

# david tiemstra • portfolio



**p6. playground oracles (master's thesis)**  
speculative design research with community



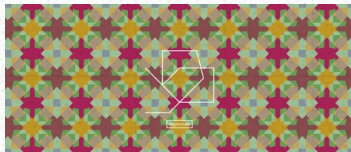
**p2. .rct (ongoing)**  
receipt printers as narrative media



**p13. visual science of art conference**  
organisation & RISO program booklet design



**p10. rat labour**  
generative embroidery



**p19. p5js**  
various interactive experiments



**p16. pièta**  
cemetery visit experience design



**p23. audiovisual performance**  
programming visual accompaniment to music

## Note

A web version of this portfolio with videos and interactive elements is available at [divad.info](http://divad.info)

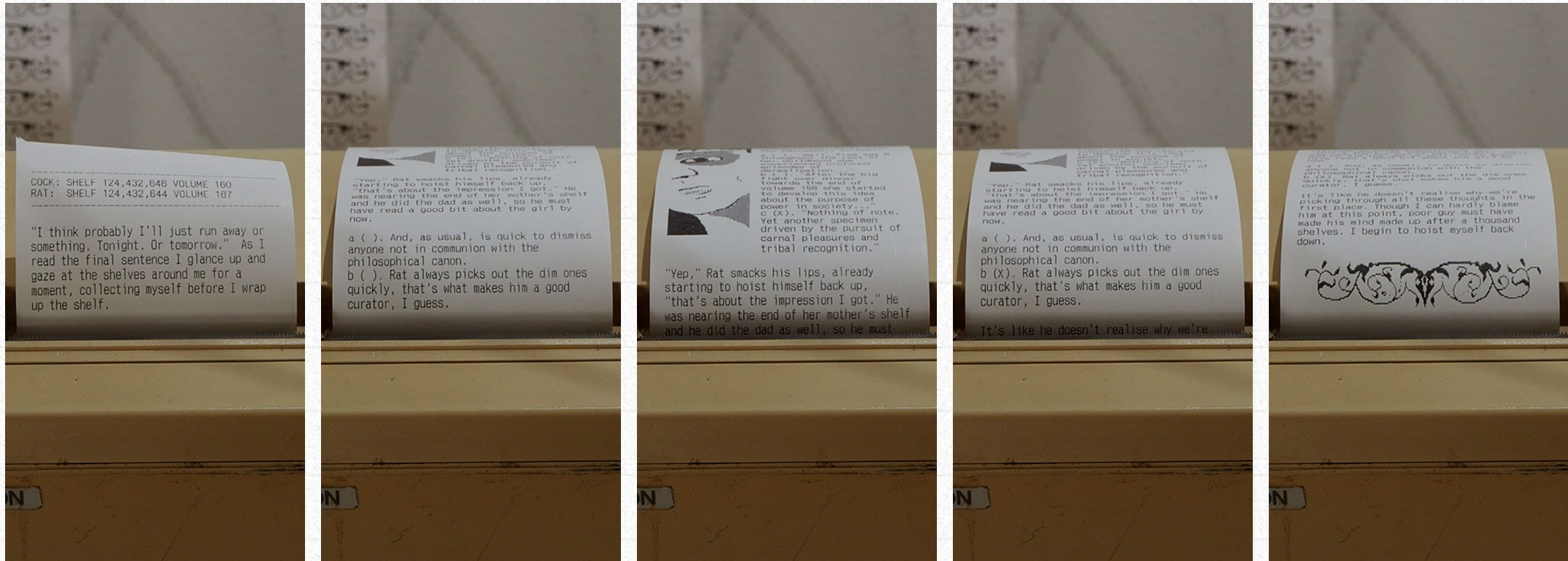
# .rct (ongoing)

## project description

The project I am currently working on seeks to explore the interactive and narrative possibilities of thermal receipt printers through electronic modification and programming. Their printing speed allows for feedback on inputs while leaving a tactile artifact, as opposed to the ephemeral nature of the screen. Their relative resistance to planned obsolescence cycles warrant inspection from a permacomputing perspective, and the one dimensionality of their mechanism lends them a relation to time akin to the thread of fate spun by the Moirae of Greek myth.

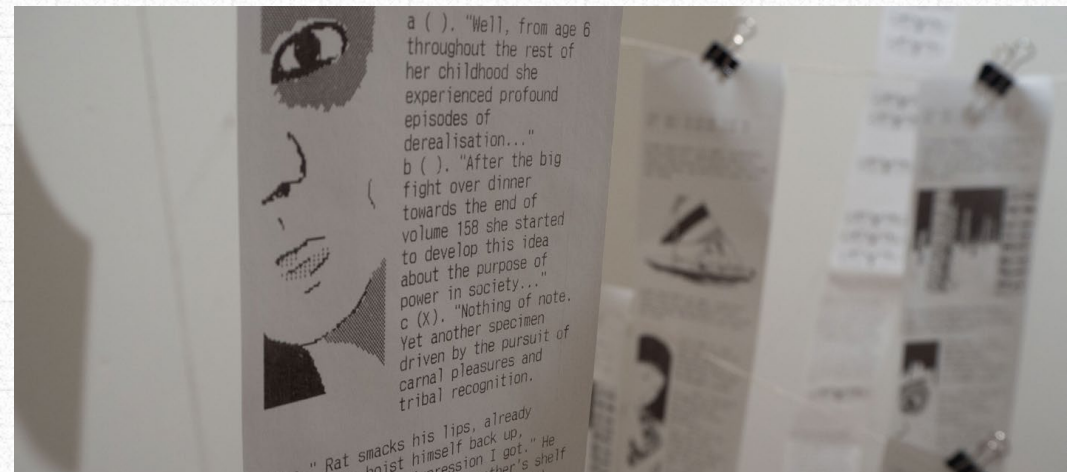






Series of stills showing an interaction where the printer is used as an interactive storytelling medium. Modifications to the wiring of the printer allow the direction to be reversed during operation, facilitating new interactions.

Receipts of stories could be accumulated in an exhibition space, causing visitors to slowly create a collaborative artwork.





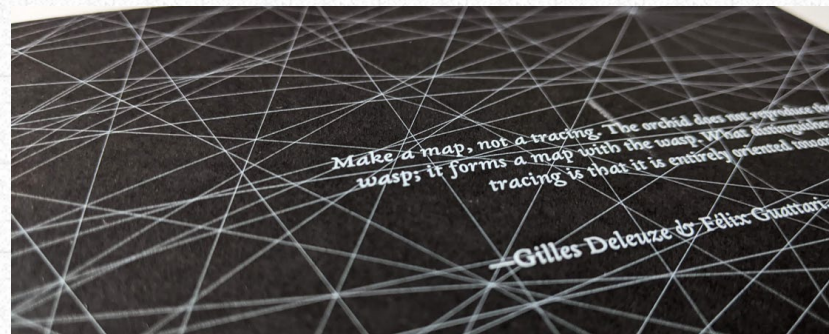




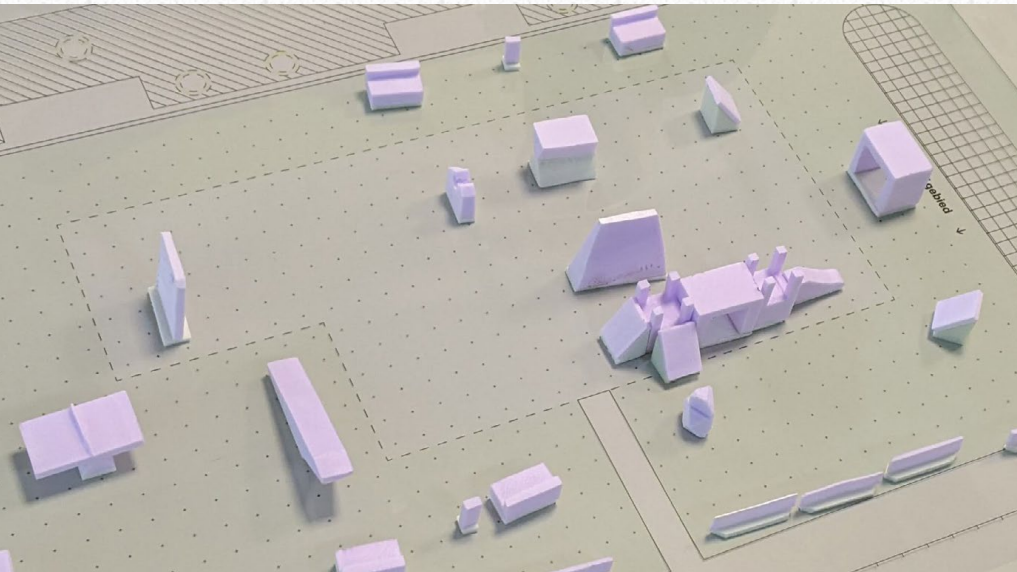
# playground oracles

## project description

For my master's thesis in Design for Interaction at the TU Delft in collaboration with the municipality of The Hague I researched the social implications of the budding technology known as urban digital twins and their use in public participation. I did this through Speculative Enactments, inventing plausible future scenarios of how the technology may end up being used and eventually manifesting those physically in a prototype used to enact that future with residents of the city. These enactments revealed potential harms to the democratic process that might come to pass if the technology stays on its' current course as well as benefits that may be exploited if it is developed with care.





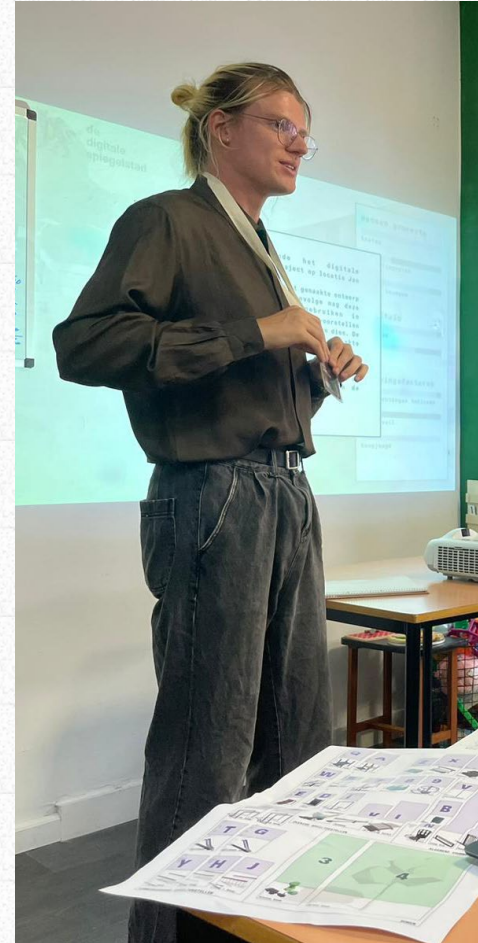
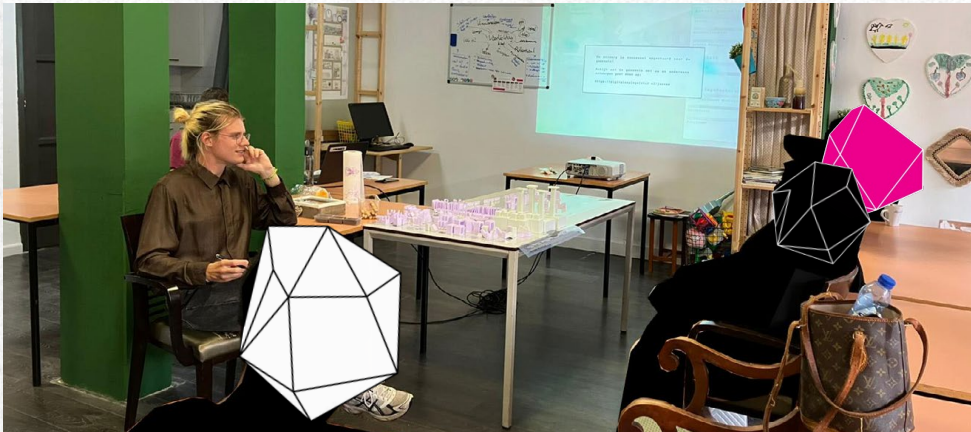


The final prototype consisted of a physical and a digital component. A physical interface allowed participants to interact with the digital twin by placing pieces on a map to propose spatial redesigns. In reality a research assistant would translate their physical design to the digital space.



The digital twin would then communicate back by showing a calculated projection of the future if their design is pursued. This projection was largely random noise rather than based on any real model. Some of the prediction meters were intentionally vague or provocative to elicit discussion among the participants.

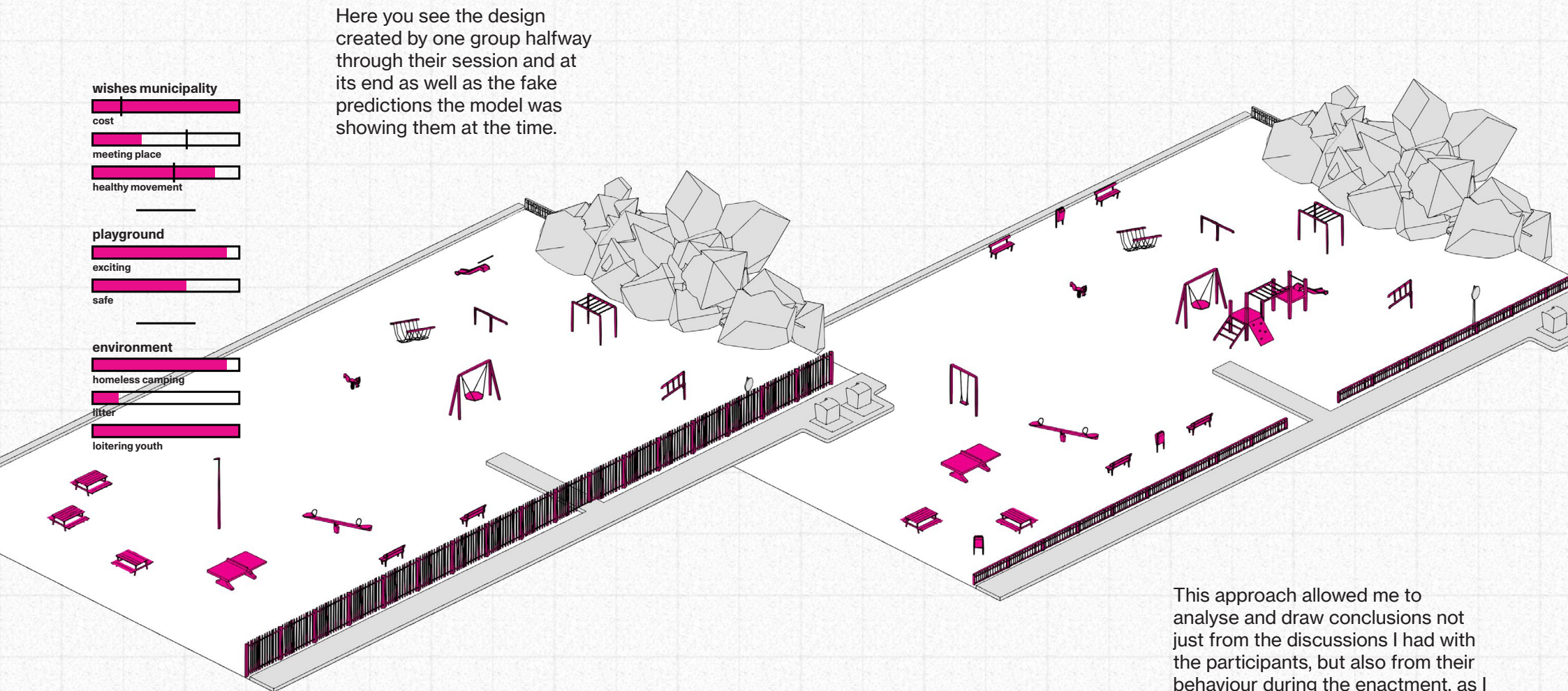




I conducted the enactments with residents of the Moerwijk neighbourhood in The Hague. I created various artefacts to attract participants and to aid in the immersion of the enactment.





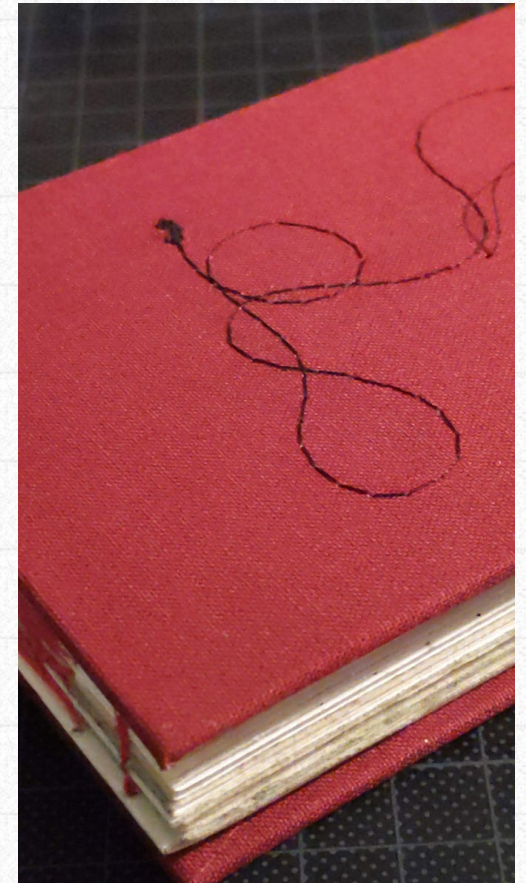
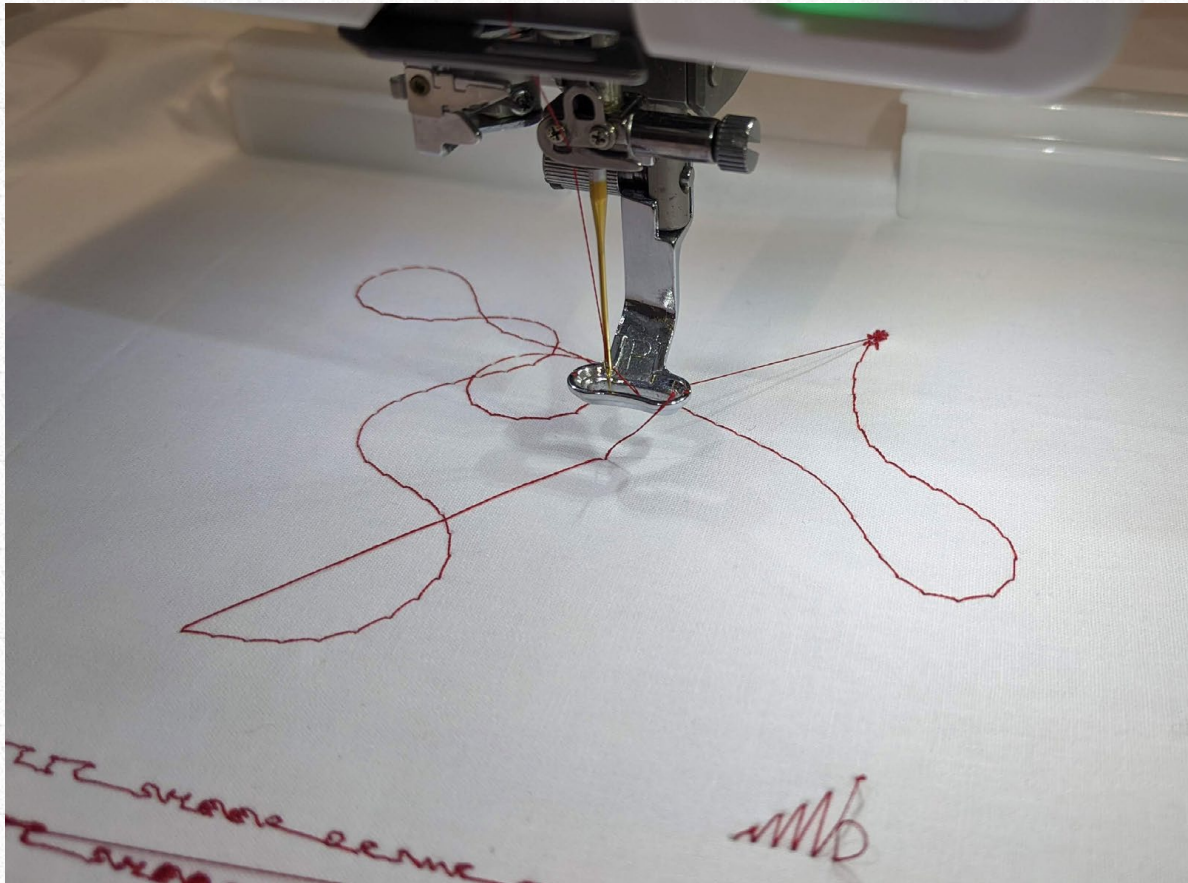


This approach allowed me to analyse and draw conclusions not just from the discussions I had with the participants, but also from their behaviour during the enactment, as I had rich data about how they adjusted their actions to the predictions of the model.

# *rat labour • generative embroidery*

## **project description**

Since 2022 a close friend and I have been irregularly working on algorithms that create patterns for embroidery machines using noise, data and user inputs. The current focus of this project is on experimentation with form and the possibilities of the medium rather than concept.



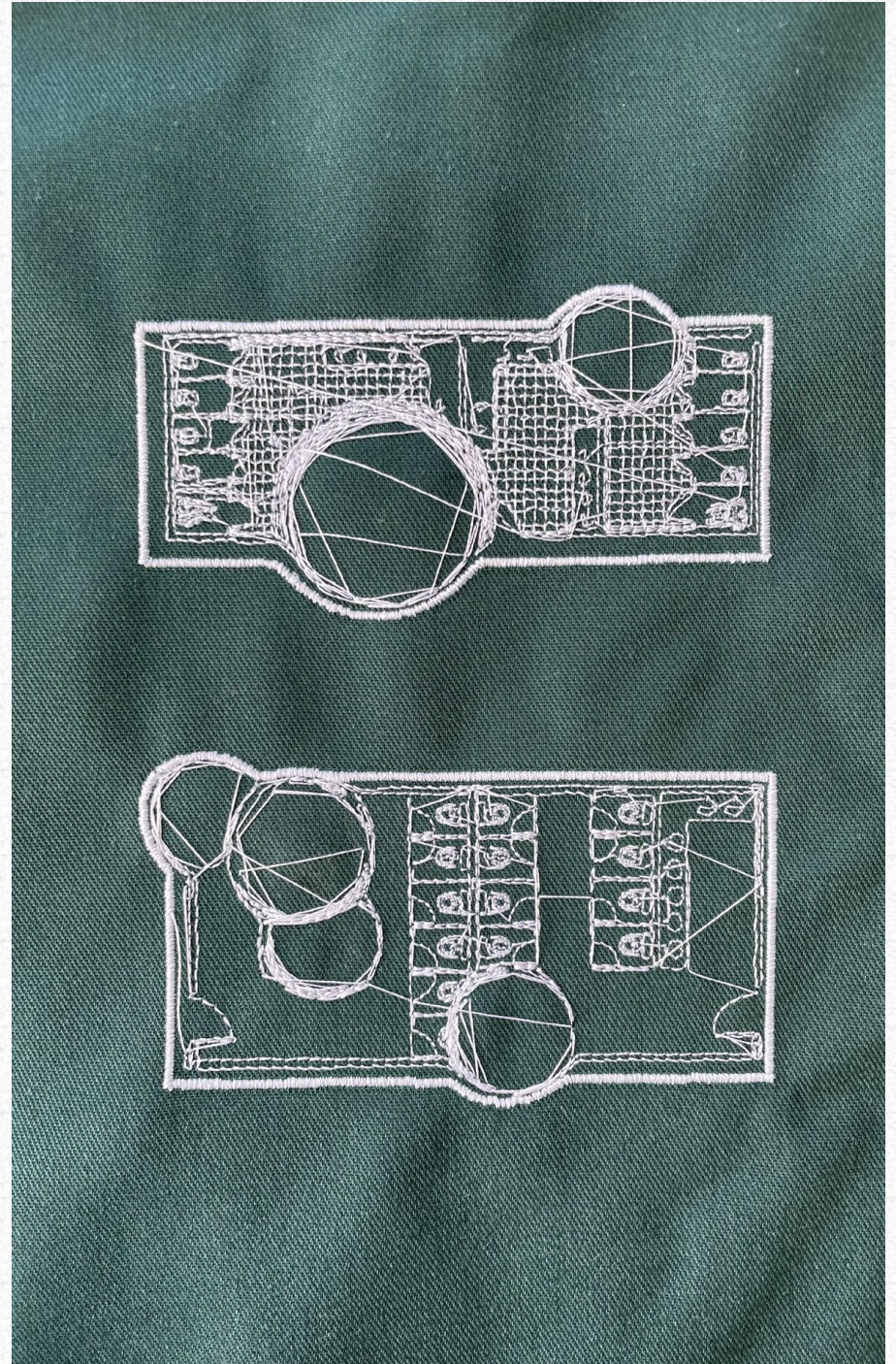


A bucket hat embroidered with light-seeking flowers and roots. The flower algorithm can be run and experimented with on the web version of this portfolio.





Floor plans of public bathrooms with holes blown into them by users, pulling the threads in unusual directions. Holes can be blown into bathrooms on the web version of this portfolio.



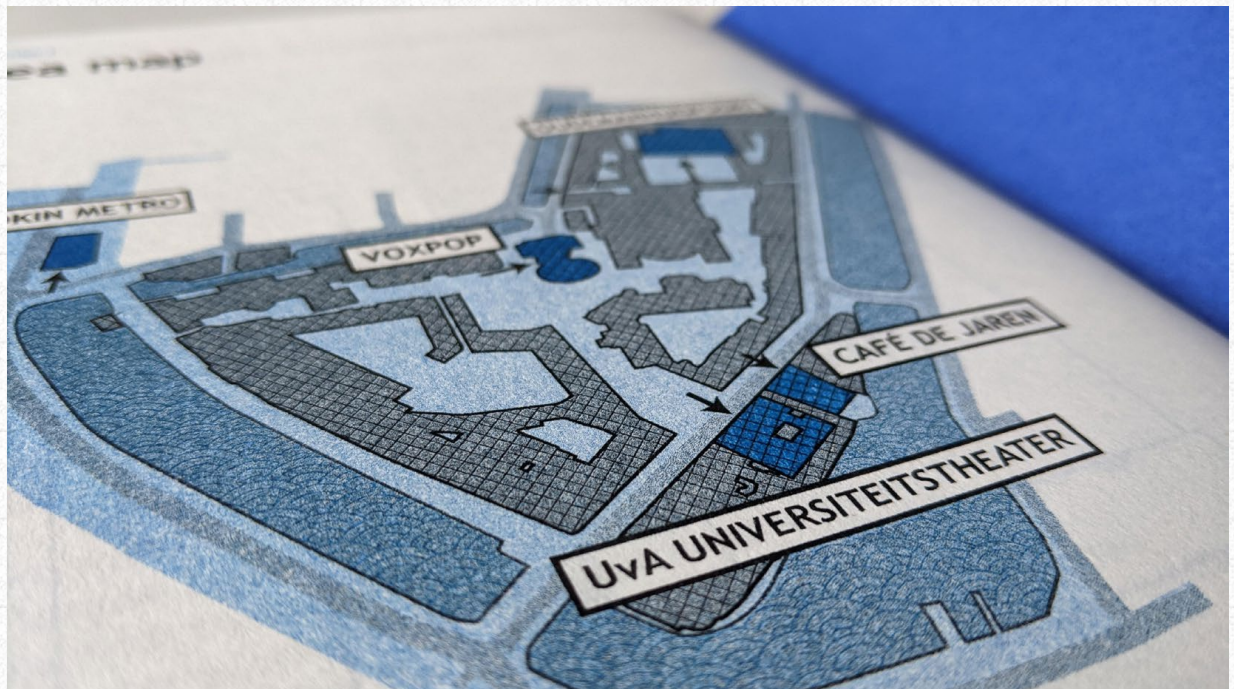


# visual science of art conference

## project description

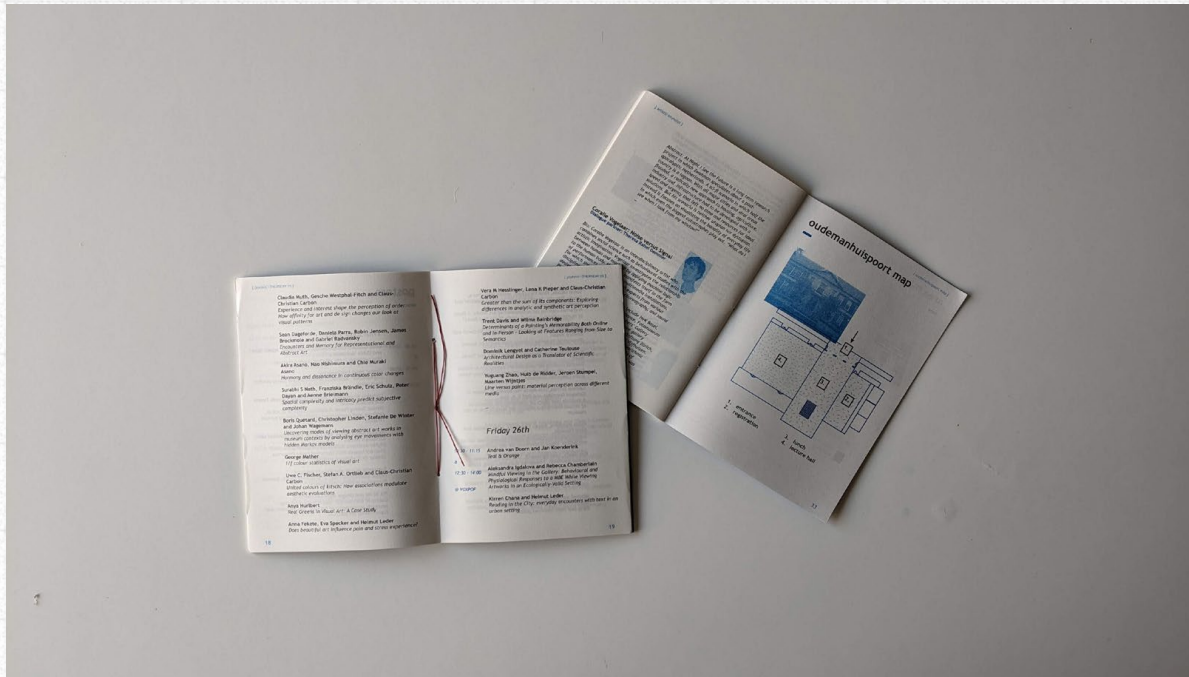
As a member of the organising committee for the Visual Science of Art Conference 2022 (<https://vsac2022.tudelft.nl/>) I designed the program booklets and other printed material used for the conference (poster, timetable, badges). Being an conference which tried to bring together academics and artists, the program booklet had to complement this stylistically while still being highly functional.

The end result is 170 RISO printed booklets hand-bound by me and some friends.



detail showing riso texture







*program booklet in use  
during the conference*





# pietà

## project description

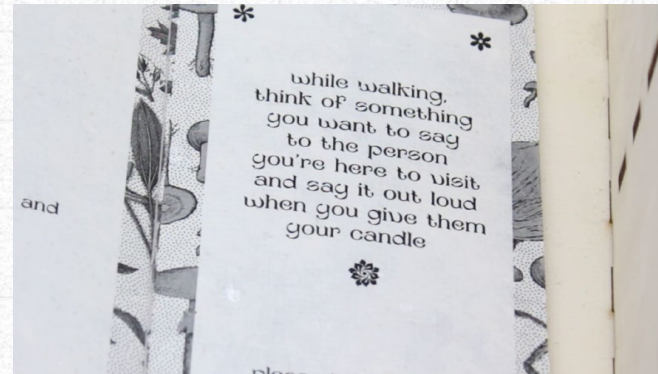
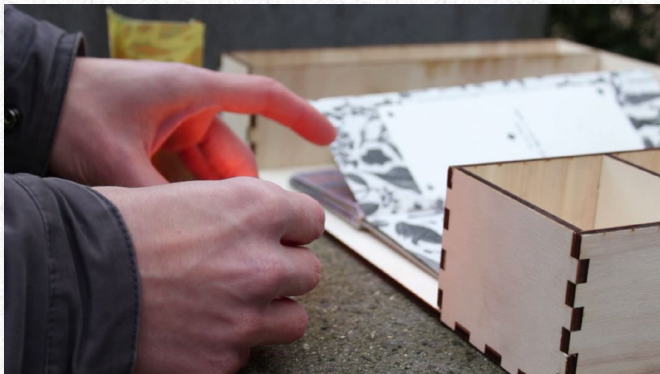
A design project during my master saw me designing an alternative experience for people visiting the grave of a loved one at the cemetery. At the center of this experience was a small book that guides visitors through the experience, prompting them to consider their own emotions in relation to the person they are visiting as they prepare and carry a decorated candle.

The design of the book was meant to offer an emotional alternative to the sober calvinist dreariness that tends to dominate many Dutch cemeteries while being calm and inoffensive enough not to disturb those who seek out that experience.

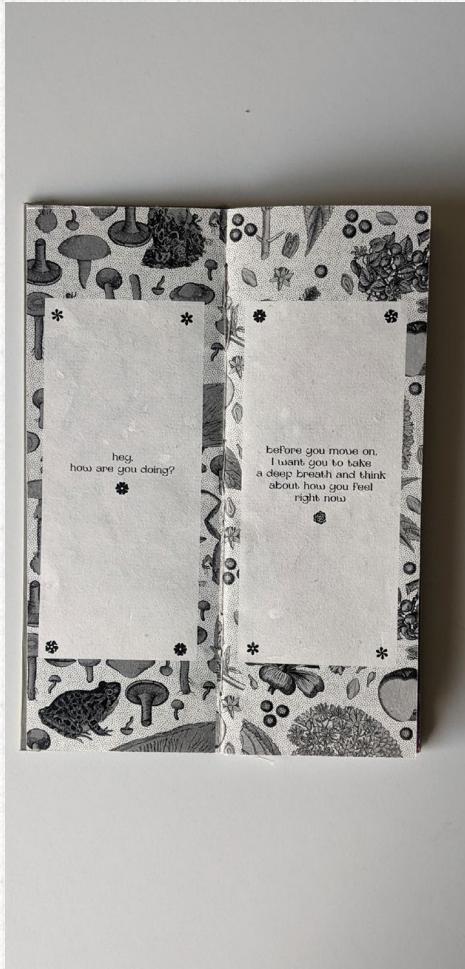
**An article about this project was published in Vakblad Uitvaart (edition november/december 2023).**











At the core of the booklet is a series of colored pages from which visitors can pick one that resonates with their emotions in that moment. the colors and motifs were picked to offer a broad spectrum of emotions without each explicitly pointing to a specific one, to communicate to participants that whatever emotion they felt in that moment was permitted and beautiful, after I learned from interviews that many visitors of a cemetery experience a kind of pressure to feel exclusively somber.

The botanical figures used in the designs were chosen because of their potential to be emotionally evocative and neutral at the same time, and to conjure the image of placing a flower bouquet on a loved one's grave.



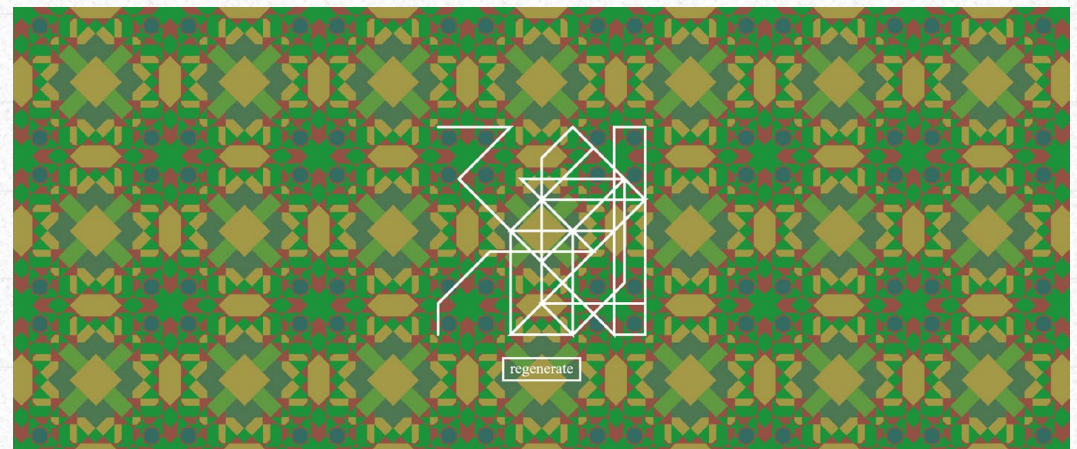
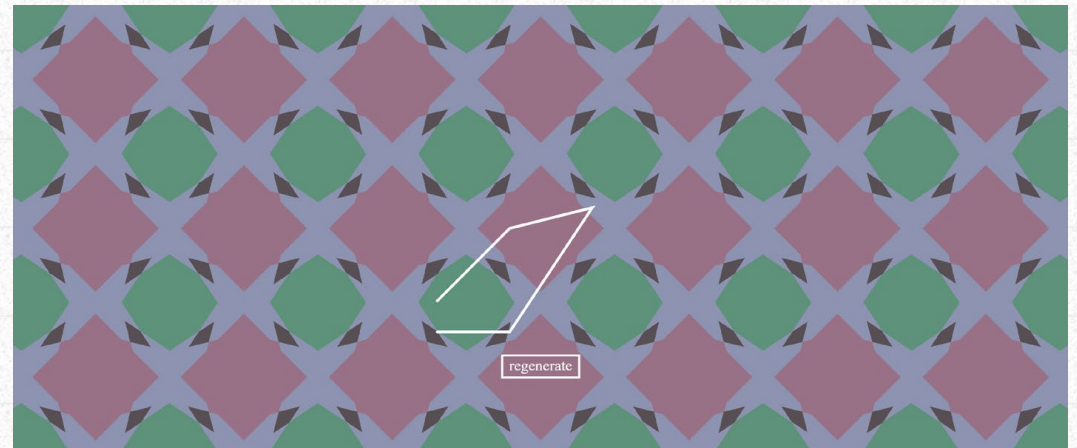
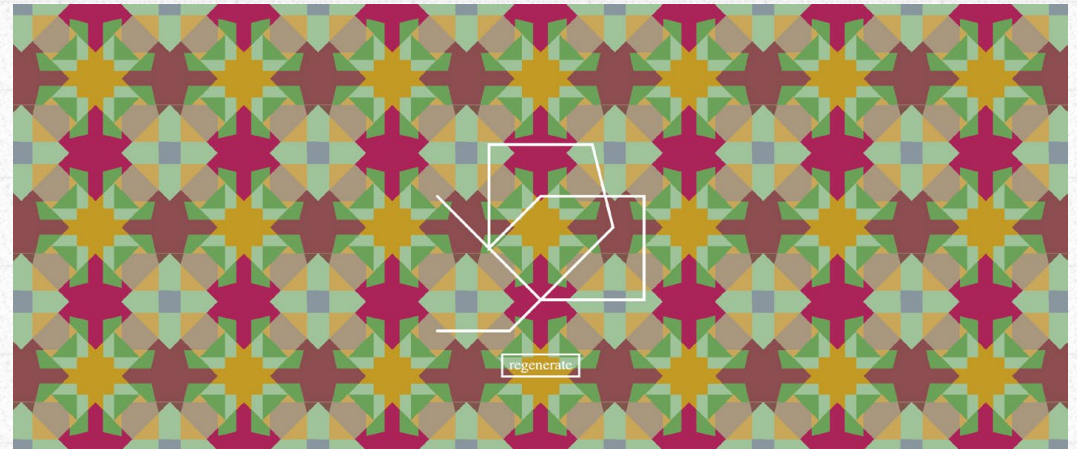
# p5.js

## project description

For two years I was the teaching assistant of a course focused on visual analysis of art and creative coding using p5.js, a javascript library built for artists and educators. This has since grown to become one of my favorite modes of expression, I have included four of my p5 sketches in the portfolio. **All of these can be interacted with in the web version.**

## project one: janabi

This work is inspired by the mathematical construction of tile patterns used in Islamic art, specifically the construction of fourfold patterns as taught by Mohammed Aljanabi. The sketch invites the viewer to play with the patterns it generates, facilitating a human-computer artistic collaboration.





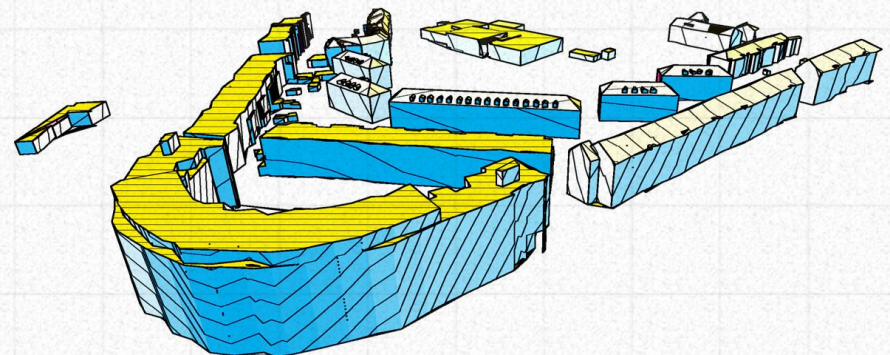
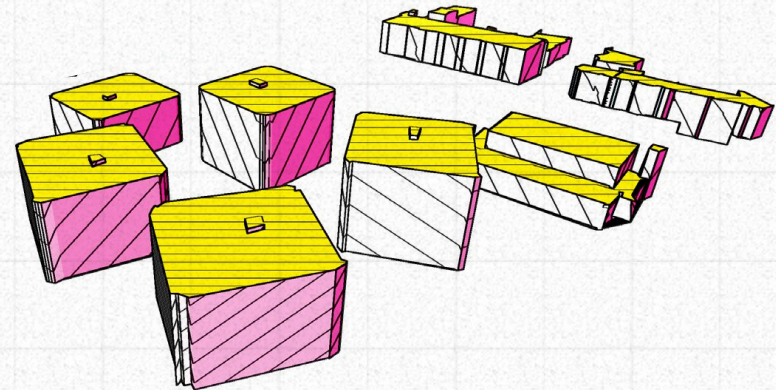
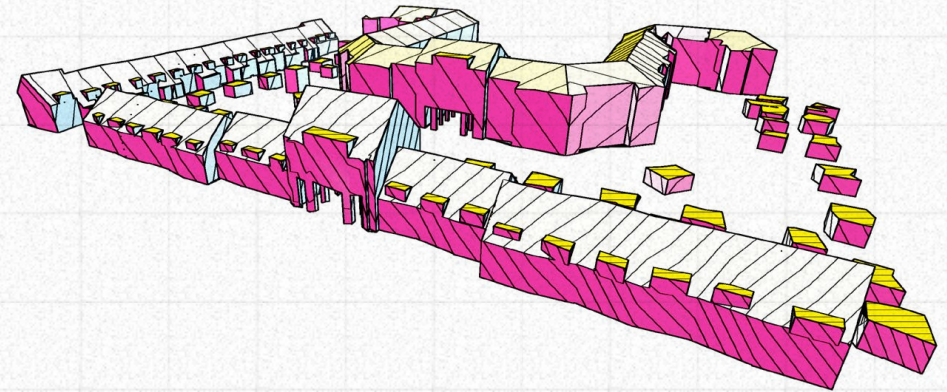
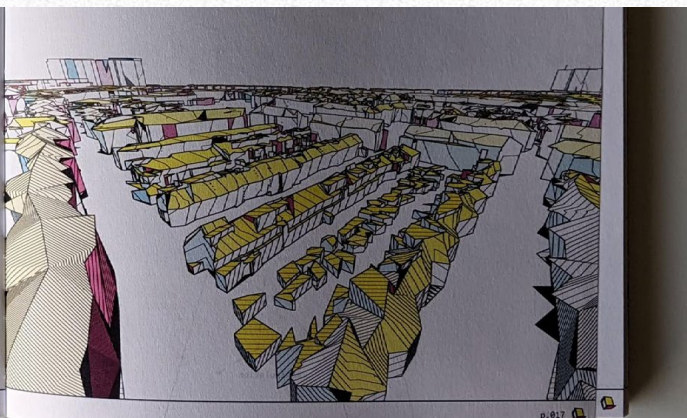
### project two: cmy city

This sketch was specifically made to create ornamental graphics for my thesis. In response to the factual correctness implied by the digital twin movement, it takes the same 3D model of Moerwijk used in the municipal digital twin but instead distorts it and makes it more strange.



s are involved in a decision-making process. When  
is absent, projects are based on technocratic perspectives  
(22). This research focuses more specifically on processes  
citizens in urban planning. Innes and Booher (2004) identify  
shared by most participatory processes:  
ring the preferences of the public.  
rating citizens' local knowledge.  
ing fairness and justice by discovering the needs of groups  
not recognized through normal information sources.  
g legitimacy to public decisions by showing a support base.  
legal requirements for participation.  
e can draw upon these goals to assess the effectiveness of  
y applications.

n can take multiple forms, and to understand where  
s can fit into these processes I will draw upon a typology  
tion. The first and most commonly cited classification is  
(1969) ladder of participation. Arnstein saw public participation  
lower in public decisions, and classified processes by the  
power they extended to the public, defining eight levels  
ng order: manipulation, therapy, informing, consultation,  
artnerships, delegated power, and citizen control.  
back to the late 60s, it has been argued that Arnstein's  
s not accommodate modern forms of participation since  
fully account for the ways participation works in today's  
entrepreneurial cities (Cardullo & Kitchin, 2019), therefore  
d Kitchin (2019) have developed an expanded classification  
scaffold of smart participation (figure 5). This framework

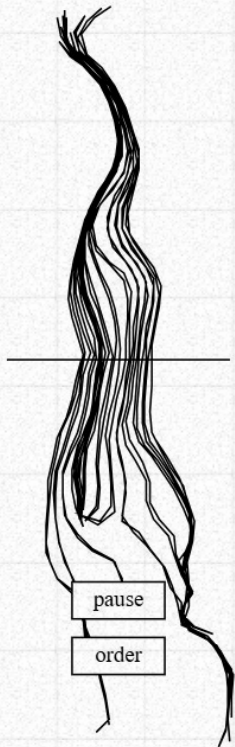




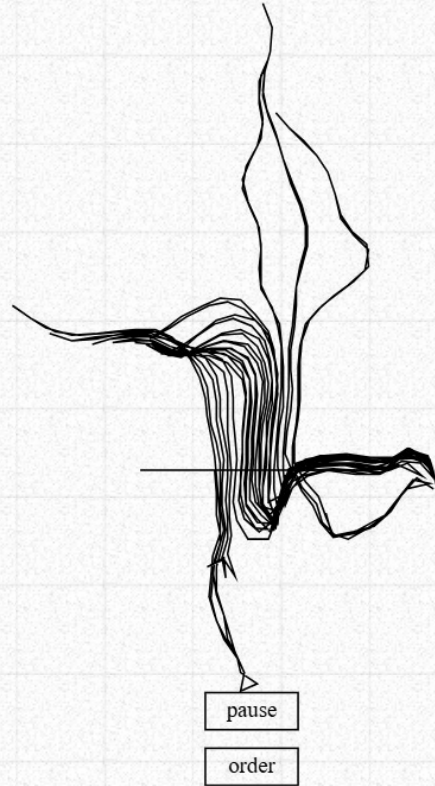
### project three: sintree

Part of the embroidery project, this sketch distorts a single sine wave into a tree-like shape consisting of a single continuous line.

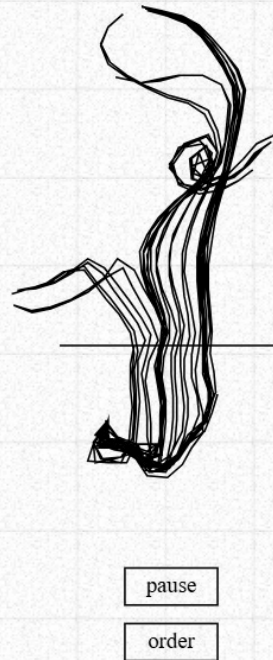
sintree 01  
seed: 4274



sintree 01  
seed: 3565



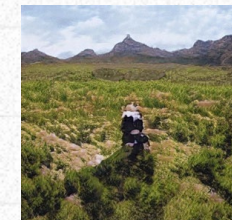
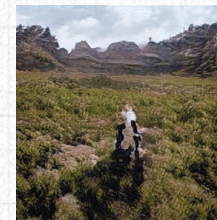
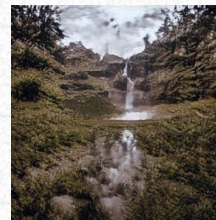
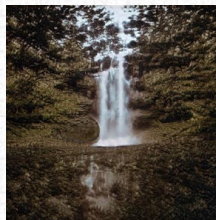
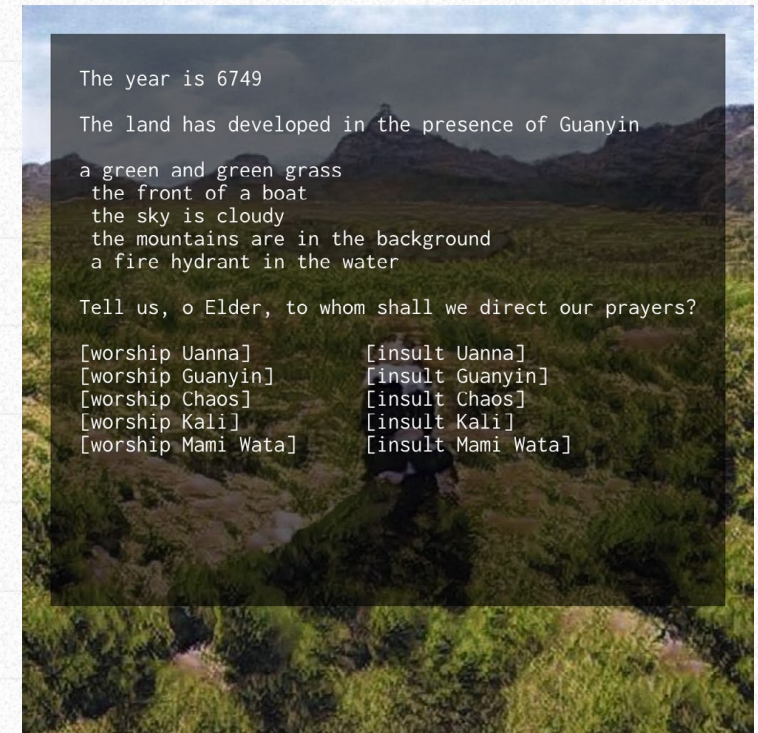
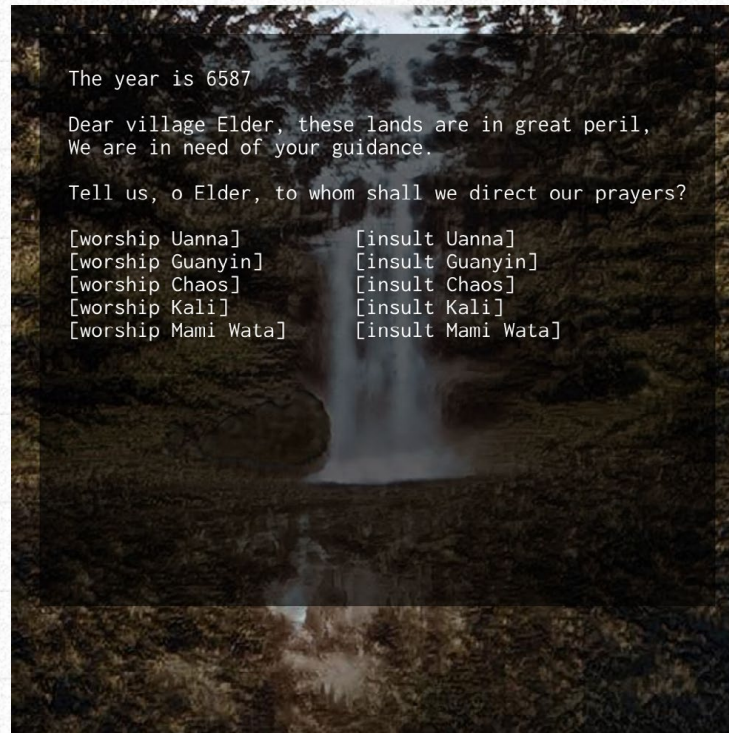
sintree 01  
seed: 5065





#### project four: latent prayer

Inspired by the narrative simulations of Ian Cheng, this work asks the viewer to steer the evolution of their homelands by worshipping or forsaking different gods, which would change the input vector of an AI model generating the landscape. Created in the early days of generative AI it would prompt them to weave a mythology from their own choices and the resulting machine hallucinations. The current version no longer uses AI but displays images archived during its initial run.





# audiovisual performance

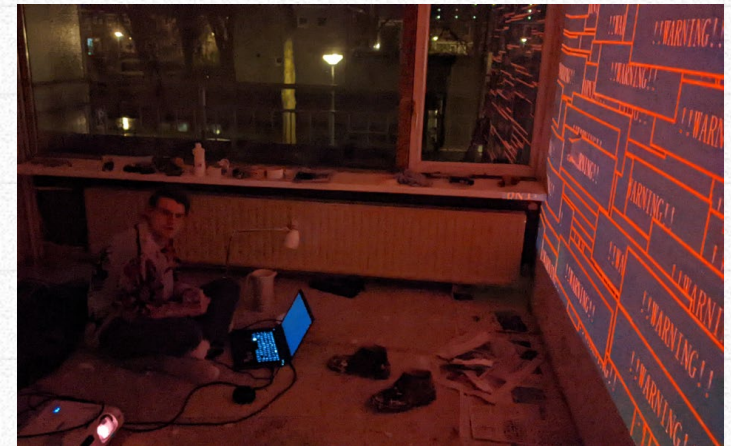
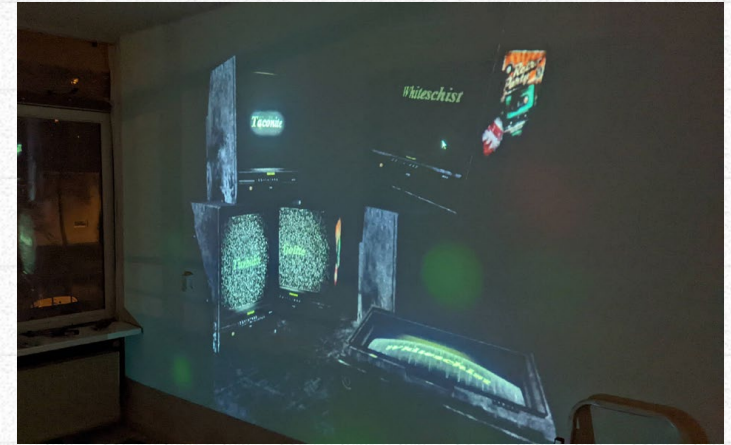
## project description

A final art form I have dipped my toe into is programming for audiovisual performance. While not a path I plan to immediately pursue I would like to one day create interactive installations for music and dance performance. As a first step, I have started to taking ballet classes to gain a deeper understanding of dance and human movement.



*changing, warping, and shifting  
wallpaper*

*rendered tv's showing words,  
noise, anteaters and live footage  
sync'd with the beat*



*transition between sets  
(prototyping)*