

Gene Chou

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EDUCATION

Cornell University 2023 -
PhD student in computer science
Advisors: Noah Snavely and Bharath Hariharan

Princeton University 2018 - 2022
BSE in computer science, minor in applied mathematics
Honors: magna cum laude, departmental GPA: 3.96 / 4.0

RESEARCH

Google Research | San Francisco, CA 5/2025 - 11/2025
Large-scale 3D reconstruction.

Netflix Eyeline Studios | Los Angeles, CA 1/2025 - 5/2025
Real-time, high-resolution 4D reconstruction.

Adobe Research | San Jose, CA 5/2024 - 1/2025
Generated 3D-consistent videos from unposed, wide-baseline images such as internet photos.

Backflip AI | San Francisco, CA 7/2023 - 9/2023
Scaled up 3D asset generation at a GenAI startup.

Disney Research Imagineering | Glendale, CA 2/2023 - 7/2023
Combined large vision models and RL for human-robot interaction and sim-to-real transfer.

Princeton Computational Imaging Lab | Princeton, NJ 3/2022 - 2/2023
Explored generalization and generation of neural scene representations, advised by Prof. Felix Heide.

Multimedia Technology Lab at Academia Sinica | Taipei, Taiwan 6/2020 - 8/2021
Improved object detection robustness and efficiency, advised by Prof. Hong-Yuan Mark Liao.

EXPERIENCE

Teaching Assistant
Computer Vision (2025); Deep Learning (2024); Algorithms and Data Structures (2019 - 2022)

Service
Reviewer for CVPR, ICCV, ECCV, SIGGRAPH, TPAMI

Awards
NSF Graduate Research Fellowship (2023 - 2028)

PUBLICATIONS

FlashDepth: Real-time Streaming Video Depth Estimation at 2K Resolution
G. Chou, W. Xian, G. Yang, M. Abdelfattah, B. Hariharan, N. Snavely, N. Yu, P. Debevec ICCV 2025

FlashDepth predicts accurate and consistent depth of high-res videos in a streaming fashion at 24 FPS on an A100 GPU.

Generating 3D-Consistent Videos from Unposed Internet Photos

G. Chou, K. Zhang, S. Bi, H. Tan, Z. Xu, F. Luan, B. Hariharan, N. Snavely

CVPR 2025

We propose the task of generating videos from sparse, unposed internet photos, and train a 3D-aware video model without any 3D annotations such as camera parameters.

MegaScenes: Scene-Level View Synthesis at Scale

J. Tung*, G. Chou*, R. Cai, G. Yang, K. Zhang, G. Wetzstein, B. Hariharan, N. Snavely

ECCV 2024

MegaScenes is a scene-level dataset containing 100K SfM reconstructions and 2M registered images. We validate its effectiveness in training generalizable models for single image novel view synthesis.

Generalist YOLO: Towards Real-Time End-to-End Multi-Task Visual Language Models

HS. Chang, CY. Wang, R. Wang, G. Chou, HY. Liao

WACV 2025

Builds on YOLOR to jointly train multiple vision and vision-language tasks. Fast and lightweight.

Thin On-Sensor Nanophotonic Array Cameras

SIGGRAPH Asia 2023

P. Chakravarthula, J. Sun, X. Li, C. Lei, G. Chou, M. Bijelic, J. Froesch, A. Majumdar, F. Heide

Recovers images in broadband using a single flat metasurface optic and probabilistic deconvolution.

Diffusion-SDF: Conditional Generative Modeling of Signed Distance Functions

G. Chou, Y. Bahat, F. Heide

ICCV 2023

Performs diffusion on the latent space of neural SDFs to conditionally generate 3D objects.

GenSDF: Two-Stage Learning of Generalizable Signed Distance Functions

G. Chou, I. Chugunov, F. Heide

NeurIPS 2022

Reconstructs neural SDFs from raw input point clouds of over a hundred unseen object classes.