

Gene Chou

gene@cs.cornell.edu · genechou.com · github.com/gene-chou

EDUCATION

Cornell University 2023 -
PhD student in computer science
Advisors: Noah Snaveley 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

Generative AI | Backflip AI | San Francisco, CA 7/2023 - 9/2023
Generated 3D assets (at scale, text and image conditioning) at a generative AI startup.

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

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

Algorithmic Fairness | Princeton Visual AI Lab | Princeton, NJ 6/2021 - 12/2021
Stress-tested algorithmic fairness via synthetic data generation, advised by Prof. Olga Russakovsky.

ML Algorithms | Multimedia Technology Lab at Academia Sinica | Taipei, Taiwan 6/2020 - 8/2021
Researched meta-learning and style transfer, advised by Prof. Hong-Yuan Mark Liao. Collaborated with industry to augment traffic data in different weather and lighting for improved monitoring.

EXPERIENCE

Teaching
TA for Algorithms and Data Structures at Princeton (2019-2022)

Reviewing
Reviewer for CVPR 2023, ICCV 2023
Alumni interviewer for Princeton University undergraduate admissions (2023-)

Awards
NSF Graduate Research Fellowship (2023 - 2028)

PUBLICATIONS

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 ICCV 2023
G. Chou, Y. Bahat, F. Heide
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 (Featured)

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