Yeeun Shin

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RESEARCH INTERESTS

Human-Computer Interaction (HCI), Extended Reality (XR), Tangible Interface, Creativity Support
My research explores tangible and multimodal XR interfaces that harness embodied cognition to amplify human creativity. I investigate interaction techniques for adaptive XR+AI systems that transform instinctive movement into expressive and participatory workflows.

EDUCATION

Korea Advanced Institute of Science and Technology (KAIST) *Mar. 2021 – Jun 2023*
M.S. in Industrial Design (Specialization: Human-Computer Interaction) *Daejeon, Korea*
- Thesis: *Immersive Authoring Interface with 3D Virtual Controls on Physical Desk*
- Thesis Committee: Woohun Lee, Seok-Hyung Bae, Andrea Bianchi
- Advisor: Prof. Woohun Lee

Pohang University of Science and Technology (POSTECH) *Mar. 2016 – Feb. 2021*
B.S. in Materials Science and Engineering *Pohang, Korea*
- Graduated *Cum Laude*

Institut National des Sciences Appliquées de Lyon (INSA Lyon) *Aug. 2019 - Jan. 2020*
Exchange Student, Materials Science and Engineering *Villeurbanne, France*

PUBLICATIONS

Peer-reviewed publications in top-tier venues for HCI and interactive techniques. (equal contribution)*

[5] Desk Console: Augmenting 3D Virtual Controls on Physical Desks for Immersive Authoring
Yeeun Shin, Seung Hyeon Han, Woohun Lee
In *ACM CHI Conference on Human Factors in Computing Systems (CHI EA'25)*

🏆 Student Game Competition Finalist

[4] Spatial Chef: A Spatial Transforming VR Game with Full Body Interaction
Yeeun Shin*, Yewon Lee*, Sungbaek Kim*, Soomin Park*
In *ACM CHI Conference on Human Factors in Computing Systems (CHI EA'23)*

🏆 Best in Show Honorable Mention

[3] WonderScope: Practical Near-surface AR Device for Museum Exhibits
HyeonBeom Yi, **Yeeun Shin**, Sehee Lee, Eunhye Youn, Auejin Ham, Geehyuk Lee, Woohun Lee
In *ACM SIGGRAPH 2022 Emerging Technologies*

[2] ProjecString: Turning an Everyday String Curtain Into an Interactive Projection Display
Wooje Chang*, **Yeeun Shin***, Yeon Soo Kim*, Woohun Lee
In *ACM SIGGRAPH 2022 Posters*

[1] ChromoFilament: Designing a Thermochromic Filament for Displaying Malleable States
Donghyeon Ko, **Yeeun Shin**, Junbeom Shin, Jiwoo Hong, Woohun Lee
In *ACM Designing Interactive Systems Conference (DIS '22)*

AWARDS & HONORS

- **Student Game Competition Finalist** | ACM CHI *2023*
- **Emerging Technologies Best in Show Honorable Mention (Top 3)** | ACM SIGGRAPH *2022*
- **iF Design Award – user experience (UX)** *2023*
- **1st Place, AI Idea Competition** | LG CNS *2018*
- **National Merit Scholarship for Science and Engineering** | Korea Student Aid Foundation *2018*
- **Highest Academic Achievement Scholarship** | POSTECH *2018*
- **Academic Excellence Scholarship** | POSTECH *2018*

RESEARCH EXPERIENCE

Research Assistant | WonderLab, KAIST — *Mar. 2021 – Aug 2023*
Advised by Prof.Woohun Lee — *Daejeon, Korea*

- **Tangible XR Interfaces to Support Embodied Creativity**
  Designed tangible authoring interface augmenting virtual panels as spatial controls on physical desks; identified workflow gaps via contextual inquiry and evaluated user behaviors; demoed at CHI '25 [5].
- **Interactive Materials for Creative Fabrication**
  Developed thermochromic filament that visualizes malleable states to support creative decisions during fabrication; derived color mappings in design workshops and evaluated effects in user studies [1].
- **Multi-Modal Interaction in XR Systems**

- Multi-Sensory AR Devices for Public Engagement [3]
  Designed multimodal near-surface AR system responsive to user motion; deployed in museums.
- Micro-Gesture Interfaces for Vision-Based Input – with ***KAIST HCI Lab (Prof. Geehyuk Lee)***
  Led interaction definition, deriving micro-gesture heuristics and guidelines through workshops.
- Inclusive Interaction for AR Glasses – with ***Samsung Electronics***
  Defined and prototyped gesture interactions for AR glasses through Participatory Design and interviews.

PROFESSIONAL EXPERIENCE

AI Interaction Designer | Samsung Electronics — *Jan. 2024 – Present*
Seoul, Korea

- Designed the first Gemini-integrated AI Agent for Smart TVs, driving user research and cross-functional co-development with Google Cloud; inventor on 8 AI interaction patents.
- Conducted exploratory research on human–AI interaction, prototyping web app that visualize AI reasoning and support participatory decision-making with human-like agents.

UX Intern | MXXR — *Nov. 2020 – Mar. 2021*
Seoul, Korea

- Led tutorial flow design for mobile AR platform with camera-based spatial sensing.

Software Engineering Intern | LG CNS Research Center — *Jun. 2018 – Aug. 2018*
Seoul, Korea

- Built an Android smartwatch app for real-time factory task tracking, integrating Bluetooth beacons and context-specific UI for industrial IoT environments.

Interactive Prototyping Intern | Geekble — *Jan. 2018 - Feb. 2018*
Seoul, Korea

- Developed Arduino-based interactive prototypes embedded in everyday objects to enable context-aware responses to natural user behavior.

ACADEMIC ACTIVITIES

EXHIBITION & PRESENTATION

- Presenter, CHI Interactivity Demo — *Japan 2025*
- Presenter, CHI Student Game Competition — *Germany 2023*
- Presenter, SIGGRAPH Emerging Technologies Demo — *Canada 2022*
- Selected Poster Presenter, SIGGRAPH Art Papers Roundtable — *Canada 2022*
- Research Featured on KBS, MBC, TJB (National Broadcasting) — *2022*
- Research Exhibitor, Korea National Science Museum Special Exhibition — *2022*
- Research Exhibitor, Korea National Science Museum Living Lab — *2021*
- Research Exhibitor, Gwacheon National Science Museum — *2021*

SERVICE & TEACHING

- Student Volunteer, TEI Conference — *2022*
- Teaching Assistant, Design Entrepreneurship (KAIST ID402) — *2022 Fall*

SKILLS

Programming	Unity3D (C#), JavaScript/TypeScript, Python, C, C++, Java, HTML, CSS, Git
Prototyping	Oculus SDK, XR Interaction Toolkit, Arduino, Raspberry Pi, Processing, 3D Printing, Laser Cutting, CNC, Rhino/Grasshopper, Figma, Sketch, Adobe CC
Research	**(qualitative)** Focus Group, Contextual Inquiry, User Study Design, Thematic analysis **(quantitative)** Statistical & Data Analysis (SPSS, Python, SQL)