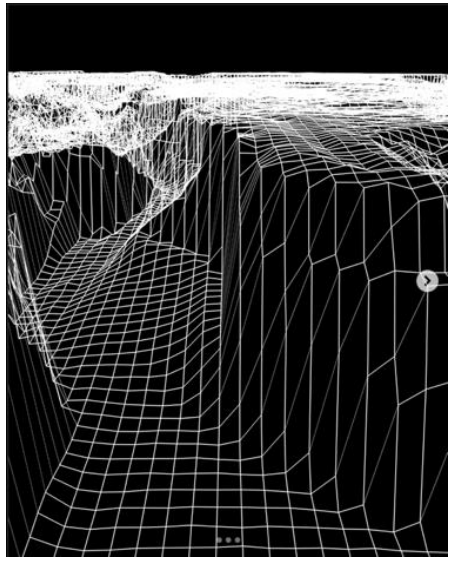
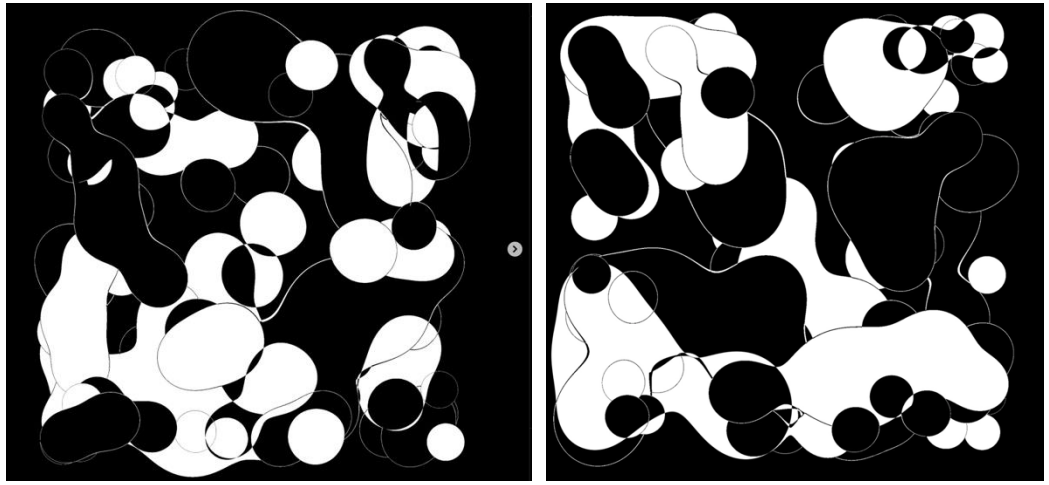
Week 2: Jan 16

This week, I explored the Genuary prompt: "Pure black and white. No gray," observing how others approached this challenge in unique ways. From there, I researched more about Perlin noise and its implications.

Featured Artwork 1: 3D Terrain - https://www.instagram.com/p/DEaoHMbiS9c/?hl=en
Artist: ix.shells
Medium: Algorithmic/generative art
Description: Through mesh manipulation, the creator crafted a surreal 3D terrain with a sense of depth using Perlin Noise.

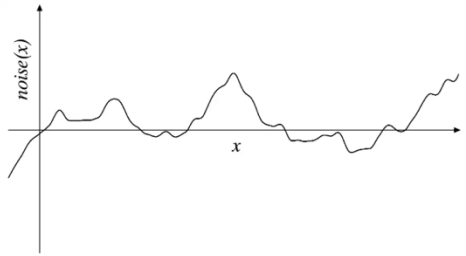


Featured Artwork 2: Fluid - https://www.instagram.com/p/DE2SJaYxKvv/?hl=en
Artist: eavilesl
Medium: Algorithmic/generative art
Description: I found this piece captivating as its progression involves parts merging and separating, forming visually engaging shapes. I interpreted these forms as akin to clouds, sparking the imagination to see them as anything.



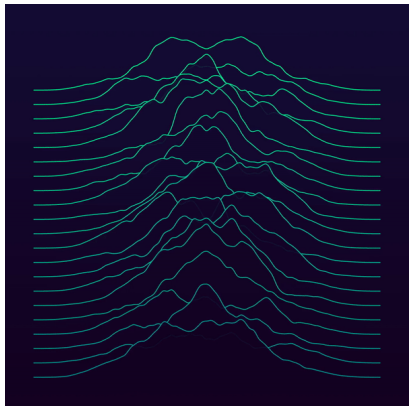
Week 2: Jan 16

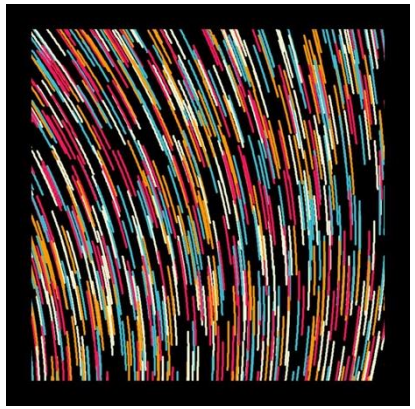
Perlin Noise research:
Documentation:
https://genekogan.com/code/p5js-perlin-noise/
Perlin noise is fascinating to me because it brings a sense of natural randomness, creating smooth, organic patterns that mimic textures found in nature, like clouds, terrain, or flowing water. Its ability to produce continuous, visually appealing variations without abrupt changes feels ideal for creating dynamic and immersive digital art. Also, the comparison of Perlin noise vs true random made me think of situations where we should use one instead of the other.

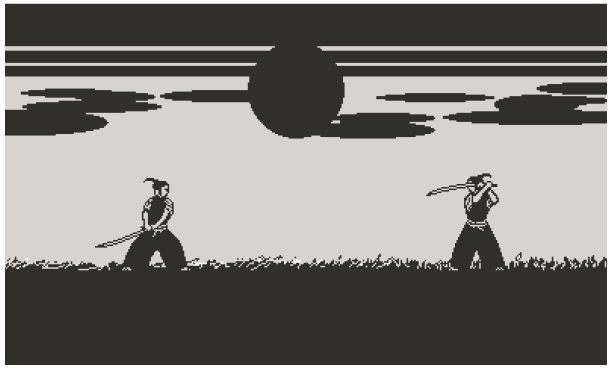


(a) plot of Perlin Noise


(b) plot of random numbers



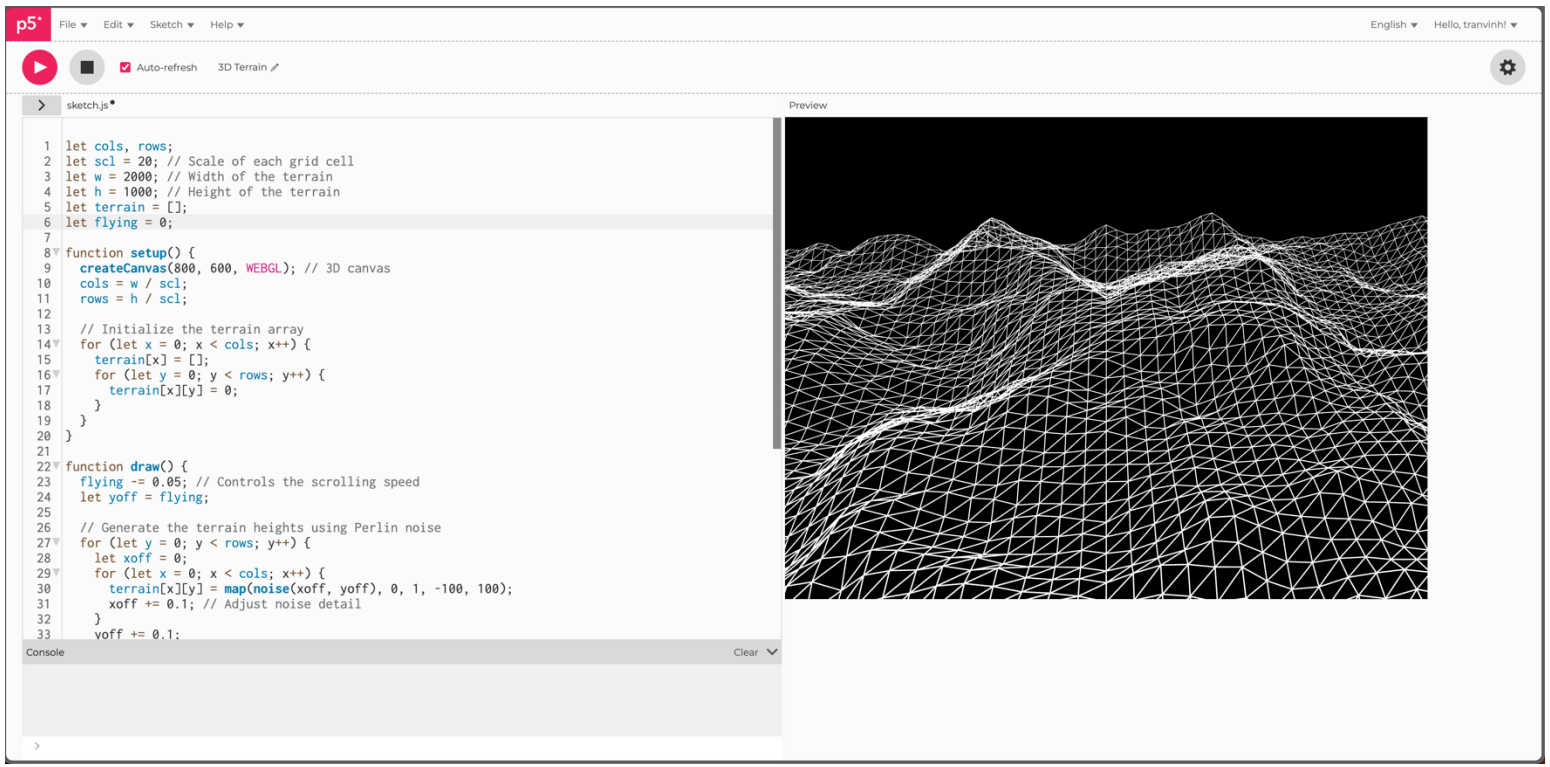



Perlin Noise to generate grass

Week 2: Jan 16

Tutorials

- 3D terrain in P5JS: https://www.youtube.com/watch?v=_Tyhfpxwips
- Perlin Noise research: https://genekogan.com/code/p5js-perlin-noise/

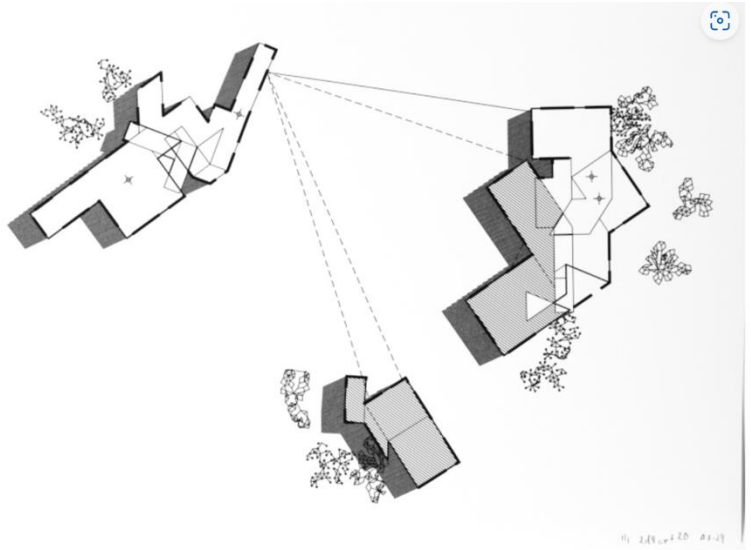


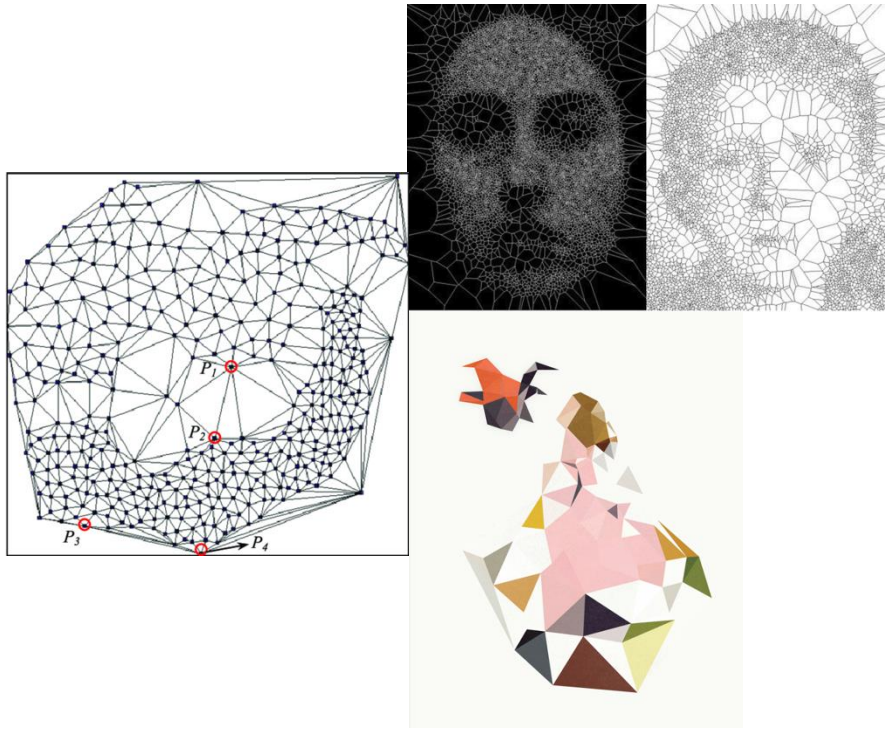
Week 3: Jan 23

Featured Artwork: “Subdivided Spiral” by Anders Hoff (Inconvergent)
Artist: Anders Hoff (@inconvergent)
Medium: Algorithmic/generative art
Tools Used: Processing, Python
Description: This piece consists of a spiral that has been recursively subdivided into smaller sections, with each segment shifting slightly to create an organic, almost hand-drawn effect. The result is a delicate balance between order and chaos, with controlled randomness giving the composition a natural aesthetic.

Why This Inspires Me

- The controlled imperfection—despite being entirely generated by code, the artwork has a hand-drawn feel, making it warm and organic rather than rigidly mechanical.
- The recursive pattern generation is intriguing because it demonstrates how simple rules can lead to complex emergent structures.
- The subdivision technique is something I want to explore further in my own work, especially in p5.js and Processing.





Week 3: Jan 23

Tutorials:

- Recursive Subdivision: https://www.youtube.com/watch?v=tQxjCb2ZDd8
- Generative Spirals in p5.js: https://www.youtube.com/watch?v=6z7GQewK-Ks

Week 4: Jan 30

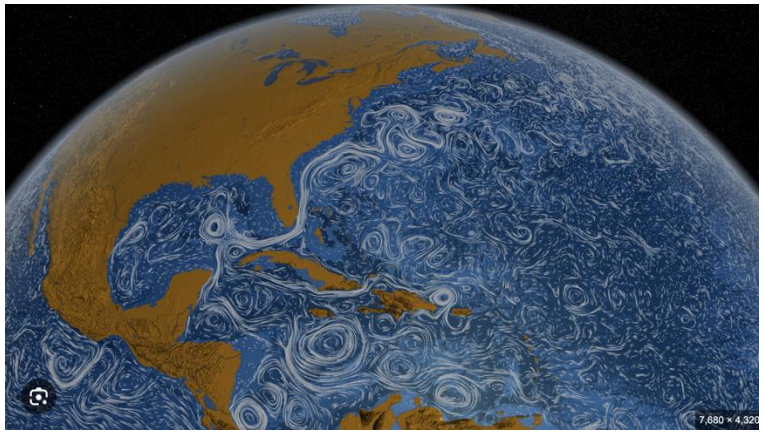
Featured Artwork: “Flow Field Experiments” by Tyler Hobbs
Artist: Tyler Hobbs (@tylerxhobbs)
Medium: Generative art using flow fields
Tools Used: Processing, p5.js, custom JavaScript scripts
Description: This piece is created using a flow field algorithm, where thousands of particles follow a vector field generated by Perlin noise. The movement creates intricate, organic patterns resembling natural forces like wind currents, water flow, or even growth patterns in nature.

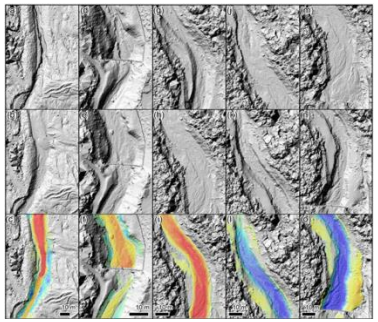
Why This Inspires Me

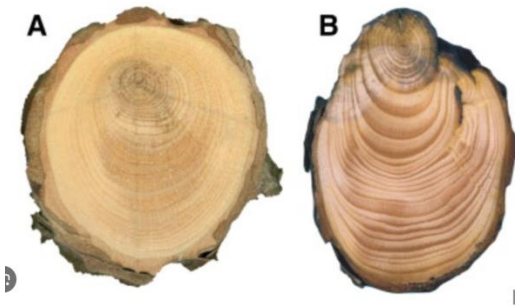
- The natural movement and flow—even though it's entirely digital, the artwork has a fluid, lifelike quality.
- The use of Perlin noise to control randomness results in structured yet unpredictable motion.
- Flow fields are versatile—they can be used for particle simulations, generative landscapes, and even AI-driven artwork.

Week 4: Jan 30

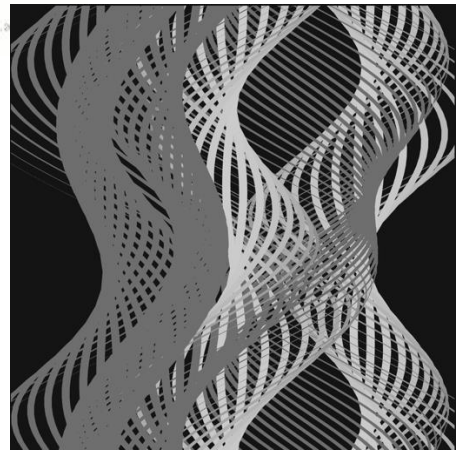
Flow fields in Nature







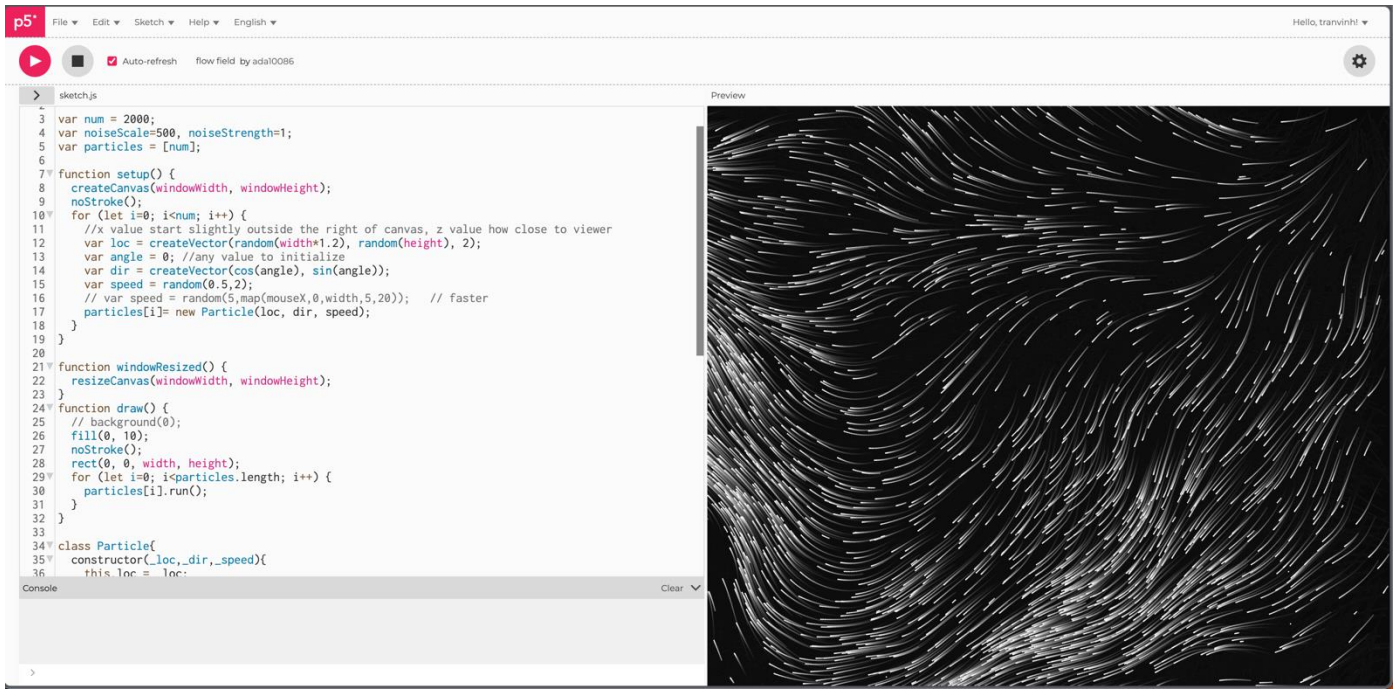
Other inspirations

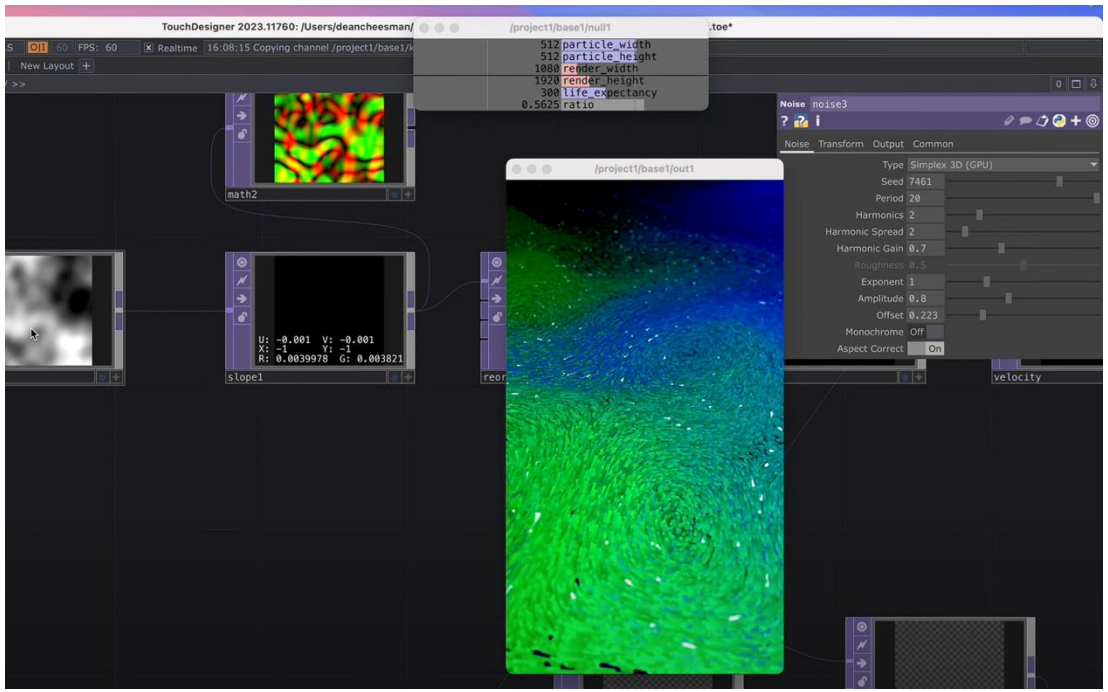


Week 4: Jan 30

Tutorials:

- Perlin Noise Flow Field: https://www.youtube.com/watch?v=BjoM9oKOAKY
- Flow field in TouchDesigner: https://www.youtube.com/watch?v=ImKahA2z1fQ



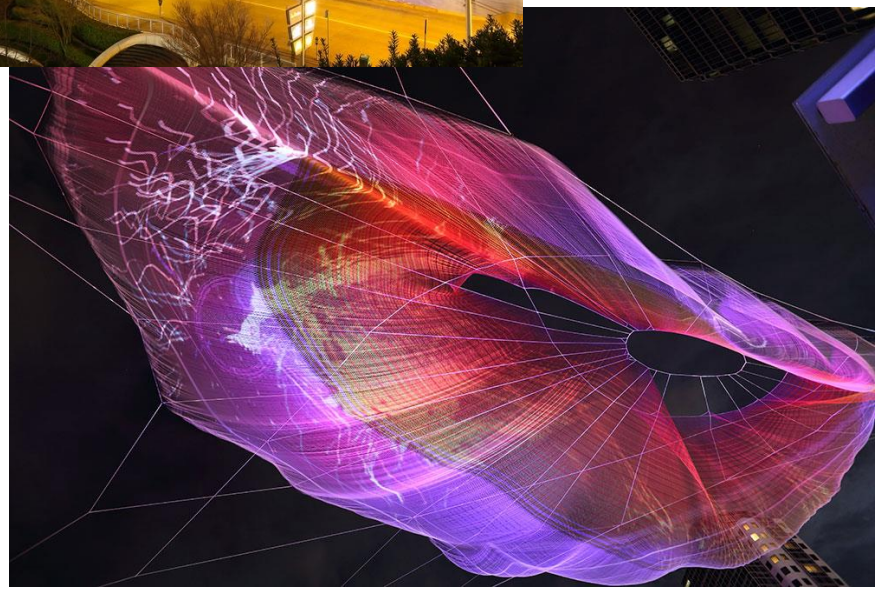


Week 5: Feb 6

Featured Artwork: "Unnumbered Sparks" by Aaron Koblin and Janet Echelman
Artists: Aaron Koblin & Janet Echelman
Medium: Generative and interactive installation art
Tools Used: Web-based technologies, data-driven visuals, projection mapping
Description: "Unnumbered Sparks" is a large-scale interactive artwork suspended over public spaces. The piece is a dynamic, flowing net sculpture lit by generative projections that respond to viewers' input via their mobile devices. This creates a collaborative art experience where individuals can "paint" the sculpture with light and color in real-time.

Why This Inspires Me

- It combines computational art with a physical, monumental sculpture, showcasing how generative techniques can transform real-world spaces.
- The flowing motion of the sculpture paired with generative patterns makes it visually mesmerizing and ever-changing.



Week 5: Feb 6

Other Projection Mapping Inspiration

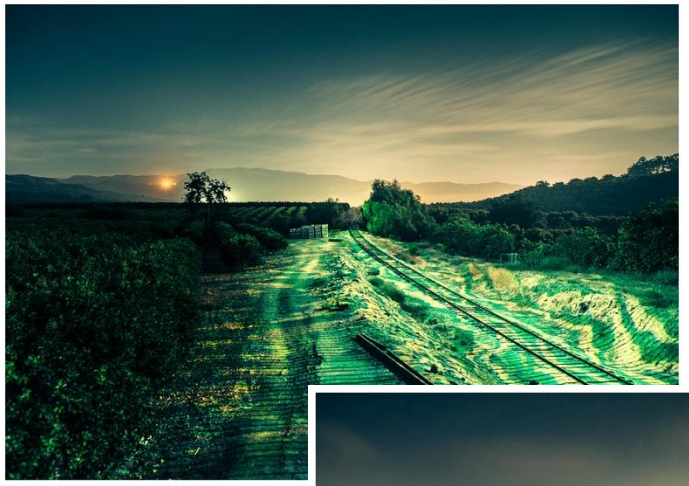
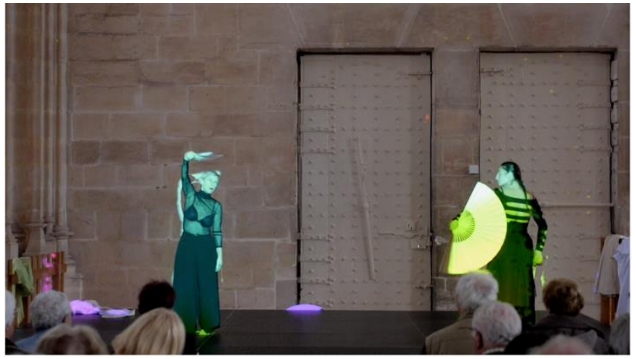


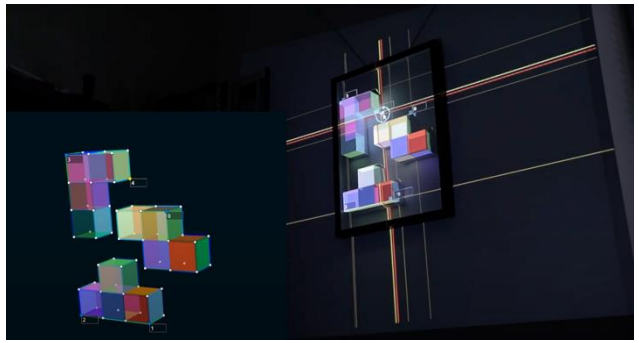
Figure 1: A conceptual sketch of the *office of the future*. By replacing the normal office lights with projectors, one could obtain precise control over all of the light in the office. With the help of synchronized cameras, the geometry and reflectance information can be captured for all of the visible surfaces in the office so that one can project images *on* the surfaces, render images *of* the surfaces, or interpret changes *in* the surfaces. The inset image is intended to help differentiate between the projected images and the real objects in the sketch.

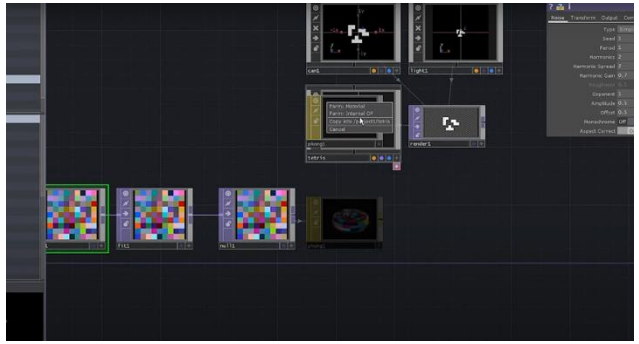


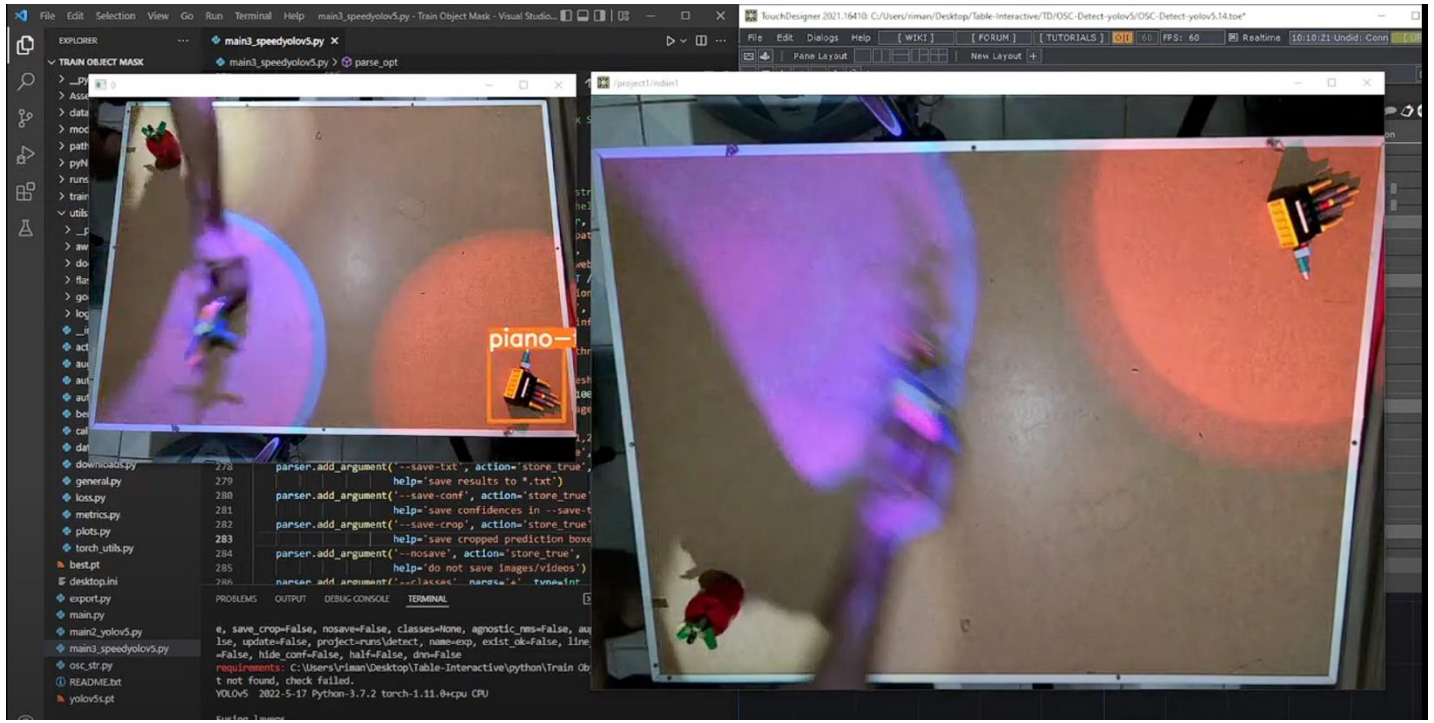
Week 5: Feb 6

Tutorials:

- 3D Mapping Installation in TouchDesigner: https://www.youtube.com/watch?v=chLpe-Il-6A
- 3D Mapping Installation in TouchDesigner 2: https://www.youtube.com/watch?v=QQy6xRnRa04
- Object Detection and Projection Mapping: https://www.youtube.com/watch?v=D0FeWTuiXFQ





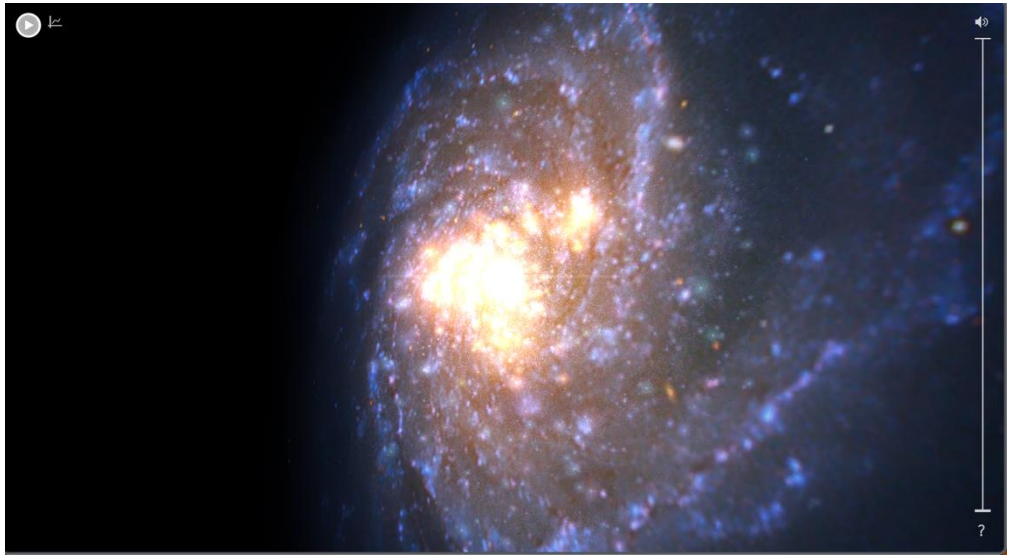


Week 6: Feb 13

Featured Artwork: "100,000 Stars" by Google Creative Lab
Artists: Google Creative Lab team
Medium: Interactive data visualization
Tools Used: WebGL, JavaScript, Three.js
Description: "100,000 Stars" is an interactive map of the Milky Way galaxy that allows viewers to explore nearby stars, their names, and their positions relative to the Sun. It's powered by astronomical data and uses generative techniques to create stunning starfield visuals that mimic the vastness of space.

Why This Inspires Me

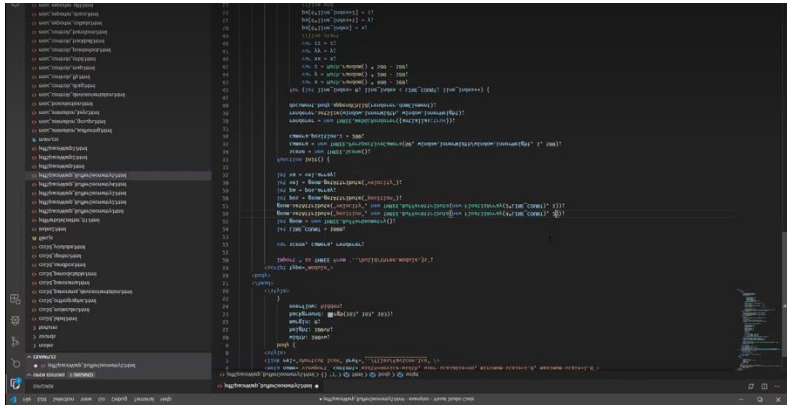
- It creates a sense of scale and wonder by visualizing space in a way that feels personal and interactive.
- The use of real astronomical data combined with generative algorithms results in visuals that are both informative and beautiful.
- It merges the beauty of computational art with the rigor of scientific data, showcasing the potential of generative art in education.

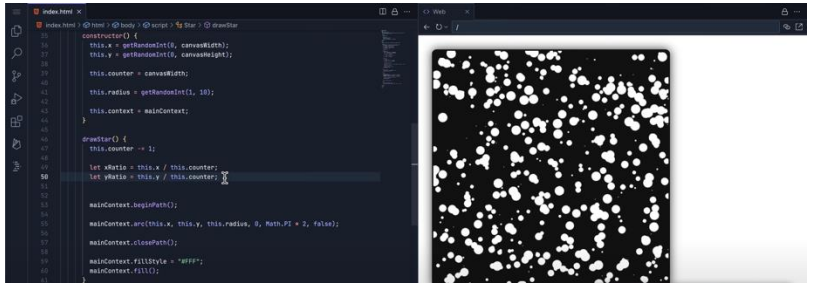


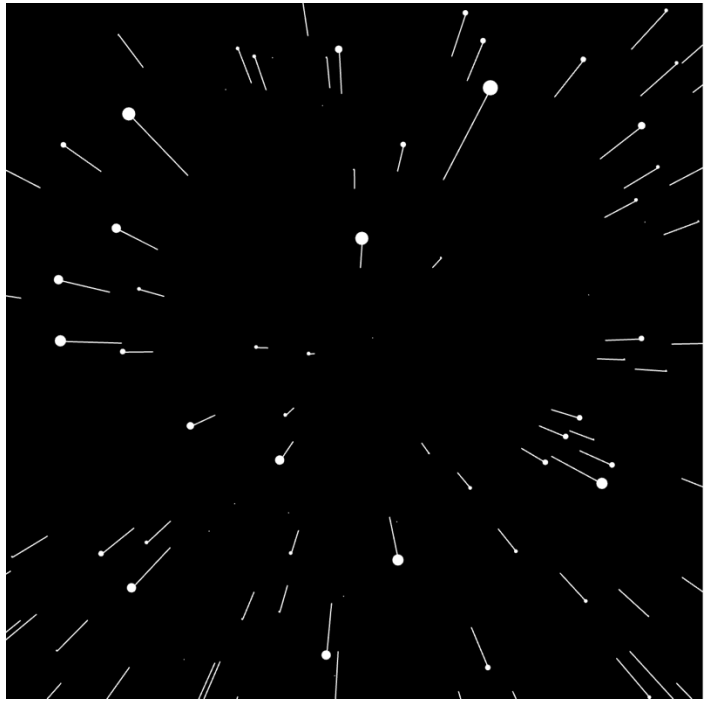
Week 6: Feb 13

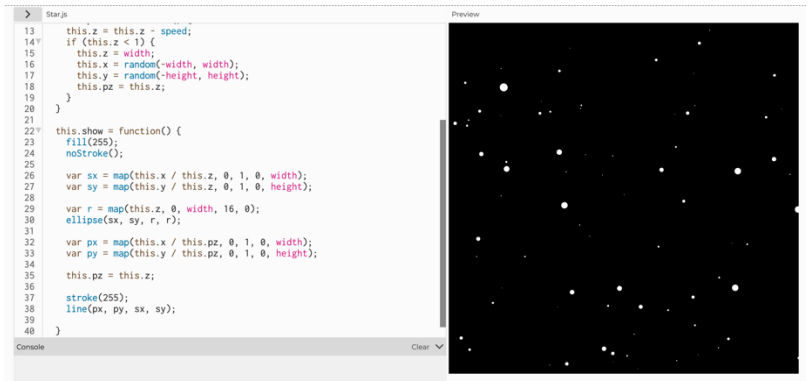
Tutorials:

- ThreeJS Warp Star: https://www.youtube.com/watch?v=MfOixPz65ag
- Starfield in ThreeJS: https://www.youtube.com/watch?v=k4Tyh-MVuxg
- Starfield in P5js experiment









Week 7: Feb 20

Featured Artwork: Future You
Artist: Universal Everything
Medium: Real-time visuals using gesture tracking
Description: This project showcases how hand-tracking technology can be used to manipulate generative visuals in real time. The work creates a **personalized digital transformation**, making each interaction unique.

Why This Inspires Me

- The system translates physical hand gestures into digital art instantly, creating a seamless bridge between body movement and generative visuals.
- Touchless Control: No need for a physical controller—gestures alone drive the experience, opening up possibilities for futuristic interfaces.
- Can be used in interactive installations, VJ performances, digital storytelling, and immersive environments.

Week 7: Feb 20

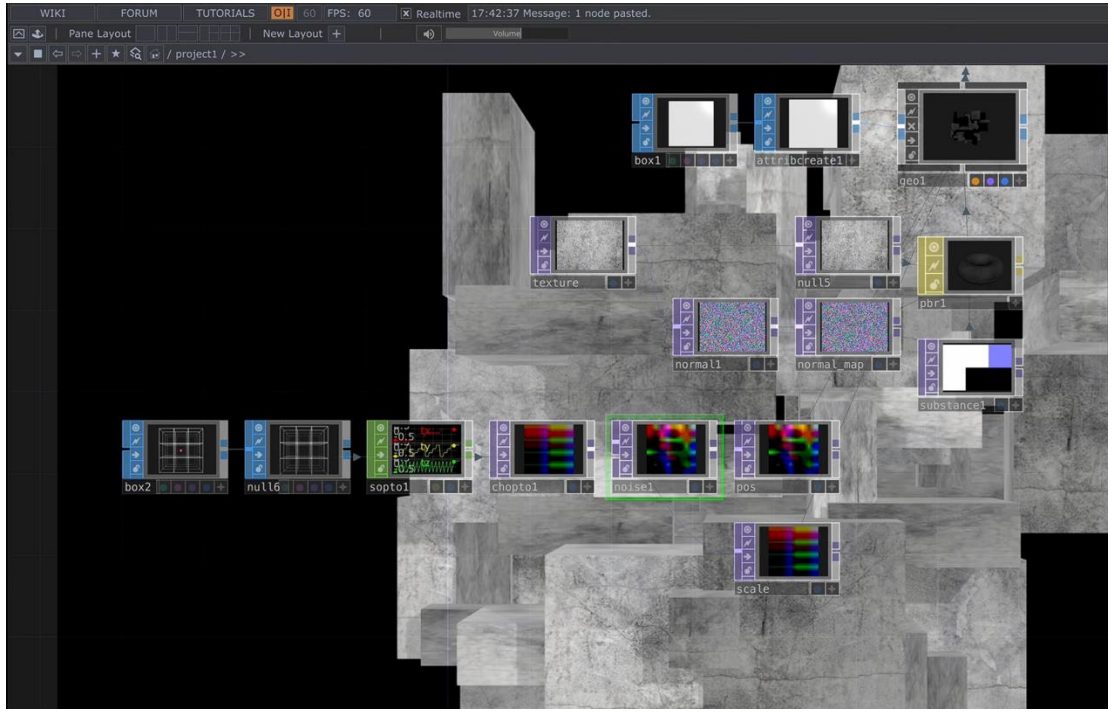
Other inspiration:

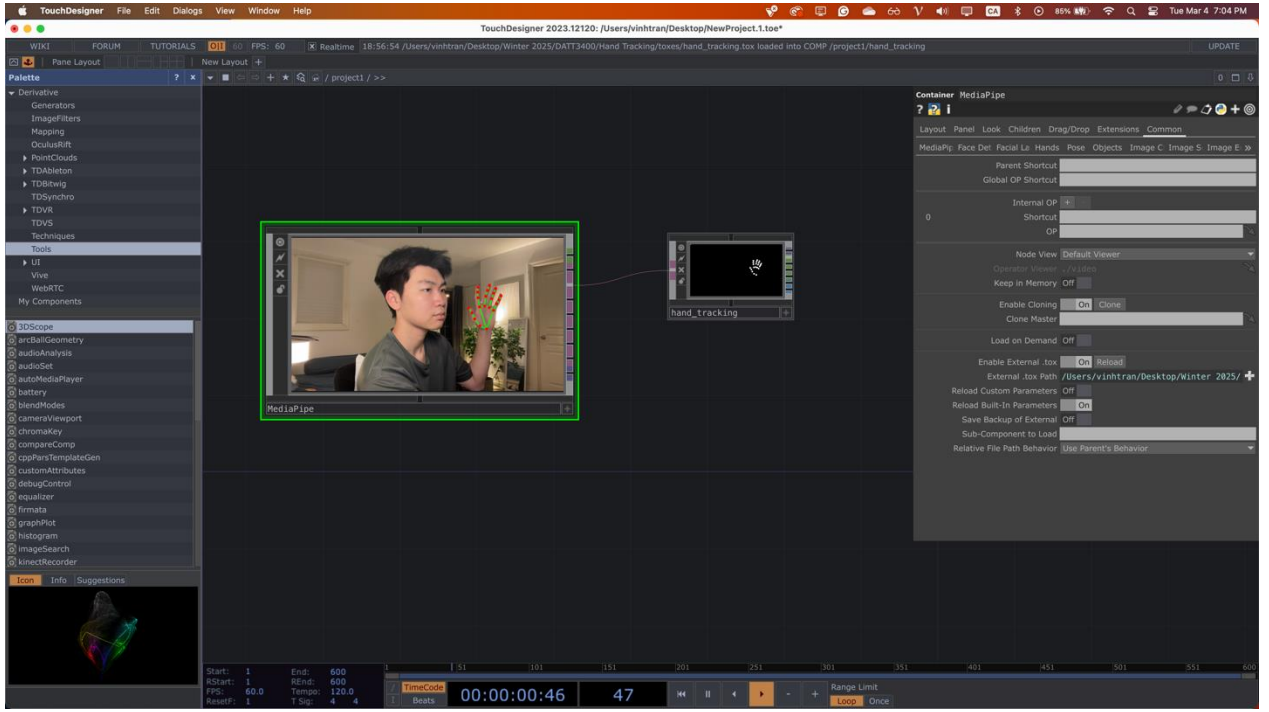
- Growing plants with gestures: https://youtube.com/shorts/PaIYtyZrplY?si=PfE7tvu1aGhHIZ5X

Week 7: Feb 20

Tutorials:

- Generative Architecture and Hand Tracking: https://www.youtube.com/watch?v=UFVvmCuM2Is&t=1566s





Experiment with MediaPipe

Week 8: Feb 27

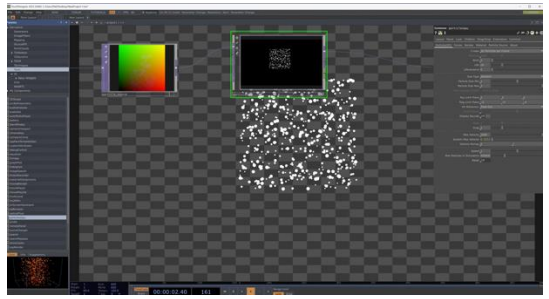
Featured Artwork: "Augmented Hand Series" – Golan Levin & Collaborators
Artists: Golan Levin, Chris Sugrue, and Kyle McDonald
Medium: Interactive Hand Tracking & Augmented Reality
Tools Used: OpenCV, Kinect, TouchDesigner, OpenFrameworks
Description: This project augments and distorts human hands in real time, using hand-tracking technology to create surreal transformations. Hands stretch, duplicate, and morph into unexpected digital forms, creating a playful and interactive visual experience.
Why This Inspires Me

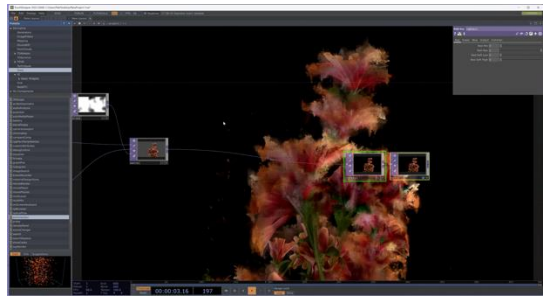
- Body as Art: Instead of controlling something external, the hand itself becomes the generative artwork.
- Real-Time Interaction: The piece reacts instantly to movement, making it feel alive.

Week 8: Feb 27

Tutorials

- Real-Time Morphing Effects in TouchDesigner: https://www.youtube.com/watch?v=2EwQSCZ0Hs8
  (Apply **real-time distortions and transformations** to hand movements)
- Particles in TouchDesigner: https://www.youtube.com/watch?v=TbM2_Cvygww





Week 9: Mar 6

FINAL PROJECT INSPIRATION: Interactive Digital Garden
Concept: A projection-mapped garden where users can "grow" plants using hand gestures.
Techniques Used:

- Perlin noise to generate organic, procedural plant growth.
- Flow fields to influence the movement of wind and plant sway.
- Gesture tracking to let users "plant" seeds by touching a surface or moving their hands.
- Projection mapping to display the digital garden on a real-world surface like a wall or table.