YUDAM SHIN

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SUMMARY

AI researcher and builder specialising in the integration of multimodal intelligence with real-world interactive systems. I am a Presidential Science Scholar at Chung-Ang University. I have extensive experience in the development of AI, XR and mobile products, from conceptualisation to deployment. I successfully led five-person teams in delivering real-time interactive systems, user-facing apps and production-ready prototypes. The candidate has been backed by five funded R&D projects, has published research, and has a strong academic background (4.31/4.5 GPA).

PUBLICATIONS

Journal Articles

- **Yudam Shin**, Wonsub Shin, Sanghyun Seo. "A Multimodal Emotion Recognition Model Applying Arousal and Valence under Incomplete Data Conditions." *Journal of Society for e-Business Studies*, Vol. 30, No. 2. (**KCI-indexed**, May 2025)
- W. Shin, **Y. Shin**, Y. Cho, S.U. Amin, B. Kim, Y. Jung, S. Seo. "M.A.D: A Synthetic Dataset for Abnormal Avatar Actions in the Metaverse." *Virtual Reality*, Springer. (**Under Revision**, Virtual Reality (Springer))

Conference Papers

- G. Kim, **Y. Shin**, S. Seo. "Single Image-based 3D Avatar Generation and Real-time Motion Retargeting Pipeline in Exhibition Environments." *KMMS Spring Conference* (2026, 2nd author)
- **Y. Shin**, Y. Kang, B. Kim, S. Seo. "A Multi-Modal Emotion Recognition Model Incorporating Arousal and Valence with Incomplete Data." *MASP (International Conference on Multidisciplinary Approaches to Social Problem-Solving)* (2025, 1st author)
- **Y. Shin**, T. Lim, S. Seo. "Exhibition Review Analysis and Experience Visualization Model through SNS Video Data: Focused on Reels." *KMMS Spring Conference* (2025, 1st author, **Best Paper Award**)
- **Y. Shin**, B. Kim, S. Seo. "A Multimodal Emotion Recognition Model Incorporating Arousal and Valence." *Smart Media & e-Business Society Fall Conference* (2024, 1st author, **Best Paper Award**)
- **Y. Shin**, S. Seo. "Adapting the Valence-Arousal Model for Multimodal Emotion Recognition with Incomplete Data." *Platcon2024* (2024, 1st author)
- **Y. Shin**, C. Oh, Y. Cho, S. Seo. "Dataset Construction for Abusing Behavior Detection in the Metaverse." *KMMS Fall Conference* (2023, 1st author)

EDUCATION

Chung-Ang University Mar. 2023 – Present

B.S. in Art & Technology

- GPA: 4.31 / 4.5 (98/100) — maintained above 4.0 every semester
- Presidential Science Scholar (대통령과학장학생), National Research Foundation of Korea (2025)
- Valedictorian Scholarship, Dept. of Art & Technology (2023-2),
- Merit Scholarship, Chung-Ang University (2024-1, 2025-2)

Hana Academy Seoul Mar. 2019 – Feb. 2022

RESEARCH EXPERIENCE

Graphic Realization Lab, Chung-Ang University | Undergraduate Researcher | Mar. 2023 – Present

Ongoing R&D Projects

- OmniTwin: Interactive 3D Virtual Twin Framework for Omni-Modal Data Generation in Sparse Scenarios — NRF, Mar. 2026 – Feb. 2029
- Emotional Intelligent Child Care System Convergence Research Center (CRC) — NRF, Mar. 2025 – Feb. 2030
- Interactive Device Content Development for Multipurpose Facilities (Industry), Apr. 2026 – Jul. 2026

Finished R&D Projects

- Applied Technology Research for Extended Reality through Digital Twin Transformation of Real-World Space and Human - NRF, Mar. 2022 – Feb. 2025
- Development of Digital Abusing Detection and Management Technology for a Healthy Metaverse Service - Funded by: KOCCA, Apr. 2023 - Dec. 2025

PROJECTS

Byeongpung Yeonhwa (屛風演畵) — Capstone Design II Mar. 2026 – Jun. 2026

PM + TD + AI/ML Lead | 5-person team | Graduation Exhibition

- Oversaw the development of an interactive XR exhibition combining Korean folktales and real-time body-motion storytelling, where four visitors collaboratively completed a digital folding-screen narrative.
- A bespoke 18-class action recognition model and an IP-Adapter pipeline were constructed to generate personalised AI-painted panels reflecting each visitor's face.

TERARiUM — Capstone Design I Sep. 2025 – Dec. 2025

PM + TD + Real-time Motion Capture & Retargeting Lead | 5-person team | Exhibition (42 main attendees)

- Developed an interactive exhibition where visitors created 3D avatars that mirrored their body movements in real time on a projection screen.
- Implemented 32-joint Azure Kinect skeleton tracking with Unity Mecanim retargeting, modified UniRig for humanoid joint remapping, and built RetinaFace + ArcFace re-identification for multi-visitor tracking.

Mindy — Mobile Application 2025

PM + Full-stack(Flutter) + Planner | 4-person team

- Built a mobile app that helps parents understand their child’s emotional state through AI conversations and automated daily mood reports with parenting insights.
- Designed dual-mode Flutter architecture and led end-to-end product development from user research and market analysis to MVP implementation.

Echotion — Real-time Emotion-Reflective Subtitle System Sep. 2023 – Dec. 2023

PM + Developer + Planner | 2-person team | github.com/PotatoBin/Echotion

- Developed a real-time subtitle system that visualized emotional tone in speech to improve communication accessibility for hearing-impaired users.
- Built the full AI-to-UI pipeline, resolving KoBERT / CUDA / PyTorch compatibility issues and PySide6 GUI integration challenges; later expanded into a KCI-indexed journal publication (2025).

SKILLS

Development	Python, PyTorch, HTML/CSS/JS, Flutter, Git, SQL
XR / Engines	Unity, Unreal Engine 5, Maya, Houdini, Nuke
Design & Production	Figma, Photoshop, Premiere Pro, After Effects
GenAI Pipeline	Stable Diffusion (SDXL, ControlNet, LoRA, IP-Adapter), ComfyUI
Languages	Korean (Native), English (Professional working proficiency)

AWARDS & HONORS

Presidential Science Scholar (대통령과학장학생) 2025
National Research Foundation of Korea — awarded to top science & engineering undergraduates nationwide

KT AI P.A.N_Next Film Festival — Excellence Award 2025
AI Artist (image & video generation)

Best Paper Award 2025
KMMS Spring Conference — SNS Video Data Analysis for Exhibition Review Visualization (1st author)

Best Paper Award 2024
Smart Media & e-Business Society Fall Conference — Multimodal Emotion Recognition (1st author)

Best Award — TikTok Effect House AR Filter Makeathon 2023
Korea Digital Contents Society

ACTIVITIES

Multicultural Python Tutoring Aug. – Nov. 2025
20 hrs · VMS certified

Planning Director, Student Council 2024
College of Art & Technology, Chung-Ang University

Open-Source Programming Lecture Tutor Sep. – Dec. 2024
DaVinci Learning Center, Chung-Ang University

Youth Career Mentoring - SeedSchool Mar. – Dec. 2024
43 hrs 20 min · 23 sessions · VMS certified

Column Contributor — 'Homo Prompt' 2024
Seoul Culture Today — Public explanation of generative AI

College of Art & Technology Conference 2023 – 2024
College of Art & Technology, Chung-Ang University

Public Relations Member, Student Council 2023
College of Art & Technology, Chung-Ang University