

Career Boost - Ryerson's Student Employment Source

Career Boost is Ryerson's new source for off campus and on campus job opportunities.

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The **Career Boost On Campus Program** provides eligible full-time undergraduate students with hundreds of on-campus paid work experience opportunities each year. Please review full eligibility [here](#).

Please note that students may apply for any Fall/Winter/Summer position **before applying for Career Boost approval**, however job offers are conditional pending the student receiving their approval. Summer approval application opens in February, Fall/Winter approval application opens in August

Research Assistant - Intern Developer

Supervisor Information

Supervisor's First Name:	Atefeh	Supervisor's Last Name:	Mashatan
Department:	TRSM Associate Dean, Research	Faculty:	None
Room No.:		Email:	amashatan@ryerson.ca
Extension:	544360		

Student Application Materials Required:

- Career Boost Approval Email

(Any job offer before receiving the approval email will be conditional. However you're more than welcome to apply for the positions before then. Summer approval application opens in February, Fall/Winter approval application opens in August. Please forward the approval email to the supervisor)

- Resume

- Cover Letter

- Transcript

- 2 Reference(s)

Method Of Student Application:

- Email

Position Information

Job Family:	Research and Analytics
Job Title:	Research Assistant - Intern Developer
Hours per week:	14
Number of Positions:	2
Hourly Rate of Pay:	\$17.00
Start Date:	Sep-07-2021
End Date:	Apr-08-2022
Mandatory Training:	No

Position supports the following priorities from the Ryerson University Academic Plan:

- Increase scholarly, research and creative (SRC) excellence, intensity and impact
- Enable greater student engagement and success through exceptional experience
- Foster an innovative ecosystem

Summary of Host Department:

The Cybersecurity Research Lab (CRL) is an academic research lab at Ted Rogers School of Management at Ryerson University. The CRL conducts cutting-edge information security research, train the next generation of cybersecurity experts, and is spearheading a crucial and ongoing dialogue with the Information and Computer Technology (ICT) industry in Canada. The lab is led by Dr. Atefeh (Atty) Mashatan, an Information Security Researcher and Solutions Architect. The CRL is recognized for its strong partnerships and linkages to industry. Its mission is to help organizations, large and small, to find innovative and cost-effective cyber risk mitigation strategy and solutions. The lab's research expertise is in Cryptography, Blockchain Technology, Quantum-resistant solutions, Machine Learning and its applications in cybersecurity, Enterprise Security Architecture, and Security of Internet of Things (IoT). <https://www.ryerson.ca/crl>. The lab founded and is directed by Dr. Atty Mashatan who is an Assistant Professor at Ted Rogers School of Information Technology Management. Her research is focused on the development of novel cybersecurity designs based on emerging technologies such as IoT, Blockchain, and Quantum Computing. She investigates challenges and opportunities brought forward by these new technologies and how they change the threat landscape of cybersecurity.

As such, the researchers in the lab collaborate with industry partners on a daily basis to study industry relevant research problems and propose solutions that can be developed as part of the industry-academic collaborations.

Position Description:

Intern Developers will also be asked to contribute to the research and development of our Mosaïque software platform. This project has components that involve software development and dev ops on mobile, web and blockchain. The work entails practical applications of very new technology. Team members will constantly be learning new technologies and techniques for using them. Each developer needs to work with the rest of the team in proposing data structures and supporting code, implementing user interfaces, building test cases and maintaining our development environment. This role will also include research related tasks such as conducting literature surveys, documentation, proofreading, proposal writing.

There is a known talent shortage in blockchain development and this project trains the RAs in an R&D initiative in this space. This is not a skill that the students will normally be exposed to in their programs. This research

project will train an undergraduate student in developing novel blockchain technology use cases in IBM Hyperledger Fabric and Self Sovereign Identification based on our blockchain technology research. This is an excellent skill in a domain where there is a talent shortage, and, as a result, the students are highly marketable for graduate studies in the domain of blockchain research or employment in top notch positions.

Incoming Intern Developers will be provided with a 6-week training program related to the technology stack used at the CRL if required. We will provide training on:

- Mobile application development
- Web application development
- Blockchain technology – IBM HyperLedger Fabric
- Smart contract development - Ethereum

This role will also include supporting the day-to-day activity of the research lab by assisting in the planning and organization of special events that includes internal stakeholders, external stakeholders, and partners. They will assist in the coordination of processes, activities and local resources required for the events. This may include liaising with Ryerson staff and external partners as needed to ensure smooth coordination and timing of events and activities.

This position also addresses the SRC theme of Technology & Intelligent Systems. The ideal candidate will possess great technical skills (demonstrable experience in developing software and in designing UIs) as well as non-technical skills (including excellent oral and written communication skills, interpersonal and teamwork skills, and creative thinking and problem-solving skills.)

Competency Development:

Core Competencies:

● Communication

- Presents ideas and thoughts effectively in a variety of formal and informal settings
- Communicates in writing effectively to encourage action or generate understanding
- Demonstrates an understanding of appropriate professional communication practices
- Demonstrates effective interpersonal communication, including an ability to communicate in an intercultural context
- Demonstrates active listening by engaging with diverse viewpoints

The Intern Developer will be working with the director, manager, technical lead, product managers, and other developers on the blockchain project so they will need to be able to develop and demonstrate effective communication skills (both written and oral). The project is a highly collaborative effort where the intern developer may be asked to propose data structures and supporting code for the project, they will develop the ability to present their ideas effectively in both formal and informal settings.

As well, as a part of this position, the intern developer will be working with new and emerging technology and they will be able learn how to actively engage and listen to learn the technology stack as well as be able to effectively communicate any challenges they may be facing during this time. As apart of their role, the intern developer will be required to read and understand research papers and be able to effectively communicate ideas and concepts in the paper to assist with the research related to the project.

● Collaboration

- Able to work within a team
- Able to adapt to new/changing situations
- Commits and contributes equitably to shared group or organisational goals
- Contributes to conflict resolution within groups, balancing individual and group goals
- Demonstrates intercultural fluency in working with diverse groups

The blockchain development team at the CRL is comprised of the director, the manager, the technical lead, product managers, and software developers. The intern developer will gain teamwork and collaboration experience working as part of this team as they go through the training and the research and development process of the blockchain platform. They will be communicating with these various team members through email, document sharing, and teleconferencing meetings. The student will also be expected to learn to prioritize and manage multiple tasks and achieve goals as well as be able to communicate any problems that they may experience throughout the project. Each developer needs to work with the rest of the team in proposing data structures and supporting code, implementing user interfaces, building test cases and maintaining our development environment. As this is an emerging technology, the intern developer will learn to adapt to new and changing situations on a constant basis by staying up to date by reading provided research papers.

Role-specific Competencies:

● Innovation & Problem Solving

- Able to apply critical thinking to solve problems
- Able to assess a situation and take informed risks
- Demonstrates resilience when faced with challenges
- Demonstrates creative thinking and resourcefulness in solving problems
- Proactively identifies alternative ways to achieve goals

The intern developer will be able to learn skills from working with the technology stack that will assist them in applying critical thinking when tackling the problems they will face when working on the blockchain project. This project will build a solid foundation for this and future projects where they will be able to use creative thinking and resourcefulness when faced with similar issues. As well, since this project is dealing with an emerging technology, the student may face challenges when learning about the new technologies in our stack that they're not familiar with and must be able to shift gears to adapt.

● Personal Management & Responsibility

- Prioritises and manages time effectively in completing tasks
- Demonstrates accountability for actions and decisions
- Able to give and receive constructive feedback, and act on feedback
- Demonstrates a willingness to continuously learn and grow Demonstrates a willingness to continuously learn and grow
- Reflects on the impact one's decisions have on self and others

The project will require the intern developer to keep updated on any changes to the technology stack. The technical

lead will be available for any additional follow questions the developer may have. The developer will learn to prioritize and manage their work effectively to complete the assigned tasks as they will be accountable to the technology lead and the rest of the software development team to contribute to the project. As blockchain is an emerging technology, the student will be able to demonstrate a willingness to continuously learn and grow with the technology.

The intern developer will also be asked to assist with the research duties related to the project as well as the day-to-day activities such as documentation, proofreading, and other administrative tasks. They will be expected to balance those duties along with the provided training and development duties.

Responsibility Breakdown:

Technology Related Research and Training - 45%

Development Support - 45%

Special Projects - 10%

Staff Supervision:

- Checkpoint meetings throughout the employment
- Regular one-on-one meetings
- Regular team meetings
- Performance Reviews

Skills Required:**Academic:**

- Good oral communication
- Good written communication
- Group facilitation
- Knowledge of computer software
- Managing Information
- Presentation skills
- Problem solving and thinking
- Research and use of numbers
- Technical skills

Personal Management Skills:

- Being responsible and accountable
- Goal setting
- Positive attitude and behaviours
- Task initiative
- Time management

Teamwork Skills:

- Contribute to team goals
- Office administration skills
- Participate in projects and tasks
- Respect differences
- Work well with others

Technical or Software Knowledge Required:

Google Suites, Microsoft Office, Slack, Zoom, IBM Hyperledger Fabric

We appreciate your interest in this position, however, only the candidates selected for an interview will be contacted.