

SIMON DEMEULE

simondemeule.com

About Me

The intersection of arts and technology are at the core of my practice.

My experience reaches both of these disciplines — on the academic side, in computer science and digital arts, as a researcher or educator — on the applied side, as an independent artist, as an artist working as part of a studio, and as a software developer.

Artificial intelligence, algorithmic techniques related to multimedia and perception are the core of my expertise and the primary thematics explored through my art.

Education

Diploma	Establishment	Status	Date
Masters in Artificial Intelligence (GPA: 4.2/4.3)	Mila, University of Montreal	ongoing	2020 ↓ 2023

My thesis explores the use of generative models to adapt convolutional neural networks to tasks based on non-uniformly sampled multidimensional signals.			
Bachelors of Computer Science, Computer Applications with Computation Arts (GPA: 3.77/4.3)	Concordia University	graduated	2017 ↓ 2020

Awards

Title	Establishment	Date
Best Original Soundtrack	Watersprite Festival	2023
Gold Award – Concours Idéa	Concours Idéa	2022
Space Between Exhibition Experiential Design Award	Concordia University	2021
Dean’s List Graduation Award	Concordia University	2020
Synchrony 2020 Demoparty Demo Category Winner	synchrony.nyc	2020
Concordia Undergraduate Student Research Award	Concordia University	2019
Focal Points Exhibition Design and Computation Arts Award	Concordia University	2019
Concordia University Golf Classic Entrance Scholarship	Concordia University	2017

Skills

Languages

- French
- English

Knowledge

Artificial Intelligence /
Machine Learning /
Generative Models /
Vision / Graphics / Audio /
Applications / Hardware /
Design / Art

Tools

Python / C++ / C / Linux / Bash /
Git / Slurm / Docker / PyTorch / JAX /
TensorFlow / OpenGL / OpenCL /
OpenCV / OpenFrameworks / GLSL /
HLSL / Unity / Max MSP API / Qt /
HTML / CSS / Javascript / Node

Work Experience

Job Description	Employer	Reference	Date
Creative Programmer New media arts and interactive installations	Studio Iregular	Daniel Iregui di@iregular.io	2021
Lecturer Internet and digital media	University of Montreal	Frédéric Dallaire-Tremblay frederic.dallaire-tremblay@umontreal.ca	2021
Invited Speaker and Mentor AI Art Hackathon	AI Launch Lab	Timothy Pereira	2021
Research Assistant Software developer (C++ backend using Qt)	Concordia University	Christopher Salter chrissalter.com	2020
Teaching Assistant Computer graphics (C++ with OpenGL)	Concordia University	Sudhir P. Mudur sudhir.mudur@concordia.ca	2019 ↓ 2020
Undergraduate Researcher Machine learning for sound generation	Concordia University	Denis Pankratov denis.pankratov@concordia.ca	2019
Teacher Technology and coding for youth	Les Ateliers Kikicode	Christine Durant kikinumerique@gmail.com	2018 ↓ 2019

Artistic projects

Description	Date
Paper Stairs	2019
Original soundtrack for Antoine Foley-Dupont short film. Co-composed in collaboration with Louis Parent et Théo Parent.	↓ 2023
Award → Best Original Soundtrack at Watersprite international film festival	2023
Awarded for best original soundtrack among over 1500 films submitted from 106 countries. We were welcomed to the festival in person in Cambridge, United Kingdom.	
watersprite.org.uk	
Puzzles	2022
This public interactive art experience enmeshes a mural with a geometric mosaic that reacts to the audience. As participants point their phone's light at the mosaic, a virtual orb of light extends their movements on the mural. The cubes making up the mosaic can be flicked, revealing a series of different designs.	
This work was created through a collaboration between the artist Bird0 and Studio Iregular. My role in this piece was that of principal creative developer. I designed the entirety of the graphics pipeline, animation system, sound system, and sensor data post-processing systems.	
Exposition → MURAL Festival 2022	2022
Shown on the primary stage of MURAL Festival, on Boulevard Saint-Laurent, at the heart of Montreal.	
murfestival.com/birido-x-iregular-when-art-transcends-the-wall/	
Award → Gold Award at Concours Idéa 2022	2022
This award is a recognition of excellence in digital arts in Quebec.	
Presented by the association of creative communication agencies.	
concoursidea.ca/projets/puzzles-01-rebirth/	

What Lies Ahead

2019

↓

2021

This interactive art piece is contemporary rebirth of the exquisite corpse. It creates a dialog between its participants and a machine learning algorithm, encouraging the creation of poems with ambiguous meanings. At times, the created texts are familiar, strange, rich or absurd. The piece conducts playful exploration of the limits of language cognition.

Created in an interdisciplinary collaboration with Pauline Palma, doctorate candidate in experimental psychology specialized in language cognition.

vimeo.com/624048085/

Exhibition → Bridges: A SciArt Exhibition

2021

This exhibition features works that exist at the intersection of the disciplines of art and science.

Presented in collaboration with Concordia University, McGill University and the Convergence Initiative.

convergenceinitiative.org/mf-what-lies-ahead/

Exhibition → Mozilla Festival 2021

2021

This annual festival is a celebration of web projects that explores art, access to education, social justice, and environmental challenges.

Presented in collaboration with the Convergence Initiative.

Exhibition → Space Between

2021

Award → Experiential Design Award

This exhibition regroups the best work created by students of the department.

This award recognizes excellence in interactive art.

Presented by Concordia University's Design and Computation Arts department.

space-between.ca/2021/project/what-lies-ahead/

Conference → Climate Crisis Hackathon

2021

Presented by AI Launch Lab. I was invited to introduce the artwork, discuss the possibilities brought to the world of arts by artificial intelligence, and mentor a group of participants in created an artistic piece reflecting on the climate crisis using artificial intelligence.

launchlab.ai

Nakade

2020

Generative audiovisual piece created from photogrammetric scans of New York City.

Created in collaboration with Victor Ivanov.

vimeo.com/386068451/

Demo → Synchrony NYC / MTL

2020

Award → Demo Category Award

The piece was created for this digital arts competition in a quick sprint.

synchrony.nyc/2020/

Exhibition → In Finite

2020

This exhibition regroups the best work created by students of the department.

Presented by Concordia University's Design and Computation Arts department.

in-finite.ca/projects/project-nakade/

Curvature

2020

Graphics rendering engine allowing atypical behaviours of light to be explored. Scenes containing objects that curve light arbitrarily can be created and rendered effectively using a novel, efficient algorithm. The program also implements BVH acceleration and multithreading.

github.com/simondemeule/Curvature/

AutonomX

2020

Software allowing the integration of complex dynamic systems, artificial neurons, and cellular automata into digital art piece using an easy to use visual interface.

Created through a research-creation project lead by Concordia University's Hexagram research cluster.

github.com/Xmodal/autonomX/

You Are X

2019

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2020

Virtual reality experience exploring the lifecycle of materials. Participants are transported to a minuscule universe where a series of poems are shown, each delving into the essence and environmental cost of the presented materials.

Created in collaboration with Victor Ivanov, Jennifer Powroznyk and Catherine Weng.

vimeo.com/383883458/

Exhibition → In Finite

2020

This exhibition regroups the best work created by students of the department.

Presented by Concordia University's Design and Computation Arts department.

in-finite.ca/projects/project-you-are-x/

Grainlet

2020

Realtime audio rendering engine combining notions of granular synthesis, wavelets, phase and frequency modulation.

In Chrome

2019

Interactive web piece allowing participants to perform Terry Riley's «In C» composition.

Exhibition → Focal Points

2019

Award → Design and Computation Arts Award

This exhibition regroups the best work created by students of the department.

This award celebrates the best use of technology in arts.

Presented by Concordia University's Design and Computation Arts department.

www.graduationshow.concordia.ca/2019/projects.html#popup20