

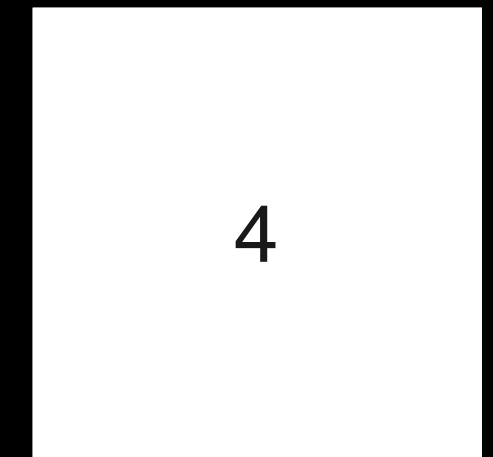
Is digital technology also reshaping/
simulating "friction"?



Using facial recognition and digital interaction,
complex emotional states are translated into
quantifiable signals and visual expressions.



how technology interprets, categorises, and reduces
human feelings.



In digital systems, friction is eliminated. Genuine
emotions become invisible.

What is Digital friction?

Digital friction is the unnecessary, often frustrating, **effort employees exert when using technology, such as navigating, broken workflows, slow systems, or switching between too many apps**. Affecting 35% of users regularly, this friction hinders productivity, lowers morale, causes high turnover, and hurts customer experience, with employees often losing hours per week to these technical hurdles. [🔗](#)

Common manifestations and sources of digital friction:

Design and process issues: Overly complex registration processes, unintuitive navigation, inability to save progress, and excessive confirmation steps.

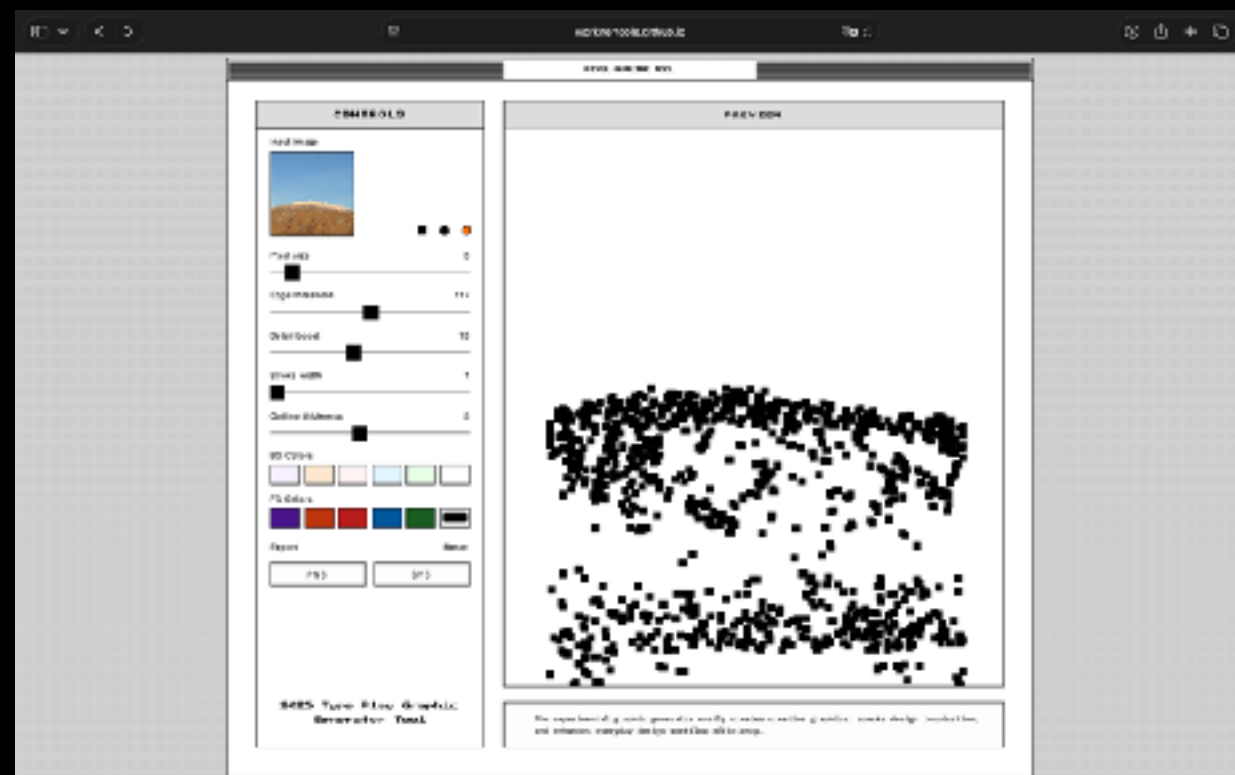
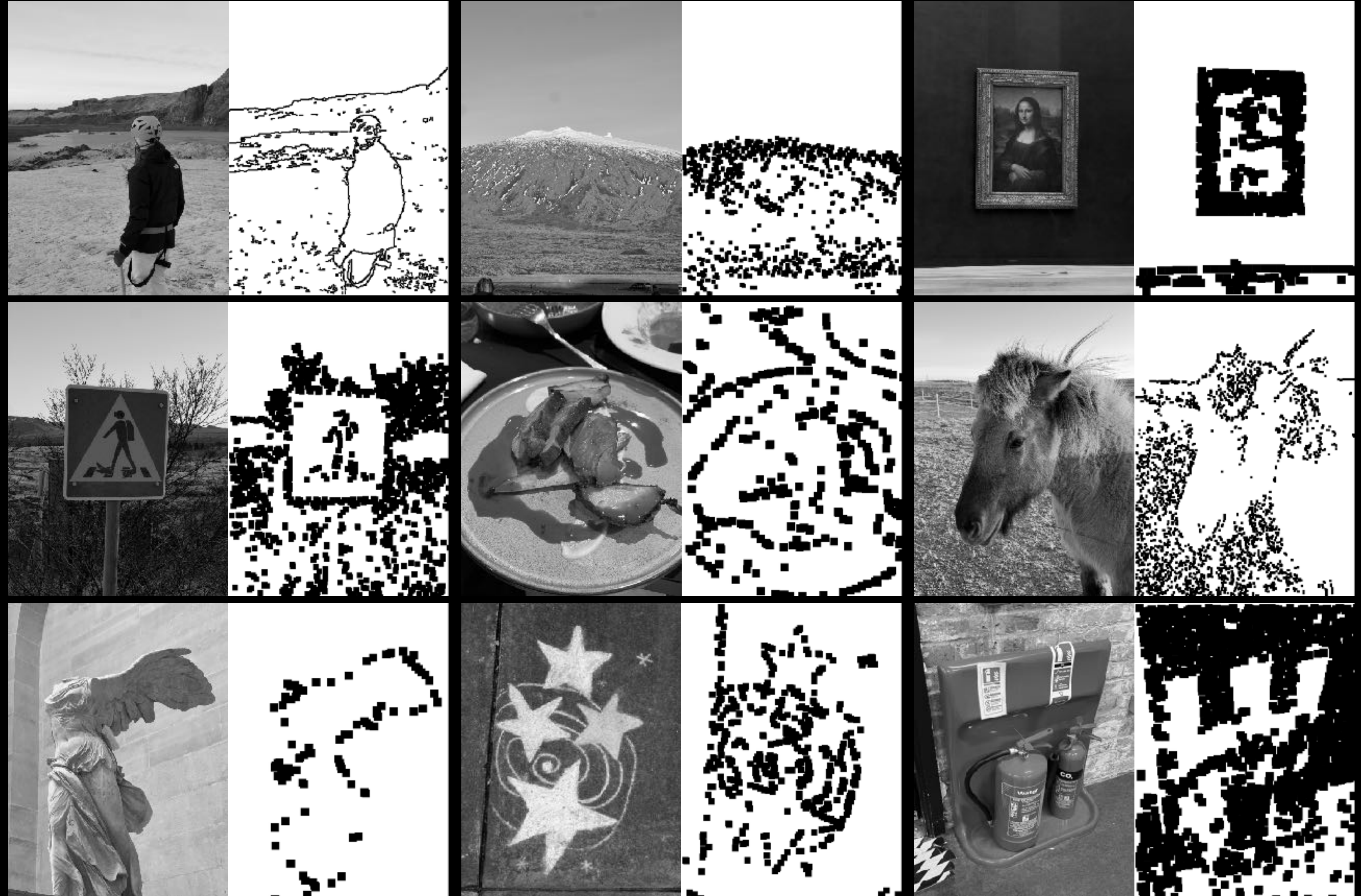
Technical glitches: Application lag, slow loading, server errors, crashes, etc.

Verification and security: Cumbersome "I'm not a robot" verification, and repetitive identity authentication.

Disjointed experience: Incompatibility between offline and online data, and difficulty switching between multiple devices.

Text 1

Translate images using digital language (coding)



Text 2

Translate images using coding language

```
if (figure.isFragmented) {  
  ignoreIdentity();  
}  
  
while (wing.isExtended) {  
  implyMotion();  
}  
  
environment = "museum wall";  
material = "marble";  
  
if (gesture.exists $$ head == null) {  
  meaning = "movement without subject";  
}  
  
state = incomplete;
```



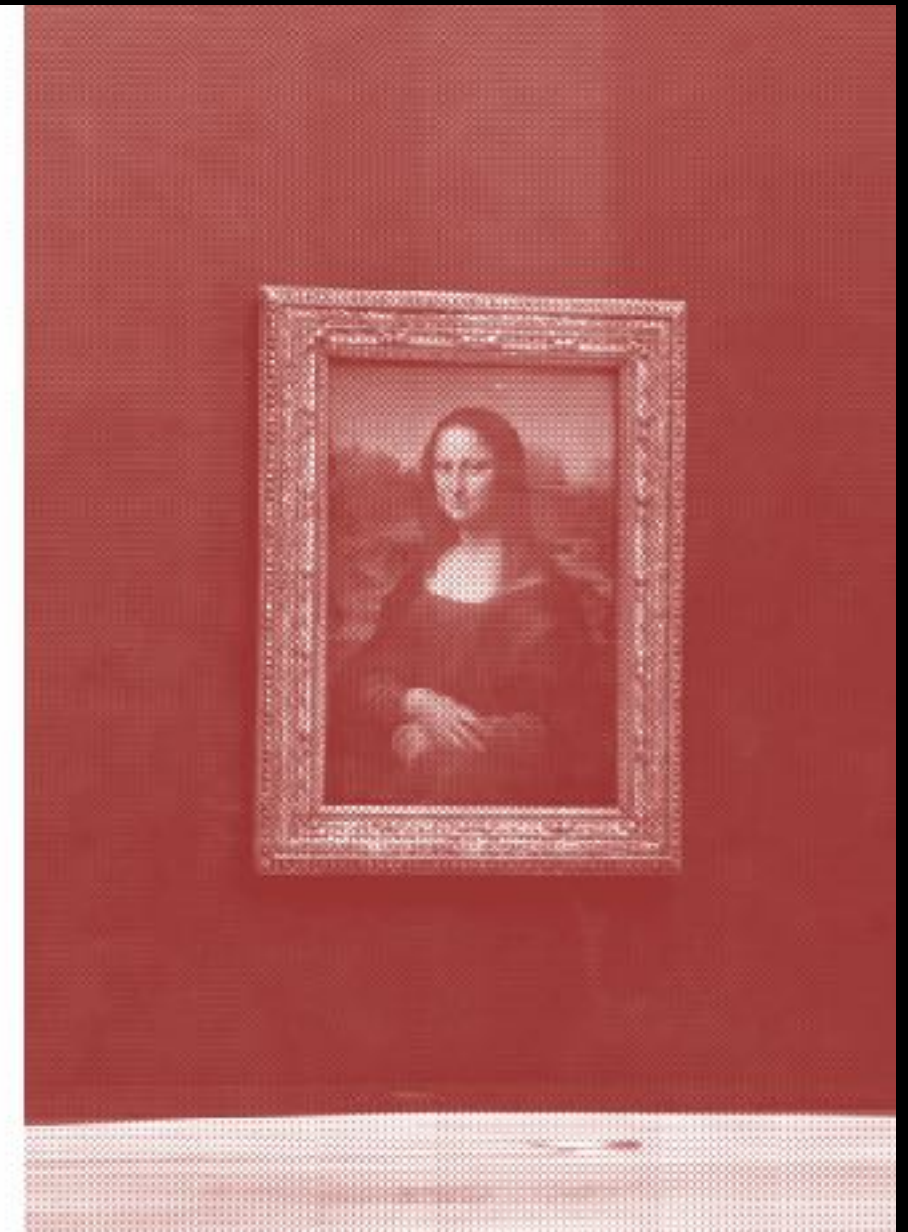
```
if (sign.type == "warning" $$ zone == "crossing") {  
  pedestrian.priority = true;  
}  
  
if (subject.isWalking) {  
  vehicles.mustYield();  
}  
  
environment = "open landscape";  
instruction = "proceed with caution";  
  
state = regulated;
```



```
if (subject.species == "horse") {  
  proximity = close;  
}  
  
light = "golden hour";  
wind.effects(mane);  
  
environment = "open field";  
barrier = "wire fence";  
  
state = calm;
```



```
if (subject.isPortrait $$ frame.isOrnate) {  
  enforceDistance();  
}  
  
environment = "museum";  
access = "visualOnly";  
  
if (viewer.approaches) {  
  triggerSurveillance();  
}  
  
state = preserved;
```



Are errors in coding considered digital friction?

Hito Steyerl

How Not to Be Seen...

MOV File 2013

In this satirical take on instructional films, Steyerl demonstrates several tongue-in-cheek strategies for remaining "unseen" in a world subject to new, sophisticated means of surveillance—pointing to the ways in which our technologies encroach on physical experience.

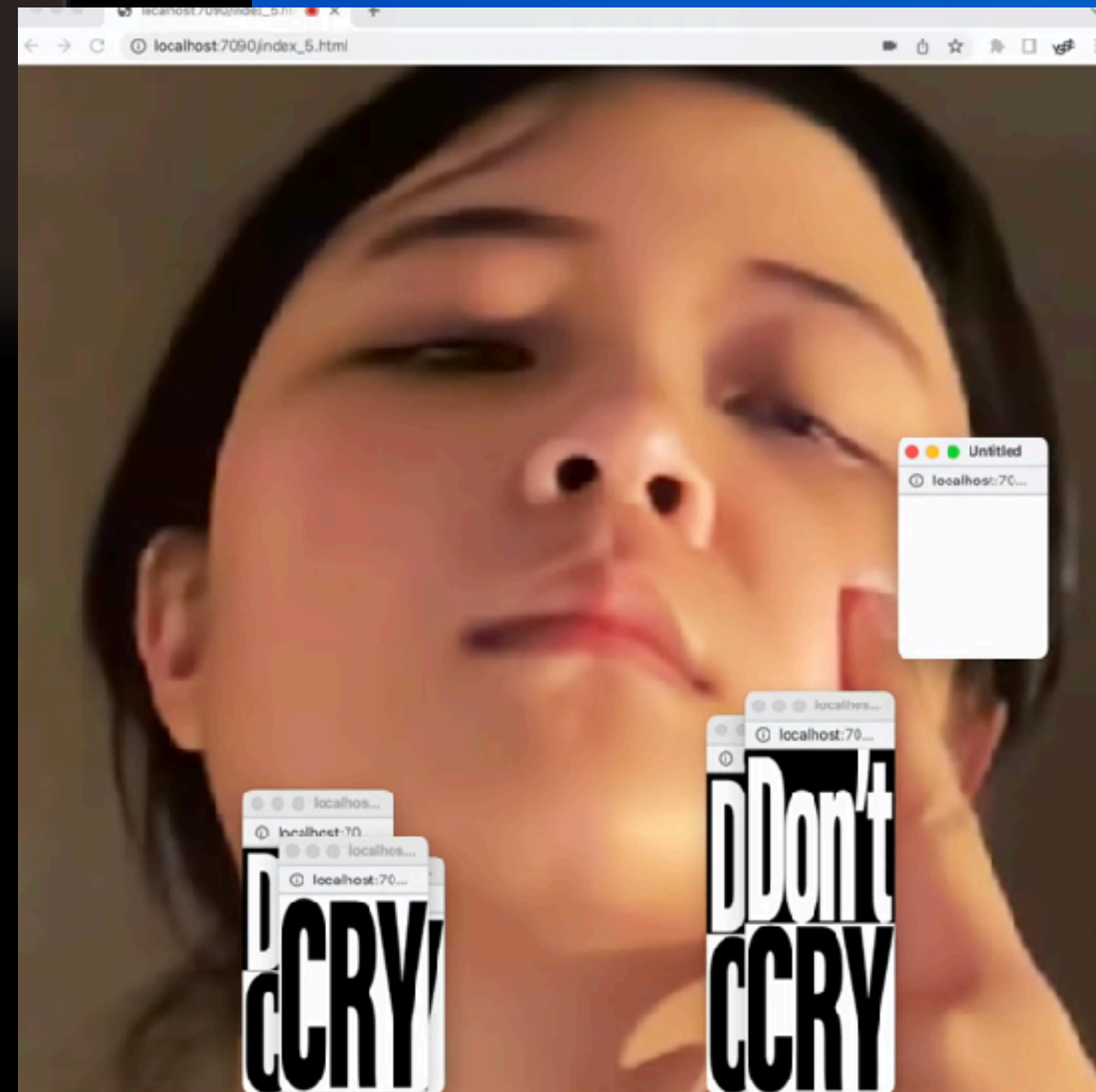
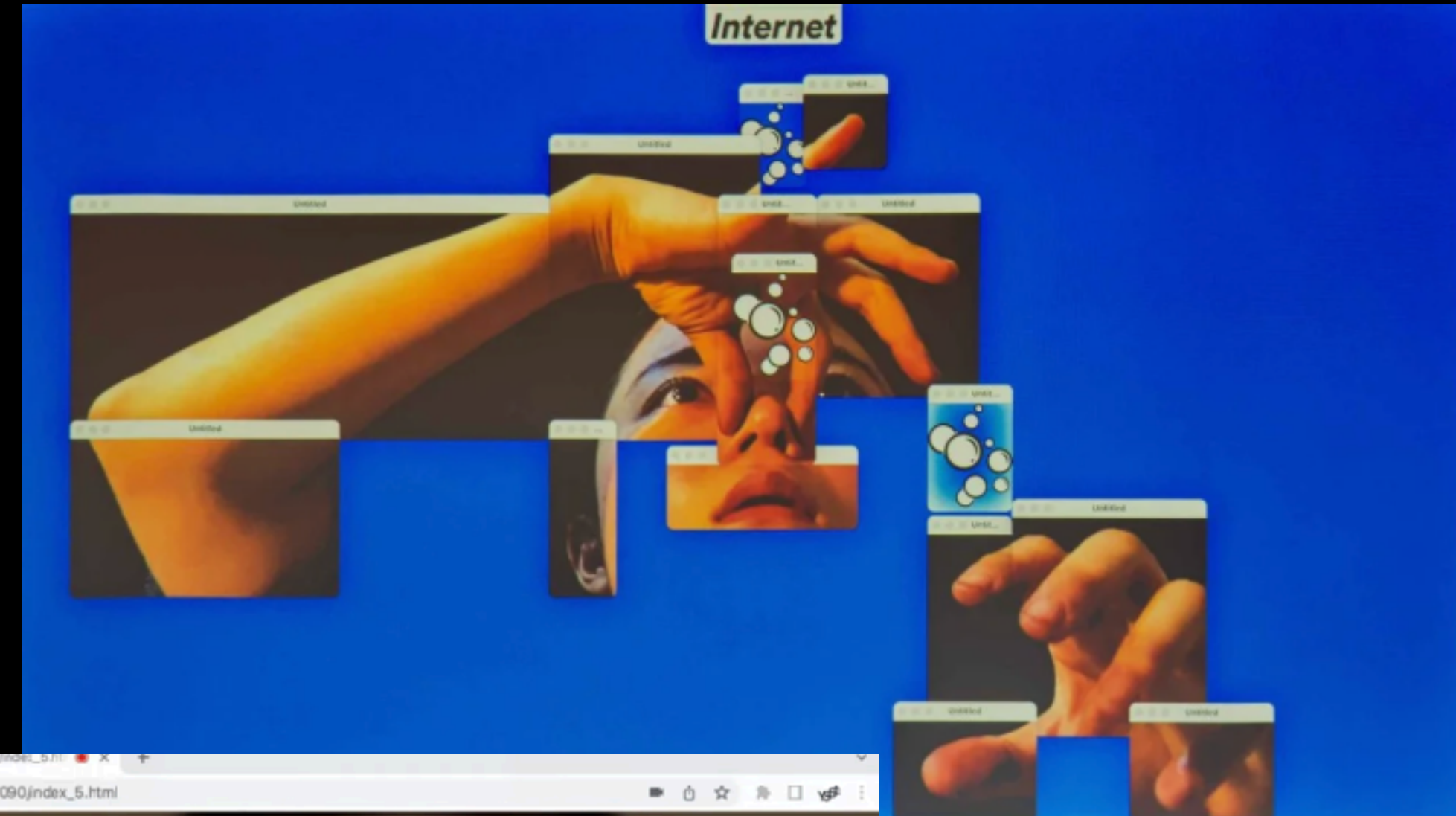
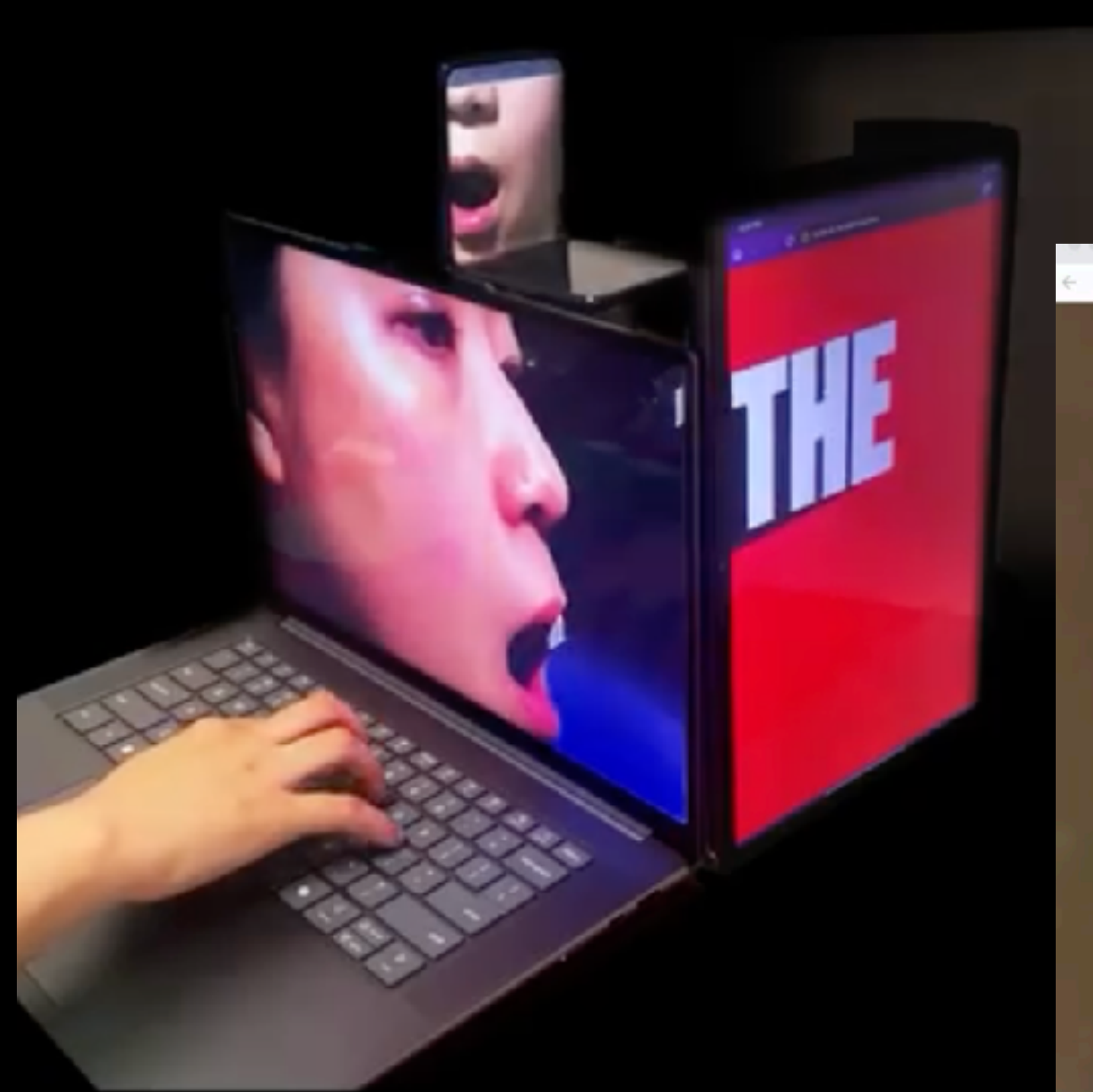
Her films sometimes look a bit like video games, because she uses digital recreations of settings and virtual realities as well as real places in her work. In fact in her films you can never quite tell what is real and what is pretend.

What attracts me is the blurring of reality and digital in her work, which makes me wonder if this approach can be interpreted as **"creating friction."**



Yehwan Song

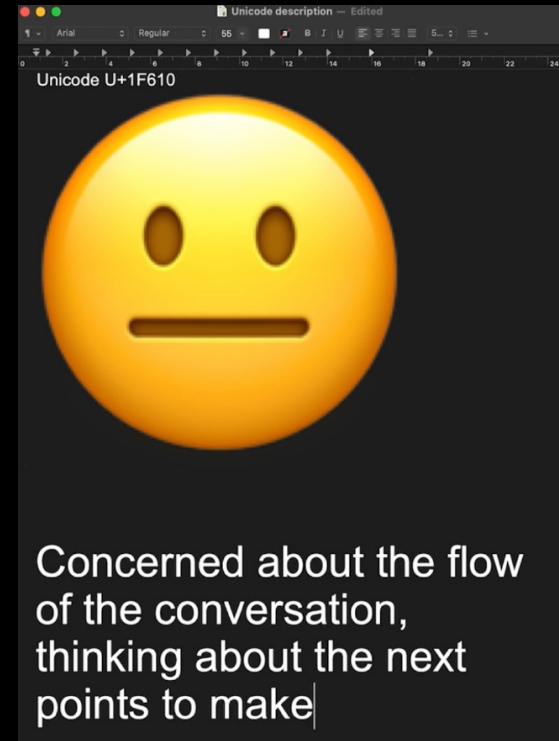
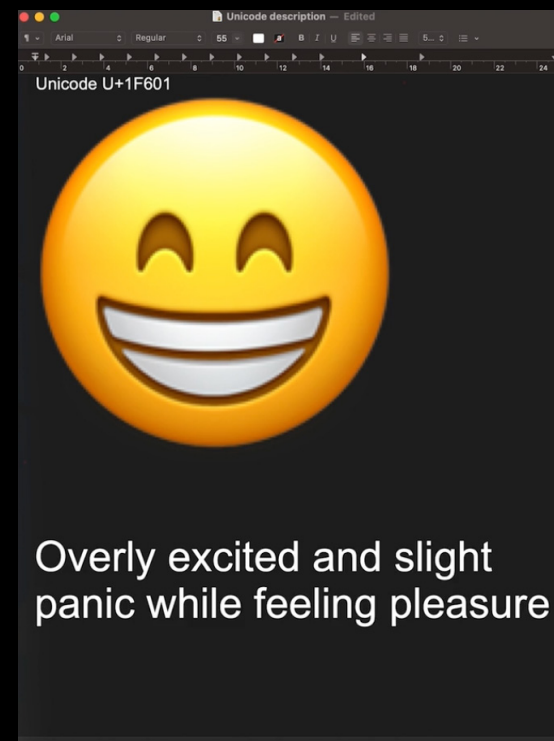
I create websites, installations, and sculptures that visualize digital systems and their limits. These works unfold between the digital and physical—often using friction, delay, or confusion as strategies for exposing what smooth design tries to hide.



Song's work uses digital technology to express emotions. This is also a way to increase "friction." So it makes me think: in the context of digital technology, how can emotions be expressed through "friction"?

DESIGNING FRICTION

A call for friction in digital culture



What is friction?

Friction is resistance. It derives from physical interaction between humans, and humans and things – its reach is holistic. All senses, elements and emotions play a role: sight, sound, smell, taste, touch, air, earth, temperature, agitation, passion, joy, sadness... With movement comes friction. The more we move and act, the more friction we encounter. The more friction there is, the more we engage and care. Friction drives our engagement. Friction, in this context, is not synonymous with either anger or conflict, nor is it malfunctioning technology. Friction is an essential ingredient that makes up our humanness and sparks human connection. Friction is a lively, intrinsic experience.

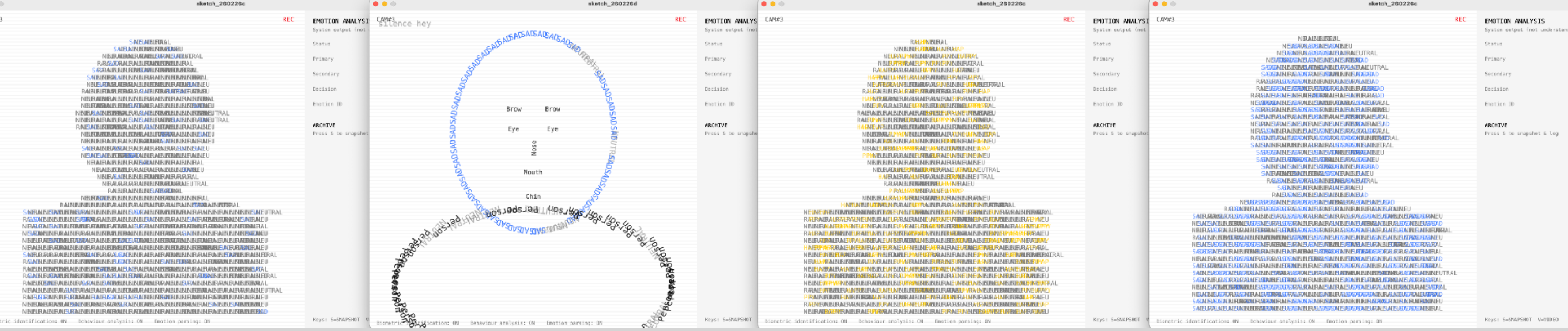
LOSS OF FRICTION

Digital technology has long pursued the goal of eliminating friction, striving for seamless. We now navigate a sea of frictionless experiences.



After reading **Designing Friction, I began to rethink the relationship between digital technology and emotions. The article points out that digital culture constantly pursues seamless, fast, and low-friction experiences; physical interactions that originally involved different tactile sensations, movements, and bodily involvement are now often compressed into the same clicks, swipes, and touchscreen actions. This made me realize that digital systems are simplifying not only physical actions, but also emotions themselves.**

How do digital systems detect, translate, and simplify human emotions, and how does this influence the way people interact with them?



Emotion Translation Test — Emotion Translation Test — Emotion Translation Test — Emotion Translation Test — Emotion Translation Test — Emotion Translation Test

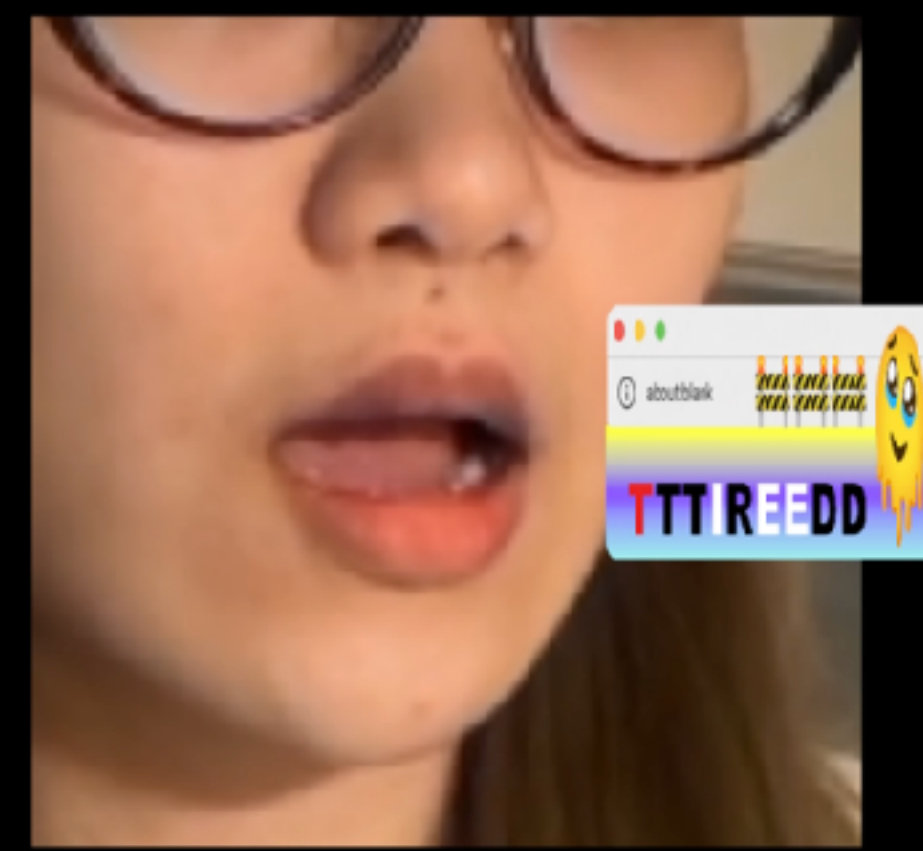
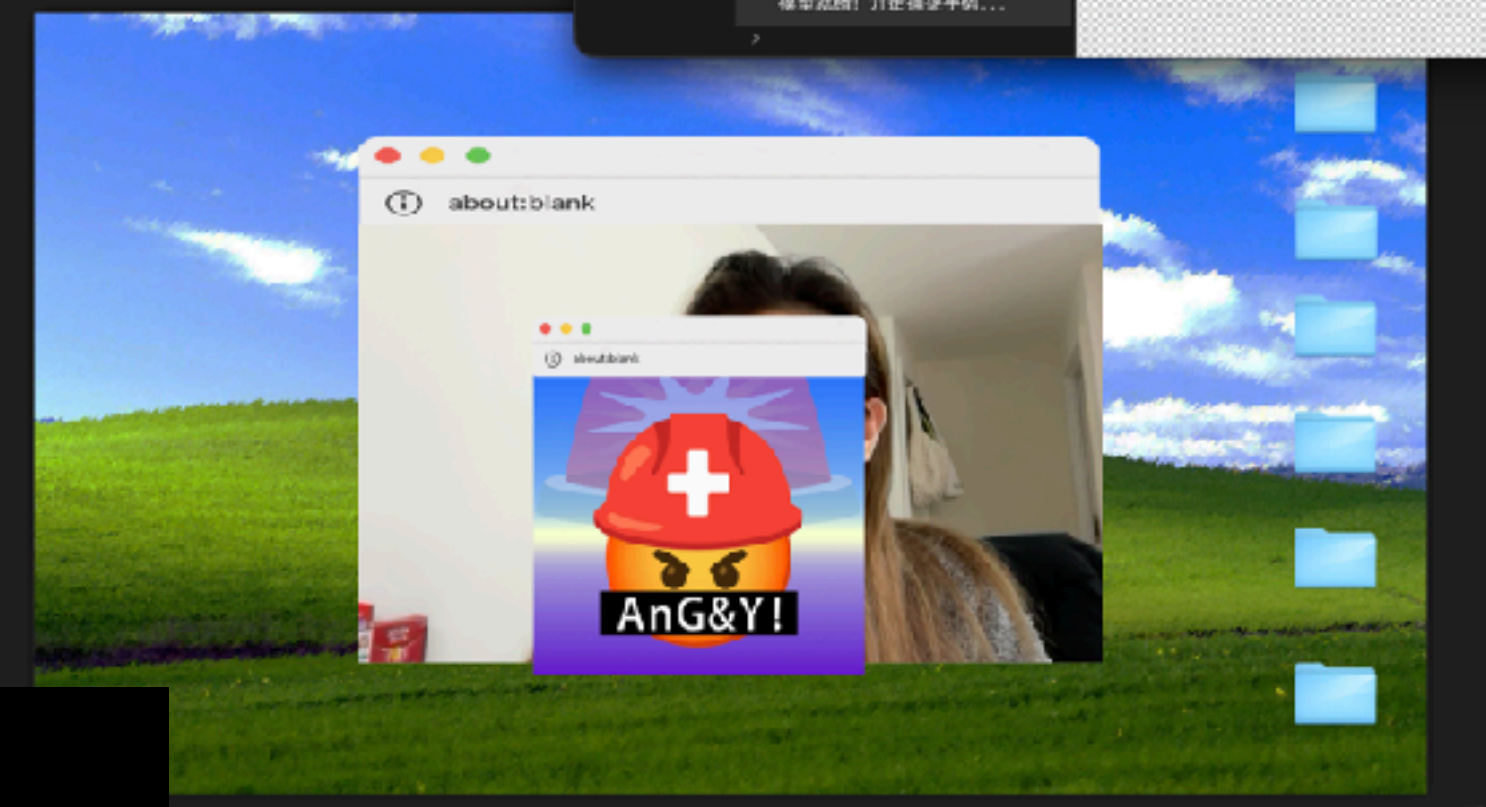
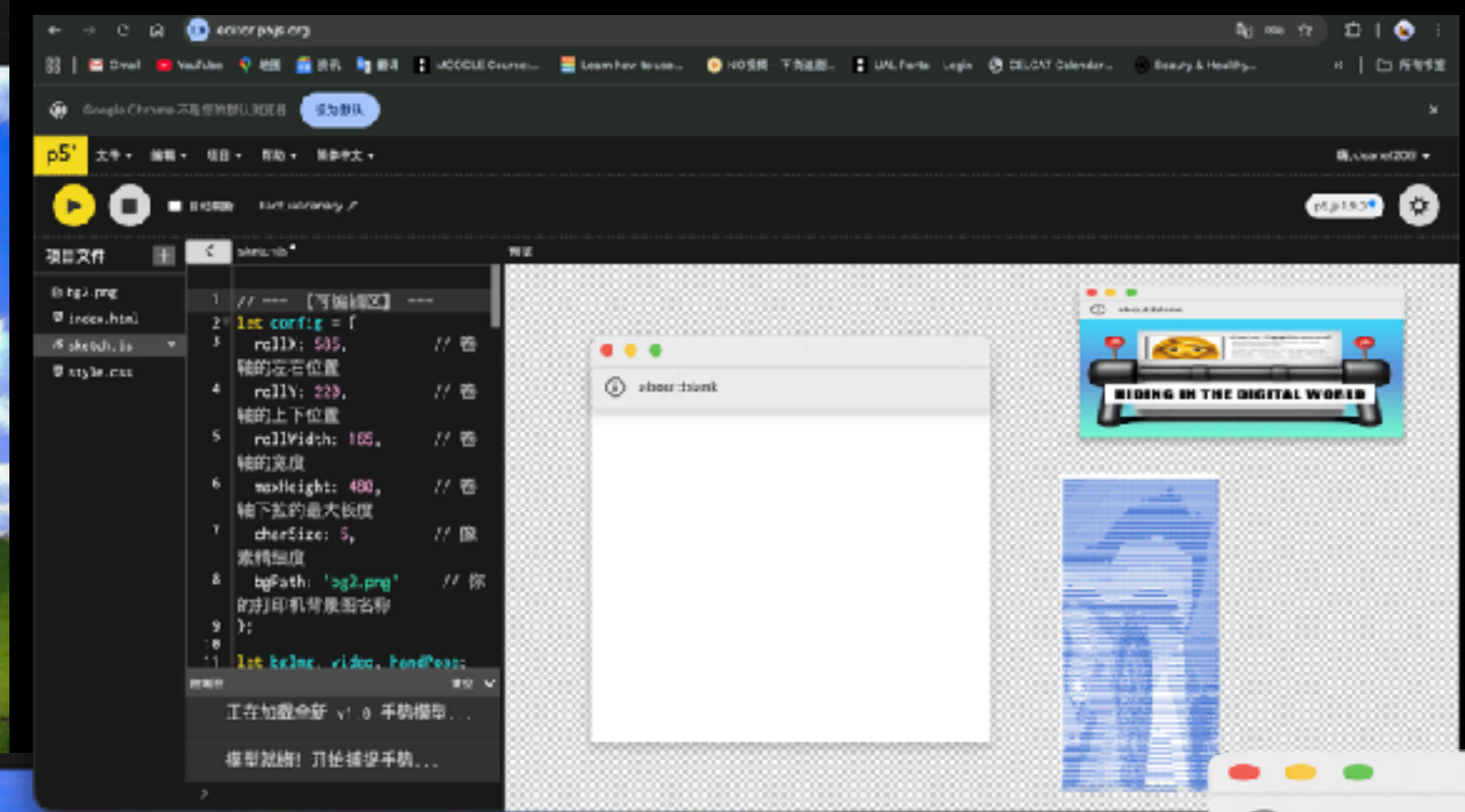
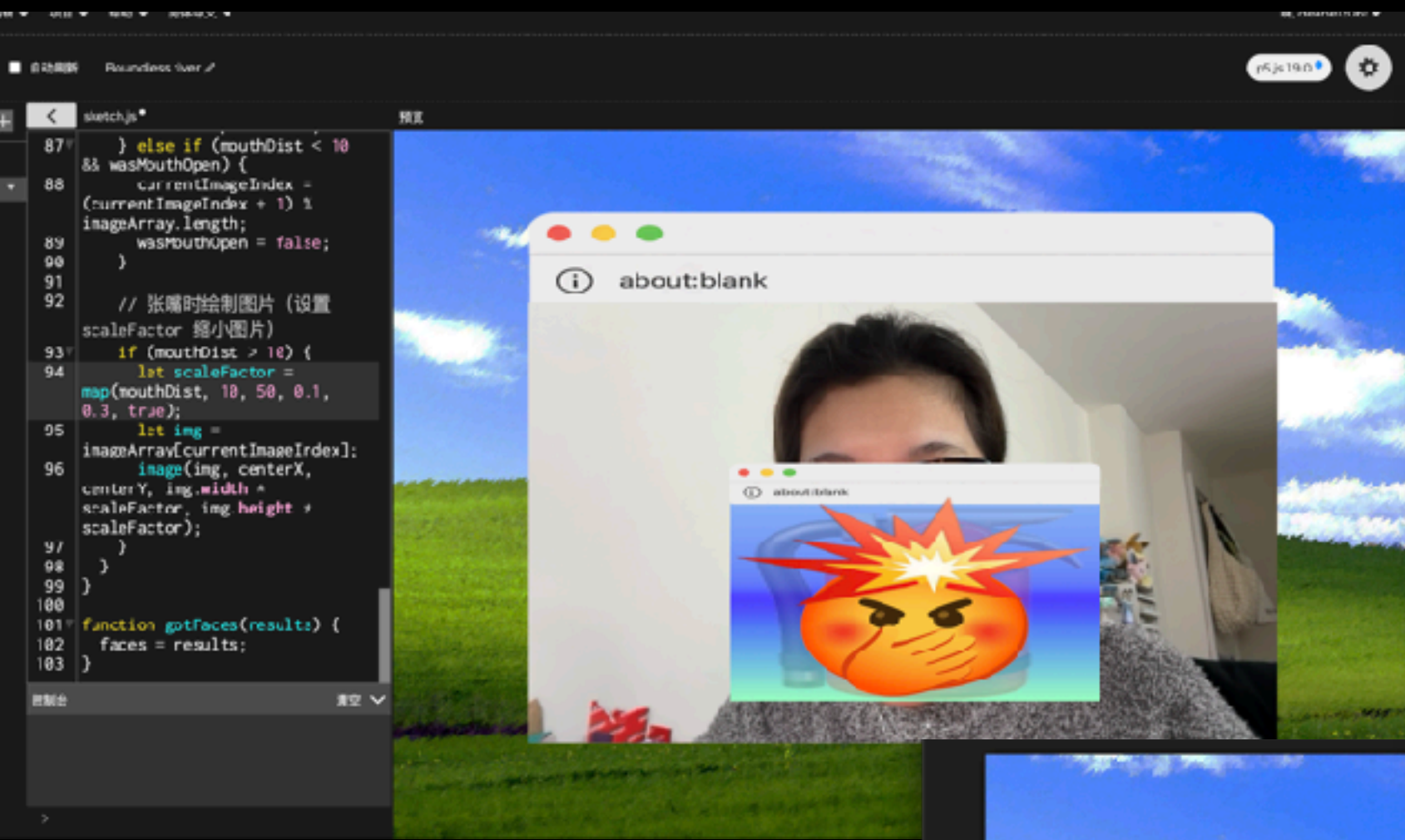
At the beginning, I was interested in how digital systems detect and translate human emotions, and I tried to use code to turn people’s facial expressions into visual responses. However, through testing, I found that the system could not recognise people’s emotions very accurately, and a facial expression alone could not really explain what someone was feeling.

This led me to a new question: **when digital technology tries to translate human emotion, do some of the more subtle and complex feelings become blurred, hidden, or even reduced?**

Through testing emotion-recognition code, I realised that digital systems cannot truly understand human feelings. Instead, they often blur or simplify emotions as they try to translate them. This led me to think about how, especially on social media, people’s real feelings may never be fully visible. For example, someone might be extremely angry but still send a smiling emoji in a message.

More subtle feelings, such as tiredness, awkwardness or shyness, are also difficult to fully express through existing digital signs and interface language. Because of this, I became interested in emotions that are hidden or flattened in digital communication, and in how the removal of “friction” can make these feelings harder to notice.

My project therefore asks how design might bring these blurred and overlooked emotions back into view?



So I tried using P5JS to see how to express emotions.



[START]

<https://sparkly-youtiao-82dd99.netlify.app>

↳ Discipline A, Discipline B, Various Credits

Projection1 Website link:

<https://di1206.cargo.site/>

GCD STUDIO link:

<https://gcd.studio/pages/di-zheng-9KO4izcRD>

I translated three emotions:

anger, fear, and tired