

Yuliya Zubak

Email | GitHub | LinkedIn | Site

Languages & Tools

Javascript, React, Python/PyTorch, R (RMarkdown), SQLite, Ollama, CLI agents & MCPs

Education

Indiana University Bloomington

Cognitive Science and Psychology PhD

2025 – Current

University of Toronto, Scarborough Campus

Honors BSc: Molecular Biology & Biotechnology (Specialist Double Major, Co-op), Neuroscience (Major, 3rd)

2015 – 2020

Papers

- **Zubak, Y.**, & Hawkins, R. (2025). Distributed statistical inference in social interaction networks under conditions of epistemic difficulty (preprint available on request)
- **Zubak, Y.**, Dronavalli, P., Chuang, Y., & Hawkins, R. (2024). Distributed statistical inference in social interaction networks. Proceedings of the Annual Meeting of the Cognitive Science Society, 46.
- Lunardon, A. and Patena W., **Zubak Y.**, [], Jonikas M. (2024). The *Chlamydomonas reinhardtii* CLiP2 mutant collection expands genome coverage with high-confidence disrupting alleles. BioRxiv
- Scipio, M. D., Tavares, E., Deshmukh, S., Audo, I., Green-Sanderson, K., **Zubak, Y.**, . . . Vincent, A. (2020). Phenotype Driven Analysis of WGS Identifies Deep Intronic Variants (...). IOVS

Experience

Lab Manager/Research Coordinator

Dr. Robert Hawkins, Linguistics, Stanford University

Sept 2023 – 2025

- Studied social learning and networking behaviors in epistemically difficult conditions, designing a web game, analyzing data, modeling behavior with agents, and collecting data with young children
- Inaugural lab manager; established lab culture, created pipelines, and maintained IRBs

Research Specialist

Dr. Martin Jonikas, Department of Molecular Biology, Princeton University

Nov 2021 – Oct 2023

- Generated mutants, then designed and tested a high-throughput pooled screen targeting all major pathways to globally study function and create an atlas of the organism.

Junior Research Analyst

Dr. Yuliya Nikolova, Centre for Addiction and Mental Health (CAMH)

Sept 2019 – Apr 2020

- Created a prediction score for genetic risk factors between the sexes in depression-associated regions/genes based on transcriptomic, polymorphism and MRI data from the Human Connectome Project

Research Student

Dr. Julien Muffat, Neurosciences and Mental Health, Hospital for Sick Children

Sept 2018 – Aug 2019

- Designed project for the lab in Fetal Alcohol Spectrum Disorder in organoids, conducting a literature search, designing and carrying out experiments, and processing resultant data

Dr. Karen Gordon, Otolaryngology

- Studied brain connectivity changes in deaf children with cochlear implants

Dr. Elise Heon, Genetics and Genome Biology

- Studied proteins caused by non-local gene changes due to epigenetic change

Extracurricular Activities

(2025) **Fellow** Human Augmentation Lab

(2018-2025) **Admin** University of Toronto
Scarborough Alumni Discord Server

(2021-2023) **Fellow** NATO Innovation Hub

(2015-2021) **Director** on Board of Directors
(Elected, Two Terms) YCC No. 457

(2017-2018) **First Year Representative**
Association of Philosophy Students