

# Garrett Holmes

## Contact Info:

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Toronto, Guelph, Ontario

## Skills & Experience:

- Programming Languages: *C, Python, JavaScript, Bash, HTML*
  - Proficient in C, skills include multi-threaded programming, data processing, systems programming.
  - Python scripting, Computer Vision using PyTorch, Detectron2, resnet, numpy. Web scraping, string & data parsing.
  - HTML & CSS for webpage design & styling, with JavaScript integration. JavaScript & WebGL for 3D graphics.
- Software:
  - Proficient in Microsoft Office & Excel, Google Products.
  - Adobe Suite, Blender for video editing and 3D/2D animation, Vegas Pro.
  - Geoprocessing with ArcGIS Pro, QGIS, Google Earth.
- Executive Member, U of Guelph Outdoors Club.
  - Quartermaster – maintained gear inventory, rented gear to members

## Education:

*Honours Bachelor of Computing, Major in Computer Science, Minor in Geographic Information Systems and Environmental Analysis - University of Guelph (2019 - 2023)*

- GPA: 83
- Worked in team of 5 to plan the features & development of a social media app for 'The Grove' youth services for 'Systems Analysis & Design in Applications'.
- Team lead as part of sprint-based development of web application for viewing university undergraduate courses in relation to prerequisites and program requirements.
  - Python for web scraping using Playwright, flask for back-end processing of requests.
  - React front-end development including Bootstrap & React Flow for graphing.
- Worked in team to research and perform a Water Footprint Analysis of the Ontario Agriculture sector.

## Work Experience

*Undergraduate Research Assistant, University of Guelph – Summer 2022*

- Review and summary of academic articles relating Precision Agriculture and computer vision.
- Self-directed research of neural network concepts and methods.
  - Exploration of Mask-RCNN, YOLO, detectron2 API networks.
- Developed computer vision software using PyTorch to automatically train on and classify and label footage of beef cattle.
  - Used Resnet to classify frames of video containing cattle – used OpenCV to save sub-clips of cattle using drinking basins.

*University of Guelph Athletic Centre Rock Climbing Monitor – 2022/2023*

- Facilitated rock climbing activities, orientations, first aid.

*Camp Kandalore - Summer 2019/2021*

- Counselor & Tripper Apprentice (2019)
  - Facilitating educational activities for groups of 6-30 campers.
  - Worked with co-counsellor to manage and lead cabin of 8 children ages 6-8 & 11-13.
- Canoe Tripper (2021)
  - Responsible for leading up to 10 kids aged 12-15 on 4-7 days white water canoe trips.
  - As trip leader, planned trips, navigated, cooked, & managed group dynamics.
  - River Guide; scouting sets, safety, educating group about paddling, hydrology, camping.