

Progressive & Pioneering

Work by William Robertson



Creative Problem Solving.

Elegant Solutions.

Compelling Experiences.

Since 2009, I've been taking on challenging problems and developing elegant solutions to create polished products for a wide variety of clients. I love working with diverse groups and teams to turn **ideas into realities**. Whether developing custom tools for artists, creating immersive experiences, or creating mind blowing visuals for live events, I excel in bringing creativity and technology together.

About Me



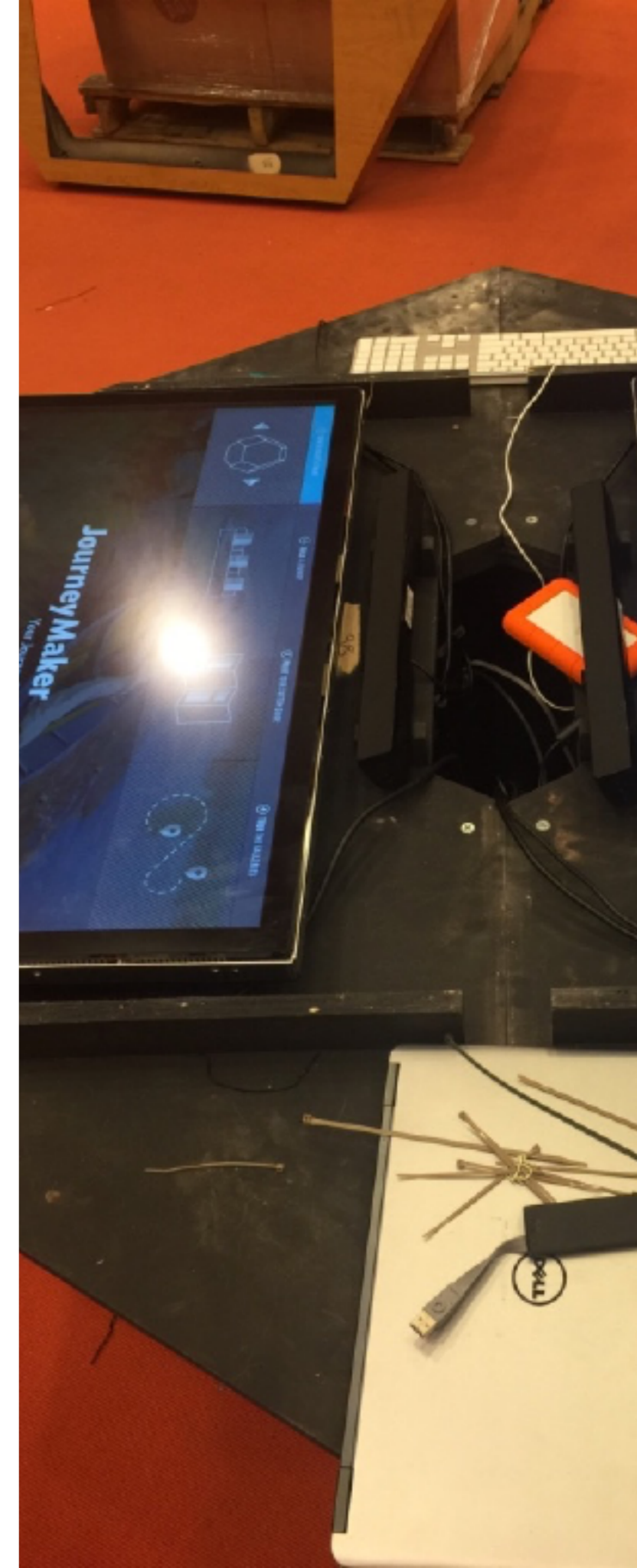
There's nothing I love more than creative challenges and expressing myself through technology. When I'm not running DiMoDA or working at Digital Kitchen you can usually find me in my studio making music, playing with Raspberry Pi and programming robots, or just working on new visuals for fun! I'm a classically trained musician in trumpet, french horn, and percussion but I also enjoy playing around with synthesizers and other electronic instruments. I'm constantly experimenting with new approaches in my creative practice and I'm always building new tools to learn and expand my palette.

Interactive Installations and Kiosks

As an artist and as a professional in a museum settings, I have years of experience designing, building, testing, and deploying interactive media installations. Built for large audiences and designed to last, my work has traveled the globe in international exhibitions. I was a key member of the design and implementation team for the Art Institute's award winning installations and my work on DiMoDA has received fantastic reviews in the media.

RELEVANT PROJECTS

Van Gogh's Bedrooms	JourneyMaker
In a Time and Place	DiMoDA
Wissler and Roussel	Canada goose: The Journey

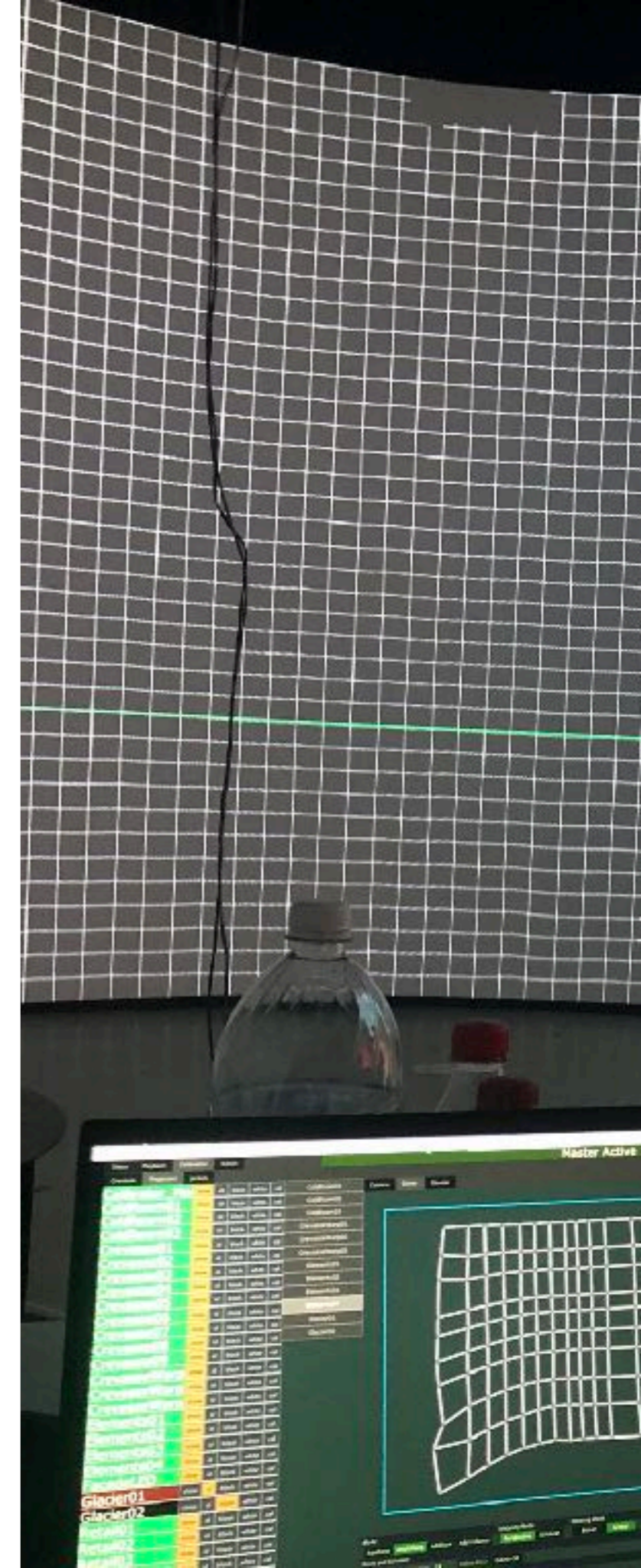


Gallery Installations

I have been involved in the installation of dozens of **gallery installations** across the globe. From small independent galleries to large museums, I have hands-on experience planning and executing complex exhibitions. Mounting a successful exhibition requires coordination, planning, teamwork, and creative problem solving skills. I strive to embody these assets as a developer, producer, leader, and artist.

RELEVANT PROJECTS

Van Gogh's Bedrooms	DiMoDA
In a Time and Place	PROJ*ECT PROJ*JECT
Wissler and Roussel	



Mobile Applications

Over the past five years, I have acted as the project lead and product manager for several mobile deployments, including the Art Institute of Chicago's mobile applications. The LaunchPad app was the museum's first take on creating an interactive label system for key objects in the collection. Source code for the project is available on github. The Art Institute of Chicago Official Mobile App is a fresh take on museum apps which utilizes state of the art indoor location technologies to help guide visitors through a new and innovative audio experience.

RELEVANT PROJECTS

Art Institute of Chicago Official Mobile App

LaunchPad Tablet Application

Porsche Macan AR

```
frame:CGRect.zero)
backgroundColor = UIColor.gray

view.manager == nil {
    configuration = URLSessionConfiguration.default
    configuration.httpMaximumConnectionsPerHost = 5
    configuration.timeoutIntervalForRequest = 30
    view.manager = Alamofire.SessionManager(conf

decoder aDecoder: NSCoder) {
    init(coder:) has not been implemented")

layoutSubviews() {
    super.layoutSubviews()
    if self.loadingIndicatorView == nil {
        let centerX = frame.size.width/2 - loadingIndicatorView.frame.size.width/2
        let centerY = frame.size.height/2 - loadingIndicatorView.frame.size.height/2
        loadingIndicatorView.frame.origin = CGPoint(x: centerX, y: centerY)
        addSubview(loadingIndicatorView)
    }
    super.layoutSubviews()

    asynchronously(fromUrl url:URL) {
        // cancel current image and cancel any pending image requests
        let request = self.imageRequest
        request?.cancel()

        loadingIndicatorView.startAnimating()
        loadingIndicatorView.alpha = 0.5

        request = AICImageView.manager!.request(url).responseImage { response, data, error in
            if let image = UIImage(data: NSData(data: response.data)) {
                self.imageRequest = nil
                self.loadingIndicatorView.removeFromSuperview()
                self.delegate?.aicImageViewDidFinishLoadingImageAsynchronously?(self, image)
            }
        }
        request?.cancel()
    }
}
```

Creative Coding and Emerging Technologies

I have a long history of working with **emerging technologies** including but not limited to virtual and augmented reality, 3D printing and scanning and marker less motion capture. I have used virtual reality for the exhibition of digital art, architectural design and proofs, and immersive video presentations. I've designed and assisted other artists 3D printing artworks. I've also designed printable hardware augmentations to overcome design flaws in machined equipment. In addition I have experience utilizing consumer cameras for motion capture, utilized to create animations for real-time performances with 3D models.

RELEVANT PROJECTS

3D Printing

Video Production and Performance

VR Work

AR Work

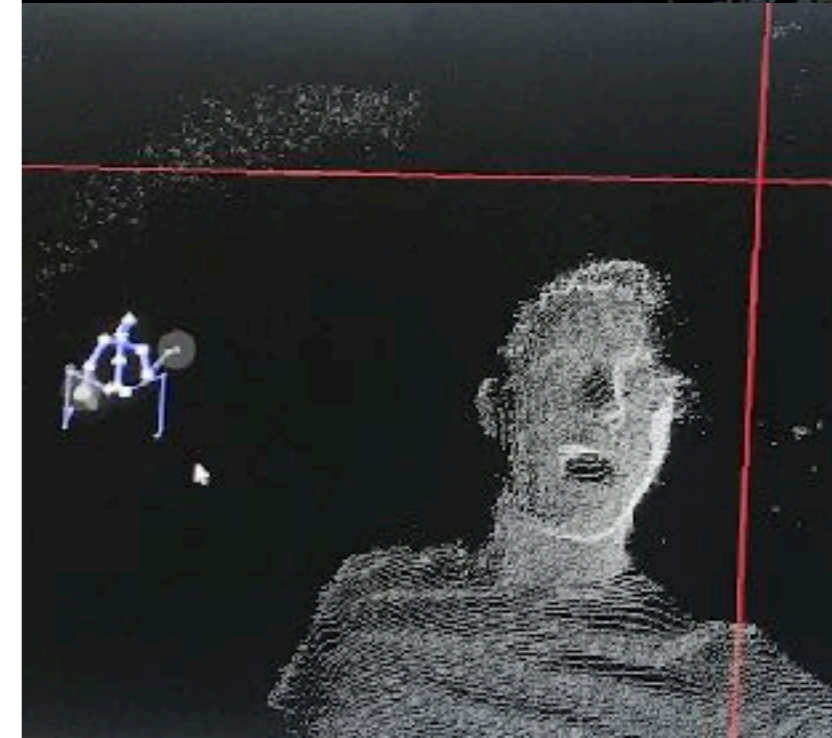
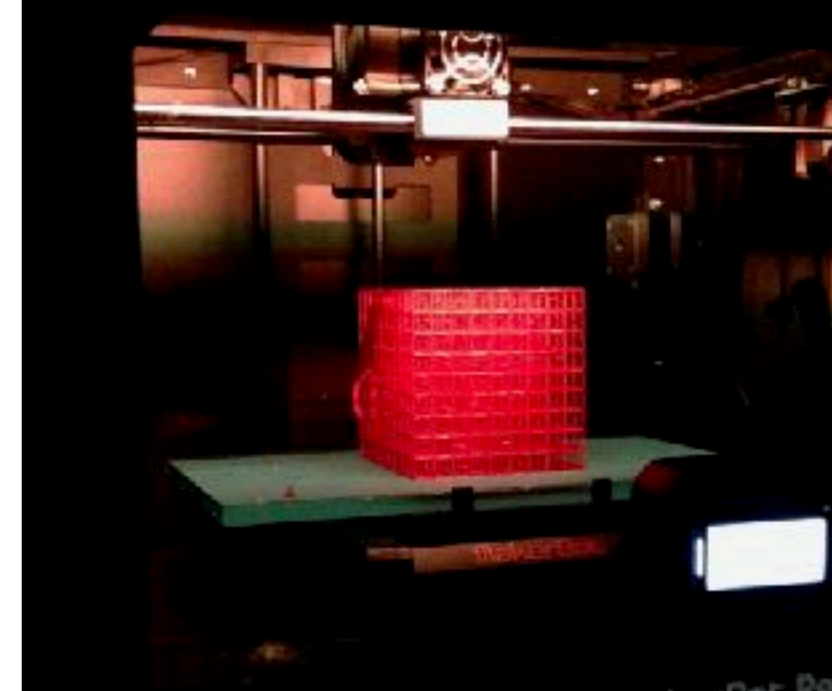
In a Time and Place

Core Exercises

DiMoDA

Creative Tool Development

Canada Goose: The Journey





Canada Goose: The Journey

CREATIVE PARTNERS

Digital Kitchen, IDEO, Gensler, MBLabs

Canada Goose' The Journey experience is a one of a kind experiential flagship store in Toronto. In a bold move forward for retail and the client, this store relies completely on storytelling and technical magic to drive sales for a store with no inventory! As visitors move through the experience they'll encounter an interactive ice cracking floor, a full 360 projection mapped elements room, interactive touch enabled parkas, and an immersive cold room with wall to wall media all with cinematic sound tailored to each area and controlled by a custom show control and content management system. I acted as the lead technical director, producer, and engineer.



Van Gogh's Bedrooms Interactive Exhibit

CREATIVE PARTNERS

AIC Digital Experience, Blue Cadet

The **Van Gogh exhibition** at the Art Institute of Chicago included a pair of large format touch tables, enabling visitors to explore the “Bedroom” paintings as never seen before. I managed technical implementation, installation, and consulted on technical approach for this project.



In a Time and Place Interactive Installation

An interactive installation, "**At a time and place**" reacts to those in the gallery while recording their actions into memory. As a visitor moves they can scrub through the recorded history of the space peering back in time, however the more one interacts with the piece the more they overwrite the recorded history with themselves. This eventually will loop back on the visitor allowing them to both witness their own history while calling to attention their impact on the collective history of the room.



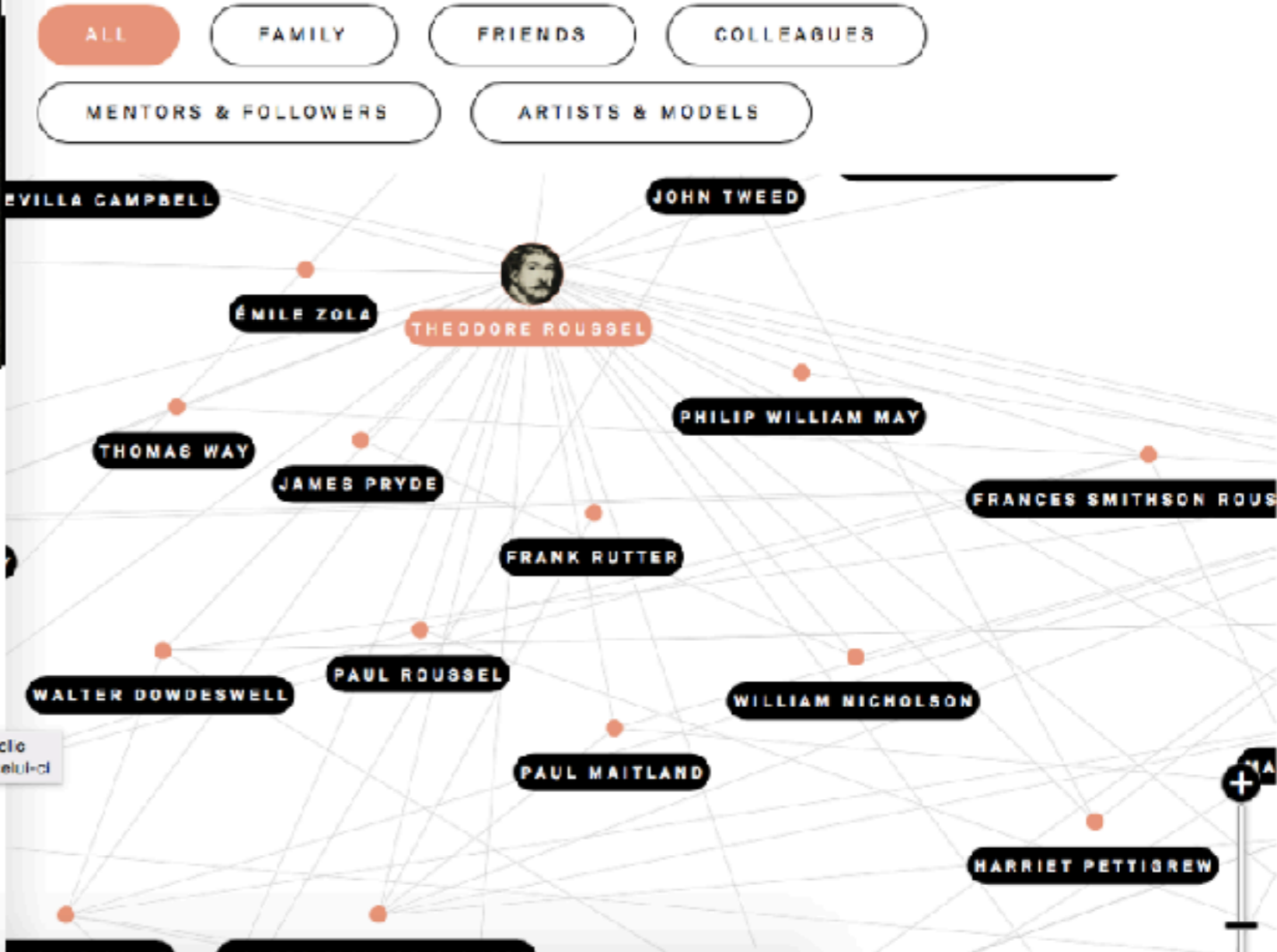
JourneyMaker Interactive Website and Kiosk

CREATIVE PARTNERS

AIC Digital Experience, Belle & Wissell

JourneyMaker is a digital tool that allows your family to create your very own tour of the museum. An innovative application for museums, the kiosks print out your personalized Journey Guide, which includes information, activities, and way-finding directions. I managed technical implementation and best practices, installation, QA testing, and ongoing code and hardware maintenance.

HOME



THEODORE ROUSSEL

Lorient, France, 1847–Hastings, England, 1926

OCCUPATION

Printmaker
Painter

Largely a self-taught artist, Roussel was educated in France and settled in England around 1877. Whistler, whom he met in 1897.

Wissler and Roussel Interactive Website

CREATIVE PARTNERS

AIC Digital Experience

“Wissler and Roussel” is a node-based touch interactive for an exhibition at the Art Institute from 2014. Utilizing data collected by the Prints and Drawings department we were able to create an interactive map to allow visitors to explore the social web connecting artists Wissler and Roussel. I worked on initial concept, technical consultation, and installation.



Core Exercises Digital Image Series

“**Core Exercises**” is a series of images created in an algorithmic exploration in image composition. Using small image samples entirely new compositions are created by extracting fundamental elements that composed the original sample image. This simultaneously exposes the core characteristics of the source while revealing characteristics of the algorithm used in the image regeneration process.



PROJ*ECT PRO*JECT

"PROJ*ECT PRO*JECT" was a single day collaborative installation project at the Sullivan Galleries at SAIC. Based in part on similar projects such as BYOB, this installation invited members of the SAIC and Art Institute communities to come together for a massive shared projection installation. With a total of 30 projections installed throughout the gallery, community members were invited to bring any projectable media to present content in a public setting. The opening of the gallery was commented with presentations from SAIC community members and New Media artists Nick Briz and Jon Cates.

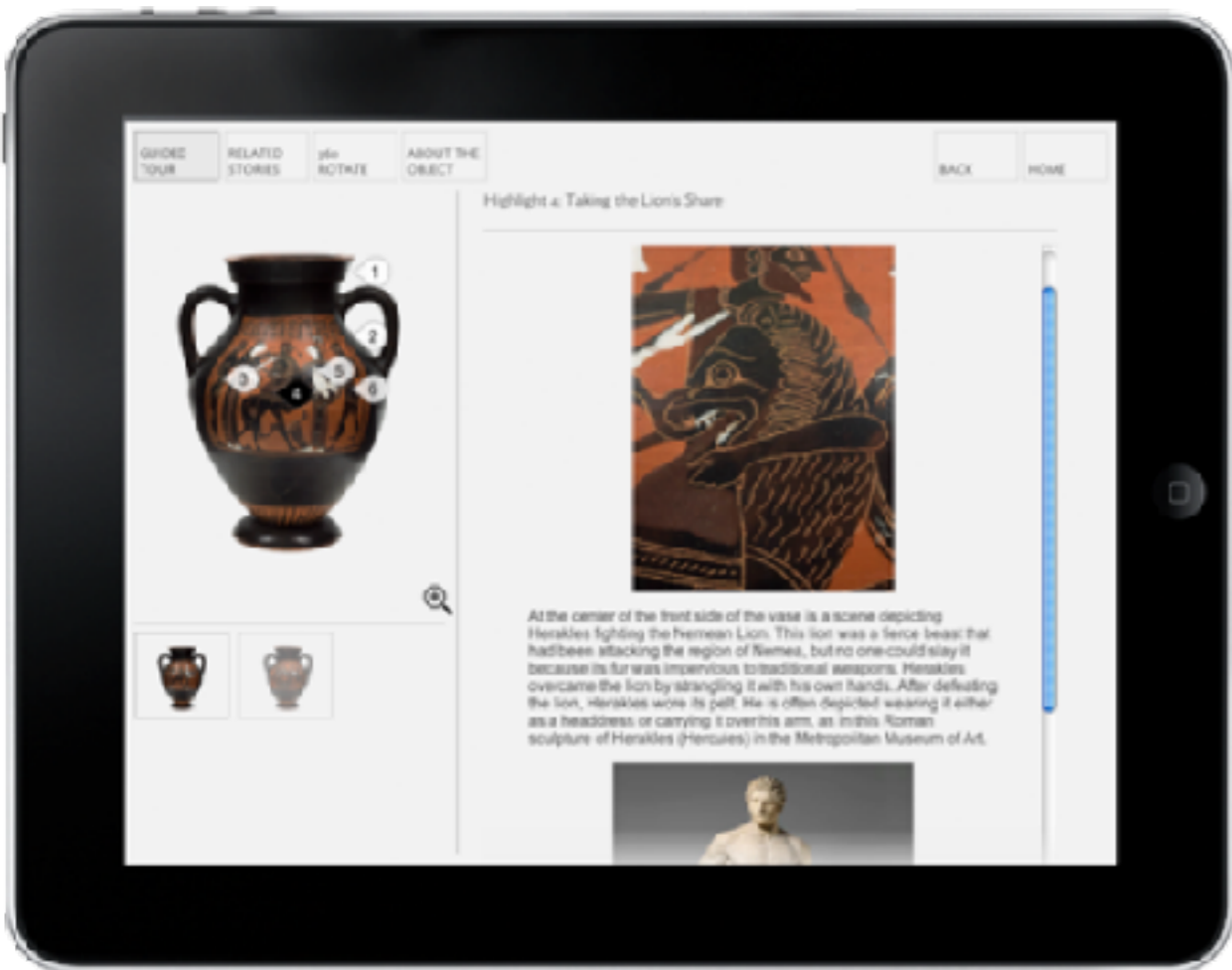


Art Institute of Chicago Official Mobile App

CREATIVE PARTNERS

Potion, AIC Digital Experience

The "Art Institute of Chicago Official Mobile App" was a two year long development process overhauling the museum's mobile ecosystem. The end result was a new and innovative app focused on providing compelling audio content in a location-aware app leveraging indoor location and a real-time connection to the collections database. I managed technical concept, implementation, QA testing, deployment, and ongoing maintenance on the Art Institute's team.



LaunchPad Tablet Application

CREATIVE PARTNERS

AIC Digital Experience, IMA Lab

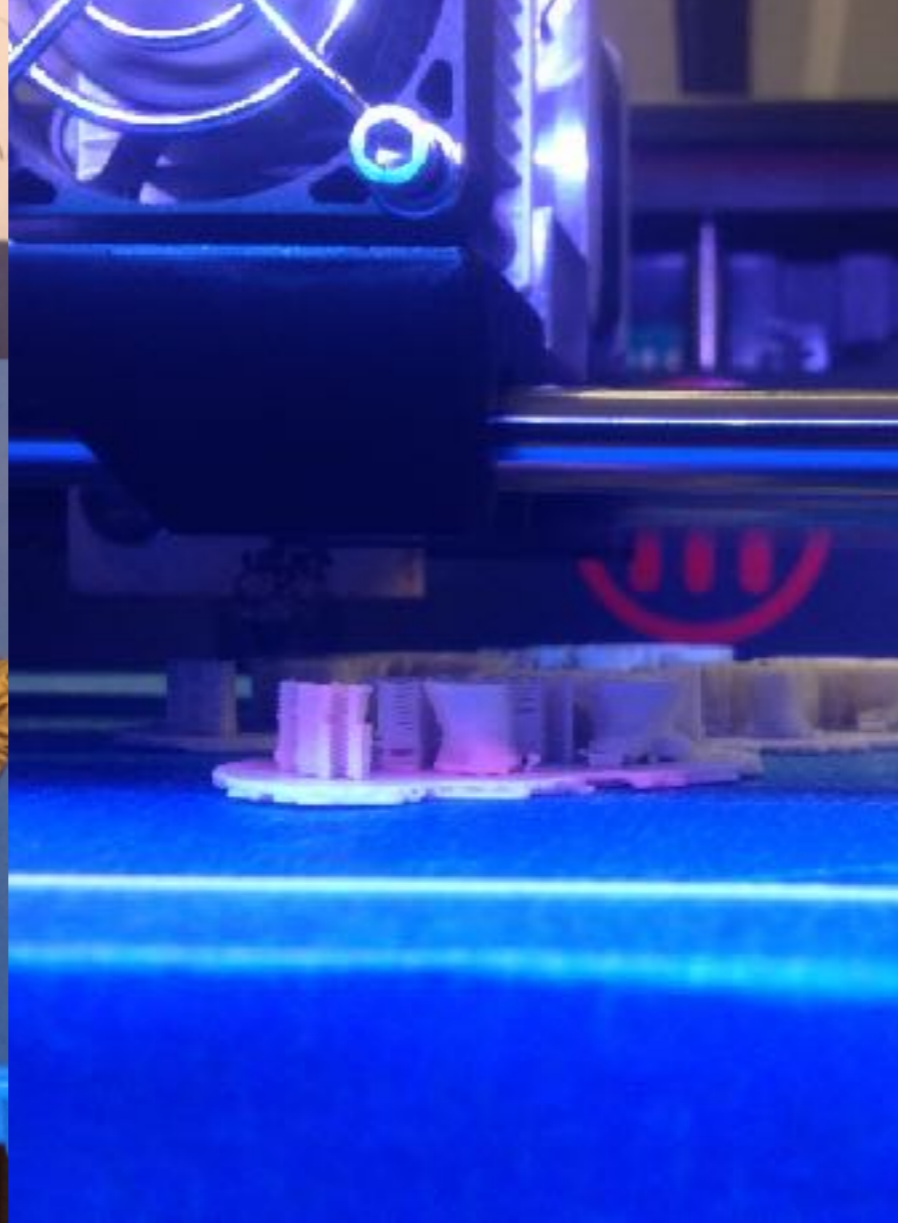
LaunchPad is the first iteration of the Art Institute's digital labels initiative, first launched in 2012. Incorporating a wide range of engaging media types including 360 image views, deep image zoom, and in depth videos, the interactive allowed a depth of exploration previously unobtainable within the museum's galleries. I managed ongoing maintenance, deployment, and code maintenance.



Video Production and Performance

Live production and performance is a passion of mine. I've worked with several artists on collaborations including string quartets, theatre groups, and DJs. I often work on effects and computer vision experiments. I occasionally post videos of interesting captures publicly online. Some of my toolsets include Max/MSP/Jitter, Unity3D, Touch Designer, OpenFrameworks, OpenCV, Maya, and Blender.

Some of my past projects have included clients such as the TUTA Theatre company, Budweiser, Canada Goose, and Porsche



3D Printing

CREATIVE PARTNERS

AIC Digital Experience, Mark Kamish

By analyzing painted textures of some of the objects in the Art Institute collection, we were able to create raised 3D details to enhance the physical experience of handling the **3D printed** replicas. We have had overwhelmingly positive feedback about this project from our blind visitors who have for the first time been able to interact with objects from our collection in a way that allows them to form lasting connections to the objects.

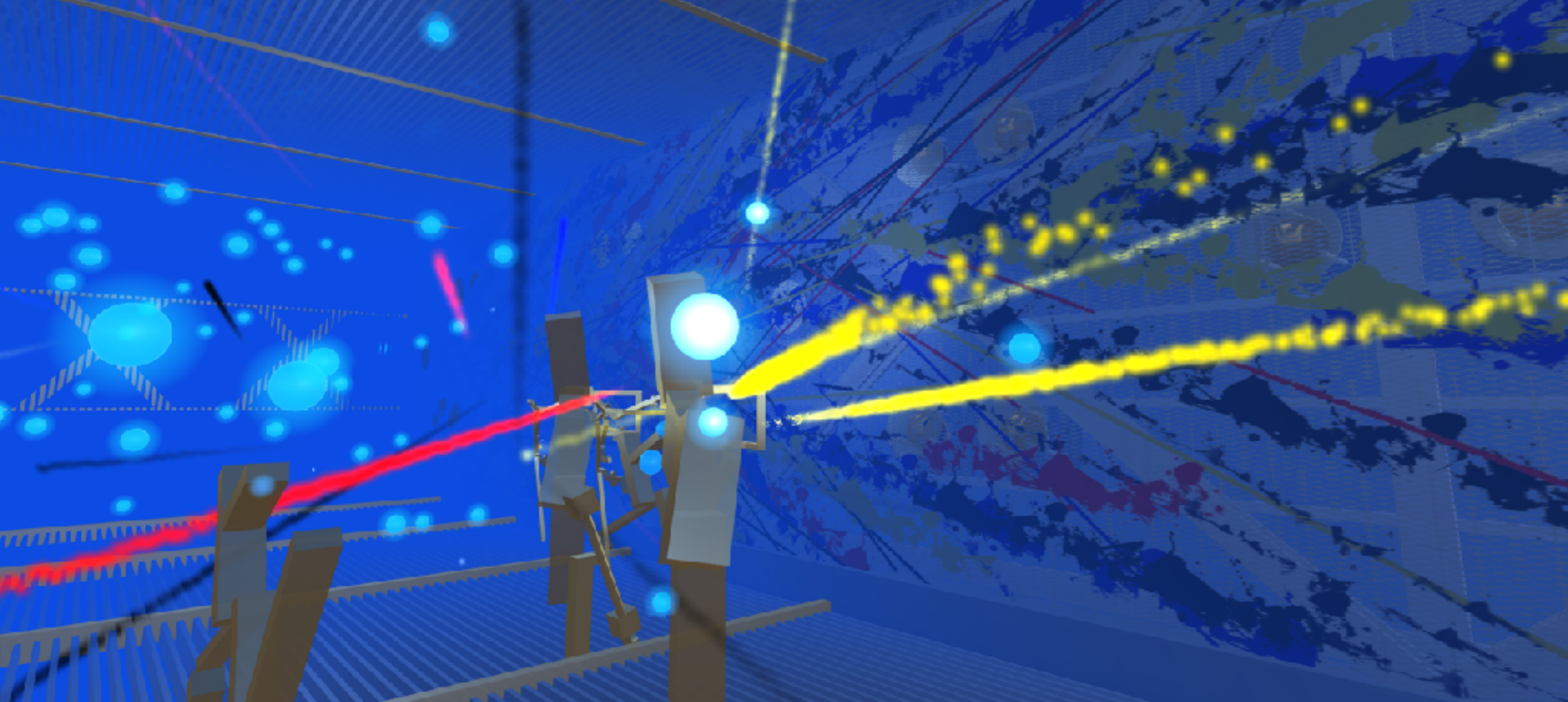


DiMoDA

CREATIVE PARTNERS

Alfredo Salazar-Caro (Co-founder)

I am co-founder and Director of Technology/CTO for DiMoDA (**The Digital Museum of Digital Art**), a virtual exhibitions space specializing in the exhibition of digital art in Virtual Reality. I write all of the core code and lead all technical development for DiMoDA. I also work closely with all of the artists exhibited to help them to realize their visions in VR. As we continue to iterate on our exhibitions subsequent collections are made available freely online for download. Additionally we are working on open sourcing many of the tools we have developed.



MicroBooNE (VR)

CREATIVE PARTNERS

(art)n Laboratory, Fermilab

MicroBooNE is an interactive VR experience designed for Fermilab. This piece visualizes neutrino collisions inside of the MicroBooNE detector at the lab as Jackson Pollock like paint strokes that are drawn along the detectors sensor wall. In collaboration with scientists at the lab, I acted a creative consultant and developer in partnership with (art)n to realize this artistic rendition of the process of neutrino detection.

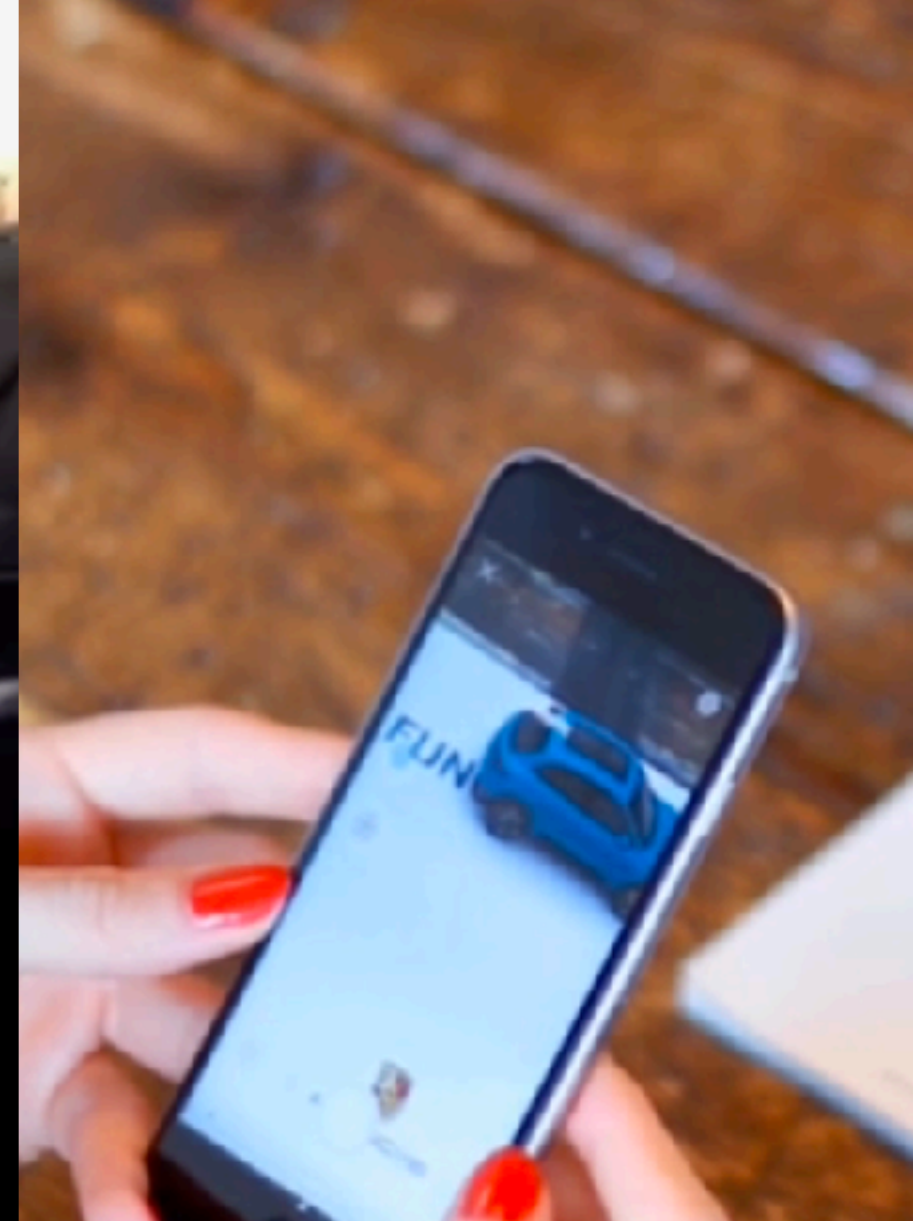


It's Two Minutes to Midnight (VR)

CREATIVE PARTNERS

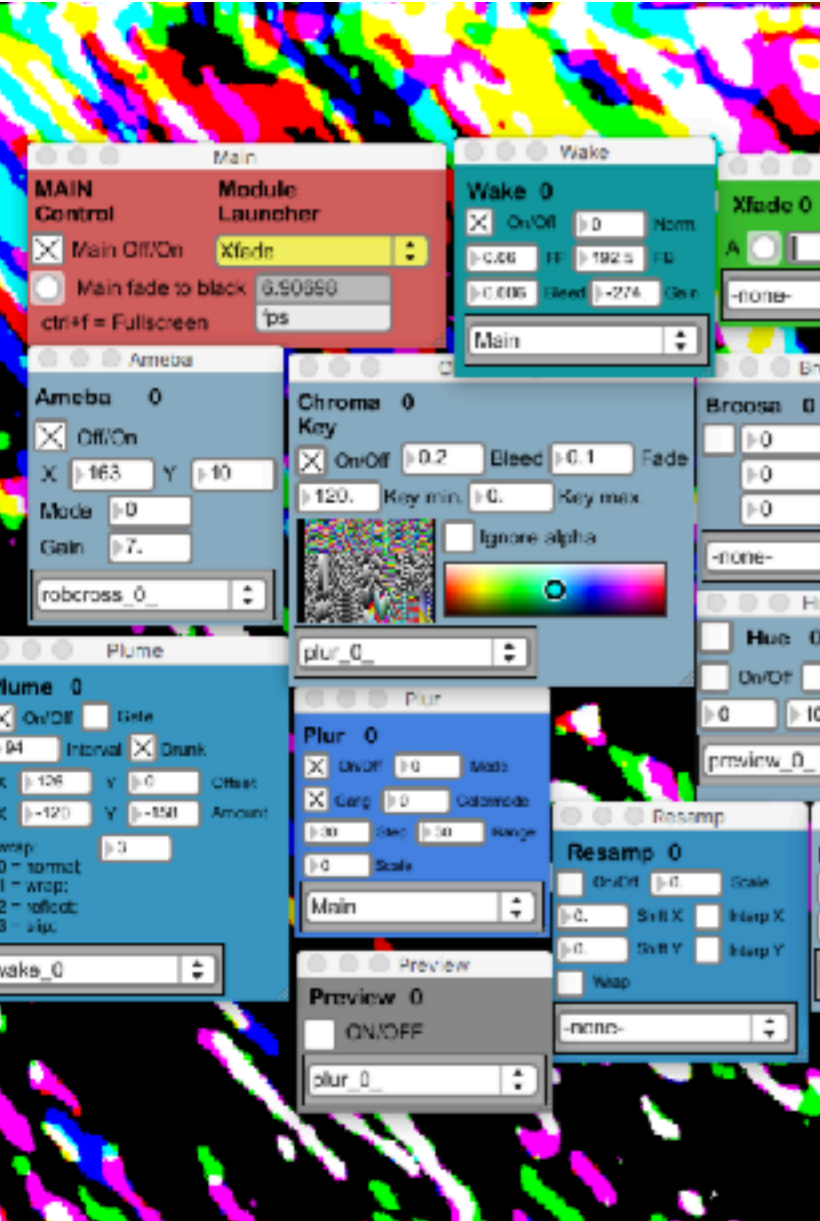
(art)n Laboratory

"It's Two Minutes to Midnight" is a VR exhibition addressing timely political events that continue to unfold on the world's stage. Featuring a variety of artistic processes from the high contrast, individual experience of the Oculus Rift and more painterly, group shared VR CAVE experiences complemented by Martyl's gouaches and vintage *Bulletin* covers—the collective works invited viewers to engage in a shared dialogue surrounding the use of technology to advance or diminish our longevity. The inclusion of historic photos further led participants on an investigative trail to the past that continues to impact our future.

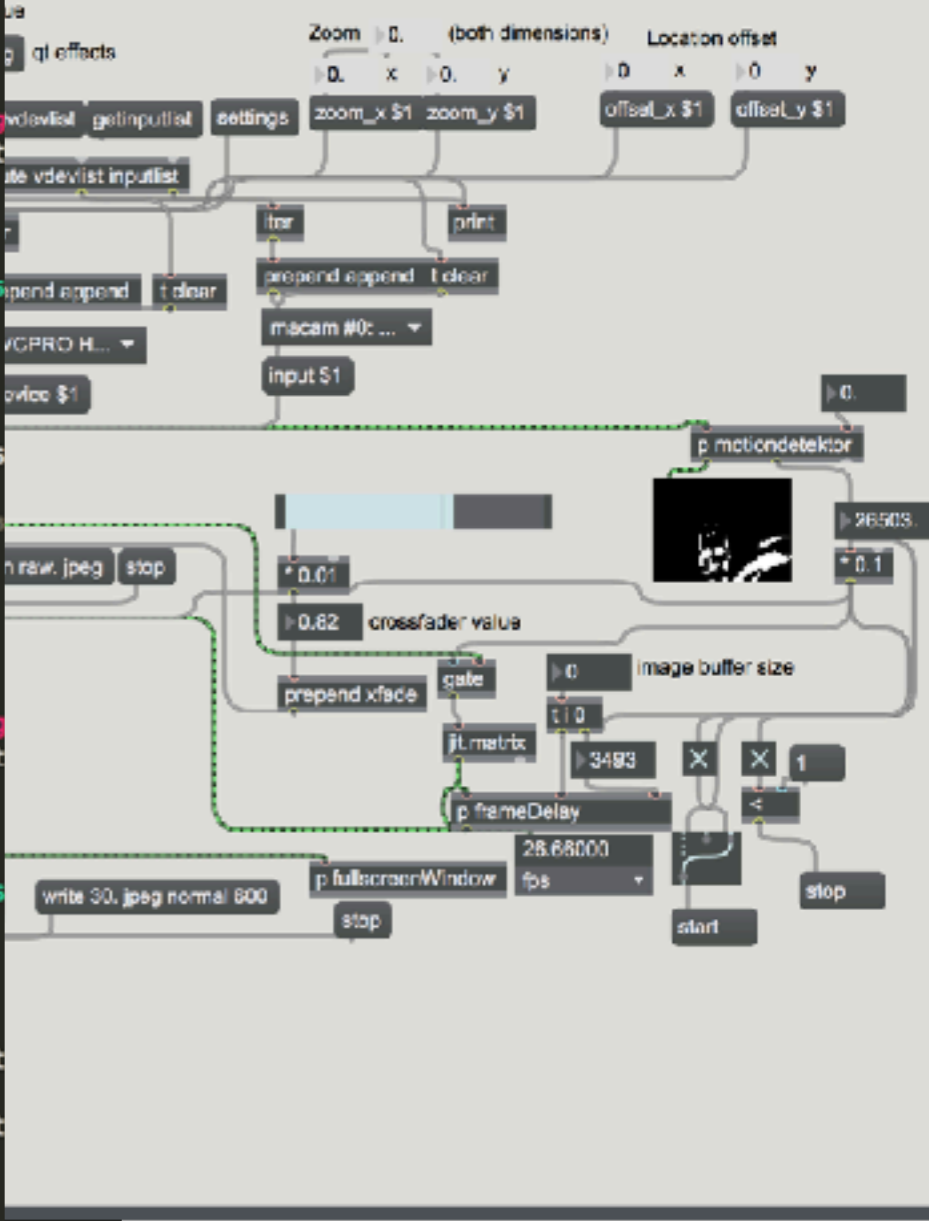


AR Work

Over the past few years **AR has exploded** in popularity and accessibility among brands and consumers. Starting with the release of Microsoft's HoloLens I've worked to create various prototypes for AR experiences in museums, art, and for branded experiences. Most recently I've been exploring new methods for creating artistic experiences and pushing forward our capabilities to tell compelling brand stories on mobile and social platforms in my roles at DiMoDA and Cramer Krasselt respectively.



```
form.AddField("oauth_callback", "oob");  
  
// HTTP header  
Dictionary<string, string> parameters = new Dictionary<string, string>();  
AddDefaultOAuthParams(parameters, consumerKey, consumerSecret);  
parameters.Add("oauth_callback", "oob");  
  
var headers = new Dictionary<string, string>();  
headers["Authorization"] = GetFinalOAuthHeader("POST", RequestTokenURL, parameters);  
  
return new WWW(RequestTokenURL, form.data, headers);  
  
private static WWW WWWAccessToken(string consumerKey, string consumerSecret, string pin)  
{  
    // Need to fill body since Unity doesn't like an empty request  
    byte[] dummy = new byte[1];  
    dummy[0] = 0;  
  
    // HTTP header  
    var headers = new Dictionary<string, string>();  
    Dictionary<string, string> parameters = new Dictionary<string, string>();  
    AddDefaultOAuthParams(parameters, consumerKey, consumerSecret);  
    parameters.Add("oauth_token", requestToken);  
    parameters.Add("oauth_verifier", pin);  
  
    headers["Authorization"] = GetFinalOAuthHeader("POST", AccessTokenURL, parameters);  
  
    return new WWW(AccessTokenURL, dummy, headers);  
  
private static string GetHeaderWithAccessToken(string httpRequest, string consumerKey, string consumerSecret, string pin)  
{  
    AddDefaultOAuthParams(parameters, consumerKey, consumerSecret);  
    parameters.Add("oauth_token", requestToken);  
    parameters.Add("oauth_verifier", pin);  
    headers["Authorization"] = GetFinalOAuthHeader("POST", AccessTokenURL, parameters);  
    return headers["Authorization"];  
}
```



Creative Tool Development

Aside from my work on DiMoDA I've also created **tools for artists and galleries**. BASE was an early project and standalone application designed to encapsulate the power of Jitter in various GUI modules which was released freely for artists to use who did not have the technical skills to create their own creations with Jitter. GalleryLooper was a simple to use video looping tool designed for galleries and museums. I have also designed and developed several customized applications for various installations and gallery exhibitions. These range from web application wrappers to VR architectural walkthroughs and full show control and content management systems.

For more examples of work and videos please visit wrobertson.net

*THANK YOU
FOR YOUR TIME*

A light gray, handwritten signature or scribble, possibly representing the initials 'WR' followed by a long horizontal stroke.