

EDUCATION

- 2021 - Present **M.Sc. Computer Science,**
Cornell University
- 2017 - 2020 **B.Sc. Honours Computer Science, Mathematics Minor,**
2011 - 2012 University of British Columbia, GPA: 4.30/4.33
- 2014 - 2015 **B.Sc. Undeclared,**
University of Washington, GPA: 3.9/4.0

RESEARCH EXPERIENCE

- 05/2020 - 08/2021 **Research Assistant,** Department of Mathematics, University of British Columbia
- Constructed developmental trajectories for biological systems in equilibrium using optimal transport on single-cell data
 - Designed a manifold-learning approach for optics-free spatial transcriptomics
- 09/2019 - 09/2020 **Research Assistant,** Institute for Resources, Environment, and Sustainability, University of British Columbia, Vancouver, BC
- Assisted with a global assessment of the functional connectivity of protected areas
 - Created acoustic permeability signatures to aid in the study of vocal amphibians
- 09/2019 - 05/2020 **Honours Thesis,** Algorithms Lab, Department of Computer Science, University of British Columbia, Vancouver, BC
- Developed a continuous approximation to the classic learning problem of prediction with expert advice for a small numbers of experts
- 05/2019 - 08/2019 **Fellow - Data Science for Social Good Program,** University of British Columbia Data Science Institute, Vancouver, BC
- Integrated six datasets and developed the database for an app helping city planners develop electric vehicle infrastructure
 - Created a model to identify and rank charging sites, developing an objective that incorporates both potential usage and even access to chargers

PUBLICATIONS & PRESENTATIONS

- 2021 Zhang, S., A. Afanassiev, **L. Greenstreet**, T. Matsumoto, G. Schiebinger. *Optimal transport analysis reveals trajectories in steady-state systems*. PLOS Computational Biology, 2021. <https://doi.org/10.1371/journal.pcbi.1009466>
- 2021 Shahan R., C. Hsu, T.M. Nolan, B.J. Cole, I.W. Taylor, **L. Greenstreet**, et al. *A single cell Arabidopsis root atlas reveals developmental trajectories in wild type and cell identity mutants*. Developmental Cell, 2021. <https://doi.org/10.1016/j.devcel.2022.01.008>
- 2020 Massri, A.J., **L. Greenstreet**, A. Afanassiev, A. Berrio Escobar, G.M. Wray, G. Schiebinger, D.R. McClay. *Developmental Single-cell transcriptomics in the Lytechinus variegatus Sea Urchin Embryo*. Development, 2020. <https://doi.org/10.1242/dev.198614>

- 2020 **Greenstreet, L.** and E. Lai. *Developing a Data-Driven Electric Vehicle Strategy in Surrey, BC.* SigKDD 2020 Social Impact Session.
- 2020 **Greenstreet, L.** and E. Lai. *Maximizing Utilization of Electric Vehicle Charging Infrastructure in Surrey, BC using a Data-Driven Model.* UBC Multidisciplinary Undergraduate Research Conference.

PREPRINTS

- 2022 **Greenstreet, L.**, A. Afanassiev, Y. Kijima, M. Heitz, S. Ichiguro, et al. *A DNA-based global positioning system—a theoretical framework for large-scale spatial genomics.* Preprint. <https://www.biorxiv.org/content/10.1101/2022.03.22.485380v1>
- 2021 Brennan, A., R. Naidoo, **L. Greenstreet**, Z. Mehrabi, N. Ramankutty, C. Kremen. *Functional Connectivity of the World's Protected Areas.* Preprint. <https://doi.org/10.1101/2021.08.16.456503>
- 2021 Hojun, L., J. Ezike, A. Afanassiev, **L. Greenstreet**, et al. *Hematopoiesis at single cell resolution spanning human development and maturation.* Preprint. <https://www.biorxiv.org/content/10.1101/2021.08.25.457678v1>

AWARDS

- 2020 **NSERC Undergraduate Summer Research Award**
- 2018 **Stanley M Grant Scholarship in Mathematics**
- 2011 **President's Entrance Scholarship**
- 2011 **Governor General's Academic Medal - Bronze**

WORK EXPERIENCE

- 09/2020 - Present **Teaching Assistant**, Cornell University, Ithaca, NY
- 01/2019 - 05/2019 **Academic Assistant**, University of British Columbia Library, Vancouver, BC
- 07/2015 - 08/2017 **Information Technology Coordinator**, Tilth Alliance, Seattle, WA

VOLUNTEER EXPERIENCE

- 2020-2021 **Mentor**, Data Science for Social Good Program, UBC Data Science Institute, Vancouver BC
- 2019 **Math Tutor**, Emerging Indigenous Scholars Program, University of British Columbia, Vancouver BC
- 2014-2015 **Board Member**, SEED, Univ. of Washington Sustainability in Housing, Seattle WA
- 2014-2015 **Volunteer**, University of Washington Student Farm, Seattle WA
- 2011-2012 **Member**, Common Energy, University of British Columbia, Vancouver BC