

Mingxuan Hong

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EDUCATION

National University of Singapore (NUS)

MEng Biomedical Engineering, supervised by Prof. Yueming Jin

Singapore

Aug 2023 - Present

The Chinese University of Hong Kong (CUHK)

BEng AI: Systems & Tech, Cumulative GPA: 3.79/4.0

Shatin, NT, Hong Kong SAR, China

Sept 2019 – May 2023

Relevant Courses: Data Structures, Discrete Math for Engineers, Fundamentals of AI, Numerical Optimization, Design and Analysis of Algorithms, Principles of Computer Graphics, Problem Solving by Programming

University of Pennsylvania (UPenn)

Exchange Program, GPA: 4.0/4.0

Philadelphia, PA, USA

Jan 2022 – May 2022

Relevant Courses: Automata, Computability and Complexity, Machine learning, Deep Learning

RESEARCH INTERESTS

- Computer Vision
- Medical Image Analysis

RESEARCH RELATED EXPERIENCE

Adapting 2D Image Models for 3D Semantic Segmentation

Singapore

Supervised by Prof. Yueming Jing, NUS

May 2023 – Present

- Working on 2D-to-3D adaptation for surgical video and 3D medical image semantic segmentation.

3D Object Detection for Autonomous Driving

Shatin, NT, Hong Kong SAR, China

Research Assistant, supervised by Prof. Chi-Wing Fu, CUHK

May 2021 – Jan 2022

- Proposed a 3D single-stage object detector (SSD) by simulating multi-modality on a single-modality input.
- Applied 4 levels of knowledge distillation to train the network to simulate multi-modality.
- Achieved state-of-the-art (SOTA) comparing with detectors on single-modality input, and surpassed the baseline multi-modality SSD on the key NDS metric.
- Successfully filled ~72% mAP gap between the single- and multi-modality SSDs.
- One paper accepted by CVPR 2022.

PUBLICATIONS

- Wu Zheng, **Mingxuan Hong**, Li Jiang, Chi-Wing Fu. Boosting 3D Object Detection by Simulating Multimodality on Point Clouds. In *CVPR*, 2022.

HONORS AND AWARDS

- Bronze Award for Outstanding Academic Performance, 2023
- Yu To Sang Memorial Scholarship 2021-2022, 2022-2023
- Arthur and Louise May Memorial Scholarships 2020-2021
- Wu Chung Scholarships and United College Head's List 2020-2021
- Elite Stream Scholarship 2020-2021
- Dean's List 2020-2021
- Chiap Hua Iron and Steel Works Ltd Scholarship and United College Head's List 2019-2020
- Elite Stream Scholarship 2019-20
- Dean's List 2019-2020
- Honours at Entrance 2019-2020

SKILLS

Languages: Chinese (Native), English (Proficient: TOEFL 113)

Programming Experience: C, Python, Mathematica

Libraries: pandas, NumPy, Matplotlib, PyTorch

Academic Writing and Presentation: LATEX, PowerPoint