

Taewan Kim, Ph.D

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Introduction

As a researcher in Human-Computer Interaction (HCI) with a design background, I explore Human-AI Interaction (HAI), grounded in a deep understanding of people. My research focuses on collaborative approaches between humans and AI to enhance mental health, particularly through reflective practices that foster self-awareness and address a range of conditions from everyday stress to clinical psychiatric disorders.

#Human-AI collaboration, #AI-infused reflection tools, #Digital mental health

Industry experience

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| Present | SAMSUNG Corporate Design Center – Seoul, Korea
Designer
Integrating generative AI into the design processes for Samsung’s products and services, enhancing creativity and productivity. |
| Jan. 2023
– Jul. 2023 | NAVER AI Lab – Seungnam, Korea
Research Intern
Led the LLM and HCI research project called “MindfulDiary”, exploring the role of large language models in clinical mental health settings. |

Education

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| 2018 – 2024 | KAIST – Daejeon, Korea
PhD in Industrial Design, <i>with Concentration in Human-Computer Interaction</i>
Advisor: Hwajung Hong
Dissertation: Designing for Mental Wellbeing: Exploring the Role of Artificial Intelligence for Reflective Practice |
| 2016 – 2018 | Ulsan National Institute of Science and Technology – Ulsan, Korea
M.E. in Creative Design Engineering, <i>with Concentration in Human-Computer Interaction</i>
Advisor: Hwajung Hong
Dissertation: Helping Friends Suffering Mental Health Issues: Challenges and Opportunities for Social Support on Social Media from the Peer’s Point of View |

2011 – 2016 **Handong University** – Pohang, Korea
B.S. in Product Design

Journal Articles / Conference Papers (Peer-Reviewed)

- 2024 **MindfulDiary: Harnessing Large Language Model to Support Psychiatric Patients' Journaling**
Taewan Kim, Seolyeong Bae, Hyun AH Kim, Su-woo Lee, Hwajung Hong, Chanmo Yang, Young-Ho Kim
Proceedings of the CHI Conference on Human Factors in Computing Systems.
(CHI 2024)
- 2024 **DiaryMate: Understanding User Perceptions and Experience in Human-AI Collaboration for Personal Journaling**
Taewan Kim, Donghoon Shin, Young-Ho Kim, Hwajung Hong
Proceedings of the CHI Conference on Human Factors in Computing Systems.
(CHI 2024)
- 2024 **Promoting Self-Efficacy of Individuals with Autism in Practicing Social Skills in the Workplace Using Virtual Reality and Physiological Sensors: A Feasibility Study**
Sung-In Kim, So-youn Jang, Taewan Kim, Bogoo Kim, Dayoung Jeong, Taehyung Noh, Mingon Jeong, Kaely Hall, Meelim Kim, Hee Jeong Yoo, Kyungsik Han, Hwajung Hong, Jennifer G. Kim
JMIR Formative Research 2024.
- 2024 **Co-Creating Question-and-Answer Style Articles with Large Language Models for Research Promotion**
Hyunseung Lim, Ji Yong Cho, Taewan Kim, Jeongeon Park, Hyungyu Shin, Seulgi Choi, Sunghyun Park, Kyungjae Lee, Juho Kim, Moontae Lee, Hwajung Hong
Proceedings of the Designing Interactive Systems Conference.
(DIS 2024, in press)
- 2022 **Prediction for Retrospection: Integrating Algorithmic Stress Prediction into Personal Informatics Systems for College Students' Mental Health**
Taewan Kim, Haesoo Kim, Hayeon Lee, Hwarang Goh, Shakhboz Abdigapporov, Mingon Jeong, Hyunsung Cho, Kyungsik Han, Youngtae Noh, Sung-Ju Lee and Hwajung Hong
Proceedings of the CHI Conference on Human Factors in Computing Systems.
(CHI 2022)

- 2022 **Sad or just jealous? Using Experience Sampling to Understand and Detect Negative Affective Experiences on Instagram**
 Mintra Ruensuk, [Taewan Kim](#), Hwajung Hong, and Ian Oakley
Proceedings of the CHI Conference on Human Factors in Computing Systems.
(CHI 2022)
- 2022 **The Workplace Playbook VR: Exploring the Design Space of Virtual Reality to Foster Understanding and Support of Autistic People in the Workplace**
 Jennifer G. Kim, [Taewan Kim](#), Sungin Kim, Soyeon Jang, Stephanie Lee, Heejung Yoo, Kyungsik Han, and Hwajung Hong
ACM Hum.-Comput. Interact. 6, CSCW2, Article 357 (November 2022).
(CSCW 2022)
- 2022 **VISTA: Understanding Characteristics of Autistic People through a VR-based Interactive Social Skills Training System**
 Bogoan Kim, Dayoung Jeong, Mingon Jeong, Taehyung Noh, Sung-In Kim, [Taewan Kim](#), So-youn Jang, Hee Jeong Yoo, Jennifer G Kim, Hwajung Hong, and Kyungsik Han
Proceedings of the 28th ACM Symposium on Virtual Reality Software and Technology.
(VRST 2022)
- 2021 **Understanding University Students' Experiences, Perceptions, and Attitudes Toward Peers Displaying Mental Health-related Problems on Social Network Sites: Online Survey and Interview Study**
 Bogoan Kim, Dayoung Jeong, Mingon Jeong, Taehyung Noh, Sung-In Kim, [Taewan Kim](#) and Hwajung Hong
JMIR Mental Health 2021.
- 2020 **In Helping a Vulnerable Bot, You Help Yourself: Designing a Social Bot as a Care-Receiver to Promote Mental Health and Reduce Stigma**
[Taewan Kim](#), Mintra Ruensuk, and Hwajung Hong
Proceedings of the CHI Conference on Human Factors in Computing Systems.
(CHI 2020)
- 2018 **Design Constraints and Their Influence Upon Design Outcome**
[Taewan Kim](#), James Andrew Self, and Hwajung Hong
Archives of Design Research 2018.

Extended Abstracts, Poster (Lightly Peer-Reviewed)

- 2024 **Evaluating and Auditing LLM-Driven Chatbots for Psychiatric Patients in Clinical Mental Health Settings**
Taewan Kim, Seolyeong Bae, Hyun AH Kim, Su-woo Lee, Hwajung Hong, Chanmo Yang, Young-Ho Kim
CHI 2024 Workshop on Human-centered Evaluation and Auditing of Language Models
- 2024 **Towards an Evaluation of LLM-Generated Inspiration by Developing and Validating Inspiration Scale**
 Hyungyu Shin, Seulgi choi, Ji Yong Cho, Sahar Admoni, Hyunseung Lim, Taewan Kim, Hwajung Hong, Moontae Lee, Juho Kim
CHI 2024 Workshop on Human-centered Evaluation and Auditing of Language Models
- 2023 **DiaryMate: Exploring the Roles of Large Language Models in Facilitating AI-mediated Journaling**
Taewan Kim, Donghoon Shin, Young-Ho Kim, and Hwajung Hong
CHI 2023 Workshop on Intelligent and Interactive Writing Assistants(In2Writing)
- 2023 **Designing a Personalized Stress Management System for Call Center Workers**
 Kwangyoung Lee, Hyunseung Lim, Sooyeon Ahn, Taewan Kim, and Hwajung Hong
IEEE 2023 International Conference on Big Data and Smart Computing (BIGCOMP)
- 2021 **Leveraging Challenges of an Algorithm-Based Symptom Checker on User Trust Through Explainable AI**
 Youjin Hwang, Taewan Kim, Junhan Kim, Joonhwan Lee, and Hwajung Hong
CHI 2021 Workshop on Realizing AI in Healthcare: Challenges Appearing in the Wild
- 2021 **An Exploratory Study on the Algorithm User Experience of a Symptom Checker Application for Self-Diagnosis**
Taewan Kim, Youjin Hwang, Junhan Kim, Joonhwan Lee, and Hwajung Hong
The Proceedings of HCI KOREA 2021
- 2018 **Studying Students Experiencing Mental Health Problems**
Taewan Kim, and Hwajung Hong
CSCW 2018 Workshop on Conducting Research with Stigmatized Populations
- 2017 **Calm Station: An Interactive Perpetual Desk Object that Reduces Digital Distractions**
Taewan Kim, Young-Woo Park, and Hwajung Hong
Proceedings of the 2017 ACM Conference Companion Publication on Designing Interactive Systems
(DIS 2017)

- 2015 **FamCom: A Communication Service Enhancing Conversation Quality Between Elders Residing in Care Hospital and Their Family Member**
Mingu Kanng, [Taewan Kim](#), Youngjae Kim, and Junghwan Ahn
Proceedings of the 33rd Annual ACM Conference Extended Abstracts on Human Factors in Computing Systems
(CHI 2015)

Selected Research Project

- Jan. 2023 **Development and Deployment of an LLM-Based Reflective System for Clinical Mental Health Settings** – NAVER AI LAB
– Jan. 2024
In collaboration with DxD LAB, KAIST · Department of Psychiatry @ Wonkwang University Hospital
- Explored the use of LLMs to improve communication between psychiatrists and patients.
 - Developed and deployed a reflective system using LLM, evaluating it with 50 patients and 5 psychiatrists in a clinical setting.
- My role: Project Lead (**First author** of [CHI 2024 Paper](#)) · Study Design and Data Analysis · UX/UI Design of study artifact · Front and back end Development · LLM-driven chat-bot architecture design and Development
- Jul. 2022 **Understanding the User Experience and Perception of Collaborative Writing with LLMs in Personal Journaling Context** – DxD Lab, KAIST
– Dec. 2023
In collaboration with NAVER AI LAB
- Examined how users interact with and perceive Large Language Models (LLMs) for collaborative writing in personal journaling.
 - Carried out a field study using the technology probe method to gather both qualitative and quantitative insights on how people embrace and leverage LLMs in a journaling.
- My role: Project Lead (**First author** of [CHI 2024 Paper](#)) · Study Design and Data Analysis · Prompt engineering · UX/UI Design of study artifact
- Apr. 2023 **Collaborative Creation of Question-and-Answer Style Articles with LLMs for Research Promotion** – DxD Lab, KAIST
– Jan. 2024
In collaboration with LG AI Research · KIX LAB, KAIST
- Developed a Q&A platform powered by LLMs that helps authors present domain-specific literature to both general audiences and experts.
- My role: Participating Researcher (**Co-author** of [DIS 2024 Paper](#)) · Study Design and Data Analysis · LLM-driven question generation architecture design · UX/UI Design of study artifact

- Feb. 2020
– Mar. 2022
- Prediction Algorithm for User-driven Stress Understanding and Management** – DxD Lab, KAIST
- In collaboration with IC LAB and NMSL LAB, KAIST · HCI LAB, Hanyang Univ.
- Investigated Human-AI interactions for collaborative stress management and understanding.
 - Developed design guidelines for supporting user-driven stress understanding and management using prediction algorithms and explainable AI.
- My role: Project Lead (**First author** of [CHI 2022 Paper](#)) · Study Design and Data Analysis · UX/UI Design of study artifact
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- Feb. 2020
– Mar. 2023
- Exploring the Design Space of Virtual Reality to Foster Understanding of and Support for Autistic People** – DxD Lab, KAIST
- In collaboration with Georgia Tech · Seoul National University Bundang Hospital
- Developed Virtual Reality (VR) programs that enhance self-understanding and sociability, promoting self-advocacy and personal agency for autistic individuals.
 - Investigated VR's potential to build an inclusive culture in workplaces, focusing on the integration of neurotypical employees.
- My role: Participating Researcher (**Co-author** of [CSCW 2022 Paper](#) and [VRST 2022 Paper](#)) · Study Design and Data Analysis · UX/UI Design of study artifact
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- Feb. 2019
– Mar. 2020
- Designing a Social Bot as a Care Receiver in a Mental Wellbeing Context** – DxD Lab, KAIST
- Investigated the use of a social bot designed as a care receiver, aimed at helping users recognize and address their own cognitive distortions and challenges.
- My role: Project Lead (**First author** of [CHI 2020 Paper](#)) · Study Design and Data Analysis · UX/UI Design of study artifact

Talks

- Apr. 2024
- Potential Use Case of Generative AI in Psychiatry
2024 Korean Neuropsychiatric Association Spring Conference
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- Feb. 2024
- Harnessing Large Language Model for Enhancing Communication Between Patients and Psychiatrists
2024 Korean Neuropsychiatric Association Jeonbuk Branch
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- Jul. 2023
- Design for Mental Wellbeing: Exploring the Role of Artificial Intelligence for Self-Reflection
HAI LAB at Seoul National University of Science and Technology
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- Jul. 2023
- Exploring Opportunities for Generative AI to Improve Mental Health
NAVER UX Designer Workshop

Jan. 2023 Exploring the Role of Large Language Models in Retrospective Writing
NAVER Tech Talk

Teaching experience

Fall 2022 Smart Health: Data-Driven Service Design for Health and Wellbeing
KAIST CS492(36.492), Teaching assistant

Spring 2022 Introduction to UI/UX, Prototyping, and Usability Evaluation
KAIST CS course for Hana Bank employees, Lecturer

Fall 2019 Creative Research Design
Seoul National University (SNU) 2114.409, Teaching assistant

Skills

Mixed Method Research

Interview, focus group, content analysis, survey design, field deployment study, contextual inquiry, co-design workshop, grounded theory, thematic analysis, statistical modeling, machine learning, usability testing, statistics

Programming & Data Analytics

Python, R, JavaScript, React.js, React Native, FastAPI, Firebase, SwiftUI, HTML & CSS, Prompt engineering (for LLM)

Design & Fabrication

Adobe Creative Suite, Sketch, Figma, SIEMENS NX, Rhino, AutoCAD, 3D Printing, Laser cutting, Arduino

Academic Service

2018 – Present **Journal and Conference Reviewer**
ACM Conference on Human Factors in Computing Systems (CHI)
ACM Conference on Computer Supported Cooperative Work and Social Computing (CSCW)
ACM Conference on Designing Interactive Systems (DIS)
ACM Conference on Tangible and Embedded Interaction (TEI)
Archives of Design Research (ADR)
International Association of Societies of Design Research (IASDR)