Yingshan Chang

(1)412-807-0419

Pittsburgh, PA

yingshac@cs.cmu.edu

https://zdxdsw.github.io/

Research Keywords: Multimodal + Grounding / Fusion / Reasoning

Key to my research goal is answering the following questions:

1) How to endow machines with robust skills that can be compositionally built up to achieve systematic generalization?

2) What appropriate roles can language play in (1)? We can draw inspiration from how humans use language to:

- Acquire knowledge (language as **instruction**, human–>computer);
- Externalize thoughts (language as **explanation**, computer–>human);
- Exchange information (language as **communication**, computer–>computer).

EDUCATION

PhD in Language Technologies, *Carnegie Mellon University*	2022 —
MS in Language Technologies, *Carnegie Mellon University* **GPA: 4.12/4.3**	2020 — 2022
BS in Computer Science, *Hong Kong University of Science and Technology* **GPA: 4.038/4.3**	2016 — 2020
Outbound Exchange, *Georgia Institute of Technology* **GPA: 4.0/4.0**	**Spring 2019**
AEARU STEM Summer Camp, *Peking University* **GPA: 93/100**	**Summer 2018**

RESEARCH EXPERIENCE

What is in a Patch? Efficient Visual Grounding via Patch Affinity	2022
Advised by Yonatan Bisk and Jianfeng Gao, Carnegie Mellon University and Microsoft Research	
WebQA: Multihop and Multimodal QA Paper(CVPR22) Leaderboard Website Competition(NIPS22)	2020 — 2022
Advised by Yonatan Bisk, Carnegie Mellon University	
Low-Light Video Enhancement Using Deep Learning Thesis Video	2019 — 2020
Advised by Qifeng Chen, Hong Kong University of Science and Technology	
Event-to-Sentence Using BERT in Automatic Story Generation Report	**Summer 2019**
Advised by Mark Riedl, Georgia Institute of Technology	
Building a Blockchain and Smart Contract Application	**Fall 2018**
Advised by Shing-Chi Cheung, Hong Kong University of Science and Technology	
Smart Home Solutions with Gesture Interaction	**Summer 2017**
Advised by Xiaojuan Ma, Hong Kong University of Science and Technology	

INDUSTRY EXPERIENCE

Research Intern, *Microsoft Research*	**Summer 2022**
Software Engineering Intern, *Bank of China Software Center*	**Summer 2018**

PROFESSIONAL SERVICE

Conference Review Committees

CVPR 2023
ACL 2023
TMLR 2022
EMNLP 2022
NeurIPS 2022

Departmental Service

Teaching Assistant: 11777 Multimodal Machine Learning, *Carnegie Mellon University*	**Spring 2023**
MLT/PhD Admissions Committee Student Volunteer, *Carnegie Mellon University*	**2022 — 2023**
Graduate Application Support Program Mentor, *Carnegie Mellon University*	**2021 — 2022**
Student Ambassador, *Hong Kong University of Science and Technology*	**2017 — 2020**
Student Lab Helper, *Hong Kong University of Science and Technology*	**Fall 2018**

Awards

Carnegie Mellon University Research Fellowship, *Carnegie Mellon University*	**2020 – 2022**
Academic Achievement Medal, *Hong Kong University of Science and Technology*	**2020**
Bachelor Degree First Class Honor, *Hong Kong University of Science and Technology*	**2020**
Dean's List, *Hong Kong University of Science and Technology*	**2016 — 2020**
University's Scholarship Scheme for Continuing Undergraduate Students	**2016 — 2019**
The Cheng Foundation Scholarships for Chinese Mainland Undergraduate Students	**2018 — 2019**
The Hong Kong Electric Co.Ltd. Scholarship	**2017 — 2018**
Mingxi Youth Award Scheme	**2017 — 2018**

Skills

Tools and Programming	Python, PyTorch, Git, LaTeX, MarkDown, Numpy, HTML/CSS, JavaScript, Java, Matlab, R, d3
Communication	Mandarin (native), English (proficient), French (beginner)