

SARA SWORDS

EMAIL: saramswords@gmail.com | WEBSITE: saraswords.github.io

EDUCATION

The George Washington University School of Medicine and Health Sciences
Post-Baccalaureate Certificate in Pre-Medicine
GPA: 4.0

Ashburn, VA
2025 – Present

University of Michigan
B.A. in Linguistics
GPA: 3.73

Ann Arbor, MI
2016 – 2020

RESEARCH/CLINICAL EXPERIENCE

Massachusetts Institute of Technology
McGovern Institute for Brain Research

Cambridge, MA

Technical Research Associate

2022 – 2025

- Perform precision fMRI and statistical analyses to determine the functional topography of high-level cognitive networks in lesioned brains
- Lesion-mask severely anatomically atypical brains for data processing and analysis
- Design experimental stimuli from linguistic corpora

Project Coordinator – Interesting Brains

2022 – 2025

- Recruit special population participants, nationally and internationally, to create a dataset of anatomically atypical brain data
- Collect a neuroimaging and behavioral dataset of 45+ adults and children with brain lesions

Vanderbilt University Medical Center
Bill Wilkerson Center

Nashville, TN

Hearing and Speech Technician

2022 – 2022

- Aided speech language pathologists, occupational and physical therapists in communication and feeding intervention for high-support needs, nonverbal autistic children aged 5 months to 5 years
- Conducted bilingual (English, Spanish) group therapy for children with Developmental Language Disorders from non-English speaking homes

TEACHING/MENTORSHIP

Massachusetts Institute of Technology
Undergraduate Student Researcher Mentor
• Josleen St. Luce (MIT Undergraduate Researcher)

Cambridge, MA
2023

Teaching Assistant

2023

- 9.39 “Language in the Mind and Brain”

PUBLICATIONS

Swords, S., Kean, H., Wolna, A., & Fedorenko, E. (in prep.). The case of a single hemisphere supporting all major functional networks: Language, Multiple Demand, and Theory of Mind systems.

Wolna, A., **Swords, S.**, Wright, A., Szewczyk, J., Diaz, M., Domagalik, A., Szwed, M., Wodniecka, Z., & Fedorenko, E. (in prep.). The language network, Broca's area, and motor cortex support/implement distinct stages of language production.

Kean, H., Wolna, A., **Swords, S.**, Jhingan, N., Poliak, M., Nieto-Castañón, A., Shewmon, A., Richardson, M., & Fedorenko, E. (in prep.). Functional specificity is a core principle of human brain organization, as revealed by highly anatomically atypical brains.

Malik-Moraleda, S., Taliaferro, M., Shannon, S., Jhingan, N., **Swords, S.**, Peterson, D. J., Frommer, P., Okrand, M., Sams, J., Cardwell, R., Freeman, C., & Fedorenko, E. (2025). Constructed languages are processed by the same brain mechanisms as natural languages. *Proc. Natl. Acad. Sci. U.S.A.*

POSTERS

Kean, H., Wolna, A., **Swords, S.**, Jhingan, N., Shewmon, A., Richardson, M., & Fedorenko, E. (2024). Functional specificity is a core principle of human brain organization, as revealed by highly anatomically atypical brains. Poster session presented at the *Society for the Neurobiology of Language*, Brisbane, AU.

PRESS

Science News, “Elyse G.’s brain is fabulous. It’s also missing a big chunk” 2023

- Covered findings from ongoing Interesting Brains project research exploring the neuroplasticity of lesioned brains
- <https://www.sciencenews.org/article/brain-missing-chunk-neuroplasticity>

MIT News, “Studies of unusual brains reveal critical insights into brain organization, function” 2023

- Covered findings from ongoing Interesting Brains project research with emphasis on language processing in lesioned brains
- <https://news.mit.edu/2023/studies-of-unusual-brains-reveal-insights-brain-organization-function-0221>

The New York Times, “The Curious Hole in My Head” 2022

- Covered findings from ongoing Interesting Brains project research from the perspective of a project participant
- <https://www.nytimes.com/2022/09/04/science/brain-language-research.html>

AWARDS

MIT Spot Award (2x)	2024
University Honors (4x)	2016, 2017, 2018, 2019
Award for Excellence in Chinese Language	2019
James B. Angell Scholar	2018
EECS Showcase J.P. Morgan Session Winner	2018
William J. Branstrom Freshman Prize	2017
Annual Award for Excellence in Czech Language Studies	2017
Czech Language Studies Scholarship	2017