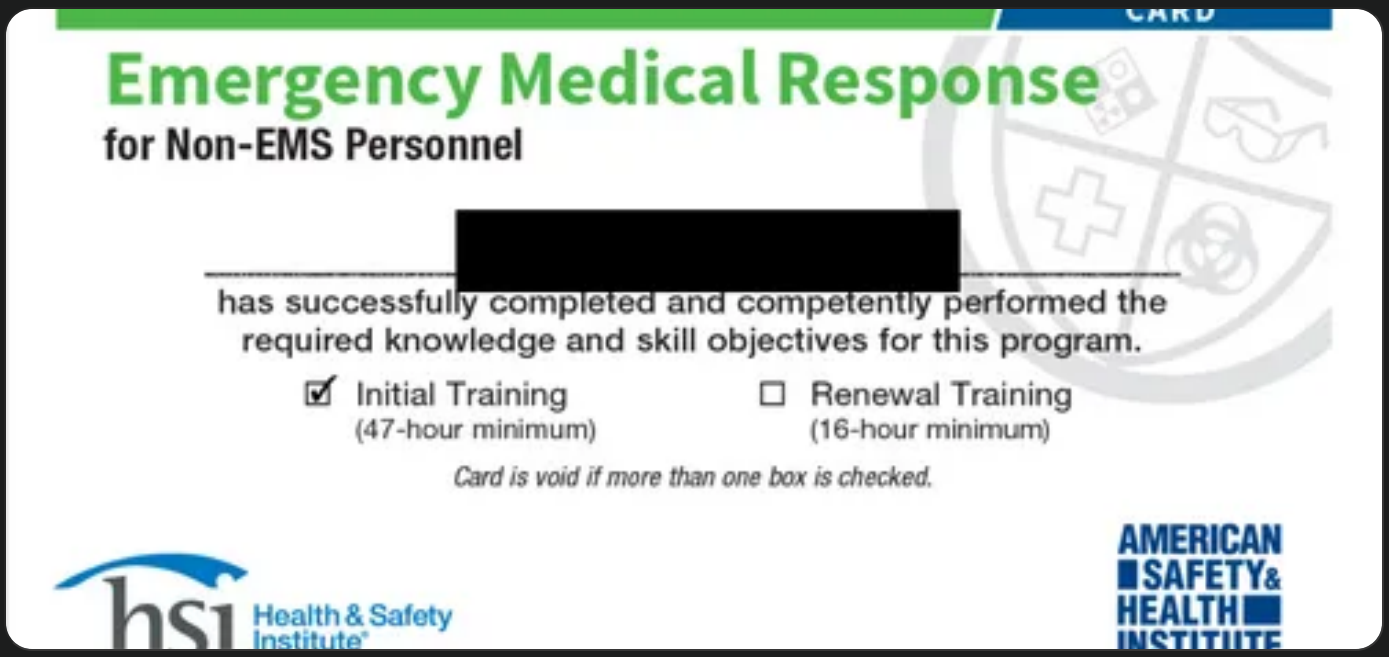
(portfolio events related to leadership)

Unless otherwise stated: please assume that any code, iconography, illustrations, modeling, or design shown below was created personally and from scratch.

Emergency Medical Responder Training

Jan 2022

Keeping trauma patients alive long enough for paramedics to arrive; blood, breath, breaks and (heart) beats.



In order *to become a better volunteer firefighter*, I took a three week class covering basic Emergency Medical Response. Things we covered included:

- Cardiopulmonary Resuscitation (CPR)
- Ventilation and Opening Airways
- Oxygen Administration
- Patient Assessment and Interviewing
- Getting Vitals (Blood Pressure, Pulse / Ox, Etc)
- Wound Packing
- Tourniquets
- Patient Lifting and Moving Techniques
- Spinal Injury Stabilization
- Pregnancy and Child Birth

It was an awesome overall class which gave *a relatively in-depth and practical understanding of the human body*.

Skills Used: Volunteer | Civil Servant

CTO at Dot Earth Networks

Sep 2020 - Jan 2022

Sole developer at social change start-up aiming to create collaboration between NGOs.

Heads up: due to funding issues, the project was not completed and there isn't much to show for the work.

The start of *this job was extremely serendipitous*. Boulder Dot Earth had been around for a long time, but had been lying dormant for the last few years. So Micha (CTO) got in contact with the originators to see if he could pick it up again, this time with newer tech.

In it's old form, it was a Wordpress site with event calendars for local non-profits, a directory of them, and some info on the generalized goals of the city. But *Micha wanted something a bit more tech heavy*, something with maps and a Single Page App (SPA) design. As it turned out, *I was working on a personal project with these exact properties when we met*.

My knowledge of the non-profit space was very limited, having come largely from a warless volunteer back-ground (art and firefighting). *Micha educated me on how dire the non-profit situation is*. Through his understanding of the space, and my ability to abstract and solve problems we came up with a solution.

The gist of **Dot Earth Networks** was to create *a mobile/web app that connected various loose ends together, creating a greater force for good*. The core goal was to get non-profits to *collaborate*, instead of being at war. But we also wanted to weave in *local voices, philanthropists, businesses, and government*. The exact details of how to build this

symbiotic network are a bit of a secret (as centralized political power strategies should be). But it was a good idea.

Micha secured a grant from the City of Boulder, and a collaboration with a local college to create the "Dot Earth Hive" where us and a small group of volunteers attempted to build something of *a social-good tech-startup*.

Unfortunately, while the network and tech skills were there, the money was not. I had to put in a three-month notice, which led to about four months of support trying to push it forwards. But as the only tech/business savvy participant, I was simultaneously the only person working on the actual product and heavily out-voted in regards to priorities. The appeal of the work drained tremendously.

In the end, I still love the idea and came out of the experience *enriched with a new understanding of the non-profit world*.

Skills Used: Stakeholder Mgmt. | Peer Leadership | MapBox | Helium UI | TypeScript | Node JS | Servers | APIs | Web App

Wildland Fire Fighting Cert (FF2)

Oct 2021

A packed 40hr weekend course on wildfire mitigation and control.

When you feel like being *able to run towards the fire*, you've got to get red carded. In particular, Fire Fighter 2 for wildfires.

Allenspark Fire Protection District (AFPD) sponsored my enrollment at **Colorado Fire Camp**, an 12-hours-a-day four-day class in South-Central Colorado. It was *the first time I'd ever gone to camp!*

While there we covered everything required to be ready for a wildland fire, which included *the effects and relationships of fire, land, weather, and fuels*. There was a

surprising amount of weather education, with **"fire-weather"** being considered a single item and the central focus.

We also learned safety and fire-fighting techniques and *practiced with a live grass-fire operation*, some line-digging, bunker-deployment, hose-running, and "mop-up." Bunker-deployment in particular was impactful: holding yourself inside a large air-less bag after a full sprint is an experience of self suffocation. I never want to get caught in a burn-over... (shudder)

If you've ever wondered about wildland fire, I highly recommend this school! It was a great education, and quite fun.

Skills Used: Volunteer | Civil Servant

Traffic Jam Nascar (48hr Game Jam)

Jun 2021

The theme of the "GMTK 2021 Game Jam" was "stuck together." Two friends and I made a game about aggressive break checking in traffic.

Created from total scratch (no framework) in less than 48 hours, the gist is: *accelerate and brake in a circle trying to cause collisions behind you*. There's a link below, if you want to see it in action.

The coding of the controls and visuals were pretty easy, with most of the difficulty coming from getting the acceleration and braking curves just right. *The hard part was the AI.* They do pretty decently, but balancing aggressiveness and risk tolerance made for a

fun and interesting challenge. I even got to watch someone do a play-through and enjoy it!

More Info

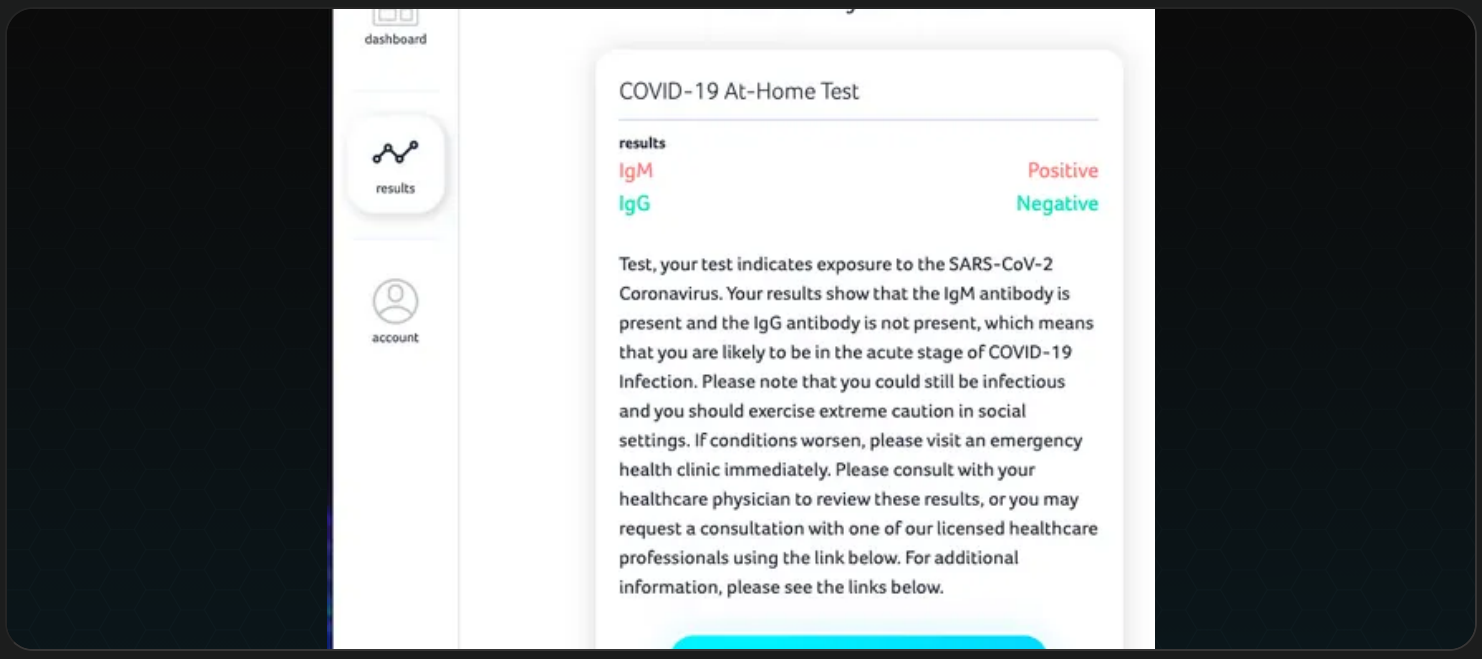
- Play the game
  https://sephreed.itch.io/traffic-jam-nascar

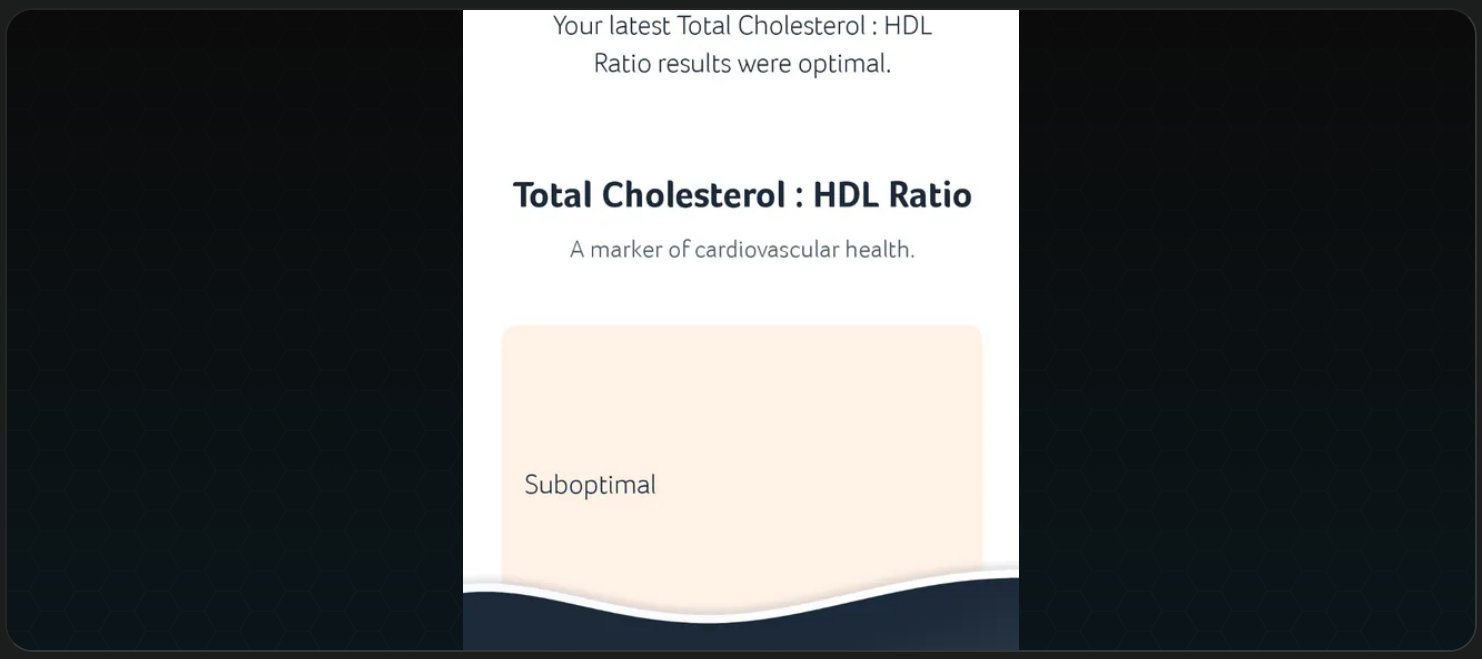
Skills Used: Collaboration | Peer Leadership | Task Delegation | Games | Vanilla JS | HTML5 Canvas | UX | Sketch App | TypeScript

CTO at Choose Health

Mar 2019 - Jul 2020

Sole developer for a subscription based at-home blood testing start-up aiming to monitor health and give personalized recommendations.





This was the first job I ever landed through LinkedIn. Choose Health was a health-sector tech start-up birthed by **Mark** (CEO), a guy who'd long been working in the field of supplements and marketing. The impetus was pretty straight-forward: *he wanted to prove the positive health benefits of supplements*. And what better way than by tracking and measuring health?

When I was first interviewed, Mark and Sam (PO) had already spoken with physicians and ran a pilot. They wanted to prove that *blood could be used to measure health*, and

that regular measurements could add value to users lives. The results were mixed, but they saw promise and *needed a full-stack, do-everything dev to make it happen*. In the end, I developed all of the following:

- A native *mobile-app for IOS and Android* which displayed blood results and recommendations
- Multiple refactors of a product site (given to me as plain HTML, eventually made an SPA, then migrated into *Webflow* for easier PO edits)
- The entire *back-end, including HIPAA* security compliance
- Untold integrations for *payments (**Stripe**), emails (product and transactional)*, analytics, shipping and tracking, user feed-back and communications, ratings...
- *An entire separate micro-service* called "Diagnostic Infrastructure" which existed to connect doctors and in-need-of-release blood results. It was extremely asynchronous with extensive "user error" corrective measures. It had it's own front and back ends... it was a full project on its own.
- And, lastly, a *web-app* version of the mobile app

As I was approaching my 30th birthday, I took stock of my life and decided that -- while I was very happy with the quality of my work and freedom to pursue interesting solutions to problems -- I wanted to turn a new page. I put in my three month notice, *ended work on my 30th birthday then moved up into the Colorado Rocky Mountains*. I learned an absolute mountains worth while working there.

Skills Used: Stakeholder Mgmt. | Roadmapping | Mobile Apps | Micro-services | Integrations | Event Systems | Stripe | TypeScript | NativeScript | Node JS | SQL | Servers | APIs | Web App | Website

Lone Bar Beer$$$ 4U

Oct - Jan 2020

A silly joke that was taken to a professional level of fabrication: a beer loan agency.

"Wouldn't it be funny if we made -- like -- a scummy loan agency for beer?"

Nobody knows how it started, but *it was a stupid idea which turned into a big, giant, hilarious, stupid project*. What a blast! And over time the project evolved into more than just a joke, but a truly rewarding experience for participants. People would come up, enjoying the inherently comedic aspect of the piece, we'd spend some time riffing with them, send them on a quest to "improve their beer credit," and then on return we'd give them a warm foamy tasteless lager.

My favorite quest came on the last day of the event, where -- having been given the information of various beer loan holders -- we began sending people out to "serve" them their "beer debts."

An intentionally ludicrous amount of time and energy was put into building out the visage of a beer loan agency, including:

- A "safety-windowed" desk for interactions
- A tacky waiting area with a tiny (toddler sized) couch
- Background "Muzak" from 80s Kmarts; pitched down slightly to give it a subtle comedic affect. Store ads were either modified or replaced to keep in line with the aesthetic and storyline.
- A television playing various serious looking satire pieces such as: onion 24 hour news, monster trucks, fake car commercials, etc.
- So many carbon-copy paper forms which had to be filled out (and faxed until the machine broke). Filing these with one of the "Loan Bar Employees" were the crux of user interaction; my two favorite "Beer Loan Requirements" were:
    - "Did you just lose the game?" -- a reference to a game that is lost by thinking of it, and
    - "Has nice eyes?" -- the answer was always yes, and it made people smile.
- A book of "quests" to so applicants could improve their "beer credit." My favorites were:
    - Go find pointy -- a scavenger hunt for our mascot Pointy Mc PointyFace
    - Go to "Lets be Frank" -- another art camp that had users share an embarrassing truth as chosen by a wheel spin (then get a hot dog)
- Employee dress codes and legit engraved name tags (they say "Beer Loan Professional" on them, and I love mine)
- A legitimate filing system which we used to verify quests that were completed
- A faux buy-out and merger with a local bar. An actual MIT lawyer got in the way by making a case that we still owed their camp a partnership deal.
- A very large ugly sign which said "This attraction sponsored by Loan Bar" that we bolted into the ground outside of various other art pieces (they had, unknowingly,

signed papers which said we could). To this day, the sign thrives and has taken on a life of its own, getting bolted down all over the place in Austin.

- A wacky wavy inflatable arm tube man, bought specifically for the event.

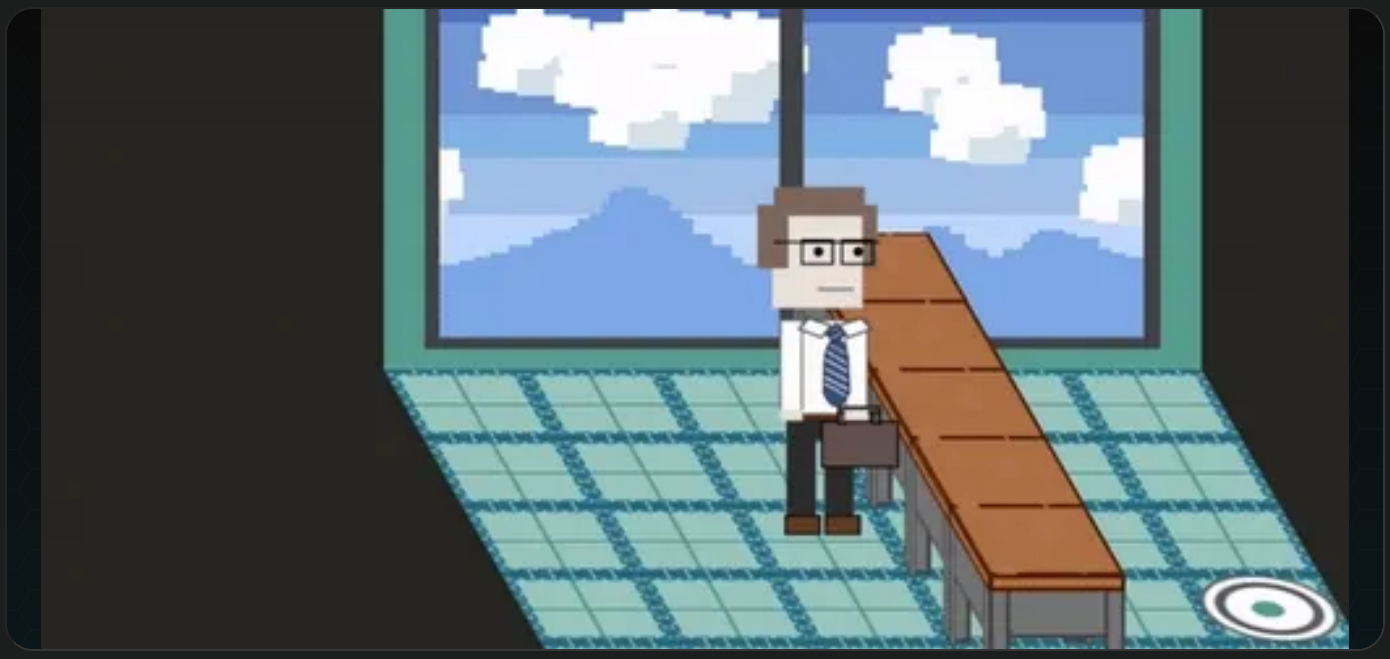
Just writing about it is enough to get me laughing and smiling. It was just so completely out of place at an art festival, but -- for participants who'd been around a while -- the joke was "epic."

Skills Used: Collaboration | Interactive Art | Performance | UX | Fabrication | Video | Audio | Bitwig

Clock Out (48hr Game Jam)

Sep 2019

The theme of "GMTK 2020 Game Jam" was "Only One." This game let users "hack" multiple game-engine state variables a single time each to solve puzzles.



Made for the first ever GMTK Game Jam, this was also the first game I'd worked on since I was a child. The theme was "Only One," and *I really wanted to test out Helium UI's* ***source derivation*** *algorithm*. So -- using helium -- I coded a puzzle game entirely out of `HTMLElements`, where you "hacked" state variables to get to the goal.

This was a brash decision to have made, as *it yielded SO MANY BUGS*. But that was kind of the point: I made something *much more demanding than a website* and found the points of failure. At this point `helium-sdx` was just a baby, yet it was still possible to make a game with it -- a game that React simply wouldn't work for.

The game was submitted with no time to spare; it was uploaded as a compressed folder and nobody except my friends played it.

More Info

- ➤ Play the game
  http://sephreed.me/clock-out/

Skills Used: Collaboration | Peer Leadership | Games | Helium UI | TypeScript | Sass

Death Gun

May - Aug 2019

A tesla coil shooting gallery; I programmed the game and score board aspects.

Aerica is an amazing muralist; Steve an electrical engineer with a fondness for tesla coils. They're a bit of a power couple, and came up with this amazing project. But they wanted to take it a bit further by making the game more gamey: they needed a programmer.

The first part of the project involved setting up a *Raspberry Pi running Node JS and using one of the USBs as a serial port*. It took some finagling as it was new territory and there's always a lot of gotchas when working with micro-controllers.

From there the coding was breezy, taking only a few days. The *scoreboard was a website with a websocket* open to a localhost server. The same server controls the game and responds to user input. In regards to game design there was some experimentation: the system ran on asynchronous promises rather than a constant loop. For testing the game, a small mock up web version of them game was created.

The experience of the game was three levels in a branching path where each one could lead to either a greater or lesser challenge; a total of 6 levels. *Almost every player was able to complete the game, but only a few made it to secret-ish the hardest level*.

One of my favorite "pranky" aspects of the game was that there were only 6 digits for high scores, and if a player went above that it just rolled over to zero. *Many laughs were had*, and it set a new challenge: get as close to 999999 as possible without going over. The other "pranky" part of the scoreboard was that it displayed "most average scores" as well as high-scores. Players were rewarded with plenty of fanfare for getting a "most average" play-through.

More Info

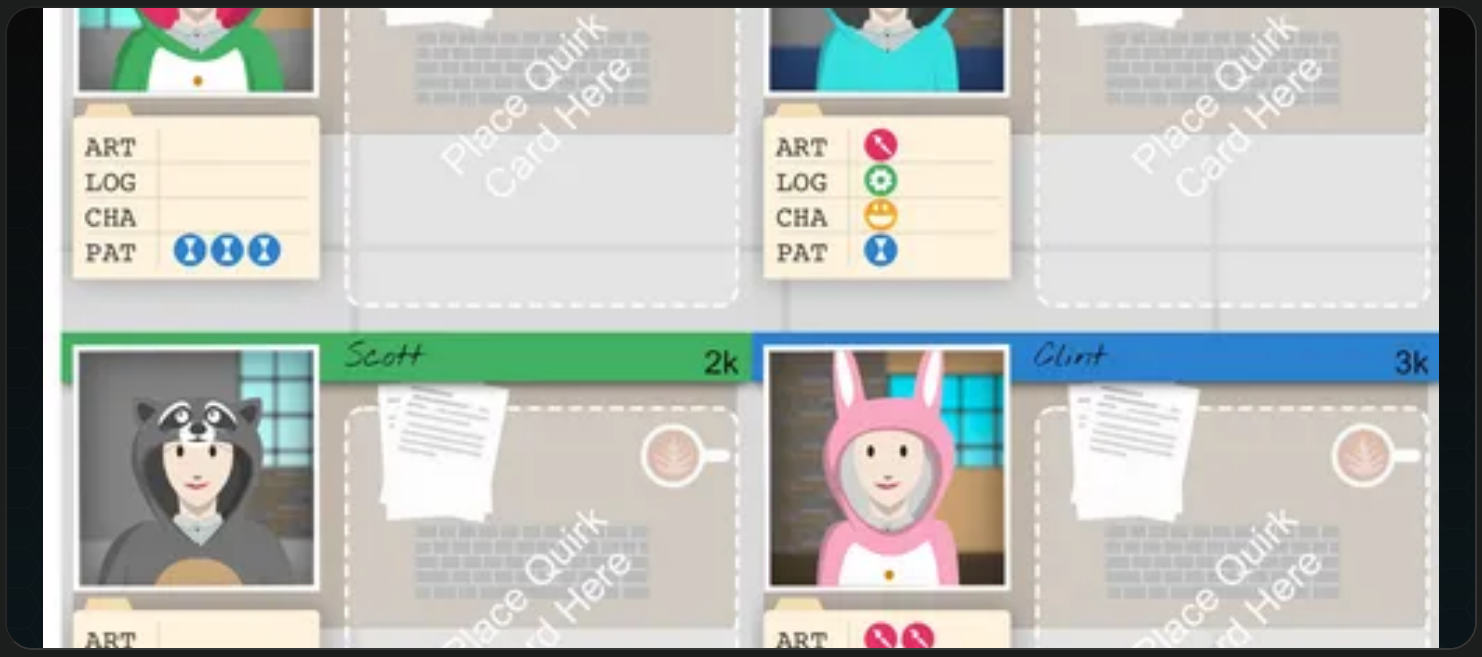
- View Aerica Ravens Portfolio/Gallery
  https://www.aerica-raven.com/special-projects/deathgun

Skills Used: Collaboration | Interactive Art | UX | Node JS | Linux | Micro-controllers | Games | HTML5 Canvas | TypeScript

Synergy

Oct 2018 - Jan 2019

A tongue-in-cheek resource-management board game based on start-up culture.



reading this] "Hey boss. Sorry I won't be able to make it into work today, I've got that thing that's going around the office." Choose an employee to take 1 task from. Also take 1 task from any employees *directly adjacent* to them.

Regards,
Office

stand and not show it off. If you have any employees with the {{IMPULSIVE}} quality, they each get a blame token and you get -1SYN. Otherwise, the keg stand is dope +1SYN.

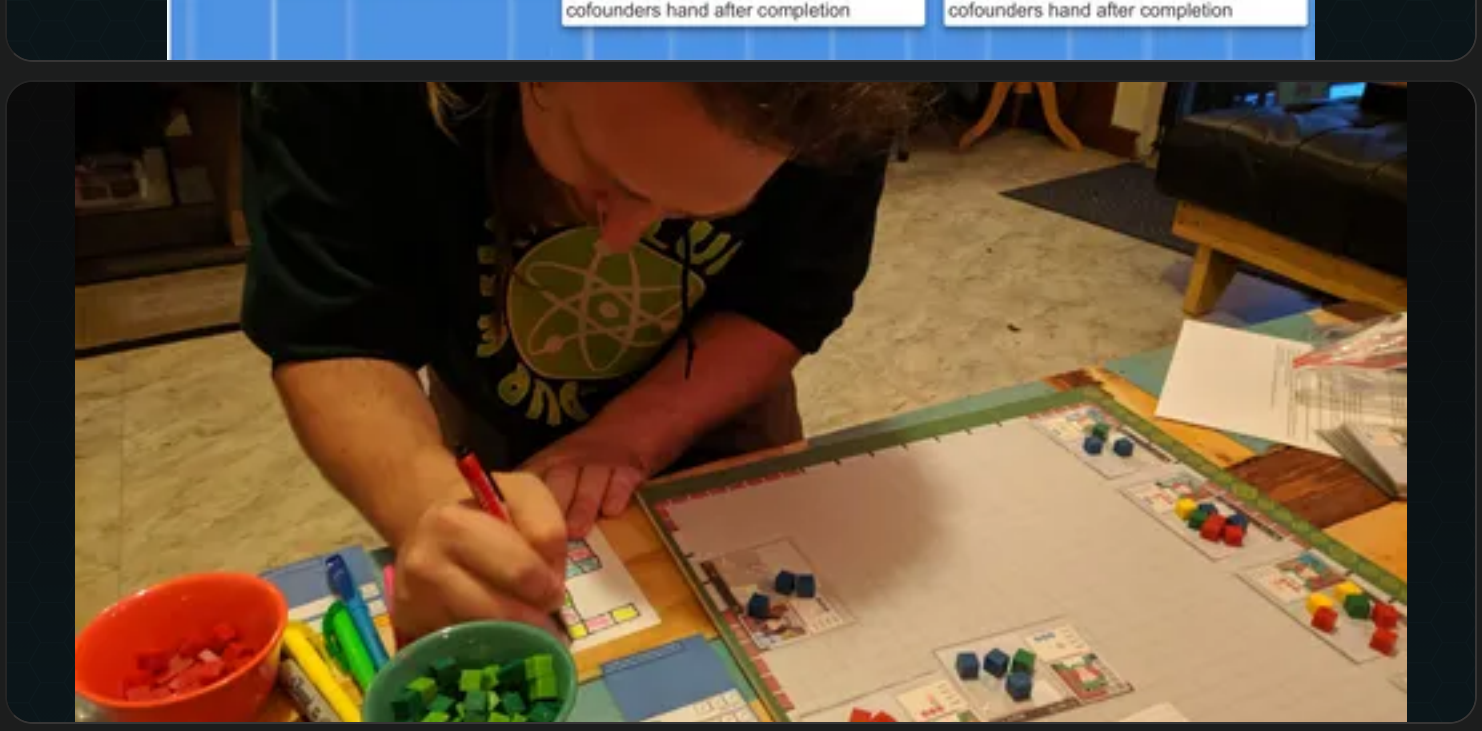
Regards,
Office

Donuts!!
from: Announcements

Someone brings donuts to the office. If you have more than one employee with {{IMPULSIVE}}, they eat all the donuts and each get a blame token. Otherwise, +1SYN.

Where the pens at?
from: Office

A signature is needed and no pens can be found. Who's job is this? If you have HR, the issue is caught in time. Otherwise, it goes on far too long for -1SYN.



Inspired by a copious amount of love for board gaming -- then mixed with the woes of job hunting and start-up culture -- Synergy was a fun and comedic respite for Misty and I. The process *started off with watching "Office Space" on loop*, trying to catch that humorous immortalization of tech life. But as time went on, the game become something more.

The basic gameplay has gone through various stages, with more to come. But the gist is: every player is a co-founder, you hire employees, upon hiring you pull quirk cards, events make the quirks come alive, you've got long term goals and short term tasks, and *Synergy represents that ever fleeting resource: employee happiness*. We'll see how much of this changes in the next iterations.

The characters were made in Sketch App, as well as the iconography and illustrations. But *the crux of this project was definitely rendering the cards*. Every single part of every type of card was defined in the form of a spreadsheet. These spreadsheets were then parsed and rendered in-browser to look like something out of Adobe Illustrator. And from there it's printable. This was a great design process as *having everything be generative from spreadsheets allowed for super fast iterations*.

We did a little bit of "blind" (no input) play-testing with our friends, cut short by me getting a new full time job. There were definitely some flaws; most notably "hierarchies"

kept emerging amongst players that led to one of them being the boss over the others. The other problems revealed were also pretty similar to real jobs. lol.

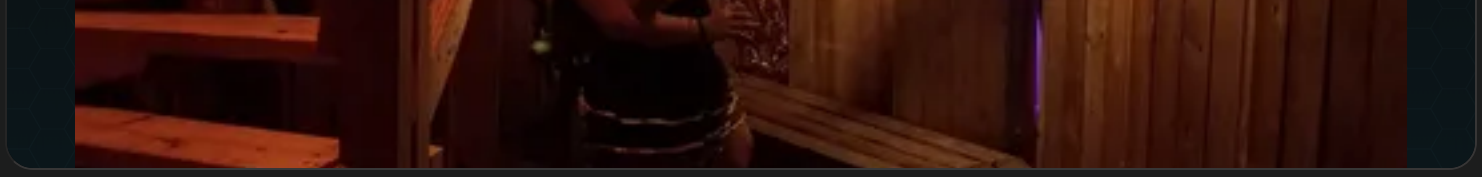
Can't wait to start this one up again later!

Skills Used: Collaboration | Games | 2d Art | Sketch App | Sass | TypeScript | RegEx

PINE Cononagon

Jan - Apr 2018

Co-designer, Lead Engineer, and Foreman for a large-scale community-built multi-media interactive art piece about life and death. Delivered early and under-budget, without any volunteer burn-out.



This project was the most involved I've ever led. It was *a large-scale multimedia endeavor, spanning three floors, brimming with creativity*, and built entirely by volunteers (myself included) on a shoe-string materials-only budget.

The outside of the piece was meant to look like a pine cone and had a nine-sided (nonagon) footprint. Interior, *there were three floors and a secret room*. The second floor was the main entrance; a twinkling forest with an 8ft wide CNC-etched-bark tree in the center and hand-made vines woven around. An arched cove in the tree led to a spiral staircase which wound down from the mortal realm forest into the after-life underworld; a cozy den filled with community art pieces dedicated to lost loved ones.

The *underworld represented the idea of immortality through lore and stories*; it also housed a live acting group which sent participants on quests related to helping citizens of the afterlife. The *top-most floor was hidden as it represented immortality through science* and was decorated as a comfy padded stratosphere staring upwards into fiber-optic constellations spread across the ceiling.

Once *lit on fire, the petals which covered the pine cone opened up* using springs and burnable restrains, a homage to how pine cones reproduce. The last reveal was hidden in the middle of it all, a metal tree which remained standing after everything else had burned down.

Here are the parts I can claim responsibility for:

- Leadership
  - Always having next steps planned and diagramed
  - Showing people easier ways to do things (being *mindful not to ruin the puzzle* if they were still self-teaching)
  - Exemplifying safety and always doing things in ways others could understand
  - Being *thankful and appreciative* of others
  - Keeping an eye out for the safety of others
  - Making sure to not let people overwork themselves
- Foreman and Engineer
  - Create, maintain, and reference 3d CAD model
  - Assurement and testing of sturdiness/strength
  - Planning out and *testing build tasks (materials, tools, techniques) before assigning them*
  - Helping with build tasks when I had the time
  - Knowing everything currently being worked on, checking in frequently (and congratulating often)
  - Coming early/staying late to do all the worst work that would be cruel to assign
- Co-Designer
  - Came up with thematic inspirations for each of the areas, and wove a story across them
  - Decided upon artistic boundaries for the art pieces, soundscape, and live actors
  - Came up with lore and backstories for the piece
  - Created the overall canvas which the volunteers filled
- Developer
  - Wrote the software for the LEDs
  - Made the proposal website

We managed to complete this project in record time (the event has been running for 20 years) while training newbies, keeping well within budget, without any drama. I'd long since felt capable of leadership roles, but this level of success indicates something beyond being simply "capable". That said, I could not have done this without Misty who is an amazing Product/Project Manager, HR, UX Designer, and Creative Director. Nor could either of us have done it without all the build crews, volunteers, and organizers who came before us and paved the way.

More Info

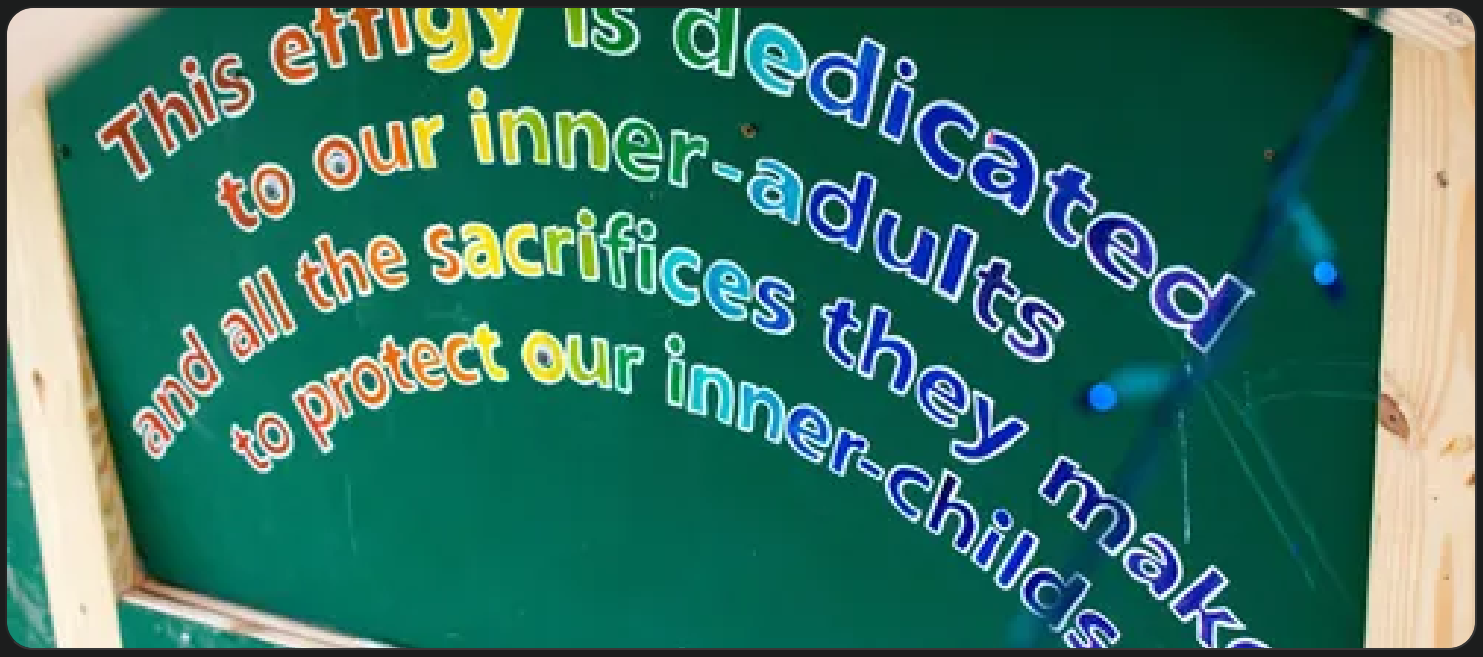
- Project Proposal Website
  https://mistynickle.github.io/DaFT-2018/proposal.html

Skills Used: Peer Leadership | Collaboration | Roadmapping | Task Delegation | Volunteer | Onboarding | Mentorship | Structural Eng. | Architecture | Fabrication | 3d Modeling | Interactive Art | UX | Website | SketchUp

Playwood Palace

Jan - Apr 2017

Codesigner, Lead Engineer, and Foreman for a large-scale art project based on my childhood castle-playground.



Playwood Palace was *a three story maze and castle-playground shaped vaguely like a unicorn*, built by a volunteer team for the regional Burning Man-inspired event: Flipside.

The winding interior of the first floor consisted of the *cafe/bar, a hobbit home, a mini forest with fake campfire, a greek veranda with blacklight chalkboards, and a dark-room ballpit in space*. Connecting the first and second floor were 1ft tall steps which, alongside the 4ft tall railings, gave participants the perception of being small again.

On the second floor were *two secret rooms*, one of which was full of treasure and required two people working together to open (the door had a pull string latch with the pulling end hidden far from the door). From the second floor, participants could get into both of *the turrets, each containing an aimable flamethrower*. On the third floor was the crux of the piece, the top of *a three-story slide*. Tons of work and volunteer hours went into this piece -- this is what of it I can claim:

- Leadership
    - Always being multiple steps ahead on what needs to be done
    - Showing people easier ways to do things (being mindful not to puzzle ruin)
    - Exemplifying safety and always doing things in ways others could understand
    - Being thankful and appreciative of others
    - Keeping an eye out for the safety of others
- Foreman and Engineer

    - Create, maintain, and reference 3d CAD model
    - Assurement and testing of sturdiness/strength
    - Planning out and testing build tasks (materials, tools, techniques) before assigning them
    - Spending ~30 hours a week fabricating the more challenging projects
    - Knowing everything currently being worked on, checking in frequently (and congratulating often)

- Co-Designer
    - Came up with thematic inspirations for each of the areas
    - Created the soundcape
    - Co-authored the story in the "childrens" book made for the piece
    - Designed the t-shirts, as well as colorizing/photoshopping images for our swag and the "childrens" book
    - Created the overall canvas which the volunteers filled

- Developer
    - Made the proposal website
    - Created a budgeting tool which calculated the total price of the piece, as well as the materials list
    - Created a media page

More Info

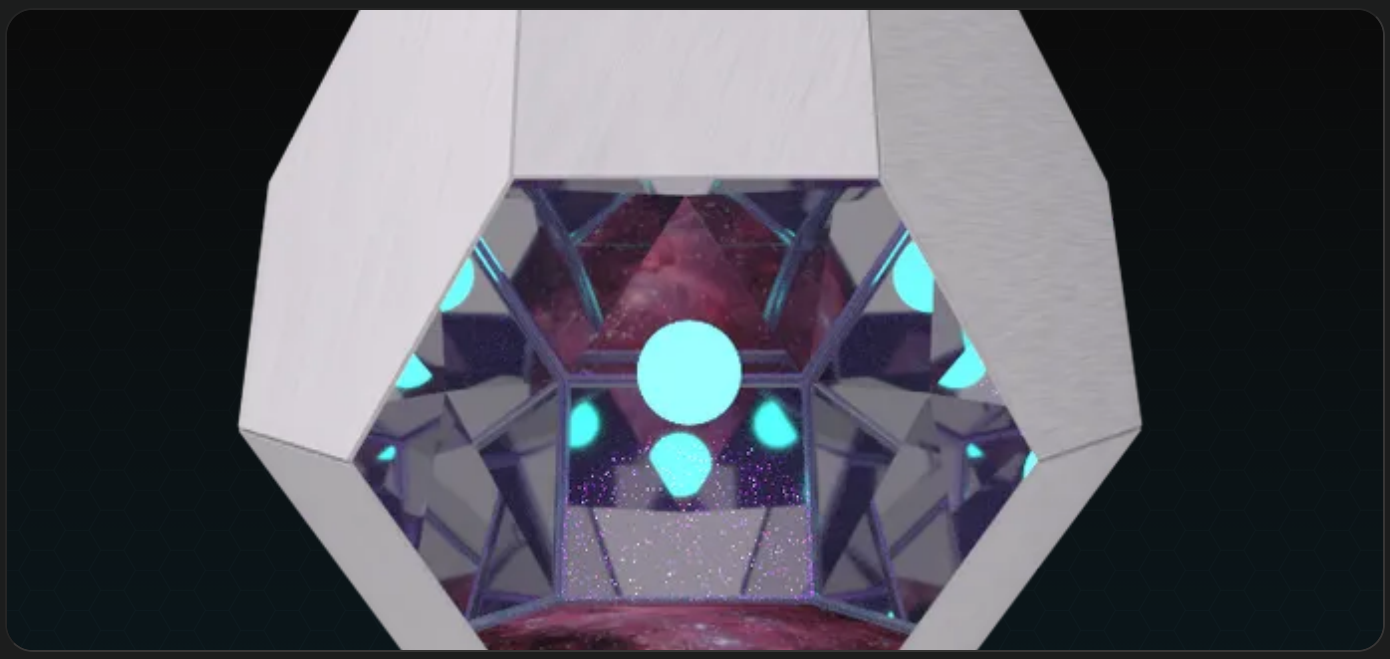
- This site has tons of links to media from the project
  http://sephreed.github.io/Playwood_Palace/index.html
- Project Proposal
  https://sephreed.github.io/DaFT_2017/
- Step by step build book
  https://sephreed.github.io/DaFT_2017/Docs/buildBook.html

Skills Used: Peer Leadership | Collaboration | Roadmapping | Task Delegation | Volunteer | Onboarding | Mentorship | Structural Eng. | Architecture | Fabrication | 3d Modeling | Interactive Art | UX | Website | SketchUp

Hexapod

Dec - Nov 2016

Project rendering for SXSW art grant submission.



After being impressed with a piece Misty and I worked on called "The Vessel," a couple friends asked if we wanted to collab for SXSW art grant. So we all got together and ideated about what we could make within the scope of the grant. Eventually the "Hexapod" is what we decided on: a neat looking 3d geometric shape with mirrors on the inside; a bit trite, a bit selfie bait, but also pretty cool.

We only ever made it to submitting a proposal, but part of it included a 3d model and website -- the model in particular being a new skill for me. I used SketchUp to draw the shape, and then Blender to add materials and render it.

More Info

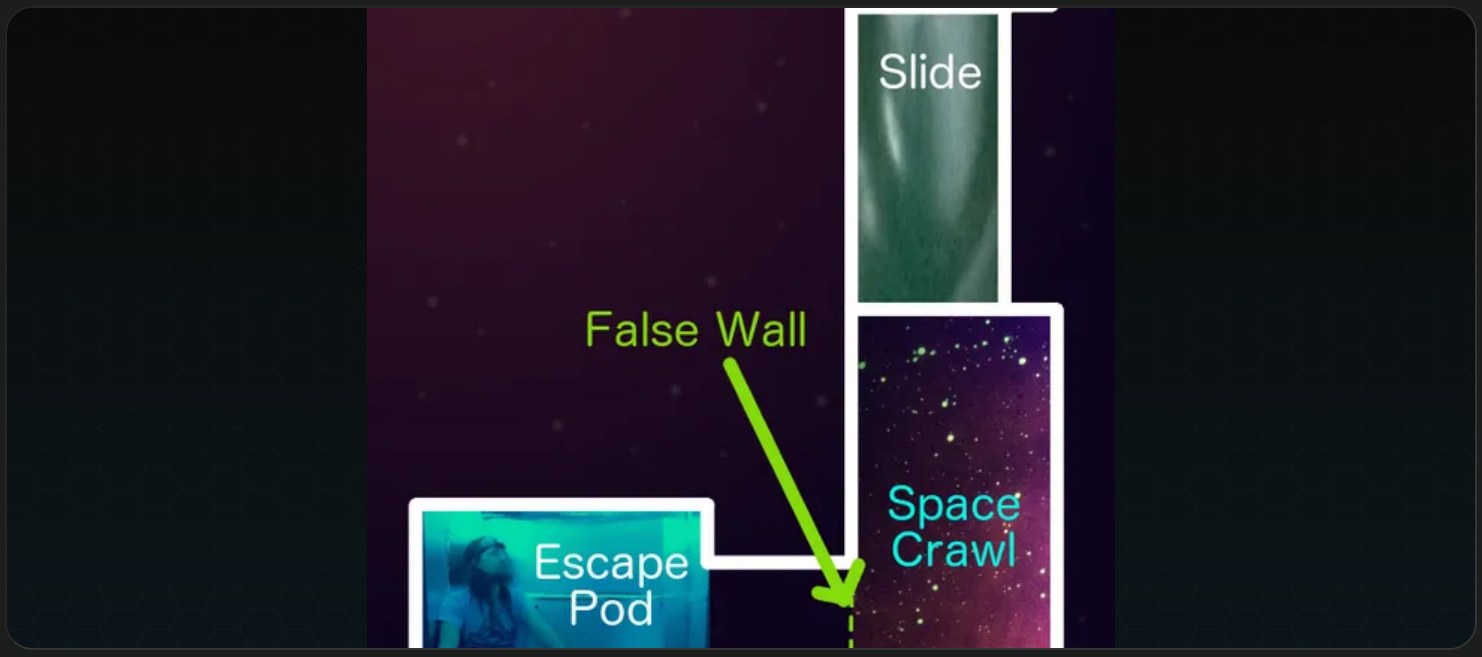
- Project Proposal
  https://sephreed.github.io/Hexapod/

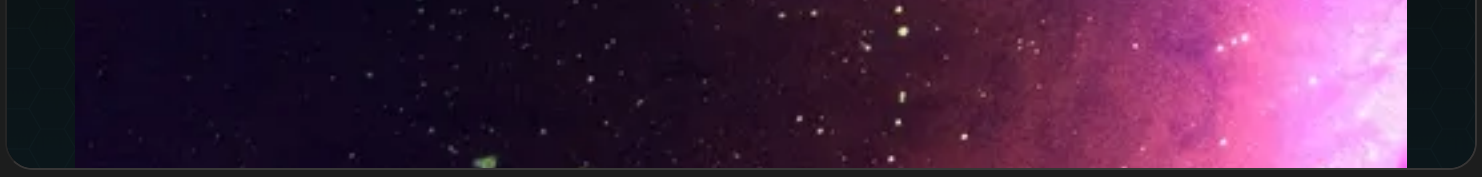
Skills Used: Collaboration | UX | 3d Modeling | Blender | Website

The Vessel

Sep - Nov 2016

An exploratory interactive art piece. Our addition was a secret space tunnel, behind a painting of space. Additionally, there was a secret room inside and a slide into ball-pit at the end.





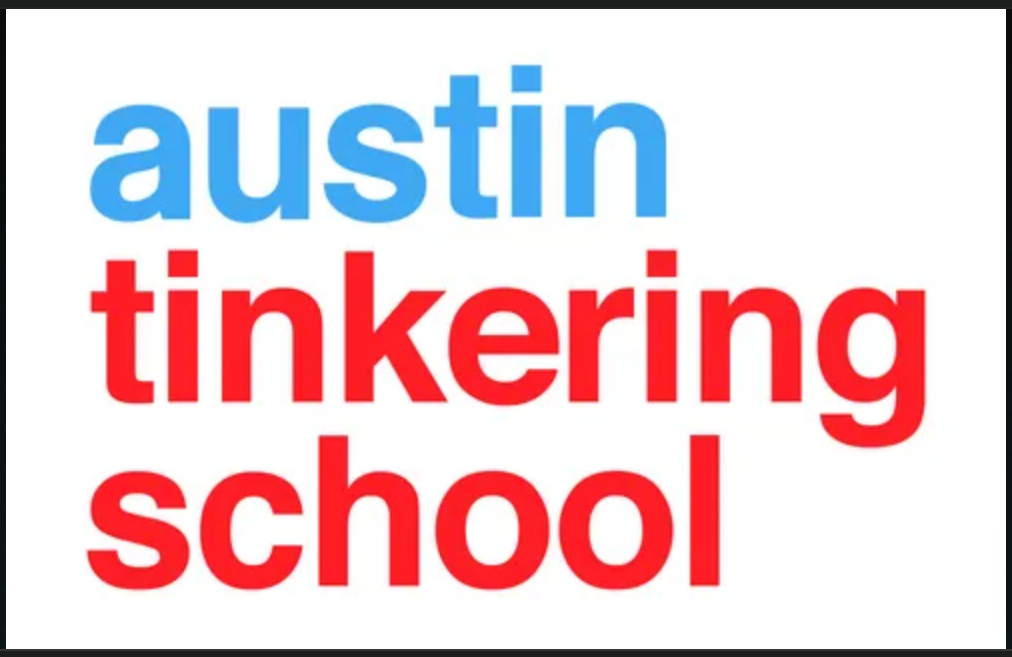
The "Space Crawl" was a section of an art piece called "The Vessel" which was an interactive/exploratory building. The space crawl was usually one of the last rooms to be found as it was a small crawl space hidden behind a painting of space. The inside of the room was lit with black light and painted to look like outer space, planets, and stars and played a 15 minute ambient song I made on loop. At the end of space crawl was a slide that went into a ballpit, and hidden behind one of the walls was yet another secret passageway to a room called "The Escape Pod." It was designed and built by Misty Nickle and I.

Skills Used: Collaboration | Interactive Art | UX | Fabrication | Website

Teacher at Tinkering School

Jun - Aug 2016

An after-school "maker style" class for introducing power tools, 3d printers, and general building skills to children.



Don't worry, my hand was always the one holding the boards down on the chop saw! Such a fun job..

Tinkering School was a sort of summer-camp for tinkering. *We brought in various age group classes, ranging from 4 - 13, and gave them building challenges and a shop.* For the younger ones, it was mostly just hot glue. But for 6 and up we started letting them use drills, hammers, saws... things most parents found astounding when they came in to watch for the last day.

As unsafe as all this sounds, no serious injuries ever occurred. We kept a close eye on the kids all the time, gave them extra small tools, and taught them to do things in ways that avoided risk. If they hammered a finger, we'd get them laughing and smiling again by the end of the day.

My favorite challenges to lead were fort building, and raft building.

Skills Used: Mentorship | Task Delegation

Americorp Leadership Development Program

Sep - Nov 2014

Six weeks in the woods, rehabbing meadows and studying the art of good leadership.

How do you get a group of eight ill-behaved teenagers who've been forced to do manual labor for less than minimum wage to *not only meet quotas but have a good time*? The answer: really good leadership.

I don't know if every Americorps group is awesome (we certainly met some groups that seemed less so), but *our leader John was amazing*. He could have easily led any team, but stuck to Americorps because "he needed the challenge."

What makes good leadership is not a subject that gets much legitimate coverage in the modern world. As such, it's extremely rare. But it's an amazingly interesting subject.

There's many different ways of doing it, but they all have a few things in common: *results, and enjoyment*. If the people working under you aren't happy, that's bad leadership. If you aren't getting the job done, that's bad leadership.

Personally, *I choose to lead from behind*. The style is to basically let people go about their own way, approaching problems the way they see fit, while keeping an eye on them whenever they stray from the path you desire, and using minimal force to keep them in-bounds. I prefer rewards over punishment (as does every psychology study). In this way, you *maximize your teams personal agency, responsibility, creativity, and happiness*. Over time, you also minimize the need to micro-manage, which allows for more personal bandwidth.

Please -- if you're interested -- chat with me about this subject.

More Info

- Photo Album from Season
  https://northwestyouthcorps.zenfolio.com/p869056121

Skills Used: Peer Leadership