

Tianze (Etha) Hua

CONTACT INFORMATION	257 Thayer Street Providence, RI 02906	tianze_hua@brown.edu ethahtz.github.io (617)-460-0626
EDUCATION	Brown University , Providence, RI Ph.D. in Computer Science	Expected to start in Sept 2025
	Brown University , Providence, RI M.S. in Computer Science	Sept 2023 - May 2025
	<ul style="list-style-type: none">• Relevant Coursework: <i>Computational Linguistics, Deep Learning, Topics in Self-Supervised Learning, Interpretability of Language Models</i>	
	Tufts University , Medford, MA B.S. in Computer Science and Philosophy, GPA: 3.97/4.00	Sept 2019 - May 2023
	<ul style="list-style-type: none">• Relevant Coursework: <i>Introduction to Machine Learning and Data Mining, Linear Algebra, Algorithms, Computation Theory, Introduction to Linguistics, Formal Logic, Epistemology</i>• Honors: <i>summa cum laude; Helen Morris Cartwright Prize in Philosophy</i>	
RESEARCH EXPERIENCE	LUNAR Lab, Brown University , Providence, RI <i>Advised by Prof. Ellie Pavlick</i>	Sept 2023 - present
	<ul style="list-style-type: none">• Studying the effect of overlapping task-specific subnetworks on task interference during multi-tasking in pretrained transformer language models• Investigated how vision-language models resolve conflicts between visual and textual inputs• Designed a synthetic environment to study multilingual representation alignment and cross-lingual transfer in multilingual language models	
	Levin Lab, Tufts University , Medford, MA <i>Advised by Gizem Gumuskaya</i>	May 2022 - May 2023
	<ul style="list-style-type: none">• Formalized a computational model of staged biobot self-assembly based on rotatable Wang tiles• Designed and implemented a shape compiler, which analyzes input target shapes and computes specifications of constituent biobots with staged choreography	
PUBLICATIONS	<i>mOthello: When Do Cross-Lingual Representation Alignment and Cross-Lingual Transfer Emerge in Multilingual Models?</i> Tianze Hua* , Tian Yun*, and Ellie Pavlick Findings of NAACL 2024	
WORKING PAPERS	<i>How Do Vision-Language Models Process Conflicting Information Across Modalities?</i> Tianze Hua* , Tian Yun*, and Ellie Pavlick <i>Effects of Task-Specific Subnetwork Overlap on Task Interference in Multitasking Language Models</i> Tianze Hua , Jacob Russin, and Ellie Pavlick	
PROJECTS	NASA Image Alt-text Generation for the Visually Impaired , Providence, RI <i>Advised by Thomas Sgouros</i>	Sept 2023 - Dec 2023
	<ul style="list-style-type: none">• Designed an InstructBLIP-powered alternative-text generator to improve accessibility for visually impaired users, focusing on astronomical images released by the Chandra Observatory	

- Developed specialized evaluation techniques to assess the accuracy and quality of alternative-text in astronomical contexts

WORKING
EXPERIENCE

O'Melveny & Myers LLP, Beijing, China

Summer Internship

May 2021 - Aug 2021

- Analyzed and summarized the financial and product status of biotech companies listed on the Hong Kong Stock Exchange under Chapter 18A listing rules
- Conducted legal research on regulations of permanent establishments under PRC law
- Edited and proofread prospectus drafts of listing companies for submission

TEACHING
EXPERIENCE

Brown University, Providence, RI

Teaching Assistant

Sept 2023 - present

CSCI 1460: Computational Linguistics (Fall 2024)

CSCI 1260: Compilers and Program Analysis (Fall 2023)