Laura Greenstreet

: (206)-673-1214
✉ : laura.greenstreet@gmail.com

EDUCATION ──────────────

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

RESEARCH EXPERIENCE ──────────────

05/2020 - 08/2021 **Research Assistant**, Schiebinger Lab, 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**, WoRCS Lab, Institute for Resources, Environment, and Sustainability, University of British Columbia
- 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
- 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
- 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 ──────────────

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

PRESENTATIONS

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

2019   **Math Tutor**, Emerging Indigenous Scholars Program, University of British Columbia

2014-2015   **Board Member**, SEED, Univ. of Washington Sustainability in Housing

2014-2015   **Volunteer**, University of Washington Student Farm

2011-2012   **Member**, Common Energy, University of British Columbia