JUN MYEONG CHOI

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EDUCATION

University of North Carolina at Chapel Hill   Aug. 2022 – Present
Graduate Student   *North Carolina, United States of America*
- Doctor of Philosophy in Computer Science
- Advisor: Roni Sengupta

University of North Carolina at Chapel Hill   Aug. 2022 – May. 2024
Graduate Student   *North Carolina, United States of America*
- Master of Science in Computer Science
- Advisor: Roni Sengupta

Korea University   Mar. 2017 – Aug. 2022
Undergraduate Student   *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 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

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.

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.

Intelligence School, Republic of Korea Army   Aug. 2018 - Mar. 2020
Computer Technician, Sergeant
- Developed a website designed for viewing and reading magazine articles. Moreover, implemented graphic animations for turning each page. Exploited WebGL and Javascript to successfully complete the project (awarded Army Major General Award).

PUBLICATION

HarmoVid: Relightful Video Portrait Harmonization
Jun Myeong Choi, Jae Shin Yoon, Luchao Qi, Roni Sengupta, Joon-Young Lee
Under-review

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*]

ProJo4D: Progressive Joint Optimization for Sparse-View Inverse Physics Estimation
Daniel Rho, **Jun Myeong Choi**, Biswadip Dey, Roni Sengupta
arxiv 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

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