Proposed NSERC Undergraduate Student Research Award Positions in Geography and Environment
NSERC USRA awards provide paid research opportunities (stipend $6,000 for 16 weeks of full time work) for undergraduate students with interests in the natural sciences and engineering.
Interested students are encouraged to contact project supervisors to develop applications. Applications are due to the Department of Geography and Environment by 4 pm Feb 7, 2022.
For details on the program at Western see
https://www.uwo.ca/research/funding/students/nserc_usra_overview.html

Camera Trap Study at Long Point National Wildlife Area
Dr Jed Long
The Geospatial lab (https://geospatial.uwo.ca) at Western University is seeking an NSERC undergraduate research assistant to help conduct a field-based study on coyotes (*Canis latrans*) at the Long Point National Wildlife Area (LPNWA) in collaboration with the Environment and Climate Change Canada and Long Point National Wildlife Area staff. Specifically, the goal of this project is to collect and analyze data on the abundance and seasonal distribution of coyotes at the LPNWA as well as perform basic habitat analysis. Camera traps will be used to capture data on coyote abundance and distribution, while in situ habitat surveys, combined with aerial imagery, will be used to assess habitat. The study will involve extensive fieldwork which will include the deployment and maintenance of wildlife camera traps, along with field habitat surveys. Further, when not in the field, this project will involve computer-based analysis of camera trap images/videos and GIS-based analysis of habitat. Key competencies for a successful candidate include experience doing environmental fieldwork, including operation of a hand-held GPS devices, intermediate to advanced GIS and/or remote sensing knowledge as demonstrated through coursework or work experience, and strong organizational and time management skills. Assets that will be looked at very positively include previous experience conducting habitat analysis in the field, along with experience using camera traps. Note that this project will require overnight stays at the LPNWA field site.
For more information, please contact Prof. Long at jed.long@uwo.ca

Reconstructing the 3d urban thermal environment in suburban neighbourhoods
Dr James Voogt
I am seeking a student with interests in remote sensing, Geographic Information Science and/or urban microclimates to help construct and analyze a data set of coupled thermal imagery (measures surface temperature) and lidar data (measures the surface structure) for two suburban study sites in Salt Lake City, UT. This dataset provides high resolution urban structure and temperature information that will be used to re-construct a three-dimensional map of the thermal environment in these two streets. Combined with other available measurements of air and surface temperature it will provide a unique dataset for assessing heat loading on pedestrians in urban neighbourhoods, the impacts of tree shading on urban microclimates, and the relationship between the full three-dimensional temperature environment of urban neighbourhoods with that observed from remote sensing. The student will also be an opportunity to contribute to summer fieldwork in London using a small mobile ground-based lidar to measure urban built and vegetated structure. The student will gain transferrable skills in working with terrestrial lidar scanning data, thermal imagery and GIS techniques, gain experience in urban fieldwork skills and collaborate with graduate students and scientists on the project from Canada and the US. Data from the project may be used as a basis for a student thesis if desired.
For more information, please contact Prof. Voogt at javoogt@uwo.ca