

# LUISA ROJAS GARCIA

COMPUTER SCIENTIST



hello@luisarojas.com

+1 (416) 856 3054

luisarojas.com

github.com/luisarojas






## EDUCATION

-  **Master's (MSc. Computer Science)** September 2017 – August 2019 (*expected*)  
University of Ontario Institute of Technology  
Thesis research area: Automatic fault localization in multithreaded programs.
-  **Bachelor (BSc. Computer Science)** September 2013 – April 2017  
University of Ontario Institute of Technology

## SKILLS

- C, C++
- HTML, CSS
- Machine Learning (Keras, TensorFlow)
- Relational Databases (PostgreSQL, MySQL)
- Docker
- Java
- NoSQL Databases (MongoDB)
- Source Code Instrumentation (TXL)
- Graph Databases (Neo4J)
- JavaScript (NodeJS backend)
- Python (Flask backend)

## PROJECTS

-  **Automatic Localization of Concurrent Faults** April 2018 – *Present*  
As part of my master's thesis research, I am developing a tool that can automatically localize concurrency bugs given a unit of source code and a set of tests. To achieve this, different sections of the given program are noised; then, the scope is narrowed down using a binary-search approach.  
`Docker` `Java` `Python` `TXL`
-  **Mentor-Mentee Matching System** February 2018 – *Present*  
Designed and implemented a platform for a matching system between mentors and mentees for the Peer Mentorship Program at the university. Given a set of survey answers, our system matches them according to their compatibility and stores the results for other visualization features.  
`CSS` `Docker` `HTML` `JavaScript` `Neo4J` `PostgreSQL` `Python`
-  **Distracted Driver Detection** December 2017  
Using a Convolutional Neural Network and transfer learning, we were able to build a model that could successfully predict if the individual in an image is driving responsibly or if they are distracted.  
`Keras` `Jupyter Notebooks` `Python` `TensorFlow`
-  **Threaded Paws** October 2016 – October 2017  
As part of my undergraduate thesis project, I designed and developed a serious game that can assist students in learning different concurrency concepts. Threaded Paws is the first educational game targeting concurrency that we are aware of.  
`C#` `Unity Game Engine`
-  **dynOBD** October 2016 – December 2016  
Android mobile application that, over a Bluetooth connection with a vehicle, can provide live data, like current speed and throttle. Moreover, the user can choose to keep track of trips' information, such as origin, destination, time and maximum speed.  
`Android Studio` `Java`

## EXPERIENCE

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- ✓ **Graduate Teaching Assistant** September 2017 – Present  
University of Ontario Institute of Technology, Faculty of Science  
Managed laboratory activities for students to complete outside of their lecture sections as part of a C++ introductory course and a Software Quality Assurance advanced course.
- ✓ **Undergraduate Teaching Assistant** January 2017 – April 2017  
University of Ontario Institute of Technology, Faculty of Science  
Managed laboratory activities for students to complete outside of their lecture sections as part of a C++ introductory course.
- ✓ **System Administrator** September 2014 – December 2014  
**Assistant System Administrator** May 2014 – August 2014  
University of Ontario Institute of Technology, International Office  
Design and maintenance of the International Office website. In addition, aided in the planning and marketing processes for various events held for international and exchange students. As System Administrator, also oversaw international students' University Health Plan (UHIP) coverage.

## EXTRACURRICULAR ACTIVITIES

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- ✳ **Program Representative: Computer Science** September 2017 – Present  
UOIT Graduate Student Council  
The GSC ensures that the university is aware of the concerns of graduate students and advocates for resolutions and changes were applicable. Program Representatives are closely involved with all of the council matters, and act as a bridge between the GSC and the rest of the students.
- ✳ **Founding Chair** September 2016 – December 2016  
**Vice-Chair** May 2018 – September 2018  
UOIT ACM-W (Women's) Student Chapter  
Responsible for leading the team and managing the chapter's activities in accordance with the mission of ACM and ACM-W. The chapter provided opportunities for networking and mentoring for all students on campus, especially those in STEM programs.
- ✳ **GitHub's Local Hack Day: Mentor and Judge** September 2016 – April 2017  
UOIT Computer Science Society and University of Ontario Institute of Technology  
Mentored by offering support to the participants in terms of ideas, development workflow, and implementation. Also partook in the judge panel by voting for best hack of the event.
- ✳ **Secretary** September 2015 – April 2016  
**Webmaster and Social Media Director** September 2014 – April 2015  
American Society of Mechanical Engineering (ASME), UOIT Student Chapter  
Designed and managed the chapter's website by keeping it current in accordance to the events hosted. Organized and carried out all general and executive meetings pertaining chapter matters.

## LANGUAGES

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English (Advanced), Spanish (Mother Language), French (Basic)