

PV259

Generative Design Programming

Week 6

Kinetic typography

M U N I
F I

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FROM PAPER TO SCREEN

<https://vimeo.com/69375692>

Text: the basics

Draw text on screen at position x, y. Optional are x2, y2, boundaries of imaginary text box, enables wrapping). Uses rectMode settings.

text(str, x, y, [x2], [y2])

textSize(number)

textLeading(number) // line height

textAlign(horizontal, [vertical])

LEFT, CENTER, RIGHT

TOP, BOTTOM, CENTER, BASELINE

```
let myFont;
function preload() {
  myFont =
loadFont("knewave.otf");
}

function setup() {
... textFont(font, [size]);
}
```

Strings in JS

MDN: Useful string methods

```
let name = "Louisa", surname = "Trump"  
name.length // 6  
name.substring(0, 2) // 'Lo'  
name[0] // 'L'  
name[name.length-1] // 'a'  
  
name.includes('uis') // true  
startsWith(str)  
endsWith(str)  
indexOf("Lo") // 0  
toLowerCase()  
toUpperCase()  
replace("ouis", "ujz") // only first occurrence  
replaceAll("u", "ü")  
name.concat(" " + surname)
```

```
print(`Full name: ${name} ${surname}`) //  
template literals
```

```
let fullname = name + surname  
fullname.split(' ') // ["Louisa", "Mean"]
```

// Escaping: use either "" or '' for the outer quotes.

```
p5: loadStrings()  
let sejkspirVole;  
function preload() {  
    sejkspirVole = loadStrings('sejkspir.txt');  
}
```

Text basics

1. choose favorite word
2. draw the word character by character
3. choose a font from [Google fonts](#), download and apply it

Replication

- draw word (string) character by character
- create 20 vertical copies of the same word
- animate the spacing between characters (kerning) using sinus
- change to monospaced font and compare the result

Bonus:

- draw on curves
- fill shapes with text
- make some noise (use grid, select letters by noise values, ...)

EXAMPLES

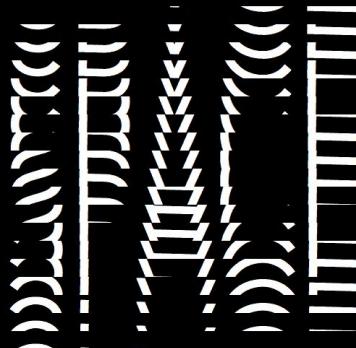
A large, abstract pixelated artwork composed of numerous small black dots on a white background. The pattern forms a complex, organic shape that resembles a stylized face or a cluster of leaves. The top portion is darker and more defined, while the bottom is lighter and more diffused.

PUWEI
WITHIN
PUWEI

A black and white abstract graphic featuring the word "WAVE" repeated in a distorted, overlapping font across the page. The letters are slanted and layered, creating a sense of motion and depth. The background is a solid black, making the white text stand out.

LOUDHORN

A



OPTICAL

OPTICAL

ANARCHY

PANDEMIC

A pandemic is an epidemic occurring on a scale that crosses international boundaries, usually affecting a large number of people. Pandemics can also occur in important agricultural organisms (livestock, crop plants, fish, tree species) or in other organisms. A disease or condition is not a pandemic merely because it is widespread or kills many people; it must also be infectious. For instance, cancer is responsible for many deaths but is not considered a pandemic because the disease is not infectious or contagious.

The World Health Organization (WHO) previously applied a six-stage classification that describes the process by which a novel influenza virus moves from the first few infections in humans through to a pandemic.

1749 N.Henry, *Philadelphia*
① restaurant ② bookstore

① restaurant ② bookstor

① restaurant ② bookstore

→ INTERACTIVE

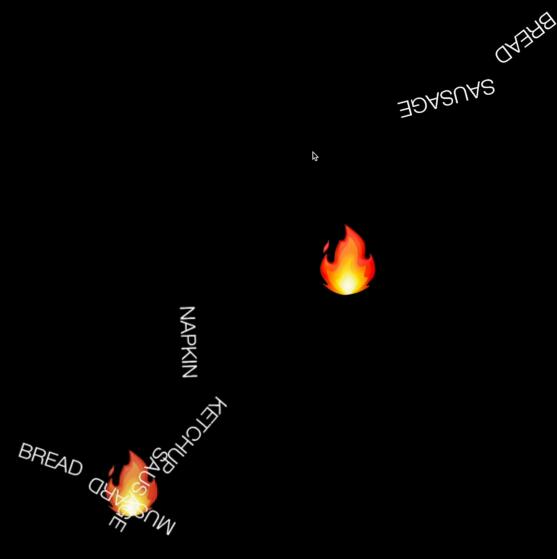
Bronislav Musil

0,54 k

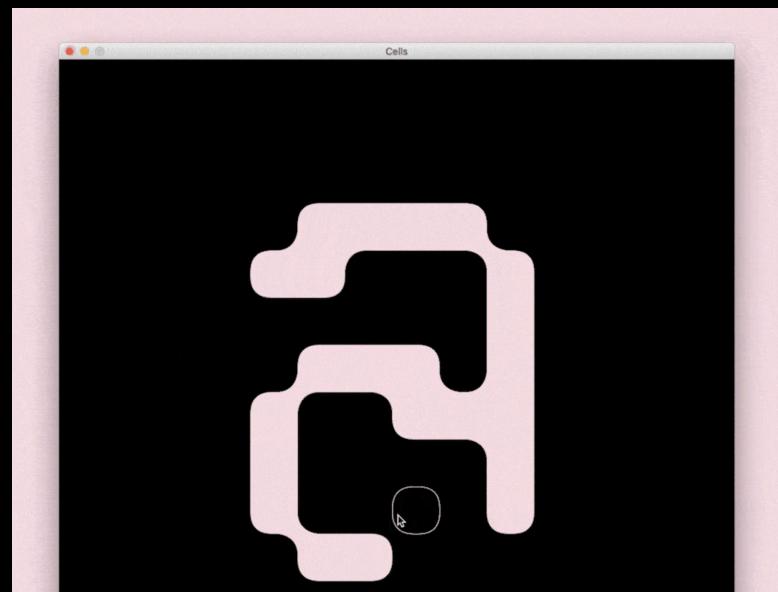
0,54 k

0,54 k

0,54 k



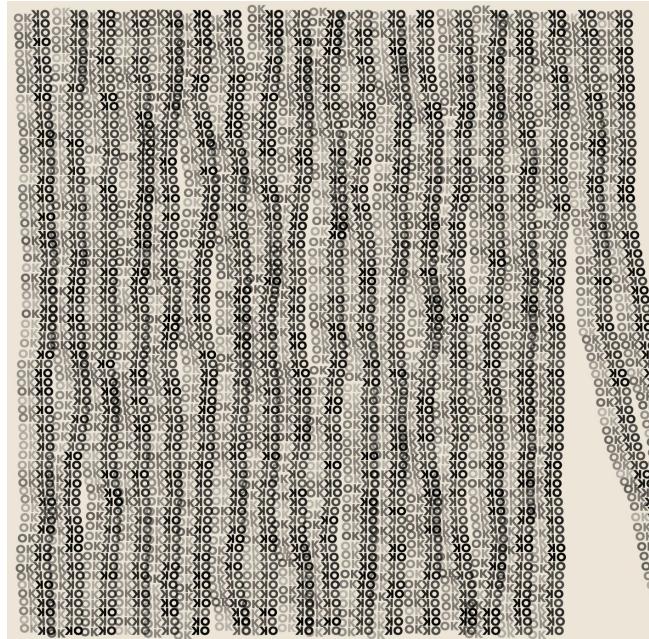
<https://bronislavmusil.com/en/projects/processing>



→ IMAGE

Day 52 - It's Still OK

Chelsea Watson, 2020



<https://www.chelseawatson.com/100-computational-designs/day-52-its-still-ok>

<https://www.chelseawatson.com/100-computational-designs/day-54-its-ok-in-small-doses>

typEm — a generative typeface that represents the emotion of the text

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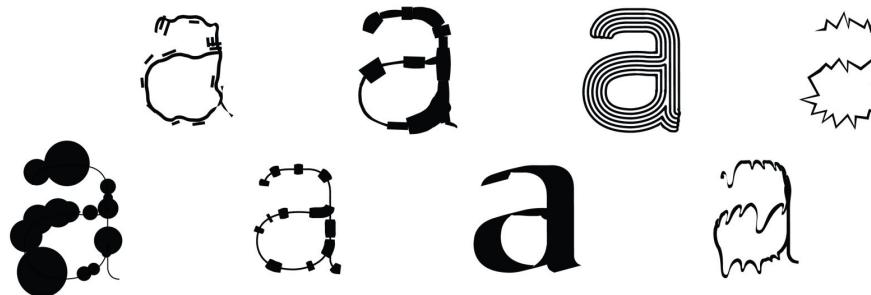


Figure 1: Different ‘a’ glyphs to represent different emotions.

ABSTRACT

The introduction of programmatic concepts brought to typography new experiments, concepts, and the possibility to create generative typefaces, capable of adapting to different contexts. This work aims to explore these new creative possibilities in the field of type design. Through the implementation of a generative system, we created a typeface that adapts its shape to the sentiments expressed in a text. In this project, we used the emotional values retrieved from each sentence of a given text to

deform the typographic glyphs to represent those emotional values. Additionally, and to enable the user to interact with the system, we implemented an application which receives a text as input and, as output, exports the input text composed with our generative typeface.

CCS CONCEPTS

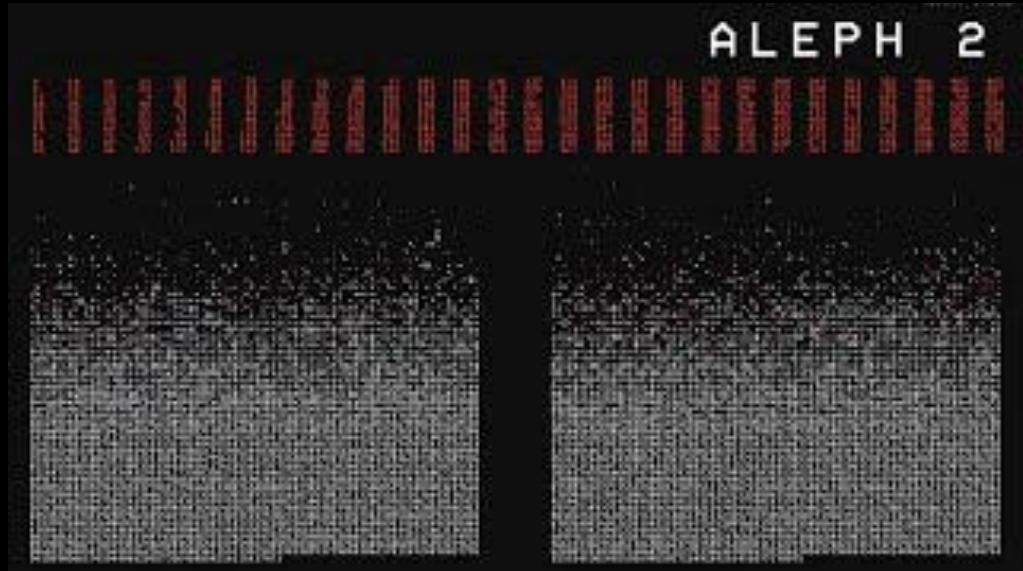
- Human-centered computing → Visualization;
- Applied computing → Arts and humanities;

→ VIDEOCLIP

Aleph 2

Max Cooper + Martin Krzywinski, 2019

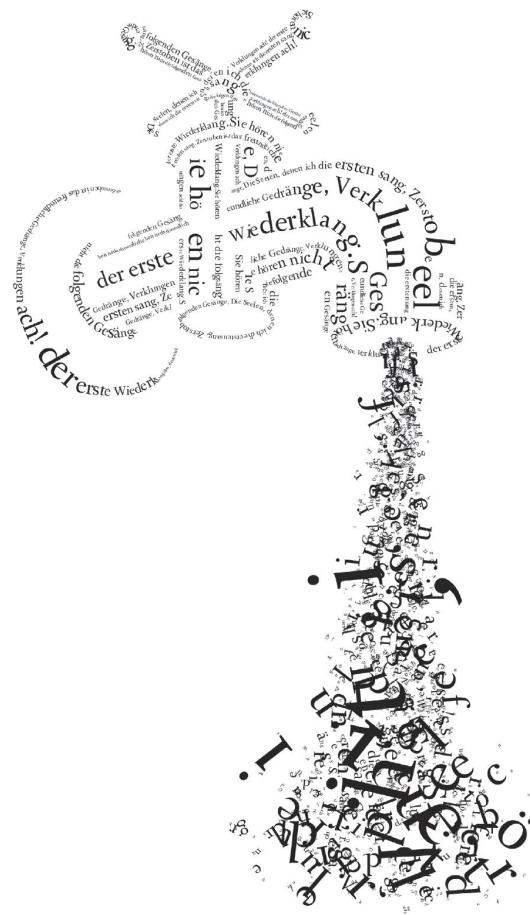
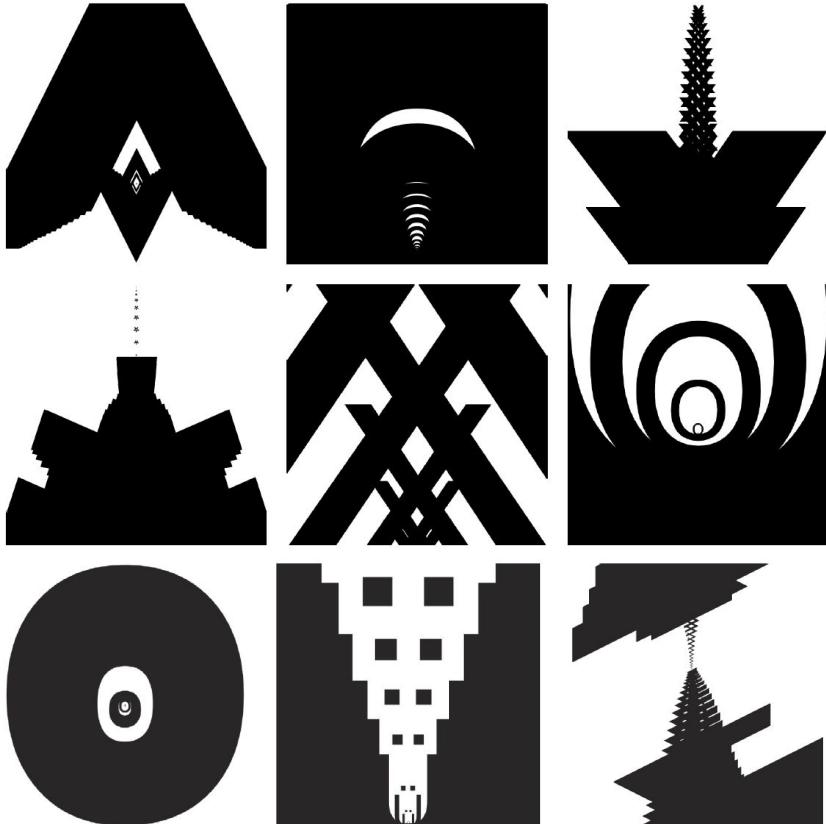
What you see is an authentic numerical rendering of Cantor's work. It demonstrates countability, Cantor's diagonal argument, power set, the formal undecidability of the Continuum Hypothesis, and the concept of Aleph 2.

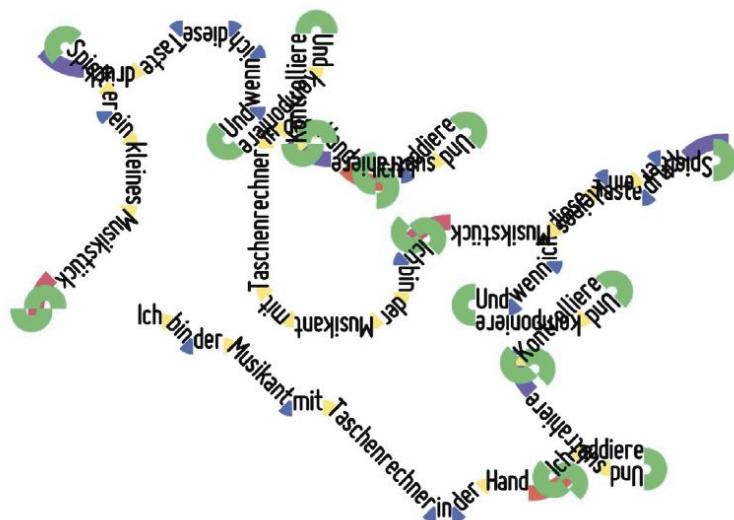


Aleph 2.1

- select a part of the previous videoclip, Aleph 2, as a reference, and make similar effect
- choose any data you want:
 - random numbers
 - poem in .txt
 - interesting number sequence or algorithm

Inspiration, methods





A diagram illustrating a sequence of three items, A, B, and C, arranged horizontally. Below them, three green arrows point from A to B, B to C, and C back to A, forming a loop. The letters are bold black, and the arrows are thin green.

Key	Translation
A	<ul style="list-style-type: none"> → Enter A → Shift writing position
B	<ul style="list-style-type: none"> → Enter B → Shift writing position
Space	<ul style="list-style-type: none"> → Draw graphic image → Turn 45° → Shift writing position
C	<ul style="list-style-type: none"> → Enter C → Shift writing position
Comma	<ul style="list-style-type: none"> → Draw graphic image → Turn 45° → Shift writing position

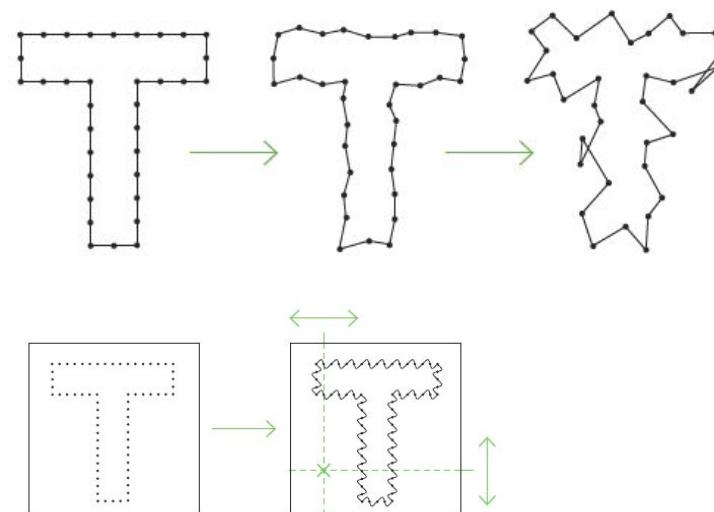
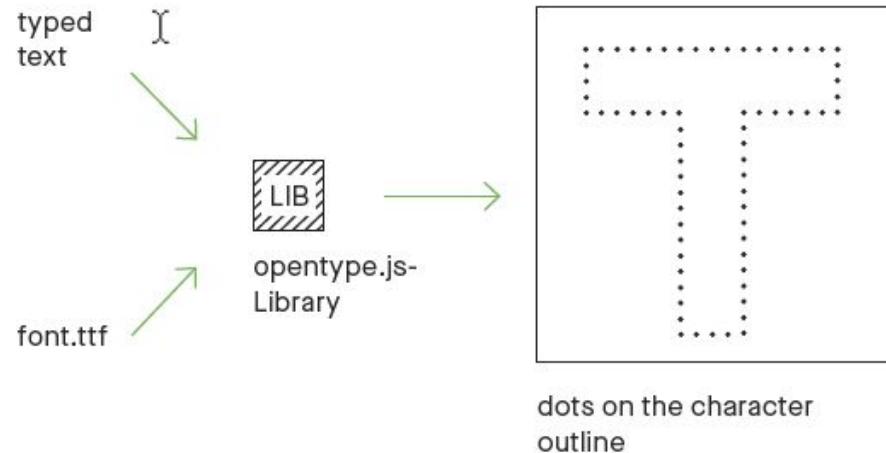
When you'

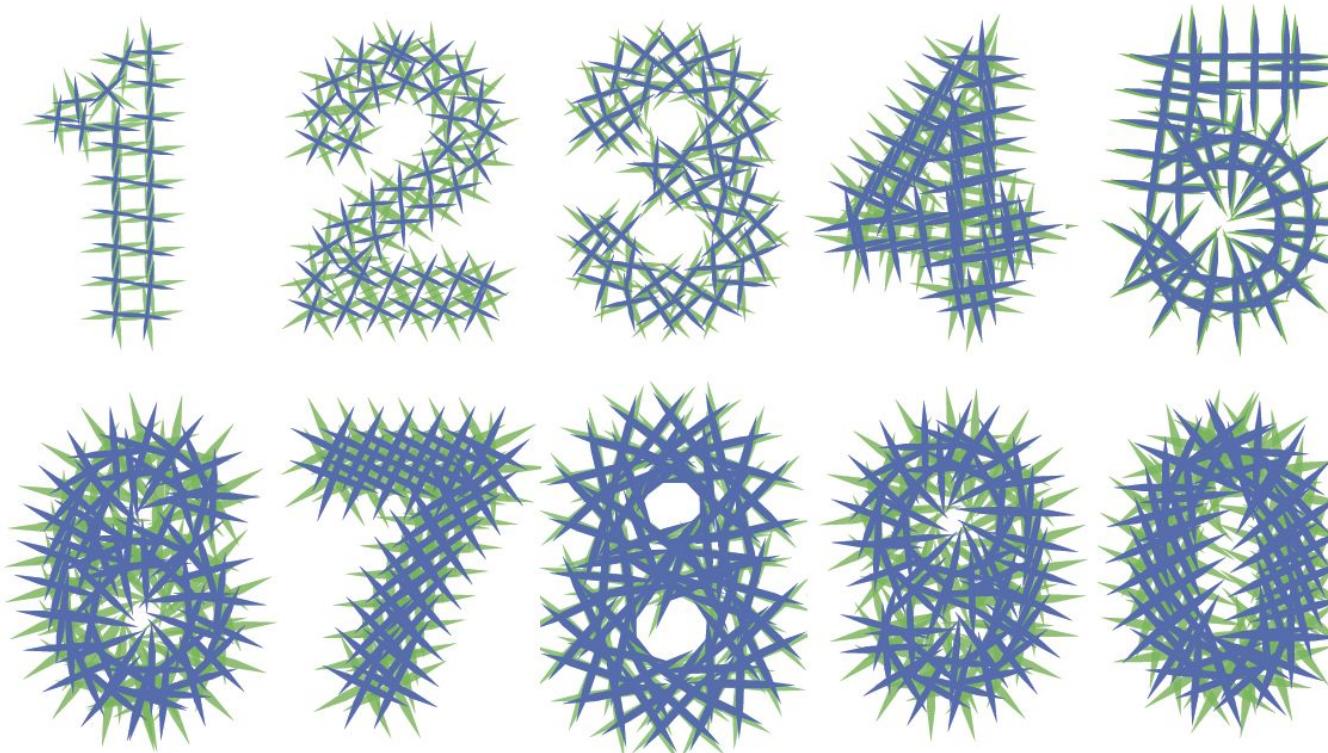
your own

Even this

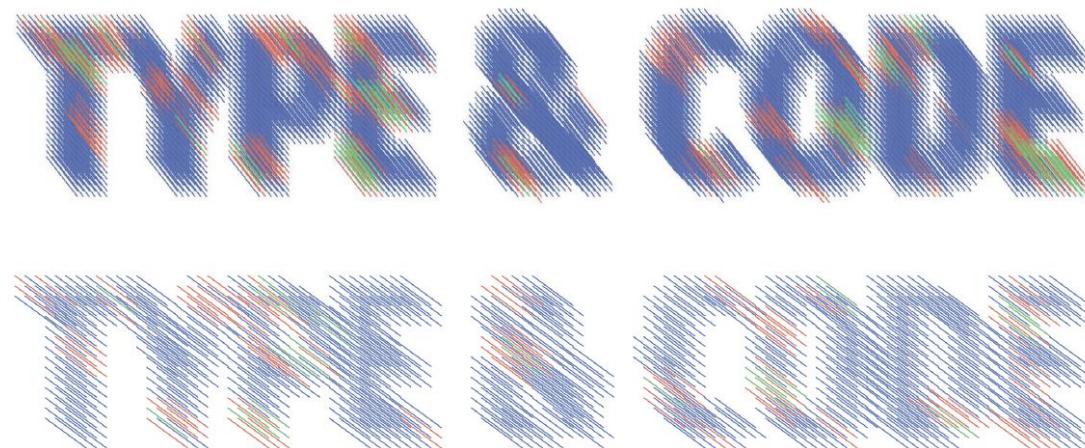
The image contains two detailed scientific line drawings of plant reproductive structures. The left drawing depicts a dense, rounded cluster of small, pointed structures, possibly microsporangia or young sporophylls, surrounded by larger, overlapping, scale-like structures. The right drawing shows a more complex, branched structure where several long, thin, spiraling filaments extend upwards from a central point, each ending in a sharp, triangular apex. These structures are also surrounded by a layer of scale-like leaves.

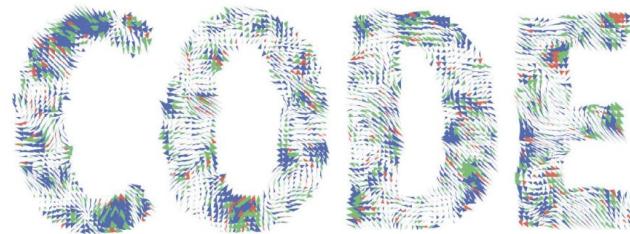
Dissolving font outline: rasterization





May the font outline do as it wishes. Ignoring legibility, it transforms into patterns and leaves no formal gimmick untried. In constant motion, these metamorphoses remain alive and make us wonder: When does writing become a form of its own?

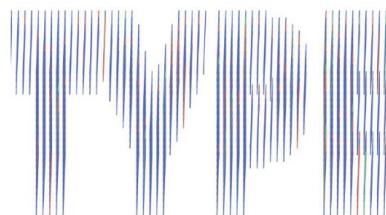




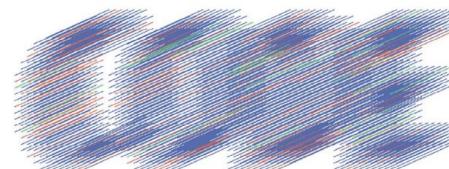
CODE



TYPE



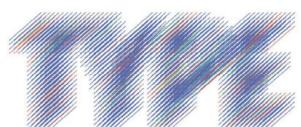
TYPE



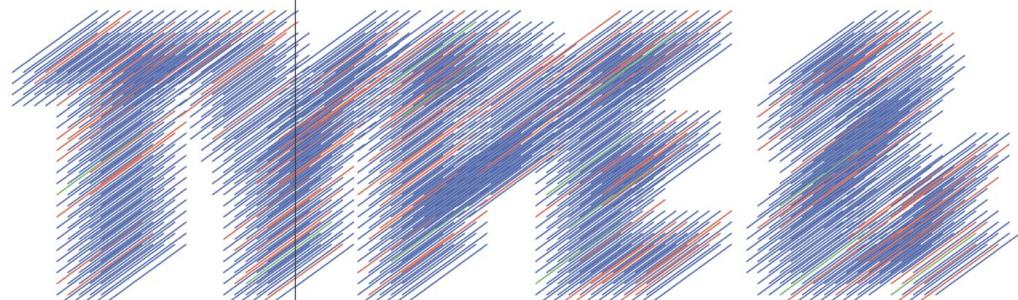
CODE



TYPE



CODE



TYPE CODE

Dissolve

Kinetyped, Marko Řeháček, 2022
[demo sketch](#), [app](#), [lib](#)

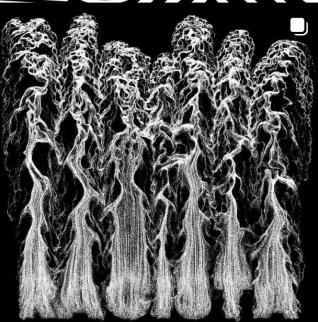
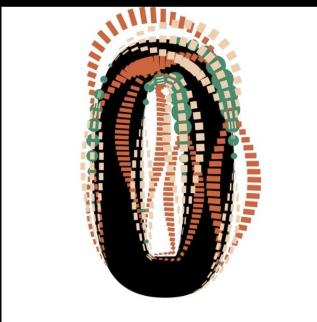
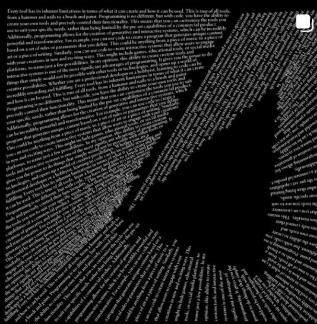
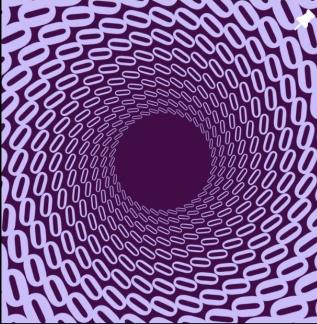
Artists



André Burnier
@burnier

I know this is impossible
to read. So I won't leave a
meaningful message, I
need some text to fill the
box, to make a nice texture
for this silly, useless
sketch. Since you came
this far, check my new
portfolio ~
andreb4m@n003.yah0o
know where to look for
my projects. To find them
please go to 100ms.

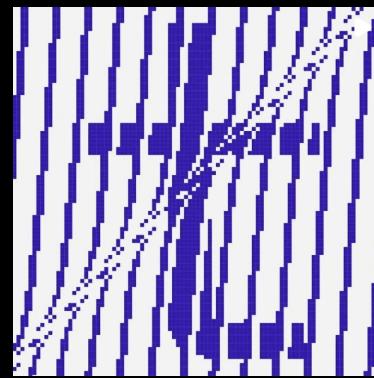
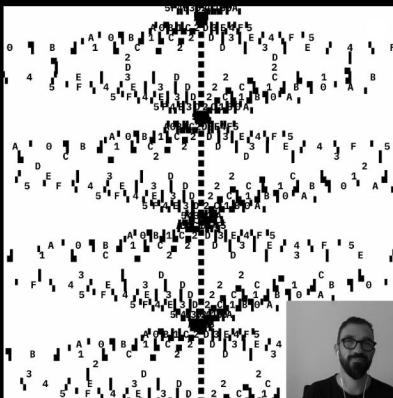
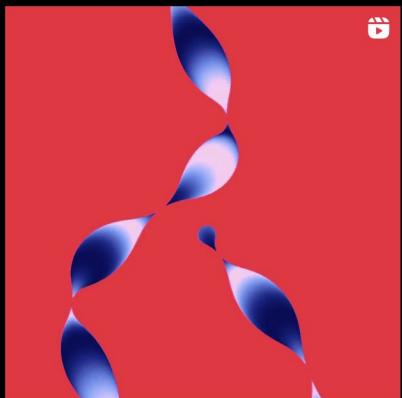
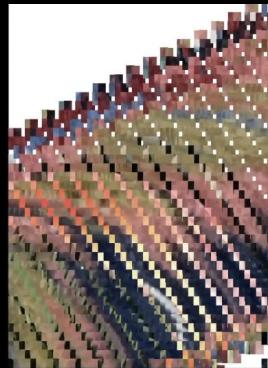
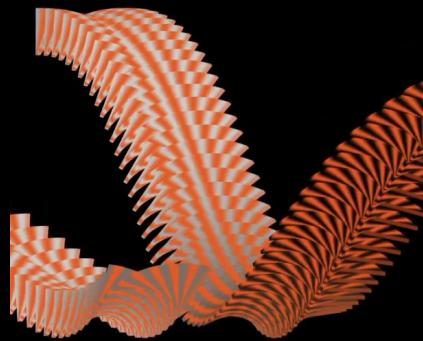
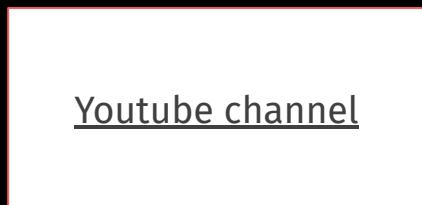
Every tool has implied limitations of how and what you can make with it. Programming is not different, but when you are working with code, you are essentially making your own tools, so you can set precisely what and how it will do. Furthermore, programming lets you create generative and interactive systems - this might be the biggest game-changer, in my opinion.





→ Tim Rodenbroeker

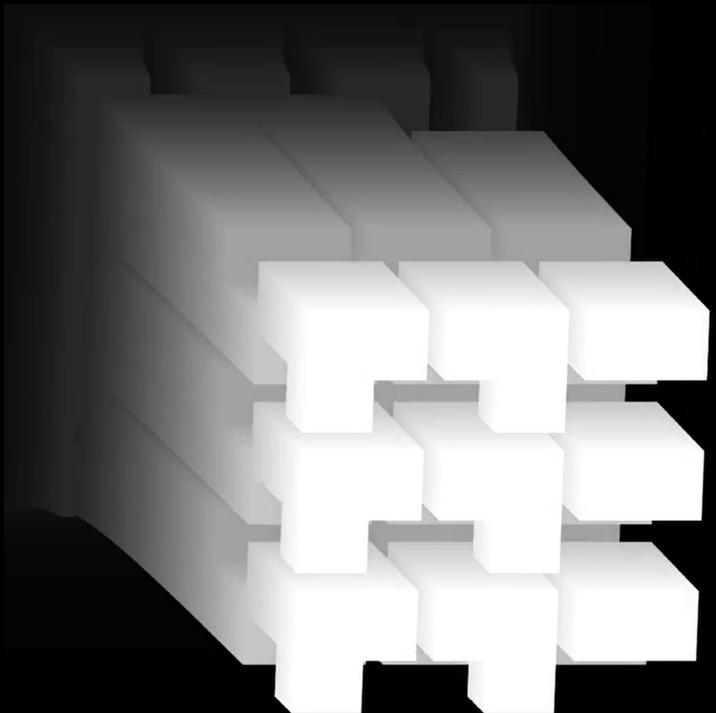
[@tim rodenbroeker](https://www.instagram.com/tim_rodenbroeker/)





Andreas Gysin

@andreasgysin



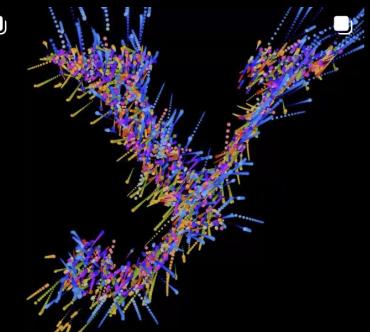
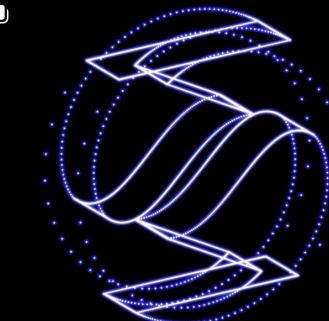
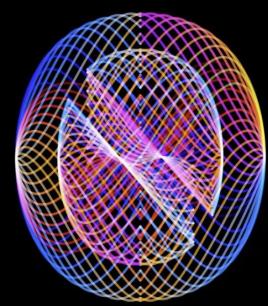
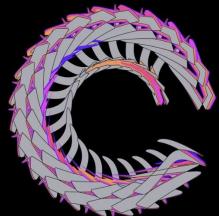
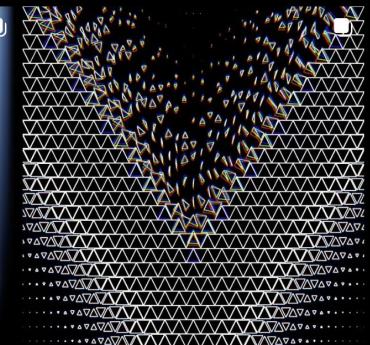
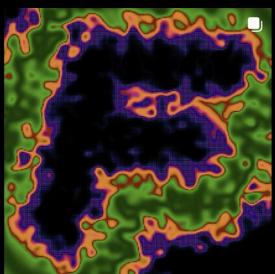
A large, bold, black and white graphic poster. The top half features the text 'DYOR' in a sans-serif font. Below it, 'Blockchain NFT Crypto Art' is written in a smaller, lighter font. The central part of the poster contains the words 'YOUR OWN RESEARCH' in large, stylized, blocky letters. The bottom half contains the text 'Kunsthalle Zürich' on the left, and '8.10.2022–15.1.2023' on the right, all in a clean, modern font.

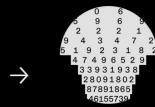
→



italiano.jpg

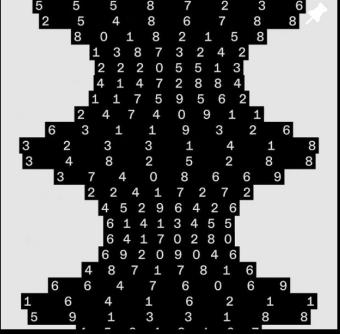
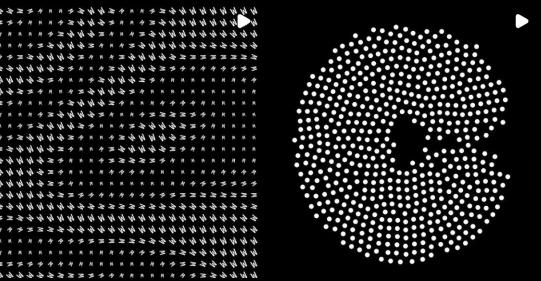
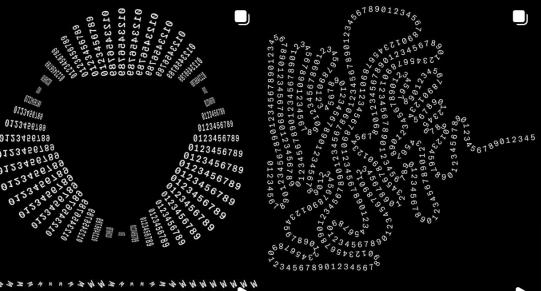
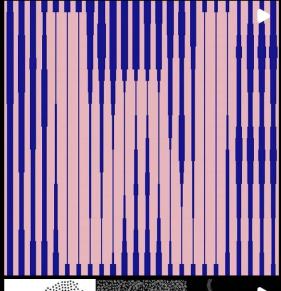
@italiano.jpg



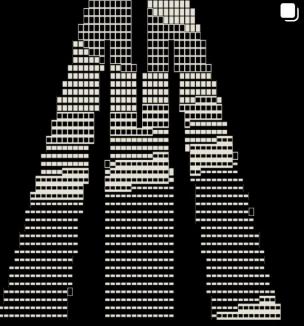


John Burgess

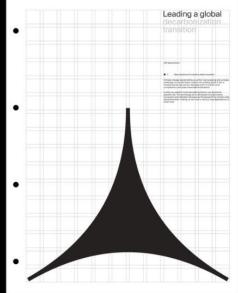
@burgess_john



' R ' .
superior
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from. With the
being a little
the Regular
bit heavier
we believe
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well :
font.RM
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to create a type family.



MOTHER DESIGN
MEETS



AY Ed PLH
PLAY Ed
w.



schultzschatzgrafik

@schultzschatzgrafik

HAPPINESS

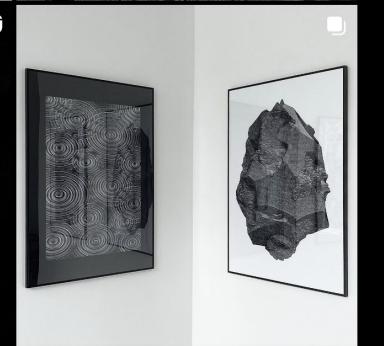
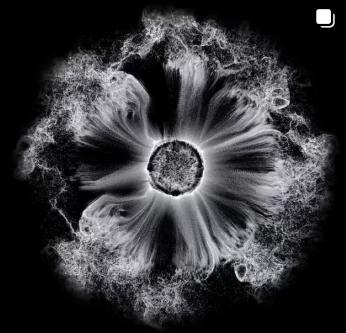
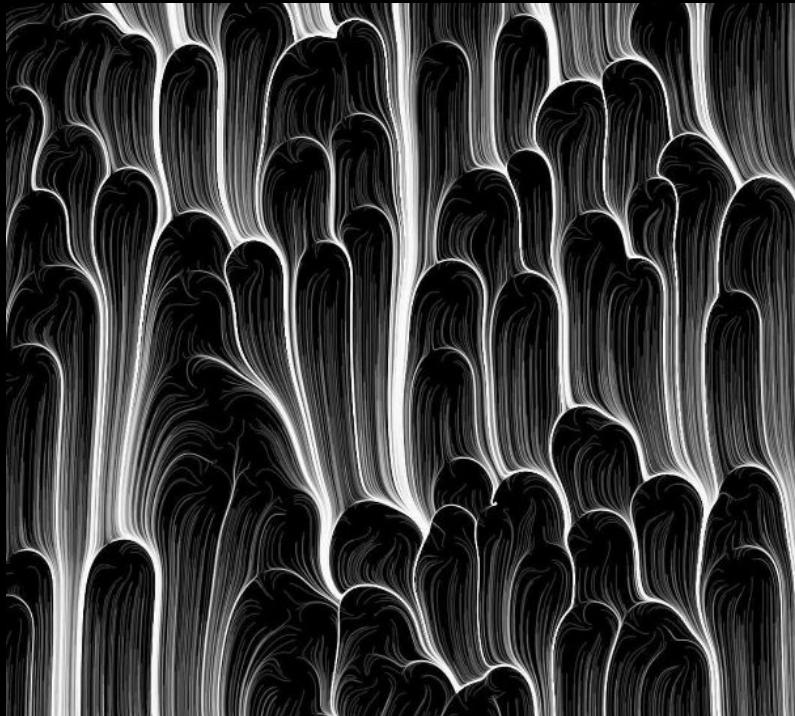
IMPRESS





→ **Generative Hut**

@generative.hut



Library of projects

Are.na <https://www.are.na/>

Artists, links

<https://www.instagram.com/burnier/>

https://www.instagram.com/tim_rodenbroeker/

<https://www.instagram.com/schultzschatzgrafik/>

https://www.instagram.com/burgess_john/

<https://www.instagram.com/italiano.jpg/>

Homework 2: Curved creations / type in motion

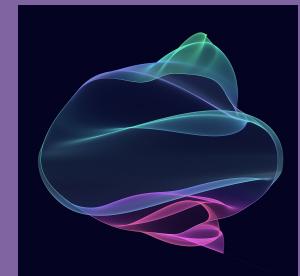
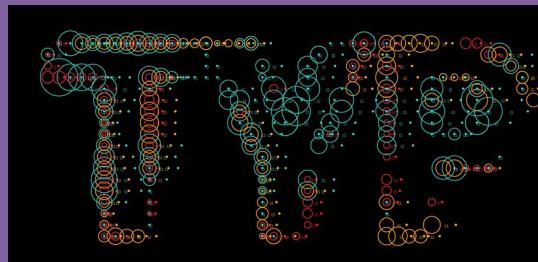
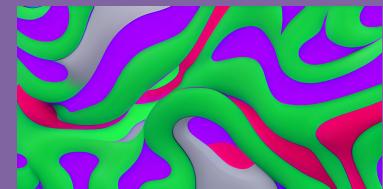
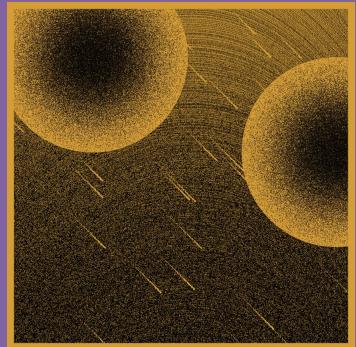
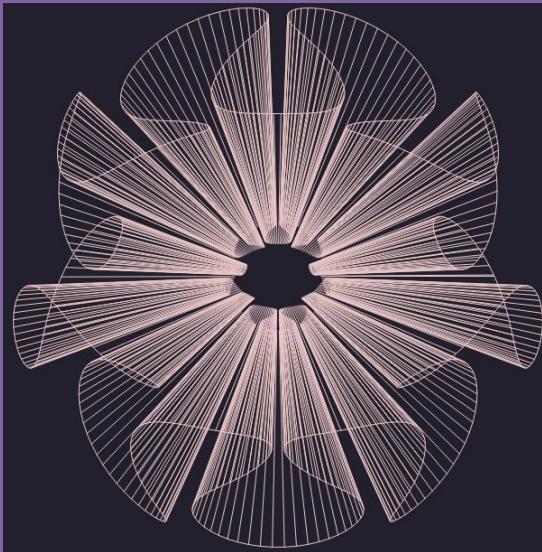
Create one of:

- 1) abstract painting using curves
- 2) typographic composition
- 3) kinetic font

Look in the slides for inspiration: landscapes from perlin noise, some blob artistry, explore interesting mathematical concepts like Max Cooper. Look for some projects on instagram or the libraries we've shown you. Sky's the limit.

The work needs to show skills learnt from last two weeks of classes and be more than was made during live-coding.

Technical information regarding the submission and deadline will be in interactive syllabus in IS.



H A P P Y

C O D I N G