

EDUCATION

MASTER OF MATHEMATICS (MMATH)

SEPTEMBER 2020 - PRESENT

CHERITON SCHOOL OF COMPUTER SCIENCE, UNIVERSITY OF WATERLOO

- Thesis-based master's program co-supervised by Prof. Craig Kaplan and Prof. Daniel Vogel
- Focus in Human-Computer Interaction (HCI), currently researching the effects of perspective distortions in immersive interfaces
- GPA: 4.0/4.0 | 95.5%

HONOURS BACHELOR OF SCIENCE (HBSC)

SEPTEMBER 2015 - JUNE 2020

DEPARTMENT OF COMPUTER SCIENCE, UNIVERSITY OF TORONTO

- Computer Science Specialist, focus in Computer Vision
- Graduated with High Distinction (3.57/4.0 | 83.2%)
- Coursework:
 - Human-Computer Interaction
 - Computer Graphics
 - Introduction to Image Understanding
 - Introduction to Machine Learning
 - The Design of Interactive Computational Media
 - Calculus I and II (Multivariable)
 - Algorithm Design, Analysis and Complexity

WORK EXPERIENCE

RESEARCH ENGINEER INTERN

SEPTEMBER 2022 – DECEMBER 2022

META INC. TORONTO ON, CANADA

- Developing research prototypes for Augmented Reality (AR) / Virtual reality (VR) experiences

RESEARCH INTERN

MAY 2022 – AUGUST 2022

ROBLOX CORP. VIRTUAL

- Developed research project on VR experiences and conducted a literature review
- Implemented research prototypes on Roblox Studio using Lua

RESEARCH INTERN

MAY 2021 – AUGUST 2021

ADOBE INC. VIRTUAL

- Conducted HCI research on typographical layouts with the Graphics Intelligence & Learning Lab

- Designed and administered an experiment and survey to identify visual preferences in typography

- **RESEARCH ASSISTANT** **JULY 2020 – AUGUST 2020**
UNIVERSITY OF TORONTO, VIRTUAL
 - Conducted user studies and reported findings in a research paper (accepted to SUI 2021) based on a VR prototype that I had built
 - Reviewed existing research on virtual reality (VR) authoring tools
 - Designed a novel interaction technique for visualizing for VR design space exploration
 - Developed the VR prototype in **Unity (C#)** for **Oculus Rift**
 - Devised and conducted remote user studies to evaluate the prototype
- **SOFTWARE DEVELOPER INTERN** **MAY 2019 – AUGUST 2019**
AUTODESK INC. TORONTO ON, CANADA
 - Developed features for Autodesk Maya's Render Setup using **pyMEL**, **Python** and **Qt**
 - Worked closely with designers and other software developers to create a more intuitive user experience with additional capabilities
- **SOFTWARE DEVELOPER INTERN** **MAY 2018 – MAY 2019**
INTEL CORP. TORONTO ON, CANADA
 - Architected and implemented an infrastructure in **Python** and **PostgreSQL** for organizing product attributes
 - Maintained and extended a set of automated dashboards that displayed completion statistics for project management
 - Coordinated project development with international teams
 - Used mathematical models to predict FPGA static power consumption and wrote supporting software in **C++** and **Python**
- **SOFTWARE DESIGNER INTERN** **MAY 2017 – AUGUST 2017**
NOKIA CORP. OTTAWA ON, CANADA
 - Wrote various **python** and **bash** scripts used in daily build testing
 - Improved work efficiency by automating common tasks such as installing new builds of our product, setting up passwordless login between network computers and modifying files for product installation
 - Mentored other summer students and taught them about the **Robot framework** as well as **bash scripting**

PUBLICATIONS

- [C1] **Cheryl Lao**, Haijun Xia, Daniel Wigdor, and Fanny Chevalier. 2021. Attribute Spaces: Supporting Design Space Exploration in Virtual Reality. In *Symposium on Spatial User Interaction (SUI '21)*. Association for Computing Machinery, New York, NY, USA, Article 11, 1–11.
DOI:<https://doi.org/10.1145/3485279.3485290>

TEACHING EXPERIENCE

- **INSTRUCTIONAL APPRENTICE** **SEPT. 2020 – APRIL 2021, SEPT. 2021 – DEC. 2021**
UNIVERSITY OF WATERLOO
 - Helping students to understand basic programming concepts using P5.js in CS 105 (Introduction to Computer Programming)
 - Clarifying course concepts and providing assistance with coursework in office hours
 - Marking lab submissions
- **TUTOR** **NOV. 2021 – SEPT. 2022**
INDEPENDENT
 - Planned and delivered regular lessons for high school students preparing for university programs in computer science

SERVICE

- **Speaker**, RevolutionizeSTEM (2022)
 - Presented an hour-long talk on opportunities in Virtual Reality research to high school and early undergraduate students
- **Panelist**, SPARCS Lite (2022)
 - Presented an overview of my research and answered questions from about 60 high school students who were interested in technology
- **Panelist**, Careers in Computing Panel (2021), University of Waterloo
 - Prepared a short talk and answered questions from undergraduate students looking to learn about computer science
- **Vice Chair**, Toronto ACM SIGGRAPH Chapter (2018-present)
 - Organized various computer graphics-related events such as industry talks, screenings, and workshops
- **Student Volunteer**, UIST 2020 Conference
 - Assisted in various virtual conference tasks such as streaming and monitoring discussions
- **Panelist**, Women in CG Panel, SIGGRAPH 2020 Conference
 - Shared academic and professional experiences in a panel discussion
- **Student Volunteer Team Leader**, SIGGRAPH Conferences (2019, 2020, 2021)
 - Coordinated student volunteer activities for over 200 students
 - Provided on-the-ground support for conference attendees and presenters
- **Moderator**, Toronto SIGGRAPH Chapter (2020)
 - Moderated a live panel discussion on *Immersive Technologies for Creation and Communication*
- **Session Chair**, University of Waterloo WatCHI Event (2020)
 - Introduced authors and their papers during the online event
- **President and Founder** of the University of Toronto Computer Graphics Club (2016-2020)
 - Took the initiative to start a club and grew it to over 350 members over 4 years
 - Coordinated research talks, taught workshops and hosted events at least monthly

- Organized a computer graphics job fair with several leading companies in computer graphics, VFX, and interactive techniques
- **Student Volunteer**, SIGGRAPH 2018 Conference
 - Assisted in various conference tasks such as greeting attendees and monitoring sessions
- **Microsoft Student Partner** (2017-2020)
 - Organized technical events such as a tutorial on the Microsoft Computer Vision API
- **Executive Member** University of Toronto Undergraduate Research in Computer Science (2019-2020)
 - Worked with other executives to host an undergraduate CS research conference
- **Vice President** of University of Toronto Computer Science Student Union (2017-2018)
 - Served as Acting President when the President was unable to continue fulfilling duties
 - Coordinated efforts to create a more inclusive computer science community
 - Instituted a general council for greater student body involvement
 - Organized a semi-formal dinner for faculty and students

TECHNICAL SKILLS

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|------------------|-------------|
| • Python | • Unity |
| • C#, C++, C | • OpenCV |
| • Java | • PyTorch |
| • JavaScript | • P5.js |
| • HTML | • Docker |
| • CSS | • Qt |
| • SQL | • Photoshop |
| • Git & Perforce | • Maya |

HONOURS AND AWARDS

- **Adobe Women-in-Technology Scholarship** (2022)
 - Recognizes outstanding female undergraduate and master's students in North American universities studying computer science, computer engineering, and closely related fields.
 - 10,000 USD awarded to 16 recipients in North America for educational expenses
- **University of Waterloo Mathematics Domestic Masters Scholarship** (2020)
 - Awarded to incoming Canadian master's students
- **University of Toronto Canada Chinese Computer Science Association Scholarship** (2017)
 - Awarded to an undergraduate computer science student of high academic standing who has demonstrated interest in Chinese literature, language or culture
- **University of Toronto Dean's List** (2016, 2017, 2020)
 - Awarded to students who achieved an average above 3.50/4.0 in the past 5.0 credits
- **Organizer's Choice Award (3rd place)**, The Lady Hacks (2016)

- Awarded to hackathon groups with the the best projects as decided by the organizers
- **University of Toronto Friends of Victoria University Library Scholarship** (2016)
 - Awarded on the basis of academic performance in the first group of 5.0 credits