Minjung Park

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RESEARCH INTERESTS

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

EDUCATION

Carnegie Mellon University *Aug. 2023 - Jun. 2029(expected)*
Ph.D. in Human-Computer Interaction, School of Computer Science Pittsburgh, USA
Advisor: John Zimmerman, Jodi Forlizzi

Korea Advanced Institute of Science and Technology (KAIST) *Sep. 2021 - Jun. 2023*
M.S. in Industrial Design | Advisor: Hyeon-Jeong Suk Daejeon, Korea
Hyeon-Jeong Suk(Chair), Youn-Kyung Lim, Sangsu Lee
Thesis title : Designing Facial Expression Guideline for Avatar-Mediated Communication

Korea Advanced Institute of Science and Technology (KAIST) *Mar. 2018 - Aug. 2021*
B.S. in Industrial Design | Advisor: Youn-Kyung Lim Daejeon, Korea
early graduation

PUBLICATIONS

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

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

EXPERIENCE

Carnegie Mellon University, Advised by John Zimmerman, Jodi Forlizzi — Pittsburgh, PA
Research Assistant — *Sep. 2023 - Present*

- **Creating value with LLM**
  [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.
- **AI innovation in Healthcare**
  - Exploring opportunities of auto-documentation tool in ICU
    Leverage LLM into clinician's SAT and SBT protocol, and explore the opportunity space for computing system to contribute to reduce medical team's burnout and increase the data quality
  - 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.

KAIST Colorlab, Advised by Hyeon-Jeong Suk — Daejeon, Korea
Research Assistant & Funded Project Manager (Hyundai Motors) — *Sep. 2021 - May. 2023*

- **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.

KAIST Creative Interaction Design Lab, Advised by Youn-Kyung Lim — Daejeon, Korea
Undergraduate Researcher — *Jul. 2020 - Jul. 2021*
[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

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

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

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

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

SCS PhD Applicants Mentor *2024, 2025*

Korean Class Volunteering Work *Sep. 2023 - Present*
A teacher of Korean Class at Carnegie Library

KAIST Student Ambassader, 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 *Mar. 2018 - Dec. 2018*
A member of executives in 2018.

KAIST Freshmen Student Volunteer *2018*