

Part time position
Job Title: Data Scientist
Industry Partner: Geotab
Key Role: co-mentorship, equipment provider/access
Principle Investigator: Dr. Alex Babanski
Area of expertise: data science, python, software development.
HQP: key skills sets: Google Big Query (SQL); Python, Google Colab, Data Mining and Analytics.
Project Summary:
<p>High-resolution gridded temperature datasets are extremely important for many modeling applications such as regional climate prediction models, agriculture, and surface transportation systems. Currently, the primary method for gathering air temperature readings is via irregularly spaced weather stations. Most high-resolution datasets use interpolation algorithms to fit temperature curves to the station data or incorporate some models of physical processes into the interpolation methods. One of the most promising possibilities to improve the temperature datasets is the potential to use vehicles as local weather observation systems. Geotab, a Canadian based company, is a global leader in commercial fleet telematics that collects a wealth of information from Geotab's GO device connected to vehicle's computer including the vehicle's location, speed, acceleration, temperature, barometric pressure, and detailed engine diagnostics. Geotab continuously collects temperature data from over two million vehicles in real-time. Due to potential errors in GO device sensor readings, the accuracy of the dataset must be analyzed and improved. In this project, we will create high accuracy real-time high-resolution air temperature datasets desirable for ecological research, weather predictions, and surface transportation systems.</p>
<p>Time and Schedule:</p> <ul style="list-style-type: none"> • 12 - 16 h / Week • 50% - Face-to-Face Teamwork (remote work due to COVID) <p>Dates:</p> <ul style="list-style-type: none"> • January 11, 2021 to April 23, 2021 (excludes reading week) <p>Remuneration:</p> <ul style="list-style-type: none"> • \$18 - \$20 / hour depending on experience and qualifications. <p>Technologies:</p> <ul style="list-style-type: none"> • Data Mining and Analytics • Google Cloud (BigQuery, VMs, Colab) • Python <p>Responsibilities:</p> <ul style="list-style-type: none"> • Research emerging technologies, frameworks and techniques relevant to the research project • Research and review literature as required by the research project • Research 3rd party components that can be reused in the project • Software development, software design, modeling and requirements analysis • Test, debug and troubleshoot software applications developed for the research project • Estimate and plan tasks that meet agreed upon deadlines • Participate in team-meetings, prepare, participate in presentation meetings and communicate with industry partners under the supervision of the PI • Work online in a collaborative approach. • Bi-weekly meeting with industry partner through Google meets, Webex or other online platform.

Job Requirements (Required):

- Knowledge and experience with complex SQL queries.
- Good Python programming skills.
- Demonstrable knowledge of professional development practices, best-practices, using debugging techniques, unit-testing and software version control.
- Can-do attitude, resourceful, demonstrates initiative, creativity and passion for purposeful, result-oriented research
- Minimum 2 year academic experience in the Mobile Computing Degree program or 2 years and relevant COOP experience in a related diploma program.

Job Requirements (Beneficial / Good to have assets):

- Experience working with Google BigQuery.
- Experience working with Google Colab and/or Jupyter notebooks.
- Knowledge of data mining techniques.
- Multi-threaded programming experience.
- Experience in project planning and management using agile management tools such as Asana
- Interest and experience in UI design, graphics and digital media design

NOTE:

This position is funded through the Work Study program only. Job offers will be made subject to the student's approval for Work Study. Please review the eligibility criteria for Work Study to see if you will be eligible. Unfortunately, international students are not eligible for Work Study funding, but can still apply to this job. You can find information on Work Study here:

<https://www.sheridancollege.ca/admissions/financial-aid-and-awards/work-study-assistance.aspx>