

# Isaac Yang

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## Education

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### Sungkyunkwan University (SKKU), Seoul, Korea

Mar. 2016 – Aug. 2023

- B.E. in Computer Engineering (Major) GPA: 3.4 / 4.5
- Bachelor of Culture & Technology (Minor) GPA: 4.2 / 4.5
- **Graduation project:** Korean Traditional Cultural Heritage Complex (KTCHC) Theme Park ([invite link](#))
- **Scholarship:** Received of the University Hope Scholarship from Saumsung Dream Scholarship Foundation during undergraduate studies (2016-2021)

### Dongsan Christian High School (DCHS), Ansan, Korea

Mar. 2013 - Feb. 2016

- **Scholarship:** Received of Dream Scholarship from Saumsung Dream Scholarship Foundation during middle and high school studies (2010-2015)

## Coursework

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**Courses(Computer Science) :** System Program, Data Structures, Programming Languages, Algorithms, Operating Systems, Introduction to Computer Architectures, Introduction to Artificial Intelligence, Introduction to Database, Introduction to Software Engineering, Computer Networks

**Courses(Culture & Technology) :** Computational Arts and Contents, Cultural Contents and Technologies, Advanced Content Planning & Development, Creative Technologies, Game Planning and Development, Creating Virtual Worlds

## Skills

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**Languages:** C, C++, Python, Java, Javascript, HTML

**Software:** Visual Studio, Visual Studio Code, ROS, Unity, Blender

## Research Area

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- **Volumetric video acquisition & encoding:** Real-life spatial volumetric video acquisition & encoding, movable robot-based volumetric video acquisition & rendering
- **Image/video compression:** MPEG immersive video (MIV, ISO/IEC 23090-12)
- **3D scene reconstruction:** 3D gaussian splatting (3DGS)
- **HTTP-based adaptive streaming:** MPEG dynamic adaptive streaming on HTTP (MPEG-DASH, ISO/IEC 23009), common media application format (CMAF)

## Experience

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### Sungkyunkwan University (SKKU), Seoul, Korea

Sep. 2023 - Current

- <http://www.skku.edu>
- M.S., Department of Immersive Media Engineering
- **Laboratory:** Multimedia Computing System Lab (MCSL: <http://mcs.sl.skku.edu>)

### Sungkyunkwan University (SKKU), Seoul, Korea

Jun. 2023 - Aug. 2023

- <http://www.skku.edu>
- Internship research student
- **Laboratory:** Multimedia Computing System Lab (MCSL: <http://mcs.sl.skku.edu>)

## Publications

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### Korean Domestic Journals

1. **Isaac Yang**, Yeongil Ryu, JunHyeong Park, Jaeyeol Choi, Jong-Beom Jeong, Jang Hyun Kim, Eun-Seok Ryu, "Real-life Spatial Volumetric Video Acquisition and Encoding System", Journal of Broadcast Engineering (JBE), Vol. 29, No. 4, Jul. 2024

### International Conferences

1. (Under review) **Isaac Yang**, Yeong-Gyu Kim, Jong-Beom Jeong, Minsu Park, Eun-Seok Ryu, "3D Gaussian Splatting-based Static Scene Volumetric Video Capturing System Using Remote Controlled Movable Robots, IEEE VR, 2025

### Korean Domestic Conferences

1. Yeongil Ryu, **Isaac Yang**, Soo-Been Jo, Min-Su Park, Eun-Seok Ryu, "Challenges and Solutions for MPEG Immersive Video Acquisition in Dynamic Unstructured Outdoor Environment", The Korean Institute of Broadcast and Media Engineers (KIBME) Summer Conference, Jun. 27, 2024.
2. Min-Su Park, Yeong-Gyu Kim, Jong-Beom Jeong, Yeongil Ryu, **Isaac Yang**, Eun-Seok Ryu, "Performance Analysis of Point Cloud-Mesh Conversion Using Screened Poisson Reconstruction and Deep Learning-Based Point2Mesh Algorithms", The Korean Institute of Broadcast and Media Engineers (KIBME) Summer Conference, Jun. 27, 2024.
3. Soo-Been Jo, Yeongil Ryu, **Isaac Yang**, Minsu Park, Jong-Beom Jeong, Eun-Seok Ryu, "Overview of Depth Estimation and Refinement for Immersive Video", The Korean Institute of Broadcast and Media Engineers (KIBME) Summer Conference, Jun. 27, 2024.
4. **Isaac Yang**, Yeongil Ryu, Jang-Hyun Kim, Eun-Seok Ryu, "6DoF VR Immersive Video Acquisition System for Real-life Spatial Video Capturing", The Korean Institute of Broadcast and Media Engineers (KIBME) Fall Conference, Nov. 20, 2023.

## Honors and Awards

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1. **Excellence Paper Award**, **Isaac Yang**, Yeongil Ryu, Jang-Hyun Kim, Eun-Seok Ryu, "6DoF VR Immersive Video System for Real-life Spatial Video Capturing", The Korean Institute of Broadcast and Media Engineers (KIBME) Fall Conference, Nov. 20, 2023

## Software Copyrights

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1. **Isaac Yang**, Yeongil Ryu, Jang Hyun Kim, Eun-Seok Ryu, "실사 공간 영상 캡처링을 위한 6 자유도 몰입형 비디오 취득 시스템", Dec. 04, 2023.
2. Yihyun Choi, Jong-Beom Jeong, **Isaac Yang**, Eun-Seok Ryu, "동적 포인트 클라우드 메쉬 변환기", Nov. 21, 2023.

## Projects Experience

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- **Development of Moving Robot-based Immersive Video Acquisition and Processing System in Metaverse**, Jul. 2022 - Dec. 2024
  - Funded by the Ministry of Science and ICT (about \$698,000)
- **Development of International Standard for CT XR Content Copyright Protection Technologies**, Jul. 2024 - Dec. 2025
  - Funded by Korea Creative Content Agency (KOCCA) (about \$409,000)

## Reference

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**Eun-Seok Ryu** (IEEE Senior Member):

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