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
<div align="right">Expected to start in Sept 2025</div>

Brown University, Providence, RI
M.S. in Computer Science
<div align="right">Sept 2023 - May 2025</div>

- Relevant Coursework: *Computational Linguistics*, *Deep Learning*, *Topics in Self-Supervised Learning*, *Interpretability of Language Models*

Tufts University, Medford, MA
B.S. in Computer Science and Philosophy, GPA: 3.97/4.00   Sept 2019 - May 2023

- Relevant Coursework: *Introduction to Machine Learning and Data Mining*, *Linear Algebra*, *Algorithms*, *Computation Theory*, *Introduction to Linguistics*, *Formal Logic*, *Epistemology*
- Honors: *summa cum laude*; *Helen Morris Cartwright Prize in Philosophy*

RESEARCH
EXPERIENCE

LUNAR Lab, Brown University, Providence, RI
Advised by Prof. Ellie Pavlick
<div align="right">Sept 2023 - present</div>

- Studying the effect of overlapping task-specific subnetworks on task interference during multitasking 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
Advised by Gizem Gumuskaya
<div align="right">May 2022 - May 2023</div>

- 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

mOthello: When Do Cross-Lingual Representation Alignment and Cross-Lingual Transfer Emerge in Multilingual Models?
Tianze Hua*, Tian Yun*, and Ellie Pavlick
Findings of NAACL 2024

WORKING PAPERS

How Do Vision-Language Models Process Conflicting Information Across Modalities?
Tianze Hua*, Tian Yun*, and Ellie Pavlick

Effects of Task-Specific Subnetwork Overlap on Task Interference in Multitasking Language Models
Tianze Hua, Jacob Russin, and Ellie Pavlick

Accessing the Universe via Algorithm: Automating alt-text Generation
Areshva Aisha Mir, **Tianze Hua**, Anna Ohrt, Sarah Kane, Nancy Wolk, Jessica Schonhut-Stasik, Kimberly Arcand, Tom Sgouros

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)