# BECOME ROTTEN

**What if we could provide a medium for digital data to become rotten ? Could our interactions influence this degradation ? Would our social relationships built upon internet connections become more organic ?**

Project aims to provide digital data a medium to become rotten, or just a continuous glitch. Through computing feedback systems inspired by nature and life cycles.

The idea is to have a scene/canvas and directory of different algorithms under the concept of rotting.

It has 2 composable stages:

- Single user interaction: mixing algorithms. This creates an inner feedback loop with their scene.

- Network interaction: Use peer to peer connections to have general context in where users' interactions will be affecting each other. Context will be the outer feedback loop.

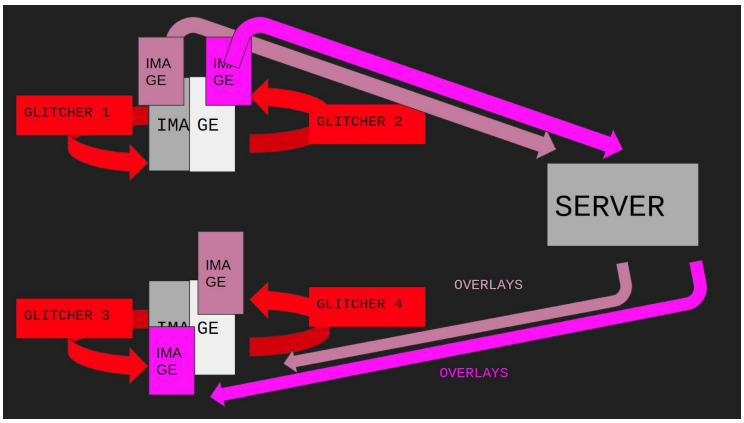
Algorithms explored:

-pixel sorting and others (detailed in *)
-diffusion
-reaction-diffusion systems
-game of life : discrete and continuous version

## Stage 0 : Continous Glitch

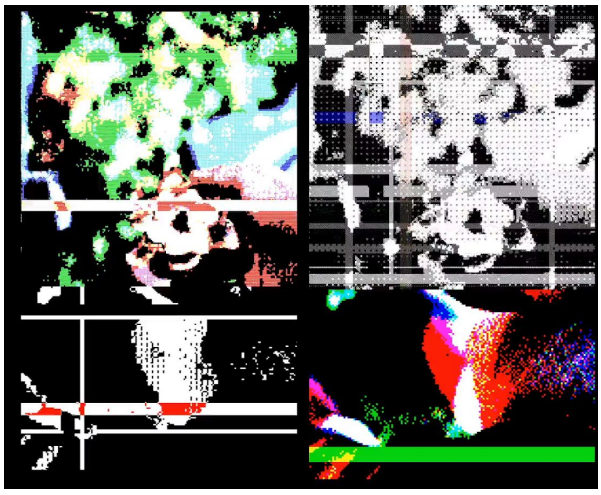

Developed a proof of concept of multi-feedback system with automated workers, which I called glitchers. They are synchronically applying glitches algorithms to an image.

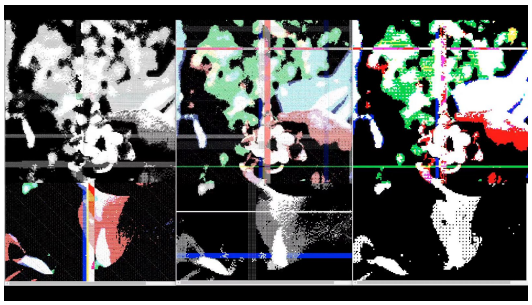
Create an internal feedback loop between p5 canvas and my html image element.

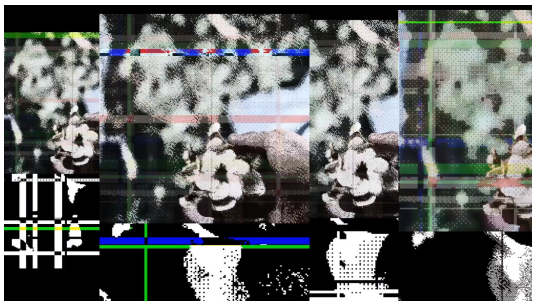




Add TCP protocol to explore socket connections. Create external loop.

Demo images:





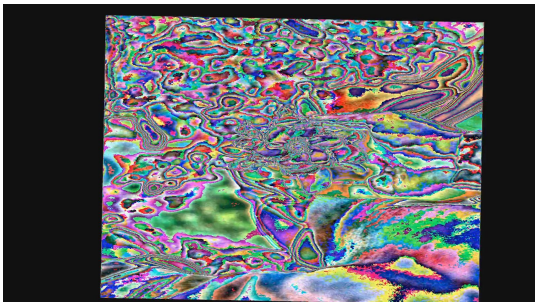


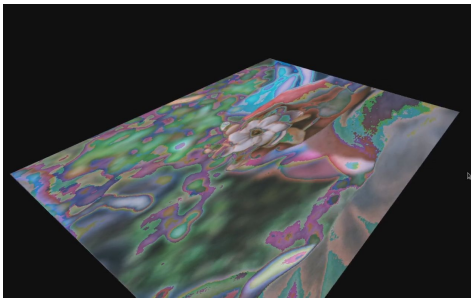
Full videos exploration are found under the name stage 0.

## Stage 1 : Exploring continous glitch with shaders and diffusion algorithms

Developed interactive scene in Three.js add shader filter to apply algorithm of diffusion, and colors controls.

**Demo Images:**





Full videos exploration are found in the Google's Drive folder under the name stage 1.

For stage 0 and 1. Code can be found:
https://github.com/solsarratea/continous-glitch (*)

## Stage 2 : Computing life forms

### Algorithms:

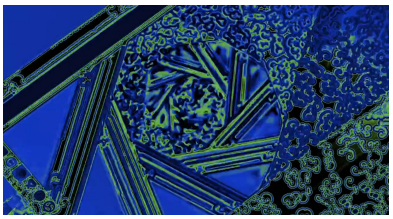
- Reaction Diffusion system

After reading Turing's paper on The chemical basis of Morphogenesis, decided to implement Gray Scott model to dive into patterns.

Developed interactive playground:
https://visualizer.solquemal.com/04-gray-scott/

**Demo Images:**





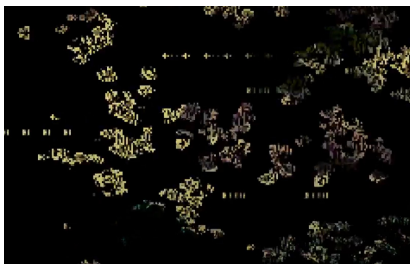
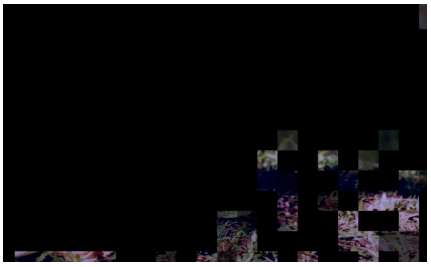
**Videos and other images** are found in the Google's Drive folder under the name stage 2.

Code can be found:
https://github.com/solsarratea/visualizer/tree/master/04-gray-scott

- Game of Life:

Implemented J.Conways' game of life, discrete version.
Implemented smooth version after reading this paper
https://arxiv.org/pdf/1111.1567.pdf

**Demo Images:**


**Videos and other images** are found in the Google's Drive folder under the name stage 3.

Extra resources:

- Presentation I gave at the Recurse Center. Explore deep notion of feedback systems and introduced multi-feedback ones.

https://docs.google.com/presentation/d/1-L_aoG_yACVZ5y5oLnFzsT5alHeMFDQd07a7BLCT5cg/edit#slide=id.g52f77a724c_1_26