

Alexander Raistrick

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EDUCATION

Princeton University

September 2021 – present

Ph.D Candidate, Department of Computer Science

Advisor: Jia Deng

University of Michigan

September 2017 – April 2021

BSE Computer Science, Minor in Mathematics

Overall GPA: 3.9/4.00. CS GPA 3.95/4.0, Math Minor 4.0/4.0

RESEARCH INTERESTS

Synthetic Data for Computer Vision, 3D Vision, Generative AI

PUBLICATIONS

- [1] John Nugent, Siyang Wu, Zeyu Ma, Beining Han, Meenal Parakh, Abhishek Joshi, Lingjie Mei, Alexander Raistrick, Xinyuan Li, and Jia Deng. Evaluating Robustness of Monocular Depth Estimation with Procedural Scene Perturbations. *The Thirty-ninth Annual Conference on Neural Information Processing Systems*, 2025.
- [2] David Yan, Alexander Raistrick, and Jia Deng. Procedural Dataset Generation for Zero-Shot Stereo Matching, 2025.
- [3] **Alexander Raistrick***, Karhan Kayan*, Lingjie Mei*, David Yan, Yiming Zuo, Beining Han, Hongyu Wen, Meenal Parakh, Stamatis Alexandropoulos, Lahav Lipson, Zeyu Ma, and Jia Deng. [Infinigen Indoors: Photorealistic Indoor Scenes using Procedural Generation](#). *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2024.
- [4] Zeyu Ma, **Alexander Raistrick**, Lahav Lipson, and Jia Deng. [View-Dependent Octree-based Mesh Extraction in Unbounded Scenes for Procedural Synthetic Data](#), ArXiv 2023.
- [5] **Alexander Raistrick***, Lahav Lipson*, Zeyu Ma*, Lingjie Mei, Mingzhe Wang, Yiming Zuo, Karhan Kayan, Hongyu Wen, Beining Han, Yihan Wang, Alejandro Newell, Hei Law, Ankit Goyal, Kaiyu Yang, and Jia Deng. [Infinite Photorealistic Worlds Using Procedural Generation](#). *IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.
- [6] **Alexander Raistrick**, Nilesh Kulkarni, and David F. Fouhey. [Collision Replay: What Does Bumping Into Things Tell You About Scene Geometry?](#) *British Machine Vision Conference (BMVC)*, 2021 (**Oral**).
- [7] [MRAT: The mixed reality analytics toolkit](#). Michael Nebeling, Maximilian Speicher, Xizi Wang, Shwetha Rajaram, Brian D Hall, Zijian Xie, **Alexander R. E. Raistrick**, Michelle Aebersold, Edward G Happ, Jiayin Wang, et al. *Conference on Human Factors in Computing Systems (CHI)*, 2020 (**Best Paper**).

AWARDS AND HONORS

Exemplar Mentor Award for Grad. Students and Postdocs - Princeton University - Spring 2024

Graduate Student Teaching Award - Princeton University - Fall 2023
Best Paper Award - “MRAT: The Mixed Reality Analytics Toolkit” - CHI 2020
Summa Cum Laude - University of Michigan, 2021
EECS Scholar Award - University of Michigan
James B. Angell Scholar - University of Michigan

EXPERIENCE

- Ph.D. Student — Princeton Vision and Learning Lab** September 2021 – present
– Working on synthetic data for 3D vision and robotics. Advised by Prof. Jia Deng.
- Undergraduate Research Assistant — Fouhey AI Lab** April 2020 – September 2021
– Researched single-view indoor floorplan reconstruction using weak supervision from robot collisions (6). Advised by Prof. David Fouhey.
- Software Engineering Intern — Microsoft** May – July 2019
– Implemented ML models for financial transaction categorization and tax audit failure prediction.
- Summer Research Assistant — Michigan Information Interaction Lab** August 2018 – April 2019
– Designed clustering algorithms and visualization for augmented reality interaction research (7). Advised by Prof. Michael Nebeling.
- Data Science Intern — NquiringMinds** July – August 2018
– Researched methods for anomaly detection on large maritime trajectory datasets, to identify smuggling and human trafficking.
- Summer Research Assistant — U-M MAVRIC Lab,** May – July 2018
– Engineered an autonomous vehicle interaction simulator for use in HCI research.
- Investigating Distributed Async SGD, Princeton COS598D (Systems & ML)** May 2022
– Investigated training speed & stability of asynchronous parameter-server stochastic gradient descent under varying communication constraints.

TEACHING

Princeton COS 324 — Introduction to Machine Learning (Grad. Teaching Award)	2023
Princeton COS 529 — Advanced Computer Vision	Fall 2022
U-M AI4ALL — Summer Outreach Program	Summer 2021
U-M EECS 280 — Programming and Intro Data Structures	Winter 2020, Fall 2020
U-M EECS 398 — System Design of a Search Engine	Fall 2019