

HAODA LI

☎ 306-987-2666 ✉ haoda_li@berkeley.edu 🌐 haoda-li.github.io

Education

University of California, Berkeley

M.Eng. in Electrical Engineering and Computer Science (GPA: 3.93/4.0)

August 2022 – May 2023

Berkeley, CA.

University of Toronto, St. George Campus

B.Sc. in Computer Science & Data Science (GPA: 3.91/4.0)

September 2017 – June 2022

Toronto, ON, Canada

Experiences

AniML, Inc.

Machine Learning Engineer

June 2023 – Present

Montreal, QC, Canada

- Joined as a founding engineer at AniML, developing the end-to-end solution for realistic 3D content creation using images and videos.
- Researched on neural rendering and 3D generative AI. Created solutions for the rapid reconstruction of high-fidelity objects.

Huawei Canada

Research Engineer Intern

May 2020 – August 2021

Markham, ON, Canada

- Developed cloud-based video editing applications on mobile devices with cutting-edge AI algorithms.
- Maintained the automated pipeline for model training and cloud deployment using Docker.
- Used OpenCV and C++ to create test systems for hand tracking and action recognition.

Researches

VIP Lab, University of California - Berkeley

Research student, supervised by Avidesh Zakhori

August 2022 – May 2023

Berkeley, CA, USA

- Researched on and published a novel method for improving quality and efficiency of 3D indoor reconstruction using low-cost micro drones.
- Surveyed on neural rendering methods and engineered on optimizations for capturing and modeling large, complex indoor environments.

SysNet Group, University of Toronto

Research student, supervised by Nandita Vijaykumar

January 2022 – June 2022

Toronto, ON, Canada

- Researched on novel methods for acceleration and edibility of neural radiance fields for scene representations.
- Developed CUDA accelerations kernels for GPU based point aggregations and differentiable physics based volume rendering.

PAIR Lab, Vector Institute

Research student, supervised by Animesh Garg

August 2021 – May 2022

Toronto, ON, Canada

- Researched on a novel method for robot to grasp and assemble objects using 3D computer vision.
- Designed a new simulation environment for 3D fractured object generations.

University Health Network

Research student, supervised by Bo Wang

September 2019 – April 2020

Toronto, ON, Canada

- Designed and created the interactive application for processing and visualizing high-dimensional cell RNA-seq data.
- Researched on acceleration methods for RNA-seq analysis with GPUs.

Publications

Ruofan Liang, Jiahao Zhang, **Haoda Li**, Chen Yang, Yushi Guan, Nandita Vijaykumar. "SPIDR: SDF-based Neural Point Fields for Illumination and Deformation", *CVPR 2023 Workshop on Advances in NeRF for the Metaverse*, 2023

Yun-Chun Chen, **Haoda Li**, Dylan Turpin, Alec Jacobson, Animesh Garg. "Neural Shape Mating: Self-Supervised Object Assembly with Adversarial Shape Priors", in *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2022

Varshanth R. Rao, Md Ibrahim Khalil, **Haoda Li**, Peng Dai, Juwei Lu. "Dual Perspective Network for Audio Visual Event Localization", in *European Conference on Computer Vision (ECCV)*, 2022

Varshanth R. Rao, Md Ibrahim Khalil, **Haoda Li**, Peng Dai, Juwei Lu. "Decompose the Sounds and Pixels, Recompose the Events", in *Conference on Artificial Intelligence (AAAI)*, 2022

Teaching Experience

CSC417H1/CSC2549H Physics based Animation

Teaching Assistant with Prof. David I.W. Levin

2021 Fall

University of Toronto

CSC311H5 Introduction to Machine Learning

Teaching Assistant with Prof. Anthony Bonner

2021 Fall

University of Toronto

CSC317H1 Computer Graphics

Teaching Assistant with Prof. David I.W. Levin and Prof. Alec Jacobson

2022 Winter

University of Toronto

Honours and Awards

UC Berkeley MEng Fung Excellence Scholarship

August 2022

Michael And Edward Dearden Scholarships

June 2022

Alen Milne McCombie Award

June 2022

Dr. James A. & Connie P. Dickson Scholarship In Science & Mathematics

October 2020

University College Special Admission Scholarships

September 2017

Dean's List Scholar

2017–2021, all years

Relevant Coursework

Computer Graphics: Physics-Based Animation; Geometry Processing; Virtual Reality and Immersive Computing; Computational Imaging; Parallel Computing

Computer Vision: Learning for 3D Vision; Visual Computing; Image Understanding; Digital Image Processing

Deep Learning: Neural Nets and Deep Learning; Probabilistic Learning and Reasoning; Machine Learning; Experimental Design for Machine Learning on Multimedia Data

Numerical Analysis: Numerical Methods; Nonlinear Optimizations; Real Analysis; Differential Geometry