

David Robert
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Creative Technologist and Arts Professional focused on spatial and interactive technologies for responsive environments. I think about how we live with technology and how technology lives with us. I am passionate about art & technology & architecture & performance & people & the way these things come together. I have worked in art studios & tech teams & scholarly research & my own practice, executing projects both big & small. I am interested in moving humanity away from the domain of technology & moving technology into the domain of humanity.

Experience

Creative Technologist (R&D)
Antimodular Research Inc.,
Atelier Lozano-Hemmer
Montreal QC
November 2023 - Present

- Researching, developing, updating, and installing artworks for Rafael Lozano-Hemmer. Ranges from art-object to large-scale installations.
- Creating software & hardware solutions. Often working with TouchDesigner, Python, JavaScript, Arduino, and OpenFrameworks.
- Oversaw, troubleshoot, and performed daily QA for the artworks in the exhibition Translation Island for a month, as part of the Manar Abu Dhabi exhibition.

Creative Technologist / Lab Assistant
Design + Technology LAB,
Toronto Metropolitan University
Toronto ON
September 2021 - April 2022
September 2022 - April 2023
September 2023 - November 2023

- Assisted in day-to-day operations of the lab, including maintenance and operation of lab equipment. This includes 3D printing, laser cutting, XR, and robotics.
- Created an interactive installation for DesignTO 2022 using TouchDesigner, OpenVR, a KUKA robot arm, and full-stack web development.
- Guided students in XR-fashion projects.

Research Assistant [AI]
Technology Research in Performance Lab,
Toronto Metropolitan University
Toronto ON
September 2022 - April 2023

- Assisted a School of Performance professor to develop an improvised human-AI performance.
- Used OpenAI's Whisper to transcribe speech, OpenAI's API to generate responses, and Google Cloud's API for text-to-speech.
- Developed using Python and prototyped interfaces in TouchDesigner.

Teaching Assistant [Physical Computing]
Toronto Metropolitan University
Toronto ON
September 2022 - December 2022

- Assessed students and gave feedback on projects for RTA 321: Intro to Tangible Media.
- Supported students with Arduino programming and simple circuit design.

Creative Developer Intern
Jam3
Toronto ON
May 2022 - August 2022

- Developed experiences for the web using Three.js, React, Node, and MongoDB.
- Worked with an autonomous team of interns including one other developer, two designers, and a production coordinator.
- Developed a multi-user 3D environment with real-time interactions and persistent individual and environment data.

Education

BA in Media Production
Concentration in Digital Media
4.27 / 4.33 GPA
Toronto Metropolitan University
Toronto ON
September 2019 – April 2023

Skills

Programming

-Arduino
-JavaScript
-Node.js
-p5.js
-Three.js
-React
-Networking
-OpenFrameworks
-Processing
-Python
-TouchDesigner
-Unity [C#]
-Unreal Engine [C++ & Blueprints]

Fabrication

-3D printing
-Circuit design
-Laser cutting
-Soldering

Research Assistant [AR]
Toronto Metropolitan University
Toronto ON
July 2021 - April 2022

- Developed an AR app using Unity [C#] centred on enhancing digital delivery of orchestral music through spatial and interactive audio.
- Co-wrote paper accepted to EVA London 2022.

Technical Consultant
CRTCL Crafting
Toronto ON
July 2021 - September 2021

- Designed and planned the technical setup for a future generative installation, including network communication between devices.
- Created simple aesthetic prototypes in TouchDesigner with Arduino input.

Unpaid & Educational Experience

Undergraduate Researcher
[Unreal & Networking Developer]
Synaesthetic Media Lab,
Toronto Metropolitan University
Toronto ON
September 2022 - December 2022

- Worked as part of a joint research team between Toronto Metropolitan University and University of Toronto creating interactive boat-drones for performances.
- Developed a simulation tool in Unreal Engine 5 [C++], as well as communication systems for the separate components. This includes a Python server, WebSockets, and I2C.

Interactive Developer
Ontario Science Centre
Toronto ON
January 2022 - April 2022

- Created an interactive audio-experience for children at the Ontario Science Centre.
- Developed interactions using Unity & Arduino, managed projection using TouchDesigner.

Code Coach
Toronto Metropolitan University
Toronto ON
September 2021 - April 2022

- Helped students fix issues in their creative coding projects and tutored them on core programming concepts.

Undergraduate Researcher
[Unreal AR Developer]
Synaesthetic Media Lab,
Toronto Metropolitan University
Toronto ON
January 2021 - April 2021

- Designed and developed an AR HoloLens 2 application in Unreal Engine 4 [Blueprints].
- The app supports training for medical workers through the manipulation of medical models with gestures and tools.

Fabrication Technician
Philip Beesley Studio,
Living Architecture Systems Group
Toronto ON
February 2020 - March 2020

- Fabricated components for an interactive installation that was part of the 2021 Venice Biennale of Architecture.
- Laser cutting; assembly of metal and acrylic scaffolding; soldering and testing electronic components.

Publications

David Bouchard, Cintia Cristia, David Robert, Michael Bergmann. 2022. **Augmented Symphony: An augmented reality application for immersive music listening.** In *Proceedings of EVA London 2022*. Computer Arts Society, London, England, UK.

Exhibitions

Rafael Lozano-Hemmer, Antimodular Research Inc. 2024. **Translation Island.** At *Manar Abu Dhabi*. Abu Dhabi, UAE. *Contribution: Exhibition Technician.*

David Robert, Alex Verni, Design + Technology LAB. 2022. **Assembly Line.** At *DesignTO 2022*. Toronto, Canada. *Contribution: Lead Developer and Designer.*

David Robert, Alex Verni, Stacy Cernova, Anthony Baloukas. 2022. **Moth Melody.** At *Ontario Science Centre*. Toronto, Canada. *Contribution: Lead Developer.*