

Isaac Wismer

Computer Science & GIS Graduate • Full-Stack Software Developer • Adventurer

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Projects

Impinj RFID Reader Middleware: *C++, Rust, ARM embedded programming*
Middleware for processing RFID tags on a **real-time embedded system**

Actix Auth Example: *Rust, MongoDB*
An example repository for how to properly implement **secure authentication** in the Actix framework

Rusty Timer: *Rust, Networking, Real-time Computing, Parallel programming*
Concurrent applications to interface with I-pico timing hardware over a network

OsmAnd Live Web Tracker: *Rust, SQLite*
A simple web application to track someone using OsmAnd's live tracking feature

Education

Bachelor of Computer Science

Honours, Co-op, Distinction

University of Guelph

- Minor in GIS & Environmental Analysis
- 90% overall average
- 94% in Computer Science courses
- 2021 Society of Excellence Inductee
- 2019 AdKnown Scholarship Winner
- 2018 Co-op Student of the Year Nominee

Volunteering & Achievements

Scout Leader: *2016 - Present*

Lead weekly meetings and monthly camps for youth 11-17

U of Guelph Outdoors Club President: *2018 - 2020*

Planned and executed day and overnight trips for members during the semester

Bruce Trail Through Hike: *June 2021*


Hiked the 930km trail in 31 days

Adirondack 46er: *Summer 2018*


Climbed all 46 4000' mountains in the Adirondacks

Experience

Software Developer Co-op

Bern, Switzerland & Remote 

CAScination


January 2020 - May 2021 

- *OTOPLAN:* Cochlear Implantation Planning Software
 - * Added robust functionality in **C++** and Qt including **unit and integration tests**
 - * Worked efficiently with a small team in an **agile environment** in person and **remotely**
 - * Wrote high quality code for production medical software and performed **code reviews**
 - * Actively participated in an ISO 62304 software release
- *Continuous Integration Pipeline:* Rewrote the Jenkins pipeline
 - * Redesigned and implemented Jenkins CI pipeline to enable increased scalability and **reduced build times** by 50%
 - * Simplified the application release pipeline, greatly automating it and reducing developer time required for release

GIS & Software Co-op

Vancouver, BC 

Minerva Intelligence

May 2019 - Aug 2019 

- *Sea to Sky Geohazards:* Near real-time landslide hazard system
 - * Directly integrated runout modelling into a web app using **Docker** containers and a **PostGIS** SQL database
 - * Completed extensive research and testing to determine model parameters
- *DRIVER:* 3D Material Volume Interpolator
 - * Designed and implemented a scalable and **cloud deployable** Python application
 - * Refactored a monolithic codebase into libraries and interfaces for increased modularity
 - * Used **test-driven development** and wrote comprehensive **unit tests** to ensure code reliability
- *Minerva Tools:* Developed a suite of GIS tools as a QGIS plugins to expedite GIS workflows
 - * Implemented an extensible framework using the MVC pattern to facilitate rapid tool development

Programming & GIS Co-op

Ottawa, ON & Remote 

Geological Survey of Canada

May 2018 - April 2019 

- *Canada-3D Web Map:* Web map and searchable database containing all Arctic bedrock geological knowledge
 - * Developed a high performance **web service** with accompanying **PostGIS** geospatial database
 - * Communicated with stakeholders to determine requirements and issues
 - * Deployed and maintained secure **Linux** testing and production servers