Research Interest

I'm broadly interested in 3D computer vision, computer graphics, reinforcement learning, and machine learning.

Education

University of California, Berkeley

August 2022 - June 2023 (expected)

M.Eng. in Electrical Engineering and Computer Science

Berkeley, CA.

University of Toronto, St. George Campus

September 2017 – June 2022

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

Toronto, ON.

Publications

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 (Accepted)

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

Research Experience

Dept. of Computer Science, University of Toronto

January 2022 - June 2022

Research student, supervised by Nandita Vijaykumar

Toronto, ON

• Research on novel methods for acceleration and edibility of neural radiance fields for scene representation.

PAIR Lab, Vector Institute

August 2021 - May 2022

Research student, supervised by Animesh Garg

Toronto, ON

• Research on a novel method for robot to grasp and assemble objects using 3D computer vision.

Noah's Ark Lab, Huawei Canada

May 2020 - August 2021

Research Engineer Intern

Markham, ON

- Working on a novel method for event localization and classification in videos.
- Assisting research on self-supervised video indexing and retrieval.
- Researching and integrating video understanding methods for video editing applications.
- Assisting research on hand tracking and human action recognition.

Wang Lab, University Health Network

September 2019 - April 2020

Undergraduate Researcher, supervised by Bo Wang

Toronto, ON

- Designing and creating an interactive application for processing and visualizing high-dimensional data in single cell analysis.
- Researching on CUDA acceleration for single cell analysis algorithms.

Dept. of Computer Science, University of Toronto

January 2021 - June 2021

Research Assistant with Fanny Chevalier and Nathan Taback

Toronto, ON

• Working on a new R package for multiverse analysis education.

Teaching Experience

CSC417H1/CSC2549H Physics based Animation

Teaching Assistant with Prof. David I.W. Levin

CSC311H5 Introduction to Machine Learning

Teaching Assistant with Prof. Anthony Bonner

CSC317H1 Computer Graphics

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

2021 Fall

University of Toronto

2021 Fall

University of Toronto

2022 Winter

University of Toronto

Honours and Awards

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

University College Special Admission Scholarships

Dean's List Scholar

October 2020

September 2017

2017-2021, all years

Relevant Coursework

Computer Graphics: Physics-Based Animation; Geometry Processing; Computer Graphics

Computer Vision: Intro Visual Computing; Intro Image Understanding

Deep Learning: Neural Nets and Deep Learning; Probabilistic Learning and Reasoning; Intro Machine Learning

Numerical Analysis: Numerical Methods; Nonlinear Optimization; Intro Real Analysis

Theory of Computation: Algorithm Design, Analysis, and Complexity; Enriched Data Structures and Analysis;

Enriched Intro Theory of Computation