Summer 2022 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Initiative (USI) is pleased to offer current UBC graduate students the opportunity to work on funded sustainability internship projects. Successful candidates work under the mentorship of a partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region.

- Visit the Sustainability Scholars Program website to learn how the program works and to apply.
- Be sure to review the application guide to confirm your eligibility before applying.

Applications close at midnight on Sunday January 30, 2022.

Research project title: Filling the walking data gap: Research to understand traffic signal push-button data

Project Background & Overview:

Vancouver is a multi-modal city. Having transportation options that are easy, accessible, and flexible allows people to save time and money while increasing their health and well-being. As part of the Transportation 2040 Plan and the Climate Emergency Action Plan, the City of Vancouver is targeting that at least two third of trips will be taken via walk, bike, or transit. In order to improve the quality and quantity of walking routes, data on volumes and preferences is crucial.

Of over 800 traffic signals, over two thirds consist of pedestrian, semi actuated, and fully actuated signals. The City of Vancouver recently began logging the number of button pushes at these signals via their signal controllers. It remains unknown whether pedestrian push button count correlates well with pedestrian volumes. Nevertheless, this data may provide an opportunity to obtain long-term pedestrian trend data that would help track changes in walking uptake over time as well as indicate locations for signal timing changes which would decrease walking wait times.

Project description

The purpose of this project is to determine the feasibility of using pedestrian push button data to

1. Infer pedestrian volumes at a location
2. Infer changes in walking uptake (walking trends)
3. Recommend signal timing changes

This work is invaluable as it enables decision makers to track walking uptake over time in a cost-effective manner. Additionally, this would provide insight into potential candidate locations for upgrades from pedestrian signals to full signals or for signal timing changes which improve traffic flow.

Project scope

The scholar would be involved in:

1. Conducting a literature or jurisdictional review of previous work utilizing push button data
2. Reviewing existing pedestrian push button data at all available intersections and identify outliers
3. Comparing pedestrian push button data to existing manual count data where available to determine the correlation and model the relationship between the two

4. Summarizing the limitations of push button data and explaining how this data source complements existing and other data sources within the City in order to ultimately enhance walking facility quality in the City
5. Providing recommendations on the usage of pedestrian push button data and any further research if advisable

Deliverables

- A final report containing a summary of the work completed
- A final report (or executive summary) for the online public-facing Scholars Project Library.
- A presentation summarizing key findings and recommendations from the report

Time Commitment

- This project will take 250 hours to complete.
- This project must be completed between May 2, 2022 and August 12, 2022
- The scholar is to complete hours between 9 am and 5 pm, Monday to Friday, approximately 17 to 20 hours per week.

Required/preferred Skills and Background

☒ Familiarity with research methodologies and survey techniques
☒ Statistical analysis
☒ Strong analytical skills
☒ Ability to work independently
☒ Deadline oriented
☒ Demonstrated experience working with large datasets
☒ GIS training or experience an asset
☒ Familiarity with statistical packages via R, Python, Matlab, or other similar software is an asset

Applications close **midnight Sunday January 30, 2022**
Apply here: Click here to apply
Contact Karen Taylor at sustainability.scholars@ubc.ca if you have questions

Useful Resources

We are holding a special **resume preparation workshop for prospective Scholars** on January 19. Click here for details and to register.

Below are some links to useful resources to help you with your resume and cover letter (there are many more online). Some of these resources also provide information on preparing for your interview.
https://students.ubc.ca/career/career-resources/resumes-cover-letters-curricula-vitae
https://www.grad.ubc.ca/current-students/graduate-pathways-success
https://www.grad.ubc.ca/cover-letter-cv-resume-templates-ubc-career-services