Andrii Zahorodnii

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EDUCATION

Massachusetts Institute of Technology February 2026
Master of Engineering in Computer Science and Brain and Cognitive Sciences [GPA: 5.0/5.0] Cambridge, MA, USA

Massachusetts Institute of Technology May 2024
Bachelor of Science in Computer Science and Brain and Cognitive Sciences [GPA: 5.0/5.0] Cambridge, MA, USA

EXPERIENCE

Member of Technical Staff February 2026 - Present
Merge Labs San Francisco, CA

- Bridging biological and artificial intelligence to maximize human ability, agency, and experience. NeuroML and Human Neuro teams.
- Intersection of neuroscience and machine learning: representation learning, brain foundation models

McGovern Institute for Brain Research at MIT February 2024 - Present
Graduate Researcher → Research Affiliate, MIT Fiete Lab (Prof. Ila Fiete) Cambridge, MA

- Modeling neural dynamics of human intracranial data (sEEG/ECoG), in order to build predictive models of neural responses to sensory stimuli and direct intracranial electrical stimulation. The goal is to optimize stimulation protocols to achieve desired, pre-determined stimulation responses in the brain.
- Leading a team of 3 undergraduate & master's students. PyTorch, GPU-optimized computing, large-scale self-supervised training runs.
- Created the Neuroprobe benchmark to evaluate foundation models of intracranial neural activity based on a publicly available neural dataset (BrainTreebank; sEEG; Zahorodnii et al. 2025).

Research Fellow May 2025 - Present
Beth Israel Deaconess Medical Center (under Dr. Joshua Aronson) Boston, MA

- Established the collaboration with my P.I. (Prof. Ila Fiete's) group at MIT, with my role in the design of novel sEEG experiments: studying rapid processing of visual stimuli and eliciting brain responses to direct intracranial electrical stimulation.
- Drafted and submitted the experimental protocol for IRB review.
- Developed the software for the SEEG Rapid Serial Visual Presentation (RSVP) paradigm task, and currently am enrolling SEEG patients at BIDMC to the study and leading the data collection.

Undergraduate Research Assistant June 2022 - February 2024
MIT MetaConscious Group (Prof. Guangyu Robert Yang) Cambridge, MA

- Mechanistically interpreted the infinite space of mechanisms that neural networks can use to prevent new sensory inputs from overwriting memories. Proposed that flexibly combining multiple mechanisms is a common strategy.
- Analyzing monkey brain data, identified differences in strategies of artificial and biological neural networks.

Undergraduate Research Assistant June 2023 - August 2023
ShineLab at the University of Sydney (P.I. James M. Shine) Sydney, Australia

- Collaborating with members of the lab, built models and developed new analysis methods to investigate neuromodulatory influence on cognitive processing in the human brain.

PUBLICATIONS

Zahorodnii, A.*, Wang, C.*, Chau, G.*, Stankovits, B., Moraitaki, C., Gross, E., Brady, A., Barbu, A., Katz, B., Fiete, I. R. (2025, arXiv). *Neuroprobe: Evaluating Intracranial Brain Responses to Naturalistic Stimuli.*

Zahorodnii, A., Mendoza-Halliday, D., Martinez-Trujillo, J. C., Qian, N., Desimone, R., Cueva, C. J. (2025, bioRxiv, under revision at Nature Neuroscience). *Overcoming Sensory-Memory Interference in Working Memory Circuits.*

Zahorodnii, A. (2025). *Improving World Models Using Linear Probes.* ICLR2025 Workshop on World Models & arXiv.

Zahorodnii, A., van den Bosch, J.J.F., Charest, I., Summerfield, C., Fiete, I. R. (2025, arXiv). *Paper Quality Assessment Based on Individual Wisdom Metrics from Open Peer Review.*

Tan, J. B., Müller, E., **Zahorodnii, A.**, Shine, J. M. (2024). *The Engagement of the Cerebellum and Basal Ganglia Enhances Expertise in a Sensorimotor Adaptation Task.* Imaging Neuroscience, 2:1-20. MIT Press.

Zahorodnii, A., Yanovsky, D. (2025). *Project Jenkins: Monkey Thinks, Robot Moves... and Back?* MIT (arXiv).

CONFERENCE POSTER PRESENTATIONS

Zahorodnii, A., Cueva, C. J. (2023). *Overcoming sensory-memory interference in working memory circuits.* Cognitive Computational Neuroscience (CCN).

Zahorodnii, A., Mendoza-Halliday, D., Qian, N., Desimone, R., Cueva, C. J. (2024). *Overcoming sensory-memory interference in working memory circuits.* Cognitive Computational Neuroscience (CCN).

HONORS & AWARDS

Elected Full Member — Sigma Xi, The Scientific Research Honor Society — September 2026

Robert J. Glushko Prize for Outstanding Research in Cognitive Sciences — Massachusetts Institute of Technology — April 2025

Schwarzman Scholarship — January 2025

Cerebras Fellow — December 2024

Outstanding Undergraduate Academic Award (2x) — Dept. of Brain and Cognitive Sciences, MIT — April 2024, May 2023

Outstanding Event Award - TEDxMIT (2x) — Massachusetts Institute of Technology — May 2023, May 2022

Award of the President of Ukraine Volodymyr Zelenskyy — Office of the President of Ukraine — July 2020

SILVER MEDAL — International distributed Physics Olympiad — December 2020

BRONZE MEDAL — International Zhautykov Olympiad, physics team — January 2020, Kazakhstan

TEACHING EXPERIENCE

Teaching Assistant in Machine Learning June-December 2024 & June-December 2025

Break Through Tech AI at the MIT Schwarzman College of Computing Cambridge, MA

- Bridge the talent gap for women and underrepresented genders in computing fields. I directly mentor six groups of university students, with each team working on a specific industry-oriented project in AI in collaboration with representatives from companies in the greater Boston area. I provide both technical as well as organizational guidance to underrepresented students as they make their first steps in AI.

Instructor in Computer Science, Physics and Mathematics

National University of Singapore High School (January 2024) Singapore

Ukraine Leadership & Technology Academy (August 2023 - Present) Barcelona, Spain

Middle East Entrepreneurs of Tomorrow (July - August 2022) Jerusalem

Educational Studies Program, MIT (November 2021 - April 2022) Cambridge, MA

- Taught advanced web development to 40 high school students for three weeks (July 2022 - Aug. 2022).
- Developed and taught short courses for 80 to 120 high school students in a physics and math curriculum.
- Designed sessions and activities to engage and motivate students while teaching challenging material.

LEADERSHIP EXPERIENCE

Co-Founder February 2023 - January 2025

Ukraine Leadership & Technology Academy (ULTA) — www.ultacademy.org Cambridge, MA & Kyiv, Ukraine

- Developed program's vision, curriculum and online presence. Researched effectiveness of various candidate educational technologies as part of the design stage.
- Proactively collaborated with Ukrainian partners and MIT to create this new organization.
- Ran the selection process of Ukrainian students (admissions from 725 applications) and instructors from MIT.
- Coordinate and am in charge of two 2-week in person summer programs abroad.

Speaker Engagement Chair March 2022 - Present

TEDxMIT Conference Cambridge, MA

- Seek and invite speakers for every event. Through feedback, guide and coach speakers in developing their talks.
- Run the TEDxMIT in-person events. Logistics, facilitation, speaker introduction.