

HYUNGWOO JIN



Contact

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Education

Bachelor of Engineering

Department of Electrical &
Electronic Engineering, Korea
University, Seoul – 19.02 to 23.02
GPA (4.02 / 4.5)

Master Student

Graduate School of Cultural and
Technology & Graduate school
of Metaverse, KAIST, Daejeon
- UVR LAB – 23.02 ~ 25.02 [E]

Military

US. Department of the Army

- Captain YOO.

Summary

I am a researcher with a keen interest in AI technology within the Computer Vision domain, particularly in **3D Vision** and remote collaboration systems mediated by avatars in XR environments. My research focuses on addressing communication issues that arise during remote collaboration when **face occlusion occurs** while **wearing XR glasses** so working on realistic facial expression retargeting and reconstruction of avatars in order to enhance the coexistence.

Skills

- Python
- Unity
- C#
- PyTorch
- Tensorflow
- Blender
- HTML
- CSS
- JavaScript

Experience

2023 HCI KOREA, HCI Korea Association, Gangwon, Jan 2024

- Presented UVR LAB Workshop and promoted our Graduate School

Korea Software Congress 2023, Busan, Dec 2023

- Presented a paper titled "Quantitative Optimal Learning Conditions for Gaussian Splatting Based On Input Quantity and Scene Dynamics."
- Networked with other presenters on Rendering and 3D Vision topics.

Metaverse Developer Competition, Seoul, June 2023 ~ Oct 2023

- Developed the application "Michelangelo" for 3D Voxel Modeling in an XR environment.
- Received the Chief of Korea Metaverse Society Award.
- Collaborated with the San Diego team using Qualcomm's Snapdragon Spaces kit.
- Utilized Unity, MRTK3, AR Foundation, Apache2, Node.js, and Express framework.

Korea Metaverse Festival, Seoul, Oct 2023

- Demonstrated the award-winning application "Michelangelo" at the Metaverse Developer Competition.
- Presented in front of the **Vice Minister and officials** from the **Ministry of Science and ICT**.

Korea Computer Graphics Society 2023, Jeju, July 2023

- Attended seminars on Avatar Rendering and Avatar Animation.
- Networked with domestic graphics professionals

2023 OpenXR (Extended Reality) Technology and Utilization Research Workshop, JEJU, July 2023

- Presentation of personal research topics and in-depth discussion on government tasks related to OpenXR Extended Reality being carried out by five institutions including KAIST with KISTI, ETRI, KIOM, KICT

General Work for Virtual Augmented Reality Professional Human Resources Development Project, Jeju, July 2023

- Workshop involving academic institutions such as ETRI, IITP, KAIST, Seoul University, Korea University, Sogang University and industry participants like Virnect and Recon LABS.
- Presentation on the application of NeRF and Gaussian Splatting for avatars and natural facial expression renderings.

Korea Computing Congress 2023, Jeju, June 2023

- Presented a paper titled "Light Deep Learning Model based Horizontal Eye Tracking for Real-Time Eye Reconstruction in Virtual Environment."
- Awarded Best Paper Award.

Creative Challenge Program, Korea University - 22.06.20 to 23.01.20

- **Team Leader** of the project under the name of "Control object using AR glasses with **EOG**, Lidar, Robot".
- KU Symposium presenter with same subject.

KU VR Assist-device MAKEATHON – 22.08.02 to 22.08.03

- Won award under the project name of "VR optimization with **EOG** and distance sensor".

Research Assistant [Intern], KAIST EE, BMM LAB – 22.02.16 to 22.08.15

- Contributed to the writing of a paper titled "**Rheumatoid Arthritis Treatment** using CMUT."

Creative Challenge Program, Korea University – June 21 to Feb 22

- **Team Leader** of the project with KT under the name of "Establishing an AI model for small business owners using KT big data".
- **Sharosu-gil Marketing One-to-one Contact Survey** and **IR Pitching for Startup Prototype** using KT Big Data Model.

KATUSA, Pyeongtaek, Yongsan – 19.09.16 to 22.04.05

- Worked in protocol for USFK commander and created **positive work environment** in both US and ROK community.

Volunteer, Happymove, Hyundai Motors - 18.01.22 to 18.02.02

- Contributed to the building of house in Chennai, India.

Mock test examiner, Daechi Sidae-injae Academy – 16.12.12 to 17.08.11

- Chemistry I (High school chemistry) Mock test examiner.

Publication

- Experiment of Light Deep Learning Algorithm for Optimization of Horizontal Eye Tracking in Virtual Environment - *Journal of the Korea Society of Computer and Information*
- Interactive 3D Voxel Drawing System with Bare hands interaction using AR glasses - *KSC 2023 Korean Comprehensive Computer Science Conference Paper Collection Vol.2023*
- Quantitative Optimal Learning Conditions for Gaussian Splatting Based On Input Quantity and Scene Dynamics - *KSC 2023 Korean Comprehensive Computer Science Conference Paper Collection Vol.2023*
- Light Deep Learning Model based Horizontal Eye Tracking for Real-Time Eye Reconstruction in Virtual Environment - *KCC 2023 Korean Comprehensive Computer Science Conference Paper Collection Vol.2023 [Best Paper Award]*

Award

2024 KAIST E*5 Startup Rank 3 – 24.05.31
2024 KAIST STARTUP BOOTCAMP Best Award – 24.05.25
2023 KCC Metaverse Developer Competition 2023.10.
2023 KCC Best Paper Award - 2023.06.
2022 KU VR Assist-device MAKEATHON Award - 22.08.05

Certification

Creative KU Research Symposium - 22.08.04
Creative Challenger Program - 21.06.11 ~ 22.02.25
Certified Investment Manager - 22.02.24
Certificate of commendation – Korea University - 22.01.06

Language

Korean – Native
English – Intermediate
Japanese – Intermediate

Recommendation

US. Department of the Army - Captain YOO.