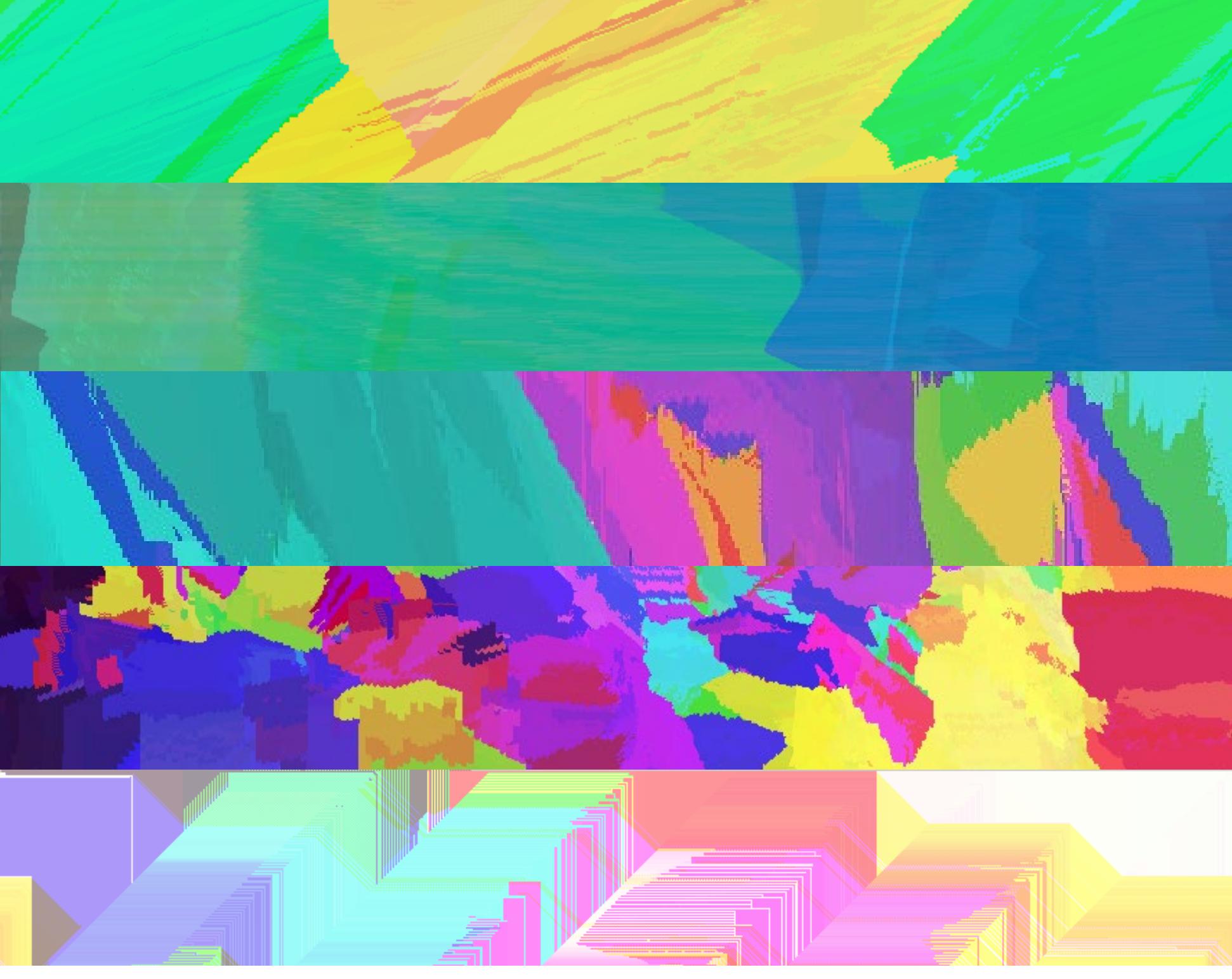


Digital Botany

The Organism

Digital Botany is an interactive, generative art piece that bridges the gap between the digital and physical realms. It utilises the repetition of simple rules to produce an elegant form of chaos.



Evolution, e. vo. lution:
“the change in the inherited characteristics of biological populations over successive generations”

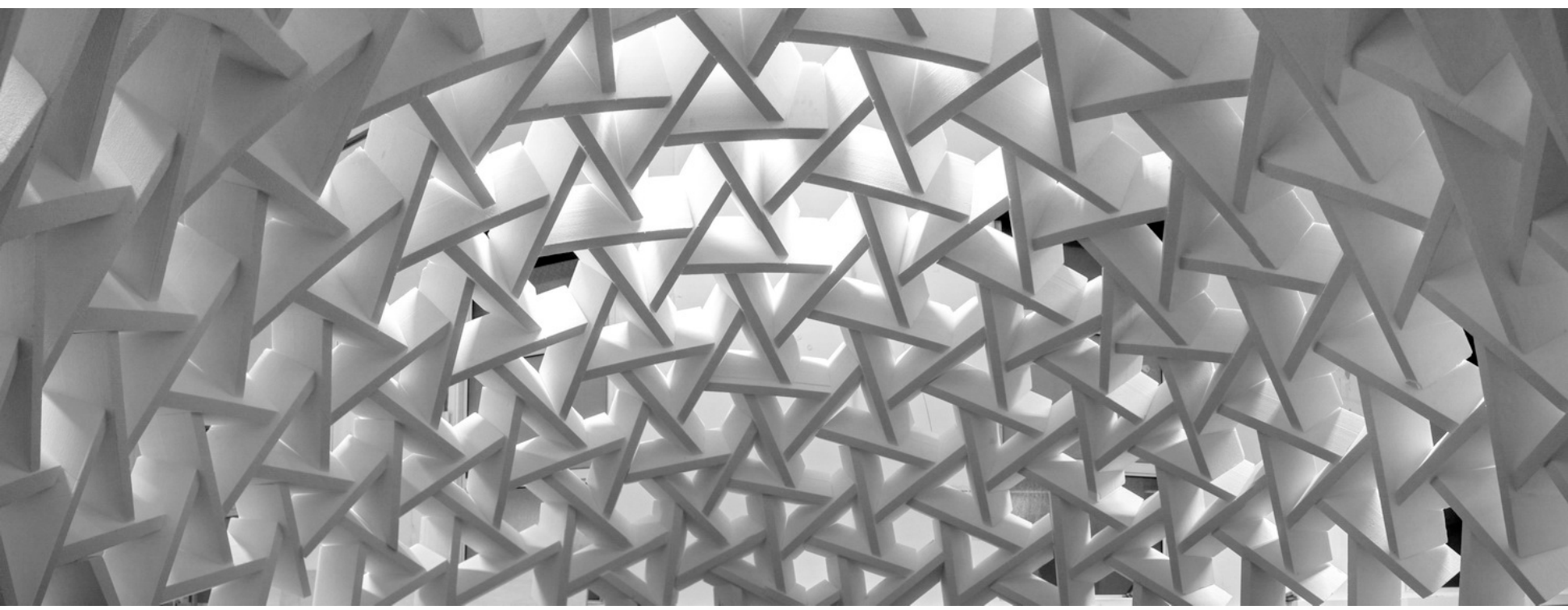
```
void draw() {
  m.loadPixels();
  if(m !=null)
  for (int k=height; k<width*height-width; k++) {
    if (threshold < Value) {
      if (saturation(m.pixels[k*width]) > threshold) {
        m.pixels[k-1] = color(
          int(red(m.pixels[k-R])),
          int(green(m.pixels[k-G])),
          int(blue(m.pixels[k-B])));
      }
      else
      if (brightness(m.pixels[k-1]) > threshold) {>
        m.pixels[k-width] = color(
          int(red(m.pixels[k-R1])),
          int(green(m.pixels[k-G1])),
          int(blue(m.pixels[k-B1])));
      }
      else
      if (hue(m.pixels[k-1]) > threshold) {
        m.pixels[k+width] = color(
          int(red(m.pixels[k-R2])),
          int(green(m.pixels[k-G2])),
          int(blue(m.pixels[k-B2])));
      }
    }

    threshold = threshold+1;
  }
  else {
    threshold = 0;
  }
}
```

Sorting Algorithm



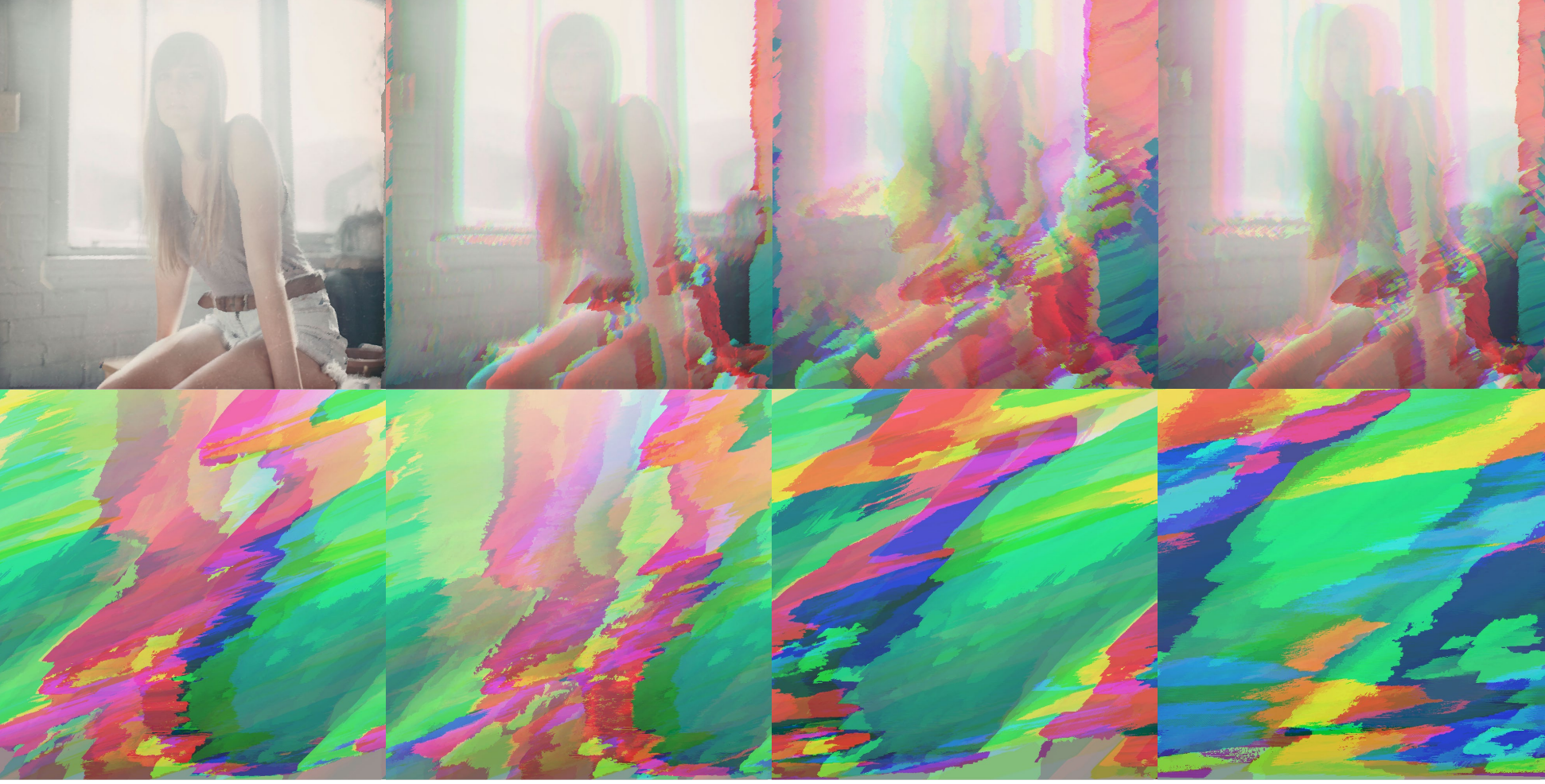
Through the replication of small steps with simple rules, immense complexity and beauty emerge - the fundamental idea behind geometric structures, computers, and even life itself. As such, we were able to combine all three of these concepts into what we call Digital Botany.



Geodesic skeleton

Objectively, Digital Botany is a combination of a geometric skeleton, projectors, and a computer network.

Digital Botany, however, is not simply a sculpture or computer. It acts as an organism, growing and changing. Just like how a tree takes nutrients from the earth, Digital Botany takes photos, (as nutrients) through a network of roots spread out into the festival where people upload their photos to feed the Organism. Inside the skeleton, the Organism digests these photos, breaking them down into a kaleidoscopic soup of constituent pixels. Photos are then Projected onto the interior of the skeleton, which acts as a live skin visible to viewers around the Organism.



With Digital Botany, everyone at the festival can get involved in growing and cultivating the Organism by submitting their pictures via smartphone or other wireless devices. Consequently, the piece also acts as a live meta-exhibit for festivalgoers' photography.

NOTE: Some form of image moderation can be implemented at request.



- What it is:**
- 1) Pixel Sorter that cycles a set of inputted pictures and projects them on to a surface
 - 2) Geometric dome/similar structure which acts as a projection surface/skeleton
 - 3) Wireless computer network(made from"nodes") creating a nervous system that takes pictures from users (from mobile phones/computers).
- What it does:**
- 1) collects photos from users around the festival
 - 2) transmits them in a central computer in the geometric skeleton
 - 3) Runs the pictures through a pixel sorting program
 - 4) Projects the output of the program live on the skeleton, where users can watch their submitted pictures morph and distort as they are digested by the organism.