

Jialu Li

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EDUCATION	University of North Carolina, Chapel Hill , Chapel Hill, North Carolina Ph.D., Computer Science <i>Advisor: Professor Mohit Bansal</i> August 2020 - Present
	Cornell University , Ithaca, New York M.Eng., Computer Science <i>Advisor: Professor Claire Cardie</i> August 2018 - December 2020
	Shanghai JiaoTong University , Shanghai, China Major: B.S., Computer Science Minor: B.E., Finance September 2014 - June 2018
RESEARCH INTEREST	Multimodal NLP, Vision-and-Language Navigation
PUBLICATION	Scaling Data Generation in Vision-and-Language Navigation <i>ICCV, 2023, (Oral Presentation)</i> Wang Zun*, Jialu Li* , Yicong Hong*, Yi Wang, Qi Wu, Mohit Bansal, Stephen Gould, Hao Tan, Yu Qiao * Equal contribution
	Improving Vision-and-Language Navigation by Generating Future-View Image Semantics <i>CVPR, 2023</i> Jialu Li , and Mohit Bansal
	EnvEdit: Environment Editing for Vision-and-Language Navigation <i>CVPR, 2022</i> Jialu Li , Hao Tan, and Mohit Bansal
	CLEAR: Improving Vision-Language Navigation with Cross-Lingual, Environment Agnostic Representations <i>Findings of NAACL, 2022</i> Jialu Li , Hao Tan, and Mohit Bansal
	NDH-Full: Learning and Evaluating Navigational Agents on Full-Length Dialogue <i>EMNLP, 2021</i> Hyoungun Kim, Jialu Li , and Mohit Bansal
	Improving Cross-Modal Alignment in Vision Language Navigation via Syntactic Information <i>NAACL, 2021 (short papers)</i> Jialu Li , Hao Tan, and Mohit Bansal
	Exploring the Role of Argument Structure in Online Debate Persuasion <i>EMNLP, 2020 (short papers)</i> Jialu Li , Esin Durmus, and Claire Cardie
	PanoGen: Text-Conditioned Panoramic Environment Generation for Vision-and-Language Navigation <i>Preprint, under submission at NeurIPS 2023</i> Jialu Li , and Mohit Bansal
	Anonymous Submission on Data Augmentation for Outdoor Vision-Language-

Navigation

Under submission at AAAI 2024

Jialu Li, Aishwarya Padmakumar, Gaurav Sukhatme, and Mohit Bansal

ACADEMIC RESEARCH

University of North Carolina – Chapel Hill

August 2020 - Present

Advisor: Professor Mohit Bansal

- Enhanced the navigation agent with the ability to generate future view semantics, and utilized the generation ability to aid instruction guided navigation.
- Learned better multi-lingual instruction representation and environment agnostic visual representation with contrastive learning for Vision-and-Language Navigation.
- Proposed an environment-level data augmentation method for Vision-and-Language Navigation to improve agents' generalization to unseen environments.
- Proposed a new task setup that encourages instruction following in Vision-and-Dialogue navigation.
- Utilized syntax information from dependency tree to enhance alignment between the instruction and the visual scenes in Vision-and-Language Navigation tasks.

Cornell University

February 2019 - May 2020

Advisor: Professor Claire T. Cardie

- Explored the relationship between argument structure and persuasion in online debates

INDUSTRY EXPERIENCE

Apple

May 2023 - August 2023

Machine Learning Research Intern

Mentor: Zhe Gan, Zirui Wang, Bowen Zhang

Amazon

May 2022 - November 2022

Applied Scientist Intern

Mentor: Gaurav Sukhatme, Aishwarya Padmakumar

TEACHING EXPERIENCE

Natural Language Processing (CS 4740 / CS 5740)

Cornell University

Graduate Teaching Assistant

August 2019 - December 2019

Instructor: Professor Claire T. Cardie

SERVICE

Reviewer for ARR, ACL 2022, 2023 EMNLP 2022, NAACL 2022, EACL 2022, 2023

Reviewer for ACM MM 2022, AAAI 2023, CVPR 2023, ICCV 2023

HONORS AND AWARDS

Academic Excellence Scholarship (Third-Class) for 2016-2017 academic year

Academic Excellence Scholarship (Third-Class) for 2015-2016 academic year

Academic Excellence Scholarship (Second-Class) for 2014-2015 academic year

REFERENCES

Mohit Bansal

John R. & Louise S. Parker Professor

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Lillian Lee
Charles Roy Davis Professor

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Weinan Zhang
Associate Professor

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SKILLS

Programming Languages: Python, C++
Machine Learning Frameworks: Pytorch