

JUN MYEONG CHOI

🏠 <https://chedgekorea.github.io> ✉ chedgekr@cs.unc.edu

EDUCATION

University of North Carolina at Chapel Hill

Graduate Student

Aug. 2022 – Expected May. 2027
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

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 an autoencoder-based framework that disentangles 3D shape, appearance, and camera pose from images and renders high-quality views using generative Neural Radiance Fields.

WORKING EXPERIENCE

Adobe Research

Feb. 2026 - Nov. 2026

Research Scientist intern

- Introduced an image-guided upsampling, super-resolution 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.

PUBLICATION

HarmoVid: Relightful Video Portrait Harmonization

Jun Myeong Choi, Jae Shin Yoon, Luchao Qi, Roni Sengupta, Joon-Young Lee

CVPR 2026 [*paper*] [*project*]

MonoPhysics: Estimating Geometry, Appearance, and Physical Parameters from Monocular Videos

Daniel Rho, **Jun Myeong Choi**, Matthew Thorton, Biswadip Dey, Roni Sengupta

NeurIPS 2026 [*paper*] [*project*]

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

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

ECCV 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*]

Understanding Model Behavior in Monocular Polyp Sizing

Xinqi Xiong, Andrea Dunn Beltran, **Jun Myeong Choi**, Sarah K. McGill, Marc Niethammer, Roni Sengupta

MICCAI 2026 [*paper*]

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*]

PREPRINTS

Over++: Generative Video Compositing for Layer Interaction Effects

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

Under-review [*paper*] [*project*]

REVIEWER

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