

# Tian Yun

tttyuntian.github.io | tian\_yun@brown.edu | (530) 551-9835

## EDUCATION

### Brown University

*Doctor of Philosophy in Computer Science*

Providence, RI

*September 2022 - Present*

### Brown University

*Master of Science in Computer Science*

Providence, RI

*August 2020 - May 2022*

### Wake Forest University

*Bachelor of Science in Mathematical Statistics*

Winston-Salem, NC

*Honors Bachelor of Science in Computer Science*

*August 2016 - May 2020*

## RESEARCH EXPERIENCE

### LUNAR Lab & PALM Lab, Brown University

*Co-advised by Ellie Pavlick and Chen Sun*

Providence, RI

*August 2020 – Present*

- Investigated whether vision-and-language (VL) pretraining yields better linguistic representations.
- Researched whether pretrained vision-and-language (VL) models learn composable primitive concepts.
- Studied how grounded world representations emerge in embodied sequence modeling.

### Humans to Robots Lab, Brown University

*Advised by Stefanie Tellex*

Providence, RI

*March 2021 – Present*

- Proposed a situation-aware coaching dialogue system that guides users to accomplish daily tasks by reasoning over uncertainties in the environment and asking clarification questions to the users.

### BigScience Workshop, HuggingFace

*Advised by Ellie Pavlick*

Providence, RI

*May 2021 – Jan 2023*

- Co-led the engineering team in Evaluation working group to build an evaluation pipeline with a large set of prompted datasets for large language models.

### DataMine Research Group, Wake Forest University

*Advised by Natalia Khuri*

Winston-Salem, NC

*August 2019 – August 2020*

- Built a pipeline with machine learning algorithms to extract information about safety and efficacy of drugs in pediatric populations from approved drug product labels.

## PUBLICATIONS

[1] *Emergence of Grounded Representations in Embodied Sequence Modeling*

**Tian Yun\***, Zilai Zeng\*, Kunal Handa, Ashish Thapliyal, Bo Pang, Ellie Pavlick, Chen Sun

*EMNLP 2023*

[2] *Improved Inference of Human Intent by Combining Plan Recognition and Language Feedback*

Ifrah Idrees, **Tian Yun**, Naveen Sharma, Nakul Gopalan, Stefanie Tellex, George Konidaris

*IROS 2023*

[3] *Do Vision-Language Pretrained Models Learn Primitive Concepts?*

**Tian Yun**, Usha Bhalla, Ellie Pavlick, Chen Sun

*TMLR*

[4] *Does Vision-and-Language Pretraining Improve Lexical Grounding?*

**Tian Yun**, Chen Sun, Ellie Pavlick

[5] *Mining Biomedical Texts for Pediatric Information*

**Tian Yun**, Deepti Garg, Natalia Khuri

*14th International Joint Conference on Biomedical Engineering Systems and Technologies, 2021*

## PREPRINTS

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[6] *BLOOM: A 176B-Parameter Open-Access Multilingual Language Model*

Teven Scao et al.

*arXiv preprint arXiv:2211.05100 (2022)*

## PROFESSIONAL EXPERIENCE

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### Google

Mountain View, USA

*Student Researcher, Advised by Bo Pang and Ashish Thapliyal*

*June 2022 – August 2022*

- Studied how well vision-and-language models can leverage learned visual commonsense knowledge to adapt to new visual commonsense knowledge in synthetic environment.

### Tencent

Shenzhen, China

*Data Analyst Intern*

*May 2019 – August 2019*

- Extracted and processed billions of rows of data to monitor QQ Kandian and Kandian APP using Hive-SQL.
- Used Flask and Git Webhook to develop a back-end service to automate script uploading and task scheduling.
- Evaluated and predicted the customer attrition in the following week (AUC score of 0.9173).

## TEACHING ASSISTANTSHIPS

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**CSCI-1470/2470: Deep Learning, Brown University**

*September 2021 – December 2021*

*Teaching Assistant*

Instructor: Chen Sun

**CSCI-1460: Computational Linguistics, Brown University**

*January 2021 – April 2021*

*Teaching Assistant*

Instructor: Eugene Charniak

**Computer Science Peer Tutor, Wake Forest University**

*September 2017 – May 2020*

## SERVICE (\*outstanding reviewer)

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### Conference Reviewer

- Computer Vision and Pattern Recognition (CVPR) 2022, 2023
- European Conference on Computer Vision (ECCV) 2022
- International Conference on Computer Vision (ICCV) 2023\*