Po Ryan

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PRINCIPAL INTERESTS
Generative AI, 3D generation, computer graphics, signal processing, physics-based rendering, computer vision, 3D sensing, optics.

ACADEMIC BACKGROUND

Ph.D. Electrical Engineering — Sep 2022 - Present
Stanford University, Stanford, CA
– Advisor: Professor Gordon Wetzstein
– GPA: 4.30/4.30

B.Sc. Computer Science — Aug 2018 - May 2022
Carnegie Mellon University, Pittsburgh, PA
– Concentration: Computer Graphics
– Research Advisor: Professor Ioannis Gkioulekas
– GPA: 3.90/4.00

PUBLICATIONS /PREPRINTS

– **Ryan Po**, Gordon Wetzstein, *Compositional 3D Scene Generation using Locally Conditioned Diffusion* . 3DV 2024

– **Ryan Po***, Wang Yifan*, Vladislav Golyanik*, Kfir Aberman, Jonathan T. Barron, Amit H. Bermano, Eric Ryan Chan, Tali Dekel, Aleksander Holynski, Angjoo Kanazawa, C. Karen Liu, Lingjie Liu, Ben Mildenhall, Matthias Nießner, Björn Ommer, Christian Theobalt, Peter Wonka, Gordon Wetzstein *State of the Art on Diffusion Models for Visual Computing* . In submission

– **Ryan Po***, Zhengyang Dong, Alexander Bergman, Gordon Wetzstein *Instant Continual Learning of Neural Radiance Fields* . CVPR Workshop On Visual Continual Learning 2023

– J. Ryan Shue*, Eric Ryan Chan*, **Ryan Po***, Zachary Ankner*, Jiajun Wu, Gordon Wetzstein, *3D Neural Field Generation using Triplane Diffusion*. CVPR 2023

– **Ryan Po**, Adithya Pediredla and Ioannis Gkioulekas, *Adaptive Gating for Single-Photon 3D Imaging*. CVPR 2022 (Oral)

EMPLOYMENT HISTORY

Research Assistant — Spring 2020 - Spring 2022
Carnegie Mellon University, Pittsburgh, PA
– Working with Prof. Ioannis Gkioulekas and Adithya Pediredla on improving accuracy of time-of-flight imaging using Single Photon Avalanche Diodes

Software Engineer Intern — Summer 2020
Riot Games, Santa Monica, CA
– Led back-end development of brand new module for tracking and alerting anomalies in incoming data for 10M+ daily players
– Refactored data storage system to handle previously leaky data streams, centralizing data streams from all of Riot's newly released titles

Software Engineer Intern — Summer 2019
Deloitte

        – Led and produced a proof of concept for a Jockey Tracking interface for identifying jockeys during races

        – Recognition and tracking algorithm trained based on YOLOv3, achieves $> 95\%$ accuracy with under 1 hour of training footage

PRESENTATIONS

– "Do we need gating for depth sensing with SPADs?", October 2021, NSF Expeditions Group

– "Adaptive gating for SPADs", September 2021, CMU Computational Imaging Reading Group

– "Optical Filtering Techniques for Improving SPAD Acquisition", December 2020, CMU Undergraduate Research Symposium

TEACHING EXPERIENCE

15-868 Physics-based Rendering	*Spring 2022*
15-462 Computer Graphics	*Spring 2021*
15-151 Mathematical Foundations for CS	*Fall 2020*

HONORS & AWARDS

– Stanford Graduate Fellowship

– HKSES Scholarship for Academic Excellence

– CMU Dean's List (All Semesters).

SERVICES

Reviewer for CVPR, NeuRIPS, SIGGRAPH, TOG; ICCP Student Volunteer

SKILLS & LANGUAGES

Technical: Proficient in C/C++, Python, MATLAB, SML
Languages: Fluent in English, Cantonese, Mandarin