

# Tiwa Eisape

Psycholinguistics, Natural language processing, Machine learning  
eisape@mit.edu • eisape.github.io

## Education

2019 – Massachusetts Institute of Technology  
Ph.D, Cognitive Science  
Advisors: Roger Levy, Yoon Kim  
Committee: Joshua Tenenbaum, Edward Gibson, Jacob Andreas  
GPA: 5.0/5.0

2015 – 2019 Boston College  
B.S, Computer Science  
Advisors: Joshua Hartshorne, Stefano Anzellotti  
Major GPA: 3.9/4.0

## Academic Postions

2022 – Student Representative to the Board, Cognitive Science Society

## Employment

2019 Vimeo Applied Machine Learning  
Research Intern

## Honors

2021 Graduate Research Fellowship (National Science Foundation)  
2019 GEM Full Fellowship (InterActiveCorp/GEM Consortium)  
2021 Predoctoral Fellowship (Ford Foundation)  
*honorable mention*  
2019 Dean of Sciences Fellowship (MIT)  
2019 Presidential Fellowship (MIT)  
*awarded & declined*  
2019 Matthew R. Copithorne Scholarship (Boston College)  
2016 Ronald E. McNair Scholarship (The Federal TRIO Programs)  
2021 Walle Nauta Teaching Award (MIT)

## Publications

### Conference Papers

**Eisape, T.**, Gangireddy, V.<sup>^</sup>, Levy, R. & Kim, Y. (2022). Probing for Incremental Parse States in Autoregressive Language Models. *Under Review at the 2022 Conference on Empirical Methods in Natural Language Processing, Proceedings of the 24th Conference on Computational Natural Language Learning.*

Liu, Z., **Eisape, T.**, Prud'hommeaux, E., & Hartshorne, J. (2022). Data-driven Crosslinguistic Syntactic Transfer in Second Language Learning. In *Proceedings of the 44th Annual Meeting of the Cognitive Science Society.*

Tucker, M., **Eisape, T.**, Qian, P., Levy, R., & Shah, J. (2022). When Does Syntax Mediate Neural Language Model Performance? Evidence from Dropout Probes. In *Proceedings of the 21st Annual Conference of the North American Chapter of the Association for Computational Linguistics: Human Language Technologies (NAACL).*

Chen, R.<sup>^</sup>, Levy, R., & **Eisape, T.** (2021). On Factors Influencing Typing Time: Insights from a Viral Online Typing Game. In *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society.*

**Eisape, T.**, Zaslavsky, N., & Levy, R. (2020). Cloze Distillation: Improving Neural Language Models with Human Next-Word Predictions. In *Proceedings of the 24th Conference on Computational Natural Language Learning.*

**Eisape, T.**, Levy, R., Tenenbaum, J., & Zaslavsky, N. (2020). Toward human-like object naming in artificial neural systems. In *The Bridging AI and Cognitive Science workshop at the 8th International Conference on Representation Learning.*

### Abstracts & Posters

Chen, R.<sup>^</sup>, Levy, R., & **Eisape, T.** (2021). The Effect of Context on Typing Time: Evidence from 100,000 TypeRacers. In *Proceedings of the 34th Annual CUNY Conference on Human Sentence Processing.*

**Eisape, T.**, Merrill, W., Dietz, S., & Hartshorne, J. (2020). Grammatical Accents: Using Machine Learning to Quantify Language Transfer. In *Proceedings of the 33rd Annual CUNY Conference on Human Sentence Processing.*

**Eisape, T.**, Merrill, W., Dietz, S., & Hartshorne, J. (2018). Grammatical Accents: Using Machine Learning to Quantify Language Transfer. In *Proceedings of the 43rd Annual Meeting of the Cognitive Science Society*.

## **Preprints**

**Eisape, T.**, Grasso, S., Kurt, L., Lim, C., & Hartshorne, J. K. (2022). Replication of Conway and Christiansen (2005) Modality-Constrained Statistical Learning of Tactile, Visual, and Auditory Sequences.

Choong, H., **Eisape, T.**, ... & Hartshorne, J. K. (2018). Fourth Replication of Saffran, Newport, & Aslin (1996) Word segmentation: The role of distributional cues.

<sup>^</sup> denotes undergraduate students mentored

## **Teaching**

### **Graduate courses**

(Spring) 2021 Teaching assistant, Cognitive Science (MIT)  
(Fall) 2020 Teaching Assistant, Computational Cognitive Science (MIT)  
(Fall) 2018 Teaching Assistant, Computational Models of Cognition (Boston College)

### **Undergraduate courses**

(Fall) 2018 Teaching Assistant, Data Mining (Boston College)  
(Spring) 2019 Teaching Assistant, Algorithms (Boston College)  
(Spring) 2018 Teaching Assistant, Computer Science I (Boston College)  
(Spring) 2018 Teaching Assistant, Personal and Social Responsibility (Boston College)  
(Fall) 2018 Teaching Assistant, Personal and Social Responsibility (Boston College)  
(Fall) 2017 Teaching Assistant, Personal and Social Responsibility (Boston College)

## **Talks**

2021 Brain and Cognitive Sciences' Cog Lunch, MIT  
2021 How Can Findings about the Brain Improve AI Systems workshop, ICLR  
2021 Wehbe Lab, Carnegie Mellon University  
2021 EdinburghNLP, The University of Edinburgh  
2020 The Conference on Computational Natural Language Learning (CoNLL)  
2020 Brain and Cognitive Sciences' Cog Lunch, MIT  
2021 Psycholinguistics Coffee, The University of Edinburgh  
2020 Bridging AI and Cognitive Science workshop, ICLR  
2020 The Language Learning Lab, Boston College  
2019 Machine Learning Reading Group, Vimeo  
2018 The Atlantic Coast Conference Meeting of the Minds  
2017 Ronald E. McNair Scholarship Research Symposium

## **Organizing**

### **Conferences**

2021 Technical Session Chair, Conference of the Cognitive Science Society

### **Speaker Series/Reading Groups**

2022 CompLang, MIT

2019 Machine learning reading group, Vimeo

### **Research Assistants**

2022 - Vineet Gangireddy, Applied Mathematics (Harvard)

2022 - Jesus Crespo, Computation and Cognition (MIT)

2022 - Nicole Wong, Computer Science (MIT)

2022 Heidi Lei, Mathematics (MIT)

2021 Vinh Le, Computation and Cognition (MIT)

2020 Robert Chen, Computer Science (MIT)

2020 Carl Joshua Quines, Mathematics (MIT)

### **Professional Service**

2020 - Diversity Ambassador, Office of Graduate Education, (MIT)

2022 MIT Summer Research Program Mentor, Office of Graduate Education, (MIT)

2020 Reviewer, DataKind/Data.org

*Inclusive Growth & Recovery Challenge*

2017 Tutor, Resilient Coders

2018 Preceptor, Options Through Education (Boston College)

2017 Council Member, PULSE Program for Service Learning (Boston College)

**Reviewing (journals):** Openmind ('21)

**Reviewing (conferences):** Cogsci ('21)

### **Misc.**

2016 Captain, Boston College Varsity Men's Rowing