligned car front design with the Voice Agents with PCA(Principal Component Analysis).

**KAIST Codesign Interaction Design Research Lab**, Advised by Tek-Jin Nam

Daejeon, Korea

Undergraduate Researcher

Mar. 2018 - Dec. 2018

Designed a 3D-printed tumbler, changed its pattern using augmented prototyping, and explored the viability and reliability of the augmented prototyping method.

## HONORS AND AWARDS

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**IF Award in communication design**

May. 2022

Stock information app service which visualizes past stock charts through sentiment analysis.  
(selected among 11000+ submissions)

**Most Contributed-to-Creativity Student**

2022

Honored with the title of most Creativity Student in **Tokyo Tech's** 2022 online summer school.

**Leadership Mileage Certificate, KAIST**

2020

Honor for top 3% among 3,600+ students with top achievements in leadership activities including volunteering and campus activities.

**Scholarship of Mintsage**

Nov. 2019

Received a \$200 Industrial Design scholarship from Mintsage for outstanding design accomplishments.

**Intel ISEF**

2017

Selected as a finalist among more than 1,800 outstanding students and as a representative of Korea in material science.

**Talent Award of Korea**

2016

A total of 100 people are selected as Korea's next leaders.

(Award of Deputy Prime Minister and Minister of Education with \$3000 scholarship)

## SERVICES

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**Reviewing**

ACM/SIGCHI Conference on Designing Interactive Systems (DIS) 2024

ACM/SIGCHI Conference on Human Robot Interaction (HRI) 2024

ACM/SIGCHI Conference on Human Factors in Computing Systems (CHI) 2023, 2024

**Student Volunteer**

MobileHCI 2022 : Proceed to the in-person conference in more than 20 hours and selected as Gifted Artist (SV's t-shirt designer)

## SKILLS

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### Language

Korean(Native), English(Full professional proficiency), Chinese(Beginner)

### Programming and Development

Web : HTML, CSS

Product Development : Processing, Arduino, C++, C

Data Processing : Python(numpy, pandas, plotly), R, SPSS

Data visualization : R(ggplot)

### Design and Media Creation

Adobe : Photoshop, Illustrator, After Effects, Lightroom, XD

UI tool : Figma, Miro, Sketch, Protopie

Modeling tool : Keyshot, Fusion 360, Unity, Blender

Word editing : Latex

## MENTORING

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### CMU Undergrad AI mentoring program (committee)

*July. 2024 - Present*

### SCS HCII Independent Studies (mentor)

*Sep. 2024 - current*

- Tingyu Su | *prev CMU MIIPs, now @ Youlify*

*Sep. 2024 - Dec. 2024*

- Katherine Niuu | *CMU MHCI*

*Sep. 2024 - Dec. 2024*

- Ashveen Banga | *CMU CS*

*Sep. 2024 - Dec. 2024*

### CMU Undergrad AI mentoring program (mentor)

Mentoring Carnegie Mellon University, School of Computer Science undergraduate students relate to AI research. The students below were mentoring students.

- Dian Zhu

*Sep. 2023 - May. 2024*

- Chen Fang

*Sep. 2023 - Dec. 2023*

- Katie Weng

*Sep. 2023 - Dec. 2023*

## EXTRACURRICULAR ACTIVITIES

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### SCS PhD Applicants Mentor

*2024, 2025*

### Korean Class Volunteering Work

*Sep. 2023 - Present*

A teacher of Korean Class at Carnegie Library

### KAIST Student Ambassador, KAINURI

*Mar. 2018 - Feb. 2020*

A member of Social Media Team

### KAIST Vision Magazine Editor

*Mar. 2018 - Feb. 2020*

### THE-KAIST Innovation & Impact Summit

*Mar. 2019*

Protocol Manager

**KAIST Undergraduate Tennis Club**

A member of executives in 2018.

*Mar. 2018 - Dec. 2018*

**KAIST Freshmen Student Volunteer**

*2018*