Lukas G. Olson, B.U.F
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(604) 817-9714

Lukas G. Olson

Masters of Science Student

Education

2019 - 2023, The University of British Columbia
Bachelors of Urban Forestry; Graduated with honours.

2023 - 2025, The University of British Columbia
Masters of Science; Research based: New technologies for measurements within stands.

Awards

2022, *K.J. ROLLER Sopron Scholarship*, UBC

2022, *Formal Invitation to UBC's Premier Undergraduate Scholarships and Wesbrook Scholars award program*, UBC
Invitation requires students to rank academically in the top 10% of their year level and awarding faculty.

2023, *Dean's Honour Roll*, UBC
Awarded to students who achieve a standing of 80% or better in the previous winter term. Achieved an 88% average for third year.

2022, *Dean's Honour Roll*, UBC
Awarded to students who achieve a standing of 80% or better in the previous winter term. Achieved an 88% average for third year.

2021, *Dean's Honour Roll*, UBC
Awarded to students who achieve a standing of 80% or better in the previous winter term. Achieved an 86% average for second year.

2020, *Dean's Honour Roll*, UBC
Awarded to students who achieve a standing of 80% or better in the previous winter term. Achieved an 82% average for first year.

2019, *Maria Hettinger Award*, Eric Hamber Secondary
This scholarship is awarded to a deserving student who demonstrates qualities of hard work and perseverance.

Publications

Published Work
- Martin, A., Olson, L., Yan, H., Reeder, K., NG, A., Zeng, A., & Rueter, A. (2022, June). Student Perspectives: Early career arborists and urban foresters' reflections on entering the industry. *International Society of Arboriculture: Arborist News, June 2022*.

School Writing
- FRST 370 Case Study (Group Work): *The Impacts of REDD+ on Community Forestry in Antioquia Department, Colombia*

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Work Experience

May 2023 - Present, *Graduate Research Assistant,* **Integrated Remote Sensing Studio, UBC Department of Forest Resource Management**
Duties Include:

- Research looks at the contemporary forest health inventorying and management of sugar maple stands with a focus on the novel application of drone-based full-tree photogrammetry and analyses of tree health.

Sept. 2022 - December 2022, *Undergraduate Teaching Assistant I for UFOR 100,* **UBC Department of Forest Resource Management**
Duties Include:

- Marking exams, assignments, and discussion posts.
- Providing semi-weekly office hours.
- Exam invigilation.
- Leading field-trips and teaching students.

May 2022 - May 2023, *Undergraduate Academic Assistant,* **UBC Department of Forest Resource Management**
As part of my undergraduate academic assistant role, I played a pivotal role in the Visualizing Urban Forestry and Open Urban Forest projects. I collected, coded, summarized, and visualized urban forest-related management documents, datasets, and inventories for all Canadian municipalities with a population greater than 20,000.

May 2022 - Sept. 2022, *Game Programmer,* **UBC Emerging Media Lab; Gameifying Forestry Project**
https://eml.ubc.ca/projects/gamifying-forestry/
I designed and developed systems, frameworks, and tools for user and classroom management, virtual terrain generation, and content creation. My core contributions to the project have directly influenced how future forestry students learn through the project. During the role, I became more interdisciplinary while my knowledge and skills as a self-taught programmer were tested, built upon, solidified, and integrated with my education in forestry. The Gameifying Forestry Project applies virtual voxel-based worlds and scenario simulation to teach forestry-related concepts to students more intuitively.
Duties Include:

- Working directly with the team and Principal Investigator to identify key features.
- Designing and implementing features using Lua.
- Creating external tools for easier data import.
- Strong collaboration with other team members and artists to identify and test visual assets.

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Sept. 2021 - May 2022, *Collegia Advisor*, UBC CSIC

As an advisor, I helped foster community and ease the transition to university life for first year commuter students through the UBC Collegia Program.

Duties Include:

- Maintaining a UBC collegium space.
- Plan interactive and educational programming for students.
- Help students navigate first year academics, and foster community.

Oct. 2020 - Present, *Team Lead*, UBC Game Dev Club

I direct a team of 15 people for the development of an upcoming videogame, "SideTracked!" https://sidetrackedgame.xyz/

Duties Include:

- Facilitate and preside over weekly Agile Scrum meetings.
- Teach students game development, programming, 3D modelling, and music development.
- Web development to create and maintain project websites.
- Back-end programming including game servers, item and resource database systems, multiplayer networking, etc.
- Systems programming and debugging including major game mechanics like character movement and enemy artificial intelligence.
- Time, budget, and personnel management to reach important development milestones.
- Public relations and marketing.

May 2020 - Sept. 2020, May 2021 - Sept. 2021, May 2022 - Sept. 2022 *Accounting Assistant*, Olson & Co. Chartered Professional Accountants

Summer internship position Duties Included:

- Autonomous Clerical work (Data entry, email correspondence, report preparation, and document filing/organization).
- Basic accountancy.
- Accountancy and financial software research and development for clients in the film and entertainment industry.

2015 - Present, *Director*, GreyBlock Games

https://greyblockgames.com/

As a freelance developer and consultant, I coordinate a small team of developers to develop and deliver mobile games, prototypes, interactive media, and corporate software to clients.

Presentations

Nov. 2022, Bringing the Idea to Life Workshop

https://www.ubcbiztech.com/gameworld/

I was invited by the UBC BizTech Game-World conference to develop and deliver a workshop to over 100 students. The workshop taught computer science students and industry professionals a framework based on strategic decision-making to more effectively envision, develop, and publish independent video games under current market pressures.

Jun. 2023, Silva21 Annual General Meeting Research Update

At the Silva21 Annual General Meeting, I delivered a presentation highlighting my initial research approaches and investigation into the innovative use of unmanned aerial vehicles (drones) for creating digital topographical models of trees. I also discussed the prospective application of these models for digitally assessing tree health.

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Volunteering

Sept. 2018 - July 2019, *Student Council President*, Eric Hamber Secondary School

Duties Included:

- Led a team of over 40 members to plan fundraisers, student events, and community initiatives.
- Presided over multiple meetings each week.
- Rewrote and strengthened the organization's constitution.
- Represented students from the school at district-wide conferences.
- Spearheaded a community carnival for the school and local residents. Events included carnival games, food trucks, booths, and a market. Duties included leading meetings, obtaining permits from the city, advertising, and general planning.

Relevant Skills

Lab Skills

- Software Design and Development
- Public Speaking & Communication
- 3D Graphics & Design
- Academic Writing
- Independent and self-motivated
- Structured Problem Solving

Software & Tools

- Word
- Ubuntu CLI
- QGIS
- C#
- Lua
- Excel
- SQL
- Zotero
- C++
- F#
- LaTeX
- ArcGIS Pro
- Git
- Python
- Web2.0

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Interests

Professional

- City Design and Sustainable Urban Development
- Ecosystem Service Valuation and Environmental Conservation
- Environmental Decision Making and Management
- Leadership and Organizational Learning
- Planning and Strategy Formulation
- Drone-based Data Collection and Remote Sensing
- Software and Web Design
- Game Development
- Technology-Assisted Learning
- Automated Tree Inventory Collection
- Urban, Peri-urban, and Forest Greenspace Management

Academic

- Photogrammetry
- Remote Sensing
- Forest and Tree Health
- Forest Inventorying
- Evaluation of Professional Volunteerism Impacts

Personal

- Backpacking and Camping
- Hiking and Outdoor Exploration
- Lego Technic and Robotics
- Sailing and Adventure Sports
- Trivia and Intellectual Challenges
- Writing and Creative Expression
- Programming and Problem Solving
- Data Analysis and Interpretation
- Lifelong Learning

Courses

Urban Forestry and Landscape Planning

- UFOR 100 – Greening the City
- UFOR 110 – Introduction to Urban Forest Design
- UFOR 200 – Urban Forests and Well-Being
- UFOR 300 – Arboriculture Principles and Practice
- UFOR 316 – Trees and Shrubs in Landscape
- UFOR 330 – Environmental Justice and Urban Green Equity
- UFOR 400 – Urban Forestry Field School
- UFOR 401 – Integrated Urban Forestry Capstone Studio
- UFOR 402 – Urban Forestry Administration, Policy, and Law
- UFOR 420 – Ecology of Urban Green Infrastructure
- UFOR 449C – (Full Year) Community Climate Hack Project
- UFOR 495 – Biodiversity in Urban Areas
- LARC 444 – Green Network Planning

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Forestry, Biology, and Conservation

- FRST 200 – Forest Plant Biology I
- FRST 210 – Forest Plant Biology II
- FRST 201 – Forest Ecology
- FRST 211 – Forest Classification and Silvics
- FRST 305 – Silviculture
- FRST 307 – Biotic Disturbances
- FRST 370 – Community Forests and Community Forestry
- FRST 385 – Watershed Hydrology
- FRST 411 – Complex Adaptive Systems
- FRST 443 – Remote Sensing for Ecosystem Management
- BIOL 121 – Genetics, Evolution, and Ecology
- APBI 200 – Introduction to Soil Science
- CONS 200 – Foundations of Conservation
- CONS 210 – Visualizing Climate Change
- CONS 340 – Introduction to GIS
- CONS 481 – Conservation Planning in Practice
- UFOR 403 – Ecological Restoration
- GEOB 102 – Climate and Ecosystems

Governance, Economics, and Sociology

- ECON 101 – Principles of Microeconomics
- SOCI 101 – Social Interaction and Culture

Design and Visual Arts

- DES 230 – Sustainability by Design
- PLAN 221 – City Visuals

Communication and Literature

- ENGL 110 – Approaches to Literature
- WOOD 225 – Communications Strategies

Mathematics

- MATH 190 – Calculus Survey

Miscellaneous

- TCPS 2: CORE

Computer Science

- Hamber Computer Science – A nationally recognized 3-year high-school computer science program.
- HarvardX: CS50 – An introduction to the intellectual enterprises of computer science and the art of programming.
- Ossu Computer Science Curriculum – (Ongoing) A complete open computer science curricula designed according to the requirements of undergraduate computer science bachelor degrees. I have been following this curricula part-time to close any knowledge gaps in my self-taught computer science education.