

Yifan Zhao

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Education

Massachusetts Institute of Technology

PhD in Medical Engineering and Medical Physics

CAMBRIDGE, UNITED STATES

2020 – present

McGill University

Honours BSc in Computer Science and Biology

MONTREAL, CANADA

2017 – 2020

- First Class Honours with Distinction

Research Experience

Rotation Student, Park Lab

CAMBRIDGE, UNITED STATES (REMOTE)

Sep '20 – present

- Copy number analysis on low coverage human glia samples

Summer Research Intern, Li Lab

MONTREAL, CANADA

May '20 – Aug '20

- Developed [single-cell Embedded Topic Model \(scETM\)](#), a Bayesian inference model that learns interpretable cellular and gene signature embeddings from single-cell transcriptomic data

Honours Research Student, Gerhold Lab

MONTREAL, CANADA

May '19 – May '20

- Developed [CentTracker](#), an automated analysis pipeline for centrosome tracking and pairing
- Conducted *in situ* live-cell imaging experiments of *C. elegans* germline stem cells

Publications

1. Zellag M. R., **Zhao Y.**, Poupart V., Singh R., Labbé J.-C., Gerhold A. R. (2021). CentTracker: a trainable, machine learning-based tool for large-scale analyses of *C. elegans* germline stem cell mitosis. *Molecular Biology of the Cell*, mbc-E20.
2. **Zhao, Y.***, Cai, H.*, Zhang, Z., Tang, J., Li, Y. (2021). Learning interpretable cellular and gene signature embeddings from single-cell transcriptomic data. *bioRxiv*. **Equal Contribution*

Teaching & Volunteering

Undergraduate Teaching Assistant, McGill University

MONTREAL, CANADA

Jan '19 – Dec '19

- MATH 240 Discrete Structures (Fall 2019)
- MATH 324 Statistics (Winter 2019)

Media Relations Volunteer, Canadian Cancer Society (BC & Yukon Division)

VANCOUVER, CANADA

Nov '16 – Aug '18

- Translated and reviewed promotion and education materials on cancer prevention
- Composed wellness-related articles for publication in [Herald Monthly](#), a Vancouver-based not-for-profit monthly Chinese magazine

Proficiencies

- **Natural Languages:** English, Chinese, French, Wenzhounese
- **Programming Languages:** Python, C++, R
- **Laboratory techniques:** Confocal spinning disk microscopy, *C. elegans* care and husbandry

Awards & Scholarships

- Jacqueline Johnson Desoer Science Undergraduate Research Award (2020)
- Sheila Ann MacInnis Grant Undergraduate Research Award (2019)
- James McGill Scholarship (2017-2020)
- E Gordon Edwards Biology Award (2019)
- Faculty of Science Scholarship (2019)
- Dean's Honour List (2018)
- Governor General's Academic Medal (2017)
- National Biology Scholar with Distinction (2017)
- British Columbia International Student Ambassador Scholarship (2017)