

# JUN MYEONG CHOI

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## EDUCATION

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### University of North Carolina at Chapel Hill

*Graduate Student*

Aug. 2022 – Present

*North Carolina, United States of America*

- Doctor of Philosophy in Computer Science
- Advisor: Roni Sengupta

### University of North Carolina at Chapel Hill

*Graduate Student*

Aug. 2022 – May. 2024

*North Carolina, United States of America*

- Master of Science in Computer Science
- Advisor: Roni Sengupta

### Korea University

*Undergraduate Student*

Mar. 2017 – Aug. 2022

*Seoul, Republic of Korea*

- Bachelor of Science in Computer Science and Engineering
- GPA: 4.33/4.5 Major GPA: 4.48/4.5

## RESEARCH EXPERIENCE

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### Computer Vision Laboratory, University of North Carolina at Chapel Hill

Aug. 2022 – Present

*Research Associate (Adviser: Roni Sengupta)*

- Developed an indoor scene relighting model using Diffusion techniques, allowing for precise light editing and relighting at desired locations. (CVPR 2025)
- Investigated a method of video relighting human faces according to the desired monitor light under any existing ambient light or moving face condition using Neural Style Transfer. (ECCV 2024)
- Developed a neural network to detect mismatches between monitor-emitted and face-reflected light in a monitor-webcam setup, aimed at identifying deep fake avatars or inattentive attendees. (CVPR 2024 Workshop)

### Computer Vision Laboratory, Korea University

Feb. 2022 – Jun. 2022

*Research Associate (Adviser: Seungryong Kim)*

- Proposed a novel framework, which is formulated in an auto-encoder architecture, extracts disentangled 3D attributes such as 3D shape, appearance, and camera pose from an image, and a high-quality image rendered from the attributes through disentangled generative Neural Radiance Fields.

## WORKING EXPERIENCE

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### Adobe Research

Feb. 2026 - Aug. 2026

*Research Scientist intern*

- Introduced an image-guided upsampling and refinement framework that enhances fine-grained details and structural fidelity, producing high-quality and visually consistent results under diverse real-world conditions.

### Adobe Research

May. 2025 - Nov. 2025

*Research Scientist intern*

- Proposed a video diffusion-based method for relightful video harmonization that learns from real and deflickered synthetic data to achieve temporally stable and natural lighting adjustments. (CVPR 2026)

### Sycros

Jul. 2020 – Dec. 2020

*Research and Development Intern*

- Implemented deep learning-based Early Warning Systems (EWS) for large-scale real-time systems, enabling accurate prediction of server resource behavior and instantaneous anomaly detection.
- Developed a software that allows for automatic detection of plane deviations upon landing. Using ILS (Instrument Landing System), engineered an algorithm that detects the deviation of pitch, roll and yaw of incoming planes in airports.

## PUBLICATION

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HarmoVid: Relightful Video Portrait Harmonization

**Jun Myeong Choi**, Jae Shin Yoon, Luchao Qi, Roni Sengupta, Joon-Young Lee  
CVPR 2026 [*paper*] [*project*]

ProJo4D: Progressive Joint Optimization for Sparse-View Inverse Physics Estimation

Daniel Rho, **Jun Myeong Choi**, Biswadip Dey, Roni Sengupta  
TMLR 2026 [*paper*] [*project*]

GAINS: Gaussian-based Inverse Rendering from Sparse Multi-View Captures

Patrick Noras, **Jun Myeong Choi**, Didier Stricker, Pieter Peers, Roni Sengupta  
Under-review

Over++: Generative Video Compositing for Layer Interaction Effects

Luchao Qi, Jiaye Wu, **Jun Myeong Choi**, Cary Phillips, Roni Sengupta, Dan B Goldman  
Under-review

ScribbleLight: Single Image Indoor Relighting with Scribbles

**Jun Myeong Choi**, Annie Wang, Pieter Peers, Anand Bhattad, Roni Sengupta  
CVPR 2025 [*paper*] [*project*]

PPS-Ctrl: Controllable Sim-to-Real Translation for Colonoscopy Depth Estimation

Xinqi (Ana) Xiong, Andrea Dunn Beltran, **Jun Myeong Choi**, Marc Niethammer, Roni Sengupta  
arxiv 2025 [*paper*]

Personalized Video Relighting With an At-Home Light Stage

**Jun Myeong Choi**, Max Christman, Roni Sengupta  
ECCV 2024 [*paper*] [*project*]

Building Secure and Engaging Video Communication by Using Monitor Illumination

**Jun Myeong Choi**, Johnathan Leung, Noah Frahm, Max Christman, Gedas Bertasius, Roni Sengupta  
CVPR 2024 - Workshop on Media Forensics [*paper*]

AE-NeRF: Auto-Encoding Neural Radiance Fields for 3D-Aware Object Manipulation

Mira Kim, Jaehoon Ko, Kyusun Cho, **Jun Myeong Choi**, Daewon Choi, and Seungryong Kim  
arxiv 2022 [*paper*]

## REVIEWER

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CVPR, ECCV, ICCV, NeurIPS, SIGGRAPH, SIGGRAPH Asia, WACV