

March 24, 2020

Job Posting:

**Software / Systems Engineer (SSE)
Ontario Research Fund – Research Excellence Project
Intelligent Systems for Sustainable Urban Mobility (ISSUM)**

Position Type

1-year contract, renewable annually for up to 2 years total.

Start Date

April 1, 2020 (negotiable)

Hours

40 hours per week

Salary

\$70,000 - 80,000 per year + benefits, commensurate with experience. Annual increments based on performance.

Closing Date for Applications

March 31, 2020

Background. The ISSUM project is a collaborative, multi-sector, multi-institutional research initiative jointly funded by the Ontario Ministry of Research, Innovation & Science (MRIS), York University, the University of Waterloo, and a number of private sector companies and public institutions in Ontario. The goal of ISSUM is to research and develop integrated intelligent systems for sensing, analysis, simulation and 3D visualization of urban population mobility. This research will strengthen the technology sector in Ontario, increase efficiency, reduce greenhouse gases and enhance the livability of urban regions for all Ontarians.

Job Description. This position will be based at York University's Keele Campus in Toronto. Occasional day travel to Waterloo will be involved. The SSE will report to the Principal Investigator Professor James Elder and work closely with him, the Project Manager and the other project investigators to meet the objectives of the ISSUM initiative.

ISSUM technologies merge research in geomatics, computer vision, machine learning, computer graphics, simulation, transportation engineering and urban planning. The five ISSUM laboratories will produce research algorithms and software validated on standard research datasets. The role of the SSE will be to transform these algorithms into integrated production software systems, validated under real-world conditions, that can then be marketed and licensed.

This position provides a remarkable opportunity for career development in the integration of diverse cutting edge intelligent systems technologies.

Education/Training

A minimum of a Bachelor's degree in Software Engineering, Systems Engineering, Computer Engineering, Computer Science or a related field is required. An advanced degree (Master's or PhD) would be an asset.

Desirable Skills & Experience

The ideal candidate will have training and experience in software/systems engineering but will also have facility and knowledge in the research domains underlying ISSUM technologies. Some ISSUM technologies involve specialized proprietary visual and mechanical hardware: experience and interest in software/hardware integration and embedded systems is therefore an asset.

1. Experience with large, complex software systems
2. Commitment to and experience applying fundamental principles of software engineering
3. Programming languages: C/C++, Java, MATLAB, Python
4. Experience with Map APIs like Mapbox, ArcGIS
5. Experience with Unity 3D, Hololens/Mobile AR/VR/MR development
6. Embedded systems
7. Backend development
8. Facility with applied mathematics
9. Experience with geomatics, computer vision, machine learning and/or computer graphics

Responsibilities

1. Transform algorithms and software from ISSUM labs into real-time production code.
2. Integrate stand-alone software into complete multi-task systems.
3. Generate complete functional and design documentation.
4. Work with end-users to evaluate/refine test systems deployed under real-world conditions.

Application Process

Your complete application package must include a cover letter and résumé. References will be requested should you be selected for interview. Please ensure that "ISSUM Software/Systems Engineer" is quoted in e-mail subject lines. Only those selected for an interview will be contacted.

Applications should be submitted to:

Ms. Anna Kajor
Project Manager
Intelligent Systems for Sustainable Urban Mobility
York University
Email: akajor@yorku.ca

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