SIMON DEMEULE

simondemeule.com

Education

Diploma	Establishment	Date	Status
Masters in Artificial Intelligence	University of Montreal	2020 - 2022	ongoing
Bachelors of Computer Science, Computer Applications with Computation Arts	Concordia University	2017 - 2020	graduated
Cegep — Natural Sciences	Cégep Sainte-Foy	2015 - 2017	graduated

Awards

Title	Establishment	Date
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 End of Year Exhibition DCART Prize	Concordia University	2019
Concordia University Golf Classic Entrance Scholarship	Concordia University	2017

About Me

I have always been deeply interested by computer science, mathematics, and art, and how these disciplines inform and relate to each other. I have explored these topics through education, research projects, art pieces, and personal projects.

Work Experience

Job Description	Employer	Reference	Date
Lecturer Internet and digital media	University of Montreal	**Frédéric Dallaire-Tremblay** frederic.dallaire-tremblay@umontreal.ca	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 **Kaustubha Mendhurwar** kaustubha.mendhurwar@concordia.ca **Nicolas Bergeron** bergeron@encs.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

Skills

Languages	Research Interests	Programming Languages	Frameworks & Libraries
• French • English	• Machine Learning • Computer Graphics • Computer Vision • Signal Processing • Digital Arts	• Python • C++ • C • Swift • GLSL • HLSL • JavaScript	• Numpy • Torch • TensorFlow • Qt • OpenGL • OpenCL • OpenCV • NodeJS

Notable projects

- Creator of a multitude of multimedia art pieces. (2014-2021) simondemeule.com

- Creator of **What Lies Ahead**, an interactive poetic art piece built on the GPT-2 language transformer model which was selected to be shown at Mozilla Festival 2021 and at AI Launch Lab's January 2021 Hackathon. (2020-2021) simondemeule.com/WhatLiesAhead

- Creator of **Curvature**, an experimental hybrid raytracing and raymarching 3D rendering engine that allows bending light with a novel, efficient algorithm. (2019-2020) github.com/simondemeule/Curvature

- Creator of **Nakade,** an audiovisual demo featuring photogrammetry and custom graphics shaders created for Synchrony 2020 demoscene event, where it was awarded first prize in the demo category. (2020) simondemeule.com/Nakade

- Backend developer for **autonomX,** a software for multimedia artists to experiment with realtime dynamical systems that display lifelike behaviours, created as part of a research-creation project with Concordia University's Xmodal laboratory. (2020) github.com/Xmodal/autonomX

- Led a CUSRA-funded research project on the application of CRBM models for audio generation for use in music, and developed techniques borrowed from the study of linear systems to manipulate sounds by transforming learnt parameters directly. (2019) github.com/simondemeule/CRBMSound