JEANETTE JOHNSON

504 Cathedral St Apt 301 | Baltimore, MD | 21201
jjohn450@jhmi.edu | (360) 866-4787 | jeanettejohnson.github.io

EDUCATION

Johns Hopkins University, Baltimore, MD
PhD program in Immunology | Graduation expected 2025

University of British Columbia, Vancouver, B.C.
BSc in Computer Science, Minor in Microbiology and Immunology | Graduated May 2020
Honors and awards: NSERC SURE Research Award (2019), Faculty of Science International Student Scholarship (2016, 2019), Accenture Leadership Award (2019), Dean's Honor List (2018-2019), Outstanding International Student Award (2015)

RESEARCH EXPERIENCE

Johns Hopkins University | Graduate Research Assistant — Sep 2020-present

- Thesis work: Building agent-based math models of early-stage pancreatic cancer, finding ways to automatically translate cell data into mathematical models.
- Developed a python package for performing non-negative matrix factorization on omics data.

Faculty advisors: Dr. Elana J. Fertig and Dr. Genevieve Stein-O'Brien

University of British Columbia | *Undergraduate Research Assistant* — May-Dec 2019

- Working extensively with CITE-seq and CyTOF data from murine tumor biopsy samples to investigate changes in the behavior of blood monocytes in the context of colorectal cancer
- Introduced Monocle 3 and Seurat 3 into our data analysis pipeline for dimensionality reduction, clustering, and differential expression; wrote scripts to apply these tools to our results in a consistent and reproducible fashion

Faculty advisor: Dr. Kenneth Harder

University of British Columbia | *Undergraduate Research Assistant* — Jan-Mar 2019

- Extracted and analyzed online news article text to determine the correlation between provenance (data lineage) and classification (reliable vs. propaganda)
- Combined C provenance library and PostgreSQL backend with top-level Python to consume articles and render NetworkX graphs detailing their connection to other articles, authors, publications, and quoted phrases
- Trained a team of seven undergraduates to work on extensions of the project in Summer 2019

Faculty advisor: Dr. Margo Seltzer

University of British Columbia | Lab Assistant — Jan-Sep 2017

- Worked to uphold a sterile environment in a lab that worked with norovirus and parasites alongside tissue culture
- Sterilized lab equipment including glassware and surgical tools
- Performed routine mouse genotyping using PCR and gel electrophoresis
- Helped to maintain the tissue culture room, incl. changing water baths, monitoring for fungal infection, supplying diluted ethanol and distilled water, and ensuring biosafety cabinets are being used properly

Faculty advisor: Dr. Lisa Osborne

OTHER WORK EXPERIENCE

UBC Computer Science | *Academic Assistant* — Sep. 2018 - May 2019

- Responsible for updating and curating the UBC Computer Science Job Posting Boards
- Organized a weekly email highlighting events, opportunities, and resources for Computer Science students

UBC Computer Science | *Teaching Assistant (TA)* — Summer 2017 and Winter 2018 terms

- One of 12 TAs for Introduction to Computer Systems, a 200-student second year Computer Science course at UBC
- Taught labs ranging from memory management and pointer manipulation to asynchronous programming
- Held weekly office hours to help students individually, actively answered questions remotely on Piazza
- Marked exams and assignments, invigilated midterms and finals

Cisco Systems/OpenDNS | *Software Engineering Co-op* — Sep. 2017 - Sep. 2018

- Worked on the Surface Intelligence Feature Team, which oversees an API server for network security data, the Umbrella reporting microapp, and multiple scalable infrastructure components
- Migrated API Server AWS deployments to the EU for GDPR Compliance, performed future deployment automations
- Redesigned and rewrote a scheduled email reporting system with three teammates
- Designed and implemented a new threat intelligence report for Umbrella, Cisco's cloud security product

PUBLICATIONS

Johnson J, Tsang A, Mitchell JT, Davis-Marcisak E, Sherman T, Liefeld T, Loth M, Goff LA, Zimmerman J, Kinny-Köster B, Jaffee E, Tamayo P, Mesirov JP, Reich M, Fertig EJ, Stein-O'Brien GL "Inferring cellular and molecular processes in single-cell data with non-negative matrix factorization using Python, R, and GenePattern Notebook implementations of CoGAPS" bioRxiv 2022.07.09.499398; doi: https://doi.org/10.1101/2022.07.09.499398 *under review*

Eaton WW, Rodriguez KM, Thomas MA, Johnson J, Talor MV, Dohan C, Bingham CO 3rd, Musci R, Roth K, Kelly DL, Cihakova D, Darrah E. "Immunologic profiling in schizophrenia and rheumatoid arthritis." Psychiatry Res. 2022 Aug 28;317:114812. doi: 10.1016/j.psychres.2022.114812 *accepted for publication*

Maunish Barvalia M, Johnson J, Lason W, Matos I, Krebs D, Harder KW "Immune cell census in murine colorectal cancer reveals distinct and novel colonic and peripheral myeloid populations and perturbation states." *submitted 2022*

TECHNICAL SKILLS

Lab Techniques:	PCR, gel electrophoresis, flow cytometry, cell culture, western blot, murine work
Programming Languages:	Python, R, Java, C, C++, x86 Assembly, HTML/CSS
Tools and Frameworks:	AWS, Docker, GO, Linux/UNIX, RStudio, Git, Illustrator

ADDITIONAL EXPERIENCE

UBC Women in Science Club | *Vice President* 2016 - 2019

- Served as an executive for three years for a 200-member club that connects undergraduates to female mentors
- Organized and facilitated multiple events, including research lab tours, meet-a-mentor nights, and panel discussions
- Leveraged email and social media to keep our members up-to-date about club events and female scientists in the news
- Designed the club's website, www.ubcwomeninscience.com