TAE SOO KIM

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RESEARCH INTEREST

My work falls in the intersection of human-computer interaction (**HCI**) and artificial intelligence (**AI**), focusing on **interactive alignment**. Specifically, I explore how to **disentangle** user inputs and AI outputs into **interactive components** that empower users to (1) **iterate** on their intents to guide the AI model, and (2) **audit** that the model's behavior aligns with their intents.

EDUCATION

KAIST — *Daejeon, South Korea*
Ph.D. in Computer Science. Advisor: Juho Kim — **Mar. 2022 - Present**
M.S. in Computer Science (Outstanding Thesis Award) — **Mar. 2020 - Feb. 2022**
B.S. in Computer Science (Magna Cum Laude) — **Sep. 2015 - Feb. 2020**

PUBLICATIONS

Conference and Journal Papers

[C15] Interactive System for Exploring and Evaluating LLM Outputs at Scale *(Placeholder Title)*
Tae Soo Kim, et al.
Under Review

[C14] Benchmarking Model Ability to Predict Preferences from Interactions *(Placeholder Title)*
Tae Soo Kim, et al.
Under Review

[C13] One vs. Many: Comprehending Accurate Information from Multiple Erroneous and Inconsistent AI Generations
Yoonjoo Lee, Kihoon Son, **Tae Soo Kim**, Jisu Kim, John Joon Young Chung, Eytan Adar, Juho Kim
FAccT 2024: Proceedings of the 2023 ACM Conference on Fairness, Accountability, and Transparency.

[C12] EvalLM: Interactive Evaluation of Large Language Model Prompts on User-Defined Criteria
Tae Soo Kim, Yoonjoo Lee, Jamin Shin, Young-Ho Kim, Juho Kim
CHI 2024: Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems.

[C11] GenQuery: Supporting Expressive Visual Search with Generative Models
Kihoon Son, DaEun Choi, **Tae Soo Kim**, Young-Ho Kim, Juho Kim
CHI 2024: Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems.

[C10] Demystifying Tacit Knowledge in Graphic Design: Characteristics, Instances, Approaches, and Guidelines
Kihoon Son, DaEun Choi, **Tae Soo Kim**, Juho Kim
CHI 2024: Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems.
Honorable Mention Award

[C9] The Semantic Reader Project: Augmenting Scholarly Documents through AI-Powered Interactive Reading Interfaces
Kyle Lo, Joseph Chee Chang, Andrew Head, Jonathan Bragg, Amy X. Zhang, Cassidy Trier, (+ 47 authors including **Tae Soo Kim**), Marti A. Hearst, Daniel S. Weld
Communications of the ACM 2024.

[C8] Cells, Generators, and Lenses: Design Framework for Object-Oriented Interaction with Large Language Models
Tae Soo Kim, Yoonjoo Lee, Minsuk Chang, Juho Kim
UIST 2023: Proceedings of the 2023 ACM Symposium on User Interface Software and Technology.

[C7] **Papeos: Augmenting Research Papers with Talk Videos**

Tae Soo Kim, Matt Latzke, Jonathan Bragg, Amy X. Zhang, Joseph Chee Chang

UIST 2023: Proceedings of the 2023 ACM Symposium on User Interface Software and Technology.

[C6] **DAPIE: Interactive Step-by-Step Explanatory Dialogues to Answer Children's Why and How Questions**

Yoonjoo Lee, **Tae Soo Kim**, Sungdong Kim, Yohan Yun, Juho Kim

CHI 2023: Proceedings of the 2023 CHI Conference on Human Factors in Computing Systems.

[C5] **Stylette: Styling the Web with Natural Language**

Tae Soo Kim, DaEun Choi, Yoonseo Choi, Juho Kim

CHI 2022: Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems.
Honorable Mention Award

[C4] **Promptiverse: Scalable Generation of Scaffolding Prompts Through Human-AI Hybrid Knowledge Graph Annotation**

Yoonjoo Lee, John Joon Young Chung, **Tae Soo Kim**, Jean Y Song, Juho Kim

CHI 2022: Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems.

[C3] **Winder: Linking Speech and Visual Objects to Support Communication in Asynchronous Collaboration**

Tae Soo Kim, Seungsu Kim, Yoonseo Choi, Juho Kim

CHI 2021: Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems.

[C2] **Supporting Collaborative Sequencing for Small Groups through Visual Awareness**

Tae Soo Kim, Nitesh Goyal, Jeongyeon Kim, Juho Kim, Sungsoo (Ray) Hong

CSCW 2021: Proceedings of the ACM on Human-Computer Interaction, Volume 5, Issue CSCW. April 2021.

[C1] **Design for Collaborative Information-Seeking: Understanding User Challenges and Deploying Collaborative Dynamic Queries**

Sungsoo (Ray) Hong, Minhyang (Mia) Suh, **Tae Soo Kim**, Irina Smoke, Sangwha Sien, Janet Ng, Mark Zachry, Juho Kim

CSCW 2019: Proceedings of the ACM on Human-Computer Interaction, Volume 3, Issue CSCW. November 2019.

Posters, Demos, and Workshop Papers

[D8] **Interacting with AI by Manipulating Intents**
Tae Soo Kim
CHI 2025 In-Person Doctoral Consortium

[D7] **Evaligner: Automatic Prompt and Criteria Refinement from User Feedback**

Heechan Lee, **Tae Soo Kim**, Juho Kim

CHI 2025 Workshop on Human-Centered Evaluation and Auditing of Language Models (HEAL)

[D6] **How to Reflect Diverse People's Perspectives in Large-Scale LLM-based Evaluations?**

Yoonjoo Lee, **Tae Soo Kim**, Juho Kim

CHI 2024 Workshop on Human-Centered Evaluation and Auditing of Language Models (HEAL)

[D5] **Unveiling Disparities in Web Task Handling Between Human and Web Agent**

Kihoon Son, Jinhyeon Kwon, DaEun Choi, **Tae Soo Kim**, Young-Ho Kim, Sangdoo Yun, Juho Kim

CHI 2024 Workshop on Computational Methodologies for Understanding, Automating, and Evaluating User Interface

[D4] **LMCanvas: Object-Oriented Interaction to Personalize Large Language Model-Powered Writing Environment**

Tae Soo Kim, Arghya Sarkar, Yoonjoo Lee, Minsuk Chang, Juho Kim

CHI 2023 Workshop on Generative AI and HCI

[D3] **Interactive Children's Story Rewriting Through Parent-Children Interaction**

Yoonjoo Lee, **Tae Soo Kim**, Minsuk Chang, Juho Kim

ACL 2022 Workshop on Intelligent and Interactive Writing Assistant (In2Writing)

[D2] **Improving Video Interfaces by Presenting Informational Units of Videos**

Saelyne Yang, Sangkyung Kwak, **Tae Soo Kim**, Juho Kim

CHI 2022 Workshop on Computational Approaches for Understanding, Generating, and Adapting User Interfaces

[D1] Consensus Building in Collaborative Sequencing with Visual Awareness
    Tae Soo Kim, Sungsoo (Ray) Hong, Nitesh Goyal, Jeongyeon Kim, Juho Kim
    CHI 2020 Extended Abstract

RESEARCH EXPERIENCE

Allen Institute for AI   **Jul. 2022 - Oct. 2022**
Research Scientist Intern, Semantic Scholar   *Seattle, WA*
Mentors: Joseph Chee Chang, Amy X. Zhang, Jonathan Bragg   [C7]

KIXLAB, KAIST   **Dec. 2017 - Feb. 2020**
Undergraduate Research Intern   *Daejeon, South Korea*
Mentors: Juho Kim, Ray Hong   [C1, C2, D1]

HONORS AND AWARDS

Honorable Mention Award   **2022, 2024**
ACM CHI 2022; ACM CHI 2024

Outstanding TA Award   **2023**
School of Computing, KAIST

AI2 Outstanding Intern of the Year Award   **2022**
Allen Institute for AI

Outstanding M.S. Thesis Award   **2022**
School of Computing, KAIST

Special Recognition for Outstanding Reviews   **2021, 2022, 2023, 2024**
CHI 2022-2025; UIST 2022; CSCW 2023, 2025

Dean's List   **Spring 2018**
School of Computing, KAIST

TEACHING

Human-AI Interaction   **Fall 2023**
KAIST CS496G Teaching Assistant, Instructor: Juho Kim

Data Structure   **Spring 2023, Fall 2024**
KAIST CS206 Teaching Assistant, Instructor: Eun Young Moon

Design and Analysis of Algorithm   **Spring 2022**
KAIST CS500 Teaching Assistant, Instructor: Sunghee Choi

Introduction to Human-Computer Interaction   **Spring 2021**
KAIST CS374 Teaching Assistant, Instructor: Juho Kim

Introduction to Social Computing   **Fall 2020**
KAIST CS473 Teaching Assistant, Instructor: Juho Kim

ACADEMIC SERVICES

Program Committee CHI LBW 2023-2024

Reviewer CHI 2022-2025. UIST 2022-2024. CSCW 2020, 2023-2025. DIS 2023, 2025.

CHI LBW 2021, 2025.

Student Volunteer UIST 2021, 2023; CHI 2022

INVITED TALKS

Guest Lecture at KAIST CS475 ML for NLP   **Dec. 2024**
Title: *"Data Use in LLMs and Human-centered Evaluation"*

Guest Lecture at NYU Abu Dhabi CDAD-UH 1044Q Human-Centered Data Science   **Apr. 2024**
Title: *"Interactively Evaluating LLMs on Specific, Subjective Criteria"*   **Dec. 2023**

NAVER Tech Talk   **Nov. 2023**
Talk on the *"Cells, Generators, and Lenses"* and *"EvalLM"* papers.

Guest Lecture at PSU IST 597-001 Intelligent and Interactive Writing Assistants   **Sep. 2023**
Title: *"Designing for Object-Oriented Interaction in Large Language Model-Powered Writing Interfaces"*

Invited Talk at Manila ACM SIGCHI Chapter   **Jun. 2022**
Title: *"Mapping Multiple Modalities to Empower Novice Designers"*