

Hye-Young Jo Curriculum Vitae

Roser ATLAS Center, Room 231
1125 18th St, 320 UCB
Boulder, CO 80309-0320, United States

www.hyeyoungjo.com
hye-young.jo@colorado.edu
[Google Scholar](#)

Research Interests

I am a Ph.D. student in Computer Science at the University of Colorado Boulder. My main research area is **Human-Computer Interaction**. My research goal is to **expand people's capacity to create and learn** by building interactive systems with generative AI and extended reality that adapt content to their actions, context, and intentions. My work spans AI-assisted filmmaking, technology-enhanced learning, and embodied fitness training.

Keywords: human-AI interaction, creativity support tools, adaptive media, embodied interaction

Education

August 2024 – Present **University of Colorado Boulder**
Ph.D. student, Computer Science
Supervisor: Ryo Suzuki

September 2020 – August 2022 **Korea Advanced Institute of Science and Technology (KAIST)**
Master of Science, Industrial Design, *Best Master's Thesis Award*
Thesis: Exploring Different Augmented Reality Visualization Methods of Fitness Videos and Their Effects on the Exercise Experience
Supervisor: Andrea Bianchi

March 2011 – February 2016 **Seoul National University**
Bachelor of Fine Arts, Painting and Media Arts, *Cum Laude*
Painting graduation exhibition on fluid identity [A1]
Media Arts graduation exhibition on Korea's [Sampo generation](#) [A4]
Supervisor: Inhwan Oh, Cheol-Woong Sim

Research Experience

May 2026 – August 2026 [Autodesk, HCI and Visualization Team](#)
Research Intern, Mentors: Frederik Brudy, David Ledo.
Created a design space for film directing, grounded in a cinematic corpus, to establish a shared language between human creators and generative AI.

May 2025 – October 2025 [Fujitsu Research of America, Converging Lab](#)
Research Intern, Mentors: Mose Sakashita, Aditi Mishra, Aakar Gupta, Koichiro Niinuma.
Built a system that grounds AI video generation in street-view imagery for spatially consistent shots, evaluated with 12 filmmakers [C8].

August 2024 – Present [University of Colorado Boulder, Programmable Reality Lab](#)
Graduate Research Assistant, Mentor: Ryo Suzuki
Study how people create and consume video by building interactive systems with generative AI, extended reality, and virtual agents for storytelling and education [C7, C8, U1].

January 2023 –
July 2024

[Chung-Ang University, Human-AI Interaction Design & Fabrication Lab](#)

Research Assistant, Mentor: Yoonji Kim

Built a filmmaking previsualization tool using image segmentation and deepfake face swapping [C4], and haptic systems that recreate a personal trainer's touch through vibrotactile and electrical stimulation [P1, C6].

September 2020 –
September 2022

[KAIST, Make Lab](#)

Graduate Research Assistant, Mentor: Andrea Bianchi

Designed and evaluated AR, VR, and haptic systems for home fitness, remote education, and immersive VR [C1-C3].

Work Experience

August 2018 –
April 2020

VR/AR Generalist at [Dexter Studios](#)

New Media Division, Immersive Content and Virtual Production

Created 3D graphics for VR films, AR exhibitions and apps, and virtual production, covering character design, environments, visual scripting, lighting, and look development [X1-X2, X4].

September 2016 –
July 2018

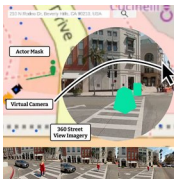
Film VFX Compositor at [Dexter Studios](#)

Film Post-Production VFX Compositing Team

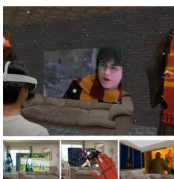
Composited live-action plates, 2D elements, and 3D CG renders into seamless final shots for feature films [F1-F6].

Peer-Reviewed Full Papers

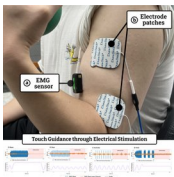
Summary: 8 full papers published in CHI (4), UIST (2), ISMAR (1, in IEEE TVCG), and HCIK (1). Two additional full papers are under review.



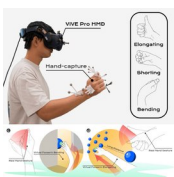
[C8] Hye-Young Jo, Mose Sakashita, Aditi Mishra, Ryo Suzuki, Koichiro Niinuma, Aakar Gupta. **Map2Video: Guiding Real-World-Grounded AI Video Generation**. In Proceedings of the Annual ACM Symposium on User Interface Software and Technology. ACM, 2026. (UIST '26, acceptance rate: 20.1%) Also accepted to the UIST '26 demo track. ([video](#)) ([PDF](#))



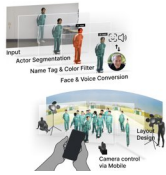
[C7] Keiichi Ihara, DaeHo Lee, Manato Abe, Hye-Young Jo, Ryo Suzuki. **CinemaWorld: Generative Augmented Reality with LLMs and 3D Scene Generation for Movie Augmentation**. In Proceedings of the Annual ACM Symposium on User Interface Software and Technology. ACM, 2026. (UIST '26, acceptance rate: 20.1%) Also accepted to the UIST '26 demo track. ([PDF](#))



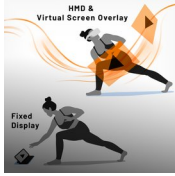
[C6] Dong-Uk Kim, Hye-Young Jo, Hankyung Kim, Ryo Suzuki, Seungwoo Je, Yoonji Kim. **TingleTouch: Touch Guidance through Electrical Stimulation in Resistance Training**. In Proceedings of the CHI Conference on Human Factors in Computing Systems. ACM, 2026. (CHI '26, acceptance rate: 25.3%) ([video](#)) ([PDF](#))



[C5] Yilong Lin, Han Shi, Weitao Jiang, Xuesong Zhang, Hye-Young Jo, Yoonji Kim, Seungwoo Je. **Designing Hand and Forearm Gestures to Control Virtual Forearm for User-Initiated Forearm Deformation**. IEEE Transactions on Visualization and Computer Graphics. IEEE, 2025. (ISMAR '25, acceptance rate: 7.86%) ([video](#)) ([PDF](#))



[C4] Hye-Young Jo, Ryo Suzuki, Yoonji Kim. **CollageVis: Rapid Previsualization Tool for Indie Filmmaking using Video Collages**. In Proceedings of the CHI Conference on Human Factors in Computing Systems. ACM, 2024.
(CHI '24, acceptance rate: 26.4%) ([video](#)) ([PDF](#))



[C3] Hye-Young Jo, Laurenz Seidel, Michel Pahud, Mike Sinclair, Andrea Bianchi. **FlowAR: How Different Augmented Reality Visualizations of Online Fitness Videos Support Flow for At-Home Yoga Exercises**. In Proceedings of the CHI Conference on Human Factors in Computing Systems. ACM, 2023.
(CHI '23, acceptance rate: 27.6%) ([video](#)) ([PDF](#))



[C2] Hye-Young Jo, Wooje Chang, Hoonjin Jung, Andrea Bianchi. **Design of Virtual Reality Application for Interaction Prototyping Remote Education**. In Proceedings of HCI Korea. The HCI Society of Korea, 2022.
(HCIK '22) **Best Paper Award** ([video](#)) ([PDF](#))



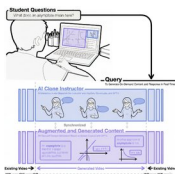
[C1] Neung Ryu, Hye-Young Jo, Michel Pahud, Mike Sinclair, Andrea Bianchi. **GamesBond: Bimanual Haptic Illusion of Physically Connected Objects for Immersive VR Using Grip Deformation**. In Proceedings of the CHI Conference on Human Factors in Computing Systems. ACM, 2021.
(CHI '21, acceptance rate: 26.3%) **Honorable Mention Award (top 5%)** ([video](#)) ([PDF](#))

Posters



[P1] Hye-Young Jo, Chan Hu Wie, Yejin Jang, Dong-Uk Kim, Yurim Son, Yoonji Kim. **TrainerTap: Weightlifting Support System Prototype Simulating Personal Trainer's Tactile and Auditory Guidance**. In Adjunct Proceedings of the Annual ACM Symposium on User Interface Software and Technology. ACM, 2023.
(UIST '23 Adjunct, acceptance rate: 21.0%) ([video](#)) ([PDF](#))

Preprints



[U1] Hye-Young Jo, Ada Zhao, Xiaoan Liu, Ryo Suzuki. **Generative Lecture: Making Lecture Videos Interactive with LLMs and AI Clone Instructors**. arXiv preprint. 2025.
([video](#)) ([PDF](#))

Fellowship and Awards

Summary: \$176,000 in total funding awarded.

Fall 2025 –
Spring 2027

Google Ph.D. Fellowship

Awarded in the Human-Computer Interaction category; full tuition and stipend (\$85,000/year)

- 2026 **Conference Support Fund**
Awarded by the Department of Computer Science, University of Colorado Boulder (\$1,500)
- 2025 **Ralph J. Slutz Student Excellence Award**
Awarded by the Department of Computer Science, University of Colorado Boulder (\$1,000)
- 2024 **Conference Travel Grant**
Awarded by the Graduate and Professional Student Government, University of Colorado Boulder (\$500)
- 2024 **Gary Marsden Travel Award**
Awarded by ACM SIGCHI to attend CHI 2024 (\$3,000)
- 2023 **Best Master's Thesis Award**
Awarded to one of two master's theses in the Department of Industrial Design, KAIST
- 2022 **Best Paper Award**
Awarded at HCI Korea 2022 [C2]
- 2022 **Top Research Award**
Awarded at the joint research seminar of Seoul National University, KAIST, Sogang University, and Korea University [X5]
- 2021 **Excellence Award**
Awarded at the Korea Metaverse Developer Contest 2021 [X5]
- 2021 **iF Design Award (Winner, UI/UX) and IDEA (Bronze, Digital Interaction)**
Contributed the information architecture to the control UI/UX of the Mobile Clinic Module, a negative-pressure isolation ward (team award, a multi-lab project of the Department of Industrial Design, KAIST)
- 2021 **Honorable Mention Award**
Awarded to the top 5% of submissions at CHI 2021 [C1]
- 2016 **Top Award**
Graduated first in class from the Maya 3D computer graphics course, Green Computer Academy
- 2016 **Alumni Award**
Graduated second in class across all departments of the College of Fine Arts, Seoul National University

Invited Talks and Lectures

- October 2025* **Fujitsu Research of America Lunch Seminar**
Grounding Generative Video in Real-World Geographies for Spatial Consistency
- May 2025* **KAIST Make Lab Seminar**
Reimagining How We Create and Consume Content
- May 2025* **Seoul National University Human-Centered Computing Systems Lab Seminar**
Reimagining How We Create and Consume Content
- February 2025* **University of Colorado Boulder, CSCI 7000 How to Hack Almost Anything Guest Lecture**
Utilizing AI Services and APIs for Coding and Virtual Agent Creation
- October 2022* **KAIST ID220 Interaction Prototyping Class Guest Lecture**
DIY Arduino paper cases without 3D printing, using Adobe Illustrator, Autodesk Fusion 360, and Blender.
- November 2019* **Kookmin University Department of Entertainment Design Career Seminar**
Transitioning from Art and Film VFX to VR Content Creation

Teaching and Mentoring

Teaching Assistant

Fall 2025 CSCI 1300 Starting Computing (C++), Instructor: Rhonda Hoenigman
Fall 2022 ID220 Interaction Prototyping (Arduino)

Undergraduate Research Assistant

Chan Hu Wie, Yejin Jang, Dong-Uk Kim, Yurim Son (Chung-Ang University)

Service

Reviewer

CHI 2025-2026, DIS 2026

Outreach and Leadership

2025 University of Colorado Boulder Prospect Affiliate Match Program, helping prospective students prepare their PhD applications
2012 Seoul National University Mentoring Program, helping international students adjust to campus life

Media Coverage

October 2025 University of Colorado Boulder Graduate School News
[“CU Boulder graduate student named a Google PhD fellow”](#)

May 2021 Microsoft Research Blog
[“Microsoft Research collaborates with KAIST in Korea to explore bimanual interactions with haptic feedback in virtual reality”](#)

Film and XR Content

Summary: I created traditional 2D films and 3D XR content as VFX Compositor [F1-F6], CG generalist [X1-X5], developer [X3], and camera operator [X4].

Films



[F6] <Along with The Gods: The Last 49 Days> ([VFX showreel](#)), Director: Yong-Hwa Kim, 2018, *2018 Grand Bell Awards - Best Visual Effects, over 12 million viewers in South Korea alone as of 2024.*



[F5] <1987: When The Day Comes> ([VFX showreel](#)), Director: Jun-Hwan Jang, 2017, *2018 Blue Dragon Film Awards - Top Film Award, over 5 million viewers in South Korea alone as of 2024.*



[F4] <Along with The Gods: The Two Worlds> ([VFX showreel](#)), Director: Yong-Hwa Kim, 2017, *2018 Blue Dragon Film Awards - 4 Crowns, including Technology Award, over 11 million viewers in South Korea alone as of 2024.*



[F3] Kung Fu Yoga ([VFX showreel](#)), Director: Stanley Tong, 2017



[F2] <Real> ([trailer](#)), Director: Sa-Rang Lee, 2017

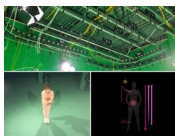


[F1] <Fabricated City> ([trailer](#)), Director: Kwang-Hyun Park, 2017

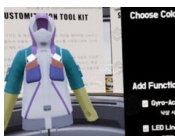
Immersive Content



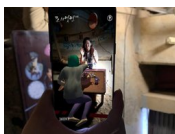
[X5] VR Boxing Game <Meta-Boxing> ([video](#)), Supervisor: Woontack Woo



[X4] AR Mobile App <LGU+ 5G AR> ([video](#), [article](#)), Supervisor: Sun-Gu Kim



[X3] VR Exhibition <Fashion For Help> ([video](#)), Supervisor: Young-Mo Son



[X2] AR Exhibition <The Tide>, Supervisor: Sang-Hyoun Lee



[X1] VR Toon Film <The Tide> ([Steam](#)), Director: Tae-Kyung Yoo, *Officially invited to the "New Frontier" category at the 2019 Sundance Film Festival.*

Art Exhibitions and Live Performances

Summary: I participated in the following art events as an artist [A1-A5, A7] and VJ [A6].



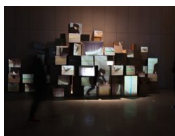
[A7] Group Exhibition <Lapses>, Platform-L Contemporary Art Center, Curator: Eobchae, 2018 (funded by Hyundai's ZER01NE project).



[A6] Live VJ Show <We Play>, Sangsangmadang, Supervisor: Hoon-Gyu Park (Parkpunk), 2016



[A5] Invited Exhibition <Don't fake it, believe it>, Mythtake Museum, 2016



[A4] Group Exhibition <Dirt Luv for Graduation>, Seoul National University, 2015



[A3] Group Exhibition <8-bit>, Seoul National University, 2015



[A2] Group Exhibition <Crawling>, Seoul National University, 2015



[A1] Group Exhibition <The Great Exodus>, Seoul National University, 2014

Skills

Programming

C#, Python, JavaScript, C++, R, HTML/CSS

Graphic Design

2D/3D image manipulation (Nuke, Adobe Creative Suite), video editing (Final Cut Pro), 3D modeling, rigging, animation (Blender, Maya, Fusion 360, Substance Painter), projection mapping (Resolume), live video mixing (VDMX)

XR Prototyping

Unity, Unreal Engine, WebXR

Fine Art

Drawing, painting (watercolor, acrylic, oil), sculpture, casting, printmaking, photography

Research Methods

affinity diagramming, A/B testing, focus group interviews, ethnography, contextual inquiry, participatory design

Languages

Korean (native), English (TOEFL 106/120), French (DELF B1)