



A co-op and summer intern opportunity in Economic Analyses and Financial Risk Assessment during COVID-19 Recovery

A unique summer program has been developed by the Advanced Disaster, Emergency and Rapid Response Simulation Initiative (ADERSIM) and the Laboratory for Industrial and Applied Mathematics (LIAM), York University; the Fields-CQAM Laboratory of Mathematics for Public Health (MfPH); in collaboration with Kings Distributed Systems Ltd., and Concentra Bank. The program aims to develop mathematical modeling and analyses and a dashboard to project the COVID-19 epidemic trend and its impact on the economic growth and financial risk during the recovery phase for all of the 34 public health units in Ontario.

In addition to postdoctoral fellows, the program is recruiting research assistants (PhD and Masters), co-op and interns (undergraduate) from Canadian universities. We hope to establish a team of trainees with complementary training in public health, software engineering, data sciences, mathematical sciences (mathematics, statistics and computational sciences), economics and financial risk assessment and management. The summer program will be run from May 1st till August 30, 2021.

The information below is relevant to the co-ops and summer interns for undergraduate students.

Skills required:

1. Communication skills: the candidate must be able to interact with team members, academic supervisors and industrial partners;
2. Analytic skills: the candidate must be able to extract relevant information and conduct relevant analyses for a research and risk assessment component of a team research project; the candidate must have completed at least two undergraduate calculus and algebra courses;
3. Computer related skills: the candidate must have at least one course in computer science, and must be able to run and modify existing codes;
4. Team work skills: the candidate must be able to work in a team environment, and is able to communicate with the team virtually;
5. Business skills: the candidate must have some knowledge in finance and economics, and able to conduct some economic analyses and financial risk assessment.

Job description: The successful candidate will

- Contribute to a team effort, participate in the group discussions;
- Undertake an independent research and risk assessment component of a team research project;
- Conduct critical literature reviews relevant to the research and risk assessment component;



- Present the review to the group, and update the review weekly;
- Conduct a review of the demographical, economic and financial data for some of the selected Public Health Units in Ontario;
- Extract relevant information needed for developing the research and risk assessment component;
- Design relevant algorithms and analyses;
- Develop relevant computational codes, and test and validate the codes;
- Demonstrate the codes and algorithms and present the results to the research labs, and the industrial partners.

How to apply: Interested students should send a CV and a statement of interest (less than one page) to describe the relevant background and skills, and indicate the desirable starting and ending dates to participate in this summer program. Interested students should send these materials to mefr2021@yorku.ca by March 30, 2021. Review of the applications will be conducted immediately, and only selected applicants will be contacted.