Coding as Creativity

Influences of software tools on contemporary design & visual culture

COD 208 - Week 03 Class →

🎨 HOW HAS SOFTWARE AFFECTED THE VISUAL ARTS & DESIGN?

🤹 WHAT IS THE POTENTIAL FOR SOFTWARE WITHIN THE VISUAL ARTS?

👨‍💻 AS A DESIGNER OR ARTIST, WHY WOULD I WANT OR NEED TO WRITE SOFTWARE?

Coding As Medium

Numerous prominent architects, designers, video game developers, and animators use software to bring their ideas to life. Custom programs are often commissioned to perfect their visions.

Jeff Koons

Koons' use of digital technology is in his "Easyfun-Ethereal" series, which features digitally rendered images of food and other consumer goods. Koons uses 3D modeling software to create the images, which are then printed onto canvas or other materials using a digital printing process.

Overall, while Jeff Koons is not a digital artist per se, he has embraced digital technology as a tool in the creation of some of his works, blurring the lines between traditional and digital art forms.

Takashi Murakami

Murakami is not typically considered a software artist, he has collaborated with software developers and designers to create interactive and digital artworks.

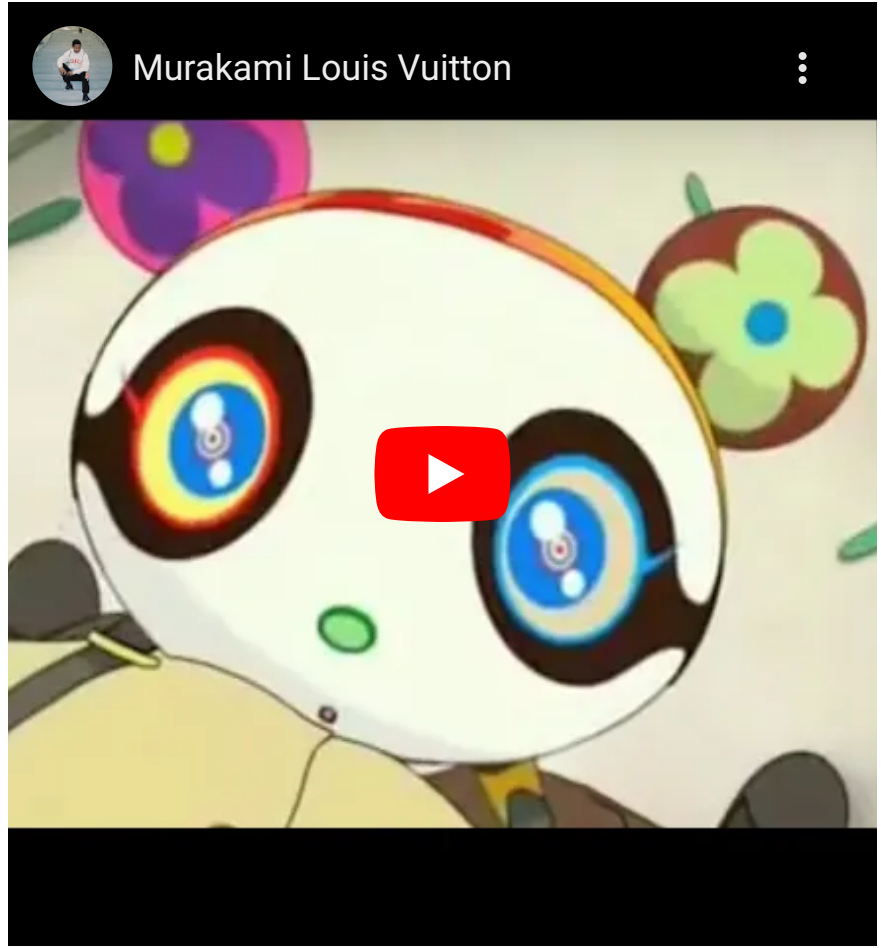
Murakami's use of software in his art is his collaboration with the Japanese video game company, Capcom. In 2012, Murakami worked with Capcom to design a video game called "Asura's Wrath," for which he created the game's final boss character and an ending sequence featuring his signature flower motifs.

Asura’s Wrath

Final boss at the Capcom’s game.

Superflat Monogram for Luis Vitton

One example of Takashi Murakami's digital artwork is "Superflat Monogram," which is a collaboration with Louis Vuitton. "Superflat Monogram" is a series of animated short films that feature Murakami's signature anime-inspired characters and motifs, alongside the iconic Louis Vuitton monogram pattern. The films were created using a combination of hand-drawn and computer animation techniques, and were originally shown as part of a larger installation at the Museum of Contemporary Art in Los Angeles in 2007.



Design, Art, Architecture

The form defined as visual and spatial structures.

Code

The code is defined by computer programs.

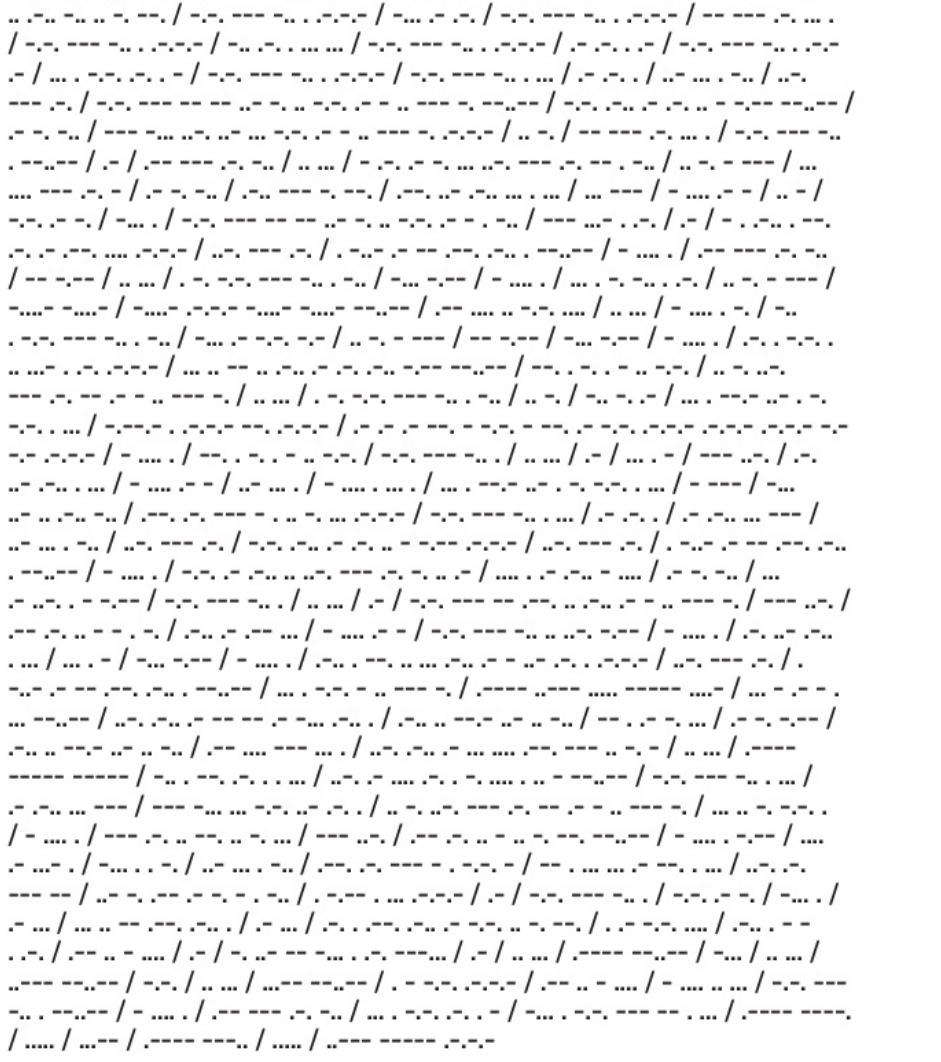
- P5JS
- openFrameWorks
- Touchdesigner
- MAX
- Sonic Pi

What is Code?

Codes typically serve three primary purposes. Namely; communication, clarification, or obfuscation.

- Morse Code → "-- -.–"
- DNA Code → "AAAGTCTGAC"
  (A: Adenine, G: Guanine, T: Thymine, C: Cysotine)
- Book ISBN → "988-29392" points to specific qualities of the printed material
- National Languages → "English, Turkish, German..."

In computer programming "coding" is a series of instructions written by the developer using a specific syntax of a programming language.



Morse code, 1840s

Algorithms

Determines how to do sequences of coded instructions.

🧶 How does knitting work?

🤔 Is knitting an algorithm?

Row 1: (RS) *K2, P2* across
Rows 2, 3, & 4: Repeat Row 1
Row 5: (RS) *K2, P2, C8F* Repeat to last 4 sts, K2, P2
Row 6: Repeat Row 1
Repeat rows 1-6 for desired length, ending with row 4
Bind off in K2, P2 pattern

Hiking Directions to Point Break

From the North:
- Follow the trail from the Nature Center
- Turn right at the Water Tower, walk until you see the Old Oak Tree
- Follow directions from the Old Oak Tree

From the South:
- From the Pinic Grove, follow the Botany Trail
- Turn right on the South Meadow Trail
- Turn right on the Meadow Ranch Trail, walk until you see the Old Oak Tree
- Follow directions from the Old Oak Tree

From the Old Oak Tree:
- Follow the path under the tree
- Turn right onto the Long Hill Trail
- Follow the trail until you reach Point Break

Qualities of an Algorithm

1. 🏞️ [MULTIPLENESS] There is not just single way to create an algorithm.
2. 🤔 [ASSUMPTIONS] There must be determined conditions.
3. 👉 [DECISIONS] An algorithm includes decisions.
4. 🧹 [MODULAR] Algorithms should be broken down into modular pieces.

Computers & Code

Writing in a human language allows the author to utilize the ambiguity of words and to have great flexibility in constructing phrases. These techniques allow multiple interpretations of a single text and give each author a unique voice. Each computer program also reveals the style of its author, but there is far less room for ambiguity.[1]

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1. Casey Reas and Ben Fry, Processing: A Programming Handbook for Visual Designers and Artists (Cambridge, MA: MIT Press, 2007), 17. ↩️

human-readable format → machine code (binaries, executables) → SOFTWARE

```
0001 0001 0000 1001 0000 0001 0000
1110 0000 1001 1100 1101 0000 0101
0000 0000 1100 1001 0100 1000 0110
0101 0110 1100 0110 1100 0110 1111
0010 0001 0010 0100
```

0s and 1s is the lowest level. Each **bit** (1, 0) is grouped into **bytes**