

# Taewook Kim

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## Research Interests

Designing and building full-stack steerable AI systems that augment human capabilities with interpretable outcomes.

*Keywords:* Human-Computer Interaction, Human-AI Alignment, Steerable AI, User Agency, Creativity Support Tools

## Education

**Ph.D., Technology and Social Behavior**, Northwestern University, Evanston, IL Sep. 2021 – Jun. 2026  
*Joint Ph.D. in Computer Science and Communication Studies* | Advisor: Matthew Kay

**M.Phil., Computer Science and Engineering**, HKUST, Hong Kong SAR Sep. 2018 – Nov. 2020

**B.S., Business Administration**, Hanyang University, Seoul, South Korea Mar. 2012 – Feb. 2018

**B.S., Computer Science and Engineering**, Military Service: 2013 – 2015

## Industry Experience

**Research Intern at Toyota Research Institute**, Los Altos, CA Jun. 2025 - Sep. 2025

Mentor(s): Matthew Hong and Matt Klenk | Human-Centered AI Division

- Built *Personagram*, a **full-stack web platform integrating Vision-Language Models** to facilitate product ideation.
- **Productization:** System transitioned to internal engineering teams for production deployment to Toyota designers.
- **Patent:** Filed a patent for an **end-to-end system pipeline** that supports **human-in-the-loop** workflows.
- **Publication:** Manuscript in preparation for *ACM IUI 2027*, a top-tier HCI academic conference.

**Visiting Researcher at Accenture Labs**, San Francisco, CA Jun. 2024 - Sep. 2024

Mentor(s): Manaswi Saha and Jordan Ackerman | Digital Experiences R&D group

- Built *TransSlider*, a **full-stack web interface integrating LLMs** to translate scientific text into personalized language.
- **Productization:** System transitioned to internal engineering teams for deployment to consultants and clients.
- **Publication:** Published at *ACM CSCW 2025*, a top-tier HCI academic conference.

**Visiting Researcher at Midjourney, Inc.**, San Francisco, CA Mar. 2024 - Sep. 2024

Mentor(s): John Joon Young Chung and Max Kreminski | Storytelling team

- Developed *Reverger*, a **full-stack web interface** for creative writers to steer story ideation **via LLMs**.
- **Publication:** Manuscript archived at arXiv:2507.03307

## Selected Publications

**Personagram: Bridging Personas and Product Design to Support Creative Ideation**

[Taewook Kim](#), Matthew Kay, and Members of Toyota Research Institute. *Preprint* | *Video demo*

**Reverger: Scaffolding Creative Idea Exploration through Divergence and Convergence**

[Taewook Kim](#), Matthew Kay, and Members of Midjourney. *Preprint* | *Video demo*

**Steering AI-driven Personalization of Scientific Text for General Audiences**

[Taewook Kim](#), Dhruv Agarwal, Jordan Ackerman, Manaswi Saha. *ACM CSCW 2025* | *Video demo*

**Authors' Values and Attitudes Towards AI-bridged Scalable Personalization of Creative Language Arts**

[Taewook Kim](#), Hyomin Han, Eytan Adar, Matthew Kay, John Joon Young Chung. *ACM CHI 2024*

**Best Paper Honorable Mention (top 5% among 4,028 submissions)**

**Opportunities in Mental Health Support for Informal Dementia Caregivers Suffering from Verbal Agitation**

[Taewook Kim](#), Hyeok Kim, Angela C. Roberts, Maia Jacobs, Matthew Kay. *ACM CSCW 2024*

**Love in Lyrics: An Exploration of Supporting Textual Manifestation of Affection in Social Messaging**

[Taewook Kim](#), Jung Soo Lee, Zhenhui Peng, and Xiaojuan Ma. *ACM CSCW 2019* | *Website*

## Technical Skills

**Languages:** Python, TypeScript, JavaScript, SQL, HTML/CSS

**Frameworks & Libraries:** React, Next, Flask, Django, Express

**Tools & Infrastructure:** Node.js, SSH, Ngrok, Git