

SKILLS: Social entrepreneurship, team lead, equitable tech R&D, UX, math, engineering, adaptability. **LANGUAGES: English, Spanish**, French, beginner Japanese. **C#**, **Python**, C++, HTML, JS, TS, SPARQL. **INTERESTS:** XR, AI, arts and technology, omniverse, open-source, raspberry pi, photography, SolarPunk.

EDUCATION

Ph.D. in the Development of Open-Source Tactile Human Computer Interfaces

Present - Design Faculty, Laval University, Québec, Canada

- Led the iterative design, implementation, and evaluation process of an assistive technology device.
- Secured funding and collaborations with academic, government, and community organizations.
- Managed risks for the human-subject research conducted during the COVID-19 pandemic.

M.A. in Adaptive Interactivity in Music Video Games - Grade: 94.23%

2016 - 2019 Music Faculty, Laval University, Québec, Canada

Bac. in Mechatronics Engineering - Grade: 96.57% - (Class of 2016 valedictorian)

2011 - 2016 Robotics and Automation Major, ITS, Saltillo, Mexico

EXPERIENCE

VirtualiSurg - Senior XR Developer

2023 - present Chirurgie Virtuelle Inc. - Canada, Brazil, France

- Own the research, development, and successful implementation of a networking framework as the foundation for current and future multiplayer and multiplatform XR simulations.
- Collaborate with international teams to pioneer a state-of-the-art XR platform for medical training, leveraging 6 DOF haptic feedback robots, AI, and UX to create an immersive learning experience.
- Lead the Canada development team, managing projects for long-term success.

XR Babel Library - Lead XR Developer

2018 - 2020 Université Paris 8 + Université de Montréal + Université Laval - France, Canada

- Communicated the potential and constraints of cutting-edge XR, AI and semantic web technologies to a multidisciplinary team to procedurally showcased cultural heritage from Europeana collections on XR.
- Led the iterative development of an XR book with 'infinite' relevant content through SPARQL.

<u>Participatory Opera</u> - Unity3D Developer

2018 - 2019 Centre interdisciplinaire de recherche en réadaptation et intégration sociale - Canada

- Designed, implemented and presented a collective immersive storytelling experience about tolerance, disability, and mental health.

LabVivant - Unity3D & Hardware Developer

2017 - 2018 Mitacs - Le Cercle + Université Laval - Canada

- Designed and implemented wearable tech and AI-based gesture interaction for mobile VR experiences.

MagnaQuest - Unity3D Developer

2015 - 2017 Mitacs Inc + Université Laval - Canada

- Developed a sound-controlled multiplayer, multiplatform XR music video game to inspire young players.

VOLUNTEERING & INTERNSHIPS

2017 **Low-vision Center Volunteer** - Lethbridge-Layton-Mackay Rehabilitation Center - Montreal, Canada 2014 **Mechanical Engineering Research Intern** - Università degli Studi di Padova - Padova, Italy