

## Education

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### Simon Fraser University, Canada

Computing Science, M.Sc.

Jun 2021 – Oct 2023

### Simon Fraser University, Canada

Computing Science, B.Sc.

Sep 2016 – Jun 2021

### Zhejiang University, China

Computer Science and Technology, B.Eng.

Sep 2016 – Jun 2021

## Publications

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### Habitat Synthetic Scenes Dataset (HSSD):

#### An Analysis of 3D Scene Scale and Realism Tradeoffs for ObjectGoal Navigation

Mukul Khanna\*, Yongsen Mao\*, Hanxiao Jiang, Sanjay Haresh, Brennan Schacklett, Dhruv Batra, Alexander Clegg, Eric Undersander, Angel Chang, Manolis Savva

arXiv preprint, 2023

[Project website](#), [Paper](#), [Code](#)

### MultiScan: Scalable RGBD scanning for 3D environments with articulated objects

Yongsen Mao, Yiming Zhang, Hanxiao Jiang, Angel X. Chang, Manolis Savva

Advances in Neural Information Processing Systems (NeurIPS), 2022

[Project website](#), [Paper](#), [Code](#)

### OPD: Single-view 3D Openable Part Detection

Hanxiao Jiang, Yongsen Mao, Manolis Savva, Angel X. Chang

European Conference on Computer Vision (ECCV), 2022, Oral

[Project website](#), [Paper](#), [Code](#)

## TA Experience

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### CMPT 361: Introduction to Computer Graphics

Jan 2022 – Apr 2022

## Work Experience

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### DaoAI Robotics Inc.

3D Vision Engineer (Undergraduate Coop)

Jan 2020 – Aug 2020

Vancouver, Canada

- Built CAD-based 3D object detection and 6-DoF pose estimation project for Random Bin Picking using point pair features (PPF) based method, the result surpassed the PCL's PPF Estimation implementation in both quantitative and qualitative terms
- Implemented boundary-to-boundary PPF algorithm, enabling the system to detect industrial flat metal sheets
- Accelerated the object pose estimation by using OpenMP and Thrust to achieve parallel PPF computation and matching
- Customized a 3D point cloud, 2D RGB and depth image visualization and interaction widget

## Honors and Awards

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### Undergraduate Graduation: Joint Honours with Distinction

Fall 2021

### Dean's Honour Roll

Fall 2019

## Activities

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### SFU-UBC AI Research Day

Present project MultiScan in oral and poster session

Dec 2022

### CS Research Day

Present project MultiScan in poster session

Dec 2019 – 2022