

Summer 2025 Sustainability Scholars Program Internship Opportunity

The UBC Sustainability Hub is pleased to offer current UBC graduate students the opportunity to work on sustainability internship projects. Successful candidates work under the guidance of a mentor from the partner organization, and are immersed in real world learning where they can apply their research skills and contribute to advancing sustainability across the region. The pay rate for the summer 2025 program is \$31.25/hour or \$7,812.50 for a 250-hour project.

- Visit the [Sustainability Scholars Program website](#) to learn [how the program works](#) and to [apply](#).
- Be sure to review the application guide on the Apply page to confirm your eligibility before applying.

Applications close at 11:59 pm on Sunday January 26, 2025.

Project title: Novel Approaches for Estimating Personal Transportation Patterns and Emissions

Project Background & Overview:

Improved vehicle kilometers traveled (VKT) estimates are critical for modelling and tracking transportation emissions and developing effective actions for climate and air quality, and supporting sustainable transportation and land use decisions. More disaggregated and frequently updatable VKT information will improve our understanding of transportation and emissions trends at a neighbourhood and municipal scale, enable quantification of the impact of programmatic and infrastructure investments on travel behavior, and improve the ability to understand how transportation emissions and cost burden is distributed in the region. This improved understanding will support a number of actions in Metro Vancouver's Climate 2050 Transportation Roadmap and Clean Air Plan, TransLink's Transport 2050 (the regional transportation strategy), and municipal transportation planning initiatives.

Project description

This project will explore options to integrate traditional vehicle data (e.g., from TransLink and ICBC) with emerging data sources, such as smartphone mobility data, GPS tracking apps, and electricity usage relevant to EVs. By identifying methods to cross-tabulate real-time travel patterns and seasonal variations with traditional datasets, this project aims to support Metro Vancouver and member jurisdictions in creating data-informed strategies that address air quality and climate goals, and optimize transportation planning.

Project scope

For this project, the Scholar will be asked to develop a method for integrating traditional vehicle stock data (e.g., from TransLink and ICBC) with emerging data sources, such as smartphone mobility data, GPS apps tracking, and electricity usage relevant to EVs. Where possible, Metro Vancouver will share available data for use in this project. The method will need to consider the

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availability, accessibility, coverage, and reliability of data sources, in addition to the ability to analyze across geographies, transportation modes, vehicle types, time frames, etc.

Expected tasks include:

1. **Review of current practices in Metro Vancouver:** work with Metro Vancouver staff to review current practices and data needs/gaps.
2. **Best practices scan:** review of practices, guidance, literature, and other material from other jurisdictions tracking VKT.
3. **Data collection and analysis:** compile available data sources and review methodologies, limitations, and where possible extract actual numbers for the Metro Vancouver region. This task should produce a comparative analysis of different data sources and their strengths and limitations, as well as an analysis of the data itself within the Metro Vancouver region to assess range of differences across various data sources.
4. **VKT estimation methodology:** using the information and insights developed through the first three tasks, develop a proposed methodology that integrates available data sources to produce estimated VKT. Ideally this will consider different geographical scales and VKTY travelled in EVs.
5. **Time Permitting, data tool development:** develop a data tool that demonstrates the proposed integrated data approach developed in Task 4.

Deliverables

- **Final Report including:**
 - A description and analysis of strengths and weaknesses of the available datasets
 - A description of method for data integration, ongoing updates of data, types of analyses an integrated data approach could support and limitations of the approach
- **Data Tool** (Optional, if time and budget allow) that demonstrates the data integration approach
- A final report for the online public-facing [Scholars Project Library](#).

Time Commitment

- This project will take 250 hours to complete
- This project must be completed between May 1 to August 15, 2025
- The Scholars is to complete their hours between 9 am and 5 pm, Monday to Friday, approximately 17 to 20 hours per week.

Required/preferred Skills and Background

- Excellent research and writing skills
- Demonstrated interest in sustainability
- Statistical analysis
- Strong analytical skills
- Ability to work independently
- Deadline oriented
- Project management and organizational skills

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- ☒ Programming skills
- ☒ Demonstrated experience working with and manipulating large data sets
- ☒ GIS training or experience.
- ☒ Familiar with using and accessing publicly available and perhaps proprietary data sets related to transportation and/or people movement
- ☒ Interested in developing creative ways to use this data to have a better understanding of emissions and transportation patterns.

Applications close at **11:59 pm Sunday January 26, 2025**

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 21, 2025. [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>