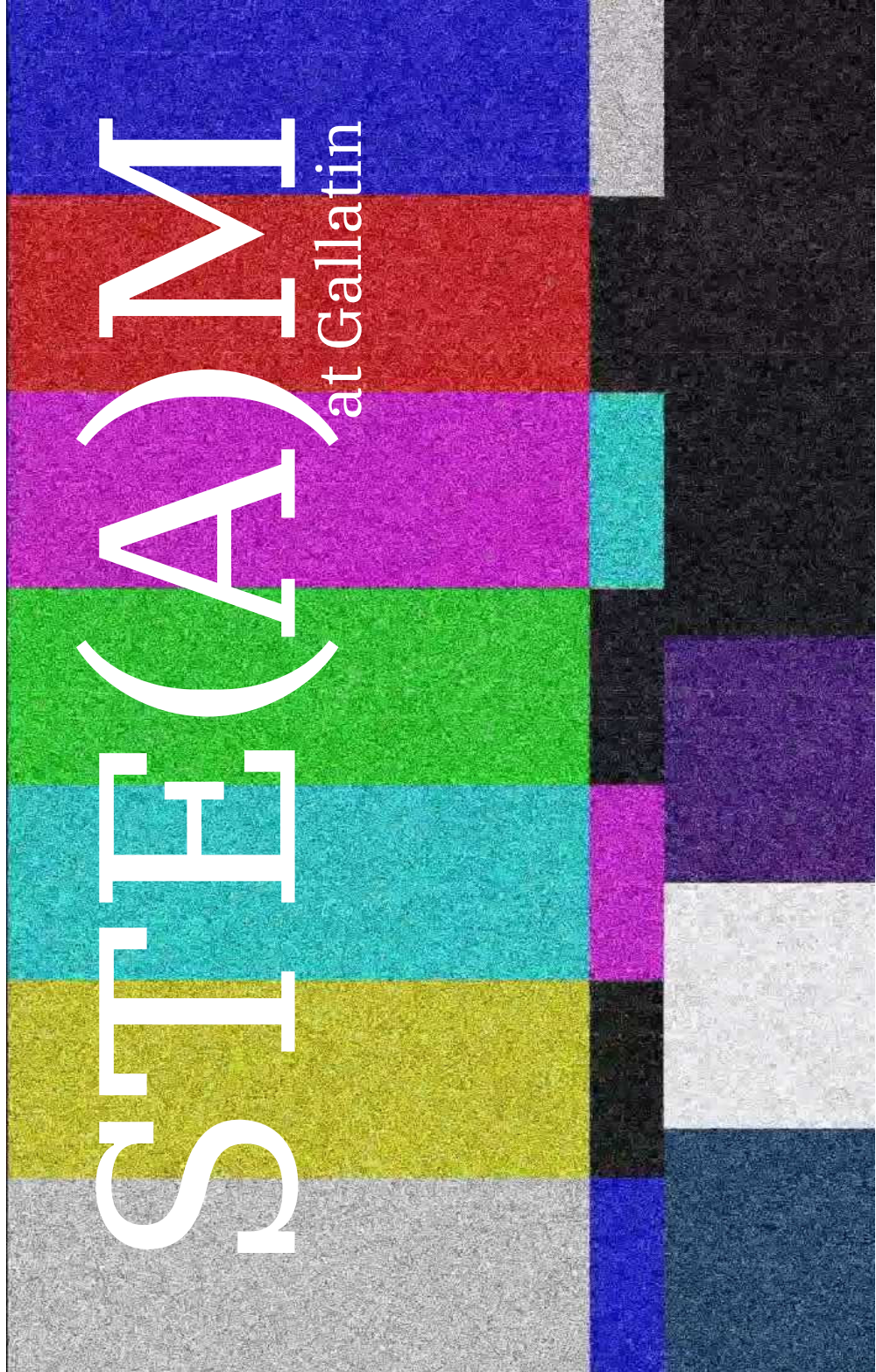
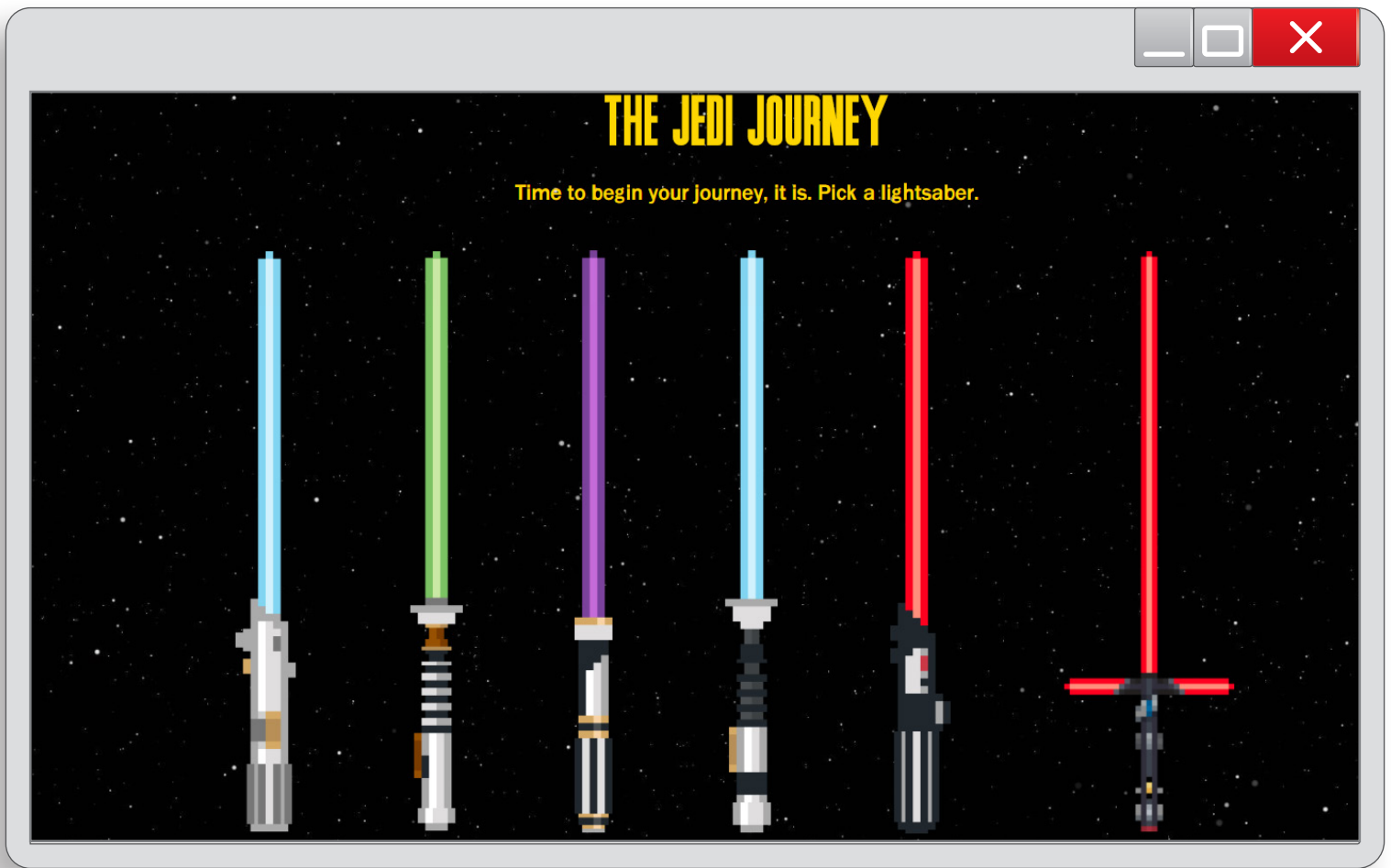


STEE(A)M

at Gallatin



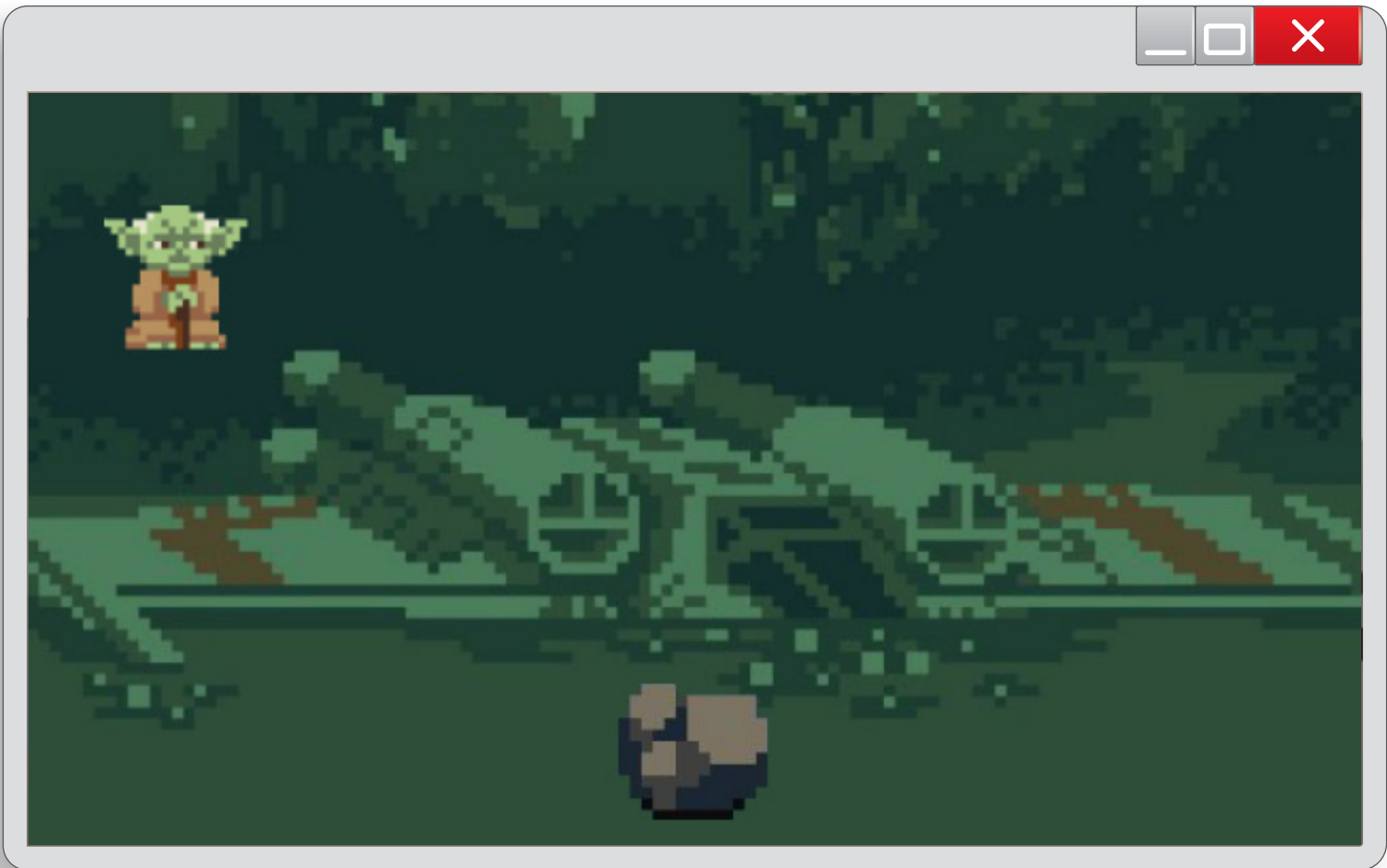


The Jedi Journey

by Erina Chavez

The Jedi Journey is, simply put, a video game. In “Interactive Computing,” I had the opportunity to build an open-ended video game on a subject of my choosing. Being unable to shake-off my newfound fascination with the Star Wars saga, I knew that I wanted to center my game around the iconic fictional universe. Thus, The Jedi Journey came into fruition. The project has grown to a scope much larger than being just a simple class assignment, and has continued to hold my attention even far beyond the game’s due date. The Jedi Journey is an exploration into video game design, fan culture, and the melding of S.T.E.M. and the arts.

Play Here: https://erinachavez.github.io/star_wars_game/index.html



I was handed a pamphlet that said: Bananas Are Too Perfect For God Not To Have Made Them.

by Henry Sheeran

If you find it hard to be happy
with the knowledge
that our brains
are children of mistakes
which led to intercourse,
think not of a Designer
who must be spurned,
but of a ball of us
and bugs and fishes
rolling and squealing through
the vast colorful Eventual,
spilling itself like tears
on the dirt of the Earth.

And wonder how,
though consciousness is happenstance,
it drives our minds to dream
even after Sun beats our eyelids closed!
It squeezes juice from berries
to brush on whitenesses
and sends fingers licking at strings,
so that something can be on purpose,
secret from the ball.



Dinner at the Palladium

by Kat Vaslova

This a game coded in javascript/p5 that was based around the Andy Warhol and Jean-Michel Basquiat joint exhibit that took place in 1985 at the Palladium.

Play here: <http://i6.cims.nyu.edu/~ev775/interactive/assignment03/index.html>



One Year of Self Tracking

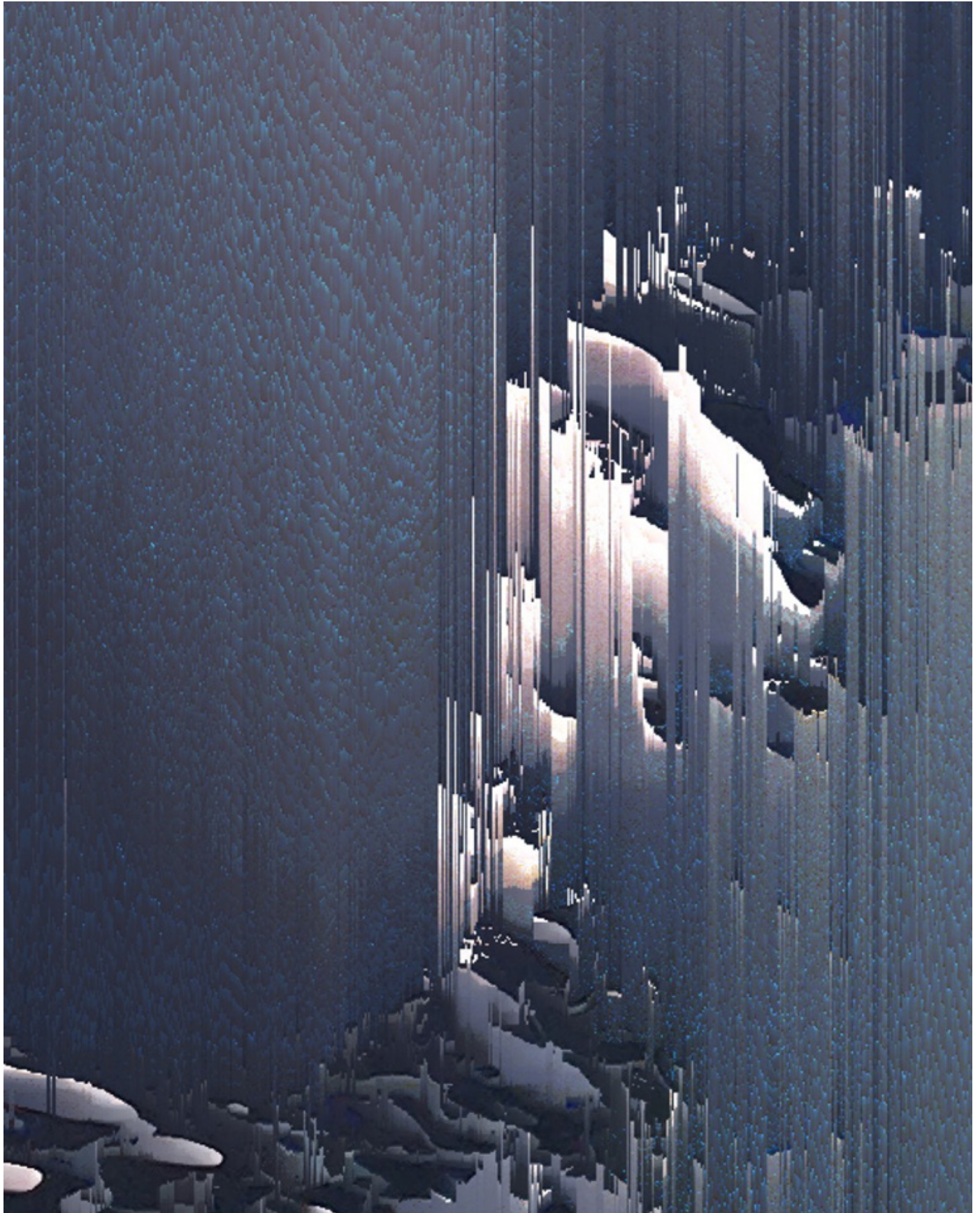
by Avigail Vantu

I started tracking my locations using my smartphone in March 2017. Soon I discovered that what previously appeared to me as an act of a voluntarily surveillance also allows me an anchoring point of reference to my day-to-day life. I continued to self-monitor myself to reveal patterns and validate my own perceptions about time spent and the places I visited.

In these two visualizations I used data stratification for months and days to capture my movements and trends. By doing so, I was able to validate my perception that during the summer months my weekends tend to be more active than my local winter months.

Both visualizations are ordered by months of the year starting from January in the upper left map till December in the right bottom row. The first visualization explores weekend vs. weekdays location tracking and displays weekdays in dark blue, and weekends in light blue. The second visualization investigates place recording for one year of only Mondays displayed in red.

When starting at my own data laid on a map a unique signature which derives from routines, home, and work locations materializes into a constant shape. This signature is unique per person and makes it easy to point out changes and special occasions such as my biking trips to Williamsburg during summer weekends as well as to JFK on one Monday during March.



Citadel
by Nicholas Ragusa

Glitch / pixel art made with Processing

Mini Brains

By Kaylee Lamarche

The human brain has sparked the curiosity of scientists from Hippocrates, revered as the father of medicine, to modern-day neurologists. The expansive neural networks seem undecipherable, like a needle hidden in a stack of needles, but what if the solution to understanding the complexities of the brain is to shrink it? What if the answer to the age-old question, “What makes us human?” lies within a cluster of cells no bigger than the width of your thumb?

Cerebral Organoids, dubbed mini-brains, are lab grown three dimensional clusters of neurons formed from undifferentiated stem cells, or stem cells that are able to form any type of cell, harvested from a single, adult skin cell. Mini-brains allow for direct observation of the early developmental stage of brain formation, something that wasn't possible before. The growth pattern displayed by mini-brains, directly parallels that of full-sized brains. The most challenging part of growing mini-brains isn't the actual growth process at all, since neural stem cells grow on their own, given the right conditions. The necessary components to spur the growth of a neural stem cell from an undifferentiated one include a gel that simulates embryonic tissue, motion to mimic blood flow and an incubator set at body temperature. As the mini-brain cells divide, they cluster and form distinct parts of the brain, such as the cerebellum and cortex, and begin to resemble a three-dimensional brain, successfully mimicking fetal brain development.

While observing model animal brains, like that of mice, has provided a copious amount of insight on how the human brain works, it is impossible to observe the effects of neurological diseases and the characteristics unique to human brains that cause them, such as an increased presence of neurons in the cortex, which controls logic and reasoning, compared to other species. Understanding and possible treatment of mystifying brain disorders, such as Alzheimer's and Autism, are at the precipice of Cerebral Organoid research. By using cells from a patient suffering from Alzheimer's to culture an organoid, one could not only observe the unique growth patterns of a brain riddled with disease in comparison to healthy brain, but also experiment with dif-

Aside from the negative connotation and controversy shrouding stem cell research, furtherment of Cerebral Organoid research has raised several ethical questions. Since mini-brains so deeply resemble full-sized brains, will they become conscious in the same capacity as full-sized brains? Will they be capable of thinking and feeling? Plainly, the answer is no. Cerebral Organoids are incapable of thinking and becoming conscious because, while the same type of tissue used to create mini-brains is observable in full-sized brains, they aren't organized in the same fashion. The brains mystique comes from its large size and plethora of neurons coming together to form a grand neural network. Mini-brains only contain a tiny fraction of the 8.6 billion neurons present in a full-sized brain, containing only a measly 100,000 neurons. The lack of blood vessels in Cerebral Organoids discourages scientists from attempting to make larger mini-brains, thus constricting the size of mini-brains to 1cm.

Mini-brains may function like human brains, but they aren't part of an organism. Making it impossible for it to interact with the outside world, a fundamental component in solidifying the human consciousness. Neural networks function by receiving inputs from sensory organs, like the eyes, and generating a corresponding response. Without this continuous cycle of inputs and outputs, the neural networks developed by mini-brains will never fully work to develop the same consciousness and ability to think and feel that full sized brains possess.

Other ethical questions arise when considering furthering research on mini-brains. Can they feel pain? Is it morally just to infect them with disease for the sake of advancing research? When considering these questions in regards to human beings in general, it is deemed morally unjust to purposefully inflict pain on a person or infect them with disease to conduct deeper research, hence why animal subjects are so frequently used to conduct research. Mini-brains are biologically incapable of organizing in the same fashion as full-sized brain, and thus unable to develop the synapses and neural connections that would allow them to feel pain. But the question still stands: does pursuing further research in the field of growing organoids from human cells allow for us to open the doors to a world or other heavily debated ethical situations, like clones?

Endless possibilities and new discoveries lie within expanding Cerebral Organoid research, making it possible for humans to quite literally have the world in their hands.

Museum of Precious Art Objects

by Michelle Johnson



The Museum of Precious Art Objects is a Retrospective of Obsolete Utilitarianism from Life on Earth. Set in a future world where human life exists in a post-colonial outer space, my project consists of an animated blender file of a curation of objects that orbit around a singular, central body (an extrasolar planet) as a museum show. The exhibition statement is as follows:

“Earth anthropologist, historian and Museum curator for the Exxon Earth Memorial has selected various remnants of Earth human life from the early 21st century for The Museum of Precious Art Objects. For thousands of years, Earth humans augmented social and political paradigms through the adoption of obsolete utilitarian objects. The Museum of Precious Art Objects presents an archive of objects dated to year 2018 of Earth human life drawn from our collection of Earth artifacts. As objects on Earth, these articles of matter occupied a historically specific value to the lives and structure of their world. Since their expiration, these objects survey a visual language that exemplifies Earth human social, political and environmental structures and systems.”

This project came from the projection that humans will eventually conquer other planets in space once Earth is inhospitable. The “obsolete utilitarian” objects represented in this museum show (funded by Exxon) are only useful in the contemporary moment by our ascribed valued and our systems of organization that reinforce their need. By placing them as “art objects” that have no remaining function, their necessity is placed into question. Many of the objects represent systems of control and power (such as the I.D., the money, the podium) or exist in environmentally illogical methods of consumption (refrigerator, trash bag). They ask the viewer to question their purpose and imagine a system of organization in its absence.

The objects circle the central body at three different orbital rings. The viewer is invited to either stand at the central planet and passively observe the objects rotate around them, or they have the liberty to explore the exhibition by dragging and scrolling through the file. The image attached is a still from the file.



An Exploration of Laser-cutting: Fab Forest
by Jo DeWaal
Laser-cut hand drawing



Rain Hometown

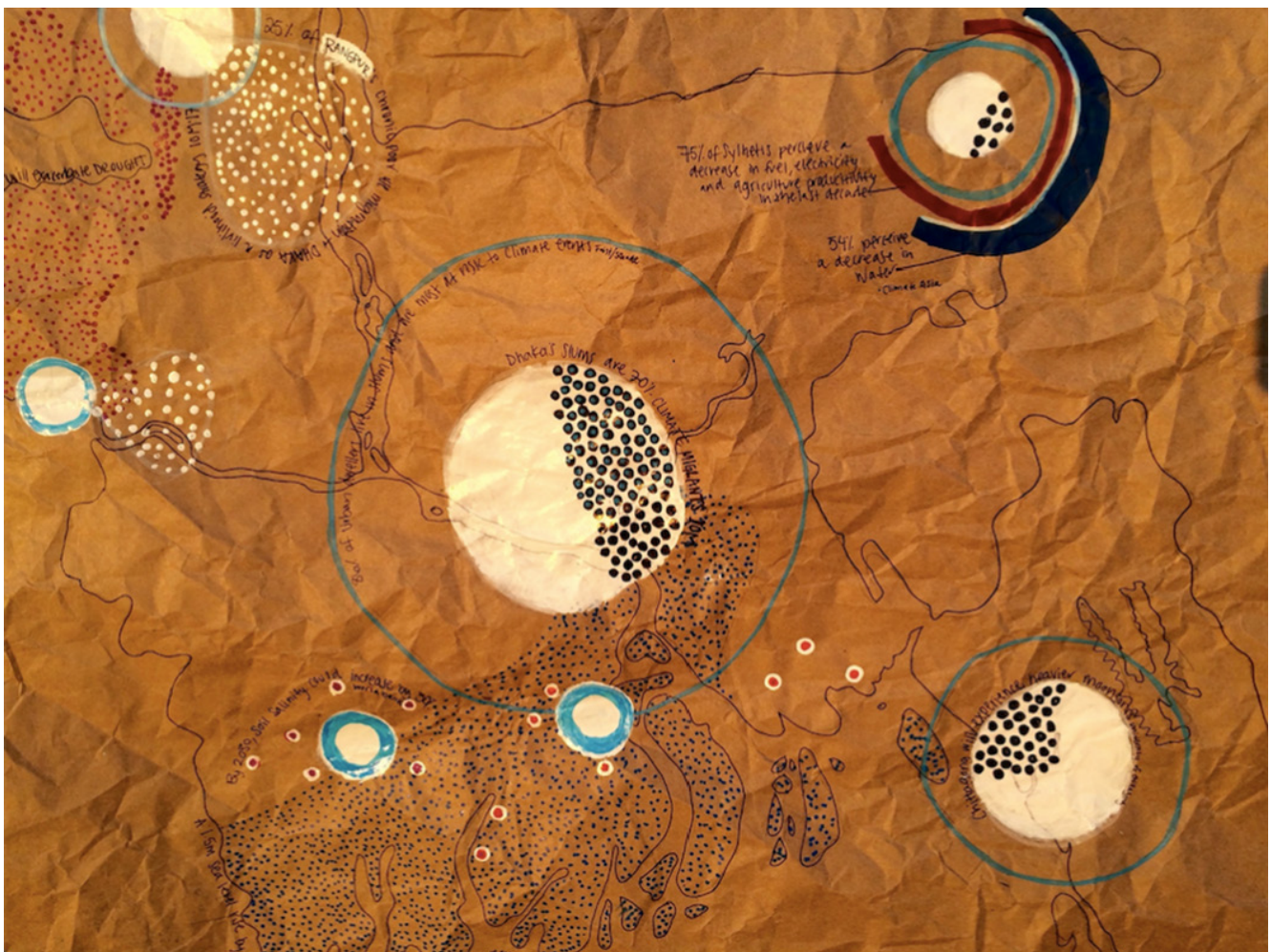
by Emma Indelicato

Condensate the cloud of meaning into icy
tears that thunder down.
Shatter on Rockaway Beach Blvd.
Explode as you hit the asphalt.
My potential repressed
now expressed kinetically
connecting baby swimsuits
and messy Mr. Softee cones to
big leather boots and shoe-box dormitories
in the sparkle of water particles.

Against the streetlight refracted
back is nostalgia
lightyears away travelling
to here as I pass
my pre-school in West-End Temple.
The quiet houses whose windows
frame vignettes of lives I never got
the chance to know.
A tres-passageway in a fence
I didn't discover in time to get

lost in childhood-thicket
brush past branches I might have
climbed if I were willing to fall.
Shadow-scrapes weaken
my knees as they remember
chasing boys on these sidewalks
curious once
now buckle twice for fear
of slipping in puddles.
We freeze
like remembrance
in cold storms and soaked socks.
My feet blister
as if they've been running for too long.

My existence is fueled by the regeneration of energy already lost
regained and changed from history into now
charged by the people I've crashed into
transmuted from falling and breaking
transmission into acceptance like light
passing through the drops
losing parts of itself while evolving
into overlaps of temperature, color, moments
barely seen but inexplicably present.

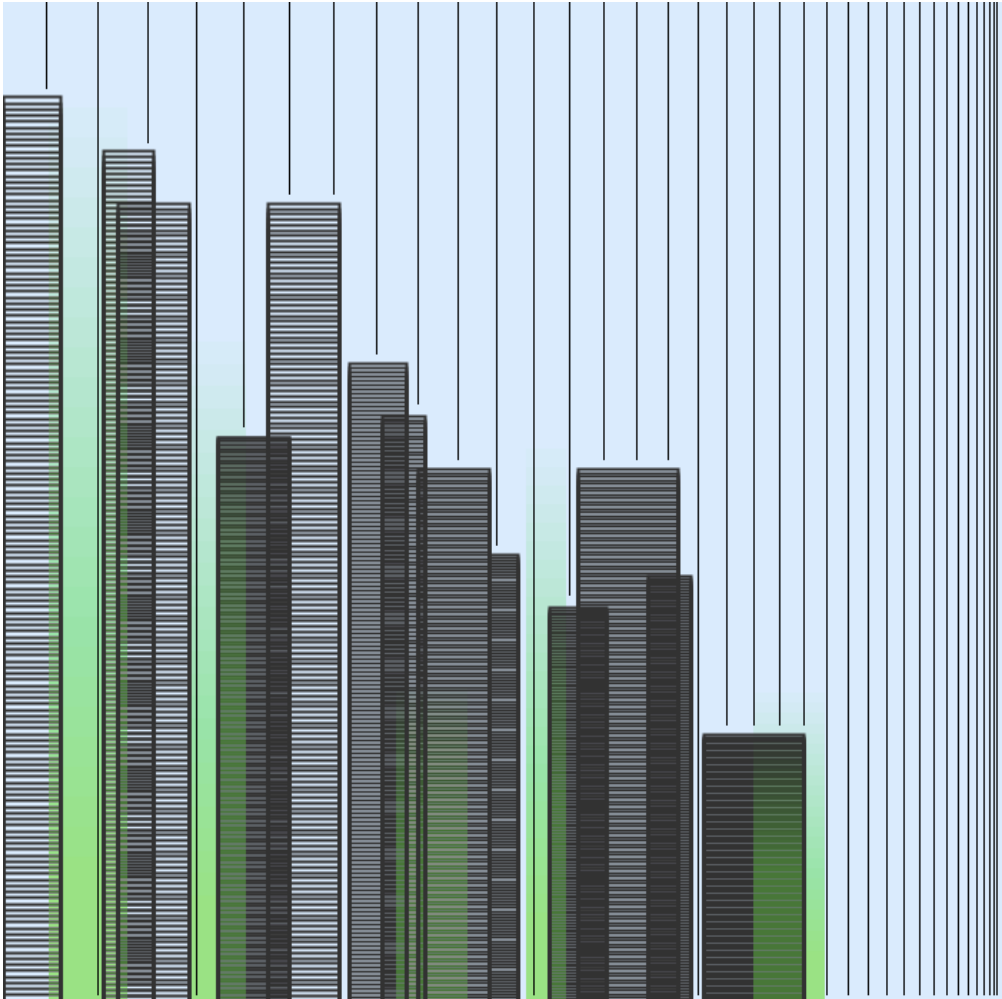
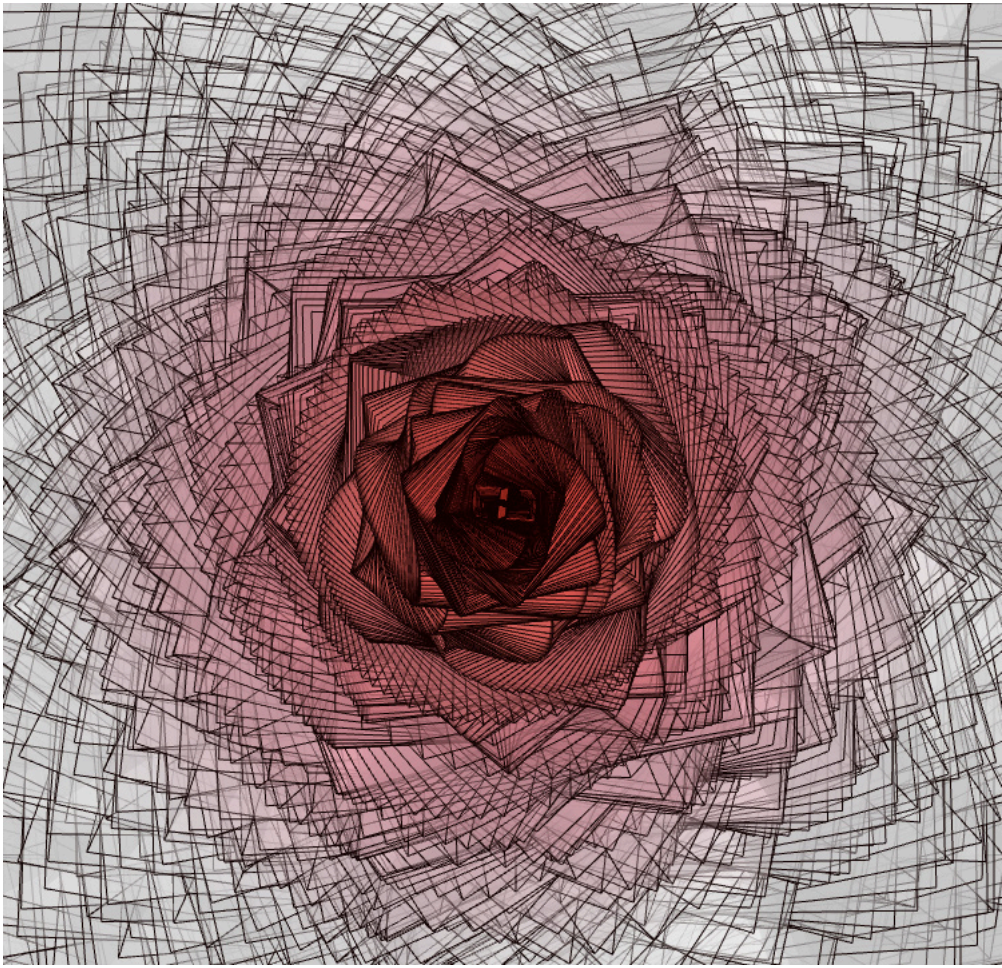


Climate Migration in Bangladesh

By Grace Webster

In my cartographic piece, *Climate Migration in Bangladesh*, I set out aiming to visually show the anthropogenically induced climate events and processes that were happening to the land and how that affects the people who live there. Bangladesh is particularly vulnerable to climate change and is one of the most densely populated countries in the world. Two-thirds of the country happen to be less than five meters above sea level so flooding is common, particularly in the south, while people in the north experience extreme droughts. These issues are exacerbated by climate change and make rural living difficult if not impossible.

I translated data from scientific reports and journals to create this piece. Each dot, colour, pie chat on this piece is a representation of a piece of data. All sources are written directly on the piece.



Choreographing Code
by Ingrid Apgar

Computer-generated art



Dismantlement/Repurpose

an event organized by Cyd Cipolla

This was a two-day critical engagement with material culture at the intersection of technology and art. At Dismantle, on Friday, participants dismantled objects down to their component parts. Guest speakers delivered short talks connecting an aspect of critical theory to the theme of dismantling. Mediators were on hand to help foster discussion around the act of “dismantling” as a political/social/meditative act and to create connections between the ideas presented and (un)making.

Saturday’s Repurpose event allowed participants to use dismantled parts to build something new. Participants were challenged to use the pieces around them to create objects to answer some of the challenges that were discussed on Friday. Participants attended either session, or both, and could come and go as they liked.

This event is co-sponsored by Gallatin and the Decolonizing Workshop.

A Tour of the Cell and its Organelles

by Sylvia Coopersmith

Welcome to Town – Organelles and their function

One defining factor that says we're alive

We've got some 30 million that help us survive

Yes I'm talking about our cells

Our cells, our cells, and our organelles

We have organelles, which means we're eukaryotes

And we're multicellular cause that's the way that we grow

Prokaryotes can reproduce with just one

They're single-celled and that gets the job done

Their DNA's in a nucleoid

There's not much there so you really can't avoid

That it's circular which isn't the same

As eukaryotes, though they both have plasma membranes

All cells also have ribosomes

And we've all got DNA compact in chromosomes

The cytoplasm's in the background

Where all our organelles can just float around

The nucleus controls this whole operation

So every molecule has a destination

It holds all of our DNA

Directs our body night and day

A nucleolus lives inside

So ribosomes can get a ride

On the nuclear envelope on its way

to make proteins out of RNA

Sometimes it'll go to the endomembrane system

where ribosomes will cling to the rough endoplasmic reticulum

there's a smooth one too that detoxifies and synthesizes

products move on stored in the golgi apparatus

Plants have vacuoles, so they can store the most

And plants also have chloroplasts, converting sun to glucose

Mitochondria is the source of energy

And through cellular respiration it makes ATP

The cell excretes things, or eats things, if it's in the wrong zone

Or digests toxics using lysosomes

it transports products using vesicles, those little blobs

so all the organelles can do their jobs

The last spot on our tour is what holds this all in place

Cause all these complicated functions can't float around in space

They're not held by stones or bricks

For plants, a cell wall, and animal's an extracellular matrix

Cytoskeleton, microtubules, and microfilaments are the backbones of this town

They keep the structure sound and help the proteins get around

These defining factors helps us all stay alive

Without these 30 trillion we would sure not survive

Yes, I'm talking about our cells

Our cells, our cells, and our organelles



A Bullet Drops Toward the Earth

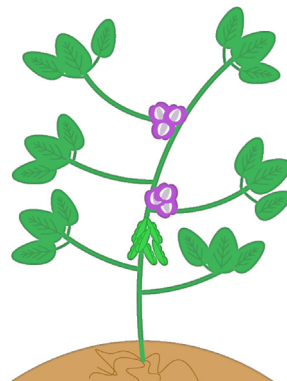
by Lucas Lovejoy

Together, my partner and I, created a fashion brand called Coronil. Coronil blends technology, garment design, and film into one cohesive product. Depicted here is a 3D printed bowtie.

Story of a Soybean

by Emily Fong

“Story of a Soybean” is a project developed for Jack Tchen’s “Indigenous Futures: Decolonizing NYC - Documenting the Lenape Trail” class. It takes the form of an interactive webpage built with p5.js, and hosted on the NYU Computer Science Department’s i6 server. The piece represents a triangulation between the self, indigeneity, and New York City. The soybean plant is reminiscent of one of my childhood memories growing up in suburban California, where I had very little exposure to my culture outside of my family and my home. Childhood was an isolating experience, but the process of making homemade soymilk from scratch connected me to a larger cultural history, and the taste of fresh soymilk became something that grounded and comforted me once I left for NYU. The user is encouraged to explore the picture as if trying to explore their own history, and mousing over different parts of the plant reveals different things about the process of making soymilk and my own feelings about that memory.



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