Taejun Kim

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Postdoctoral Researcher
Human-Computer Interaction, Physical Interface, Eye Tracking, XR

Education

KAIST — Daejeon, Republic of Korea
Ph.D. in Computer Science — 2025
Advisor: Geehyuk Lee
Thesis: *Addressing Viewing-Inputting Conflict in Gaze Interaction through Spatial and Temporal Separation*

KAIST — Daejeon, Republic of Korea
M.S. in Computer Science — 2020
Advisor: Geehyuk Lee

KAIST — Daejeon, Republic of Korea
B.S. in Computer Science — 2018

Employment

KAIST — Daejeon, Republic of Korea
Postdoctoral Researcher (XR Workstation HCI Center, w/ Geehyuk Lee) — Sep 2025 – Present

Carnegie Mellon University — Pittsburgh, PA, USA
Research Associate (Future Interface Group, w/ Chris Harrison) — May 2025 – Present

Meta — Toronto, ON, Canada
Research Scientist Intern (w/ Hemant Surale, Amy Karlson, Aakar Gupta) — Jun 2022 – Dec 2022

Awards & Honors

Best Paper Honorable Mention Award (Top 5%), UIST '25 — 2025
Best Demo Award, Jury's Choice, CHI '22 — 2022
ICT Challenge Award, Minister of Science, Republic of Korea (CES 2026 Travel Grant) — 2025
Jang Young Sil Postdoctoral Grant, KAIST (50M KRW) — 2025
KIA Research Fellowship, Kia Motors Group (3M KRW) — 2024
Global Leadership Award, President of KAIST (1M KRW) — 2024
Kim Young Han Global Leader Fellowship, KAIST (4M KRW) — 2023
Inseo Precision Engineering Fellowship, KAIST (1M KRW) — 2023
Naver PhD Fellowship, Naver Corp. (5M KRW) — 2022
Outstanding Master's Thesis Award, School of Computing, KAIST — 2021

Publications

[10] **HiFiGaze: Improving Eye Tracking Accuracy Using Screen Content Knowledge**
Taejun Kim, Vimal Mollyn, Riku Arakawa, Chris Harrison
Proceedings of the 2026 CHI Conference on Human Factors in Computing Systems (CHI 2026)
http://doi.org/10.1145/3772318.3791339 (To Appear)

[9] **TwinSpin: A Virtual Ball in a VR Controller Enabling In-Hand 3DoF Rotation (Best Paper Honorable Mention Award)**
Changsung Lim, **Taejun Kim**, Geehyuk Lee
Proceedings of the 38th Annual ACM Symposium on User Interface Software and Technology (UIST 2025)
https://doi.org/10.1145/3746059.3747735

[8] **Typing Haptically: Towards Enabling Non-auditory Smartphone Text Entry with Haptic Feedback for Blind and Low Vision User**
Jisu Yim, Donghyeon Ko, Taeho Kim, **Taejun Kim**, Jonggi Hong, Geehyuk Lee
Proceedings of the 38th Annual ACM Symposium on User Interface Software and Technology (UIST 2025)
https://doi.org/10.1145/3746059.3747801

[7] **Over the Mouse: Navigating across the Z-dimension of GUI with Finger-Lifting Operations**
YoungIn Kim, Yohan Yun, **Taejun Kim**, Geehyuk Lee
Proceedings of the 2025 CHI Conference on Human Factors in Computing Systems (CHI 2025)
http://doi.org/10.1145/3706598.3713340

[6] **Palmrest+: Expanding Laptop Input Space with Shear Force on Palm-Resting Area**
Jisu Yim, Seoyeon Bae, **Taejun Kim**, Sunbum Kim, Geehyuk Lee
Proceedings of the 37th Annual ACM Symposium on User Interface Software and Technology (UIST 2024)
https://doi.org/10.1145/3654777.3676371

[5] **WristMenu with Tactons: An Eyes- and Ears-free Menu with Tactons Describing Menu Items in the Wrist Rotation Space**
Eunhye Youn, **Taejun Kim**, Geehyuk Lee
International Journal of Human–Computer Interaction (IJHCI), Vol. 40, 2024 (Impact Factor: 4.920; Q1)
https://doi.org/10.1080/10447318.2022.2159780

[4] **QuadStretcher: A Forearm-Worn Skin Stretch Display for Bare-Hand Interaction in AR/VR**
Taejun Kim, Youngbo Aram Shim, YoungIn Kim, Sunbum Kim, Jaeyeon Lee, Geehyuk Lee
Proceedings of the 2024 CHI Conference on Human Factors in Computing Systems (CHI 2024)
https://doi.org/10.48550/arXiv.2511.21157

[3] **STAR: Smartphone-Analogous Typing in Augmented Reality**
Taejun Kim, Amy Karlson, Aakar Gupta, Tovi Grossman, Jason Wu, Parastoo Abtahi, Christopher Collins, Michael Glueck, Hemant Bhaskar Surale
Proceedings of the 36th Annual ACM Symposium on User Interface Software and Technology (UIST 2023)
https://doi.org/10.48550/arXiv.2511.21143

[2] **Lattice Menu: A Low-Error Gaze-Based Marking Menu Utilizing Target-Assisted Gaze Gestures on a Lattice of Visual Anchors**
Taejun Kim, Auejin Ham, Sunggeun Ahn, Geehyuk Lee
Proceedings of the 2022 CHI Conference on Human Factors in Computing Systems (CHI 2022)
https://doi.org/10.48550/arXiv.2511.21131

[1] **Heterogeneous Stroke: Using Unique Vibration Cues to Improve the Wrist-Worn Spatiotemporal Tactile Display**
Taejun Kim, Youngbo Aram Shim, Geehyuk Lee
Proceedings of the 2021 CHI Conference on Human Factors in Computing Systems (CHI 2021)
https://doi.org/10.48550/arXiv.2511.16133

Workshops, Posters & Demos

[3] **Tension&Gaze: Gaze-Responsive UI Gated by Finger Tension**
Taejun Kim, Ludwig Sidenmark, Parastoo Abtahi, Jisu Yim, YoungIn Kim, Geehyuk Lee
Adjunct Proceedings of the 38th ACM Symposium on User Interface Software and Technology (UIST 2025 Demo)
https://doi.org/10.1145/3746058.3759018

🏆 [2] **QuadStretch: A Forearm-wearable Multi-dimensional Skin Stretch Display for Immersive VR Haptic Feedback (Best Demo Award, Jury's Choice)**
Youngbo Aram Shim, **Taejun Kim**, Geehyuk Lee
Extended Abstracts of the 2022 CHI Conference on Human Factors in Computing Systems (CHI 2022 Demo)
https://doi.org/10.1145/3491101.3519908

[1] **QuadStretch: A Forearm-wearable Skin Stretch Display for Immersive VR Experience**
Youngbo Aram Shim, **Taejun Kim**, Sangyoon Lee, Geehyuk Lee
SIGGRAPH Asia 2022 Emerging Technologies (SA '22)
http://doi.org/10.1145/3550471.3564761

Patents

[4] Geehyuk Lee, **Taejun Kim**, Auejin Ham, Sunggeun Ahn, "Electronic Device for Providing Gaze-Based Menu Interface Utilizing Lattice of Visual ANchors, and Method of the Same", KR10-2829285, KAIST, Jun 2025.

[3] Geehyuk Lee, Youngbo Shim, Jaeyeon Lee, **Taejun Kim**, "Wearable Tactile Display Device for Presentation of Continuous Parameters Using Multiple Skin Stretch Tactors and Operating Method Thereof", KR10- 2339031, KAIST, Dec 2021.

[2] Hwisung Park, Geehyuk Lee, Sunggeun Ahn, **Taejun Kim**, Yeonsu Kim, "Region of Interest Visualization Method of Electronic Apparatus", KR10-2694286, KAIST and ADD, May 2025.

[1] Geehyuk Lee, Youngbo Shim, **Taejun Kim**, "Force Sensory Substitution Device Using Multiple Skin Stretch Tactor Pairs and Method of the Same", KR10-2820820, KAIST, Jun 2025.

Teaching

KAIST

EE488: Interactive Wearable Computing Lab (Guest Lecturer)	Fall 2021
CS584: Human-Computer Interaction (Guest Lecturer)	Fall 2021
CS492: Wearable User Interface (Teaching Assistant)	Spring 2023
CS584: Human-Computer Interaction (Teaching Assistant)	Fall 2021
CS550: Software Engineering (Teaching Assistant)	Spring 2021
CS300: Introduction to Algorithms (Teaching Assistant)	Fall 2020
CS204: Discrete Mathematics (Teaching Assistant)	Spring 2019
CS230: System Programming (Teaching Assistant)	Spring 2018
CS101: Introduction to Programming (Teaching Assistant)	Fall 2017

Invited Talks & Seminars

UNIST, Intro to HCI class, *Haptics, Text Entry, and Gaze Interaction.*	May 2024
University College London, High-beams seminar series, *Interface Control with Eye Movement*	May 2023
Stanford University, Stanford HCI lunch, *Interface Control with Eye Movement*	Nov 2022
University of Toronto, DGP lab, *Interface Control with Eye Movement*	Nov 2022

Academic Service

Program Committee

CHI LBW 2025: Associate Chair

ETRA Short Paper 2023-2025

Paper Review (47)

CHI '24, '25, '26

UIST '24, '25

CHI LBW '24, '25

ETRA Short Papers '23, '24, '25

MobileHCI '24, AH '25, ISS '24, Siggraph Asia ET '24, WHC '23, INTERACT '23

Recognitions for Outstanding Reviews

CHI '24, '25 '26(×3), UIST '24, CHI LBW '24, WHC '23