

The blacksmith and the software

Rocco Modugno & Andrea Maffei

Web development by Michele Maffei

Wud Bolzano-Bozen

Emerging technologies
and human experience

07/11/25 | Noi Techpark



[Géorgie]. 30, Signakh, boutique de forgeron / [mission baron de Baye] ; [photogr. baron de Baye] ; [photogr. reprodu. par Molteni ? pour une conférence donnée par le baron de Baye]
Baye, Joseph de (1853-1931). Chef de la mission. Photographe présumé. Auteur de la conférence

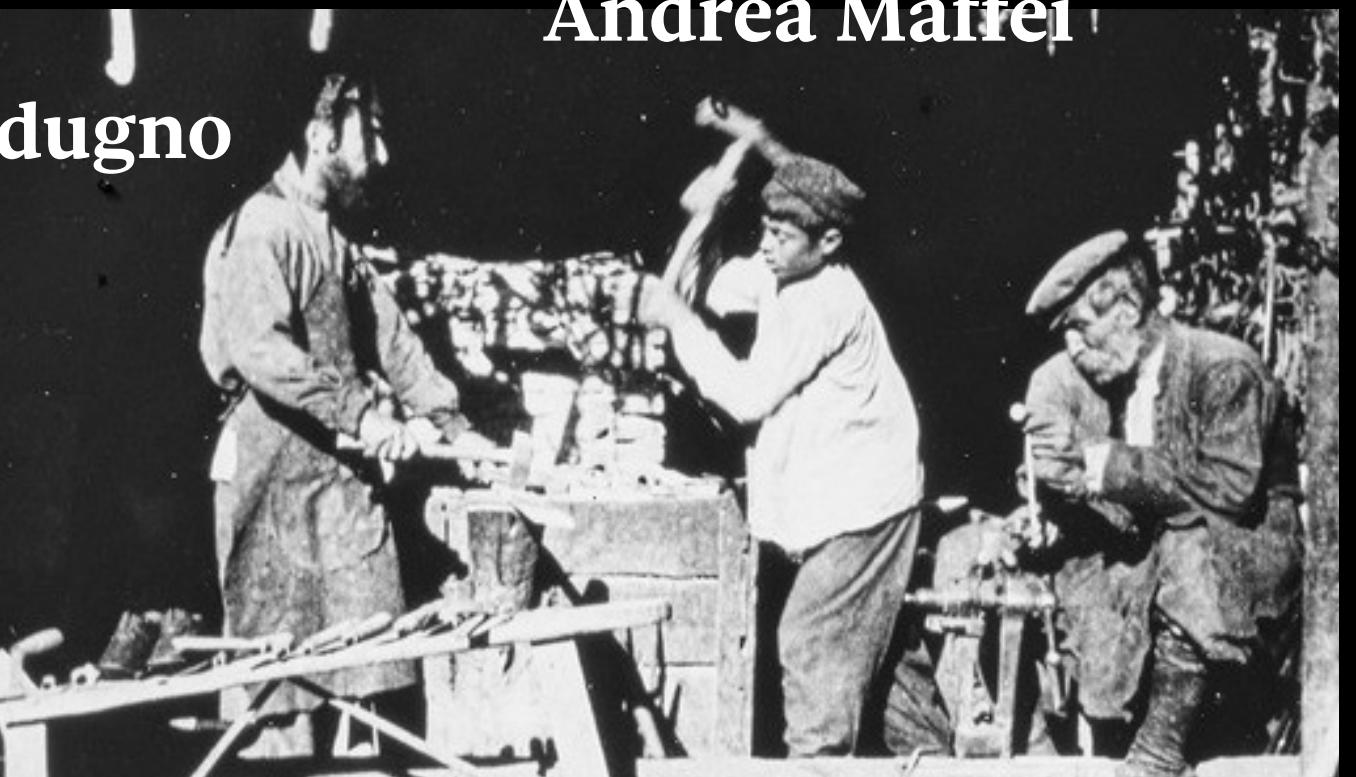
The blacksmith and the software

When the blacksmith uses a hammer to craft a knife, he is essentially using a pre-existing tool to create a new one with a different purpose.

Like the blacksmith, nowadays we can use a large language model to write software for a wide range of needs: this practice is called vibe coding.

Programming has never been so accessible to anyone, regardless of their technical background.

In this practice-based workshop, we will discuss and explore this practice for creative coding, introducing some key concepts, good practices, and warnings about vibe coding.



Rocco Modugno

Andrea Maffei

Michele Maffei

Plan for today

Mapping skills

Short introduction

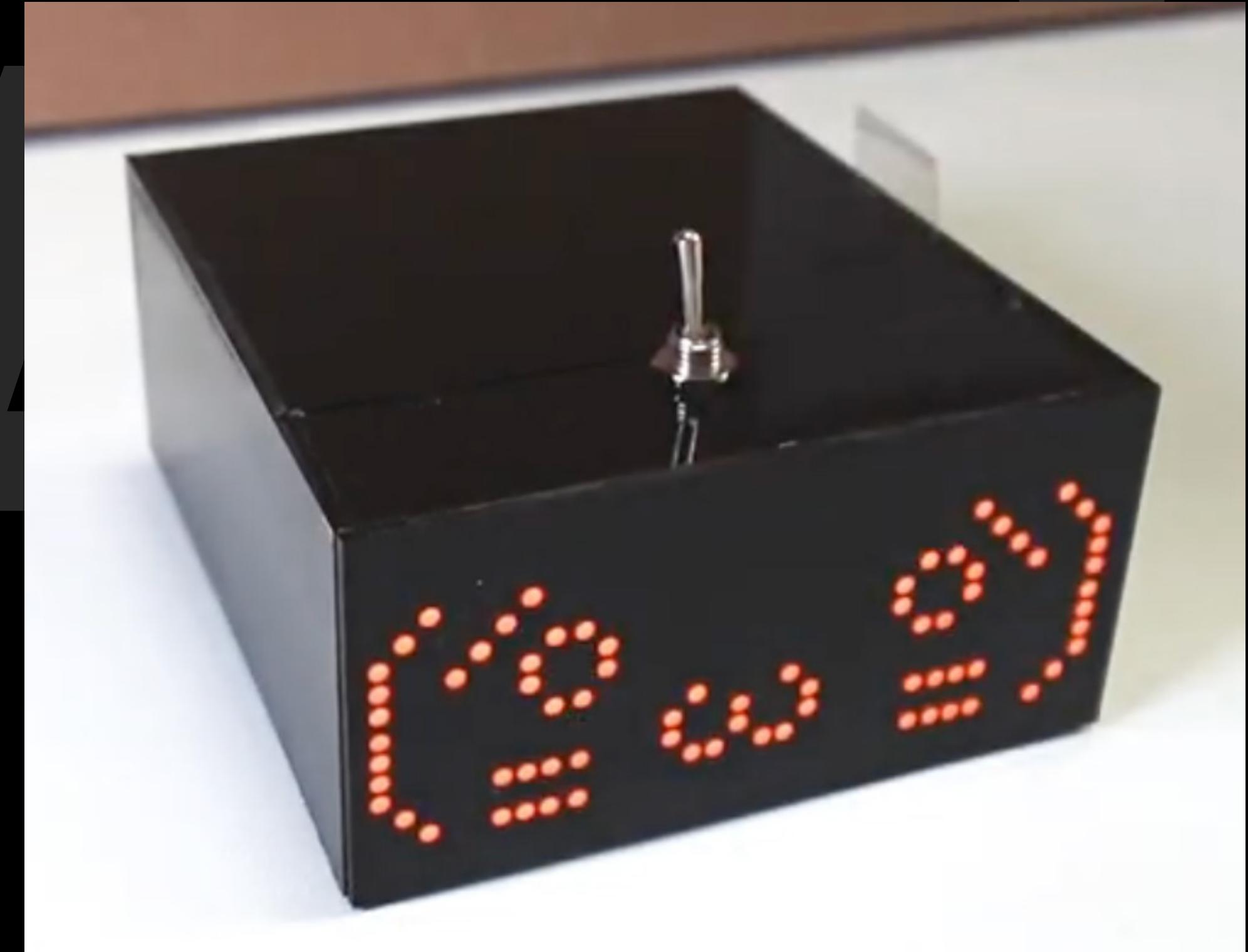
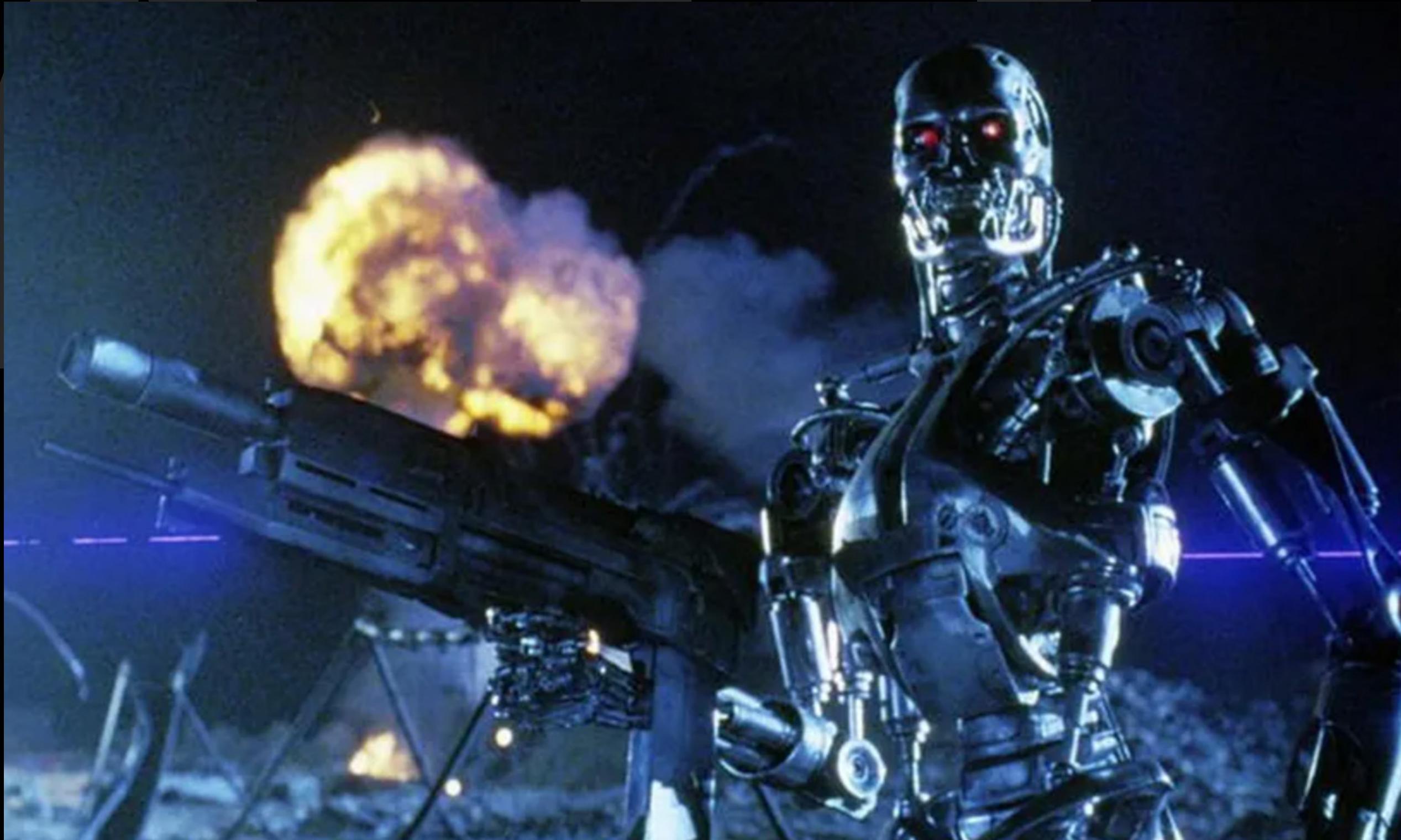
Practicing

Collecting

Discussing

ATL! ATL! ATL!

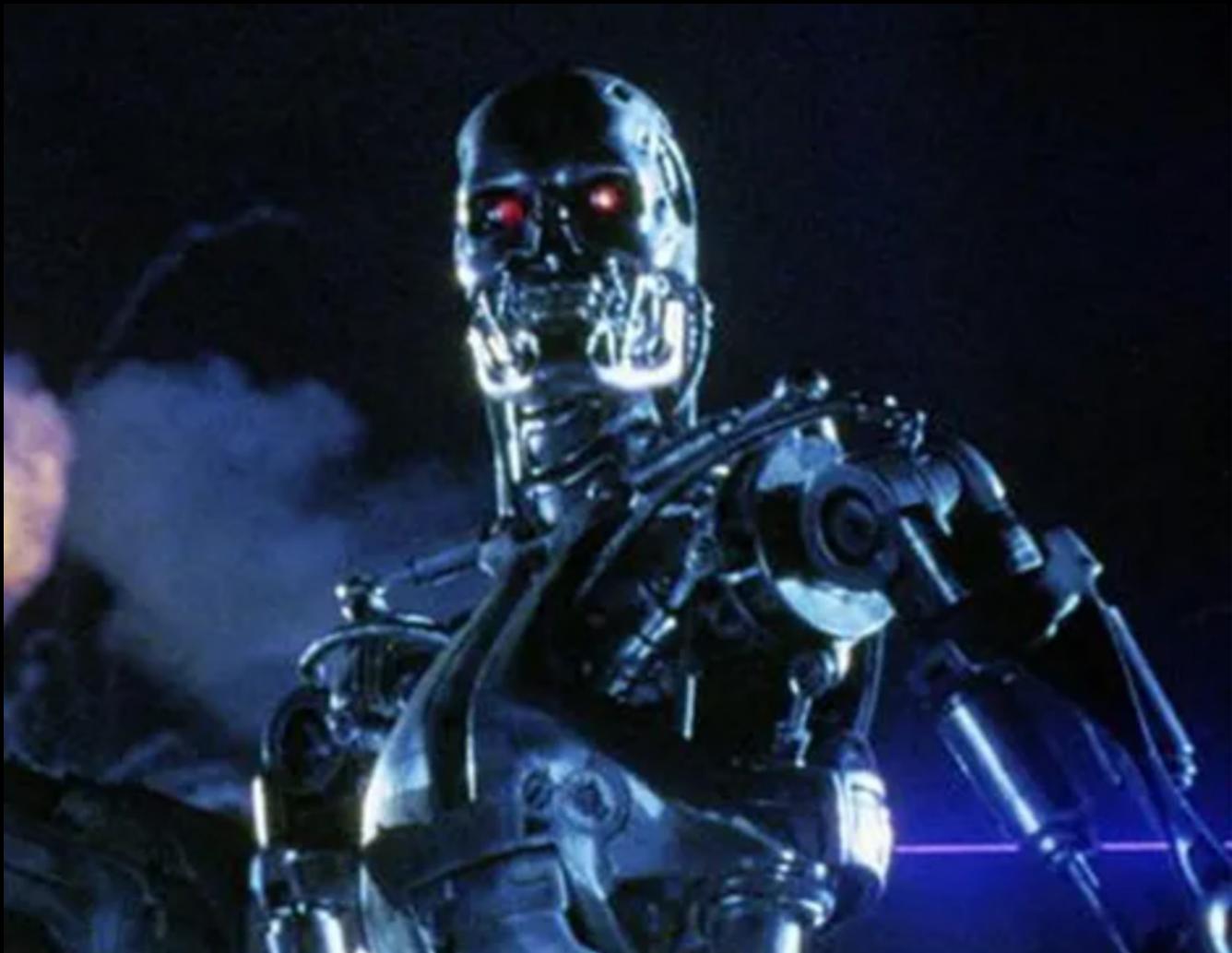
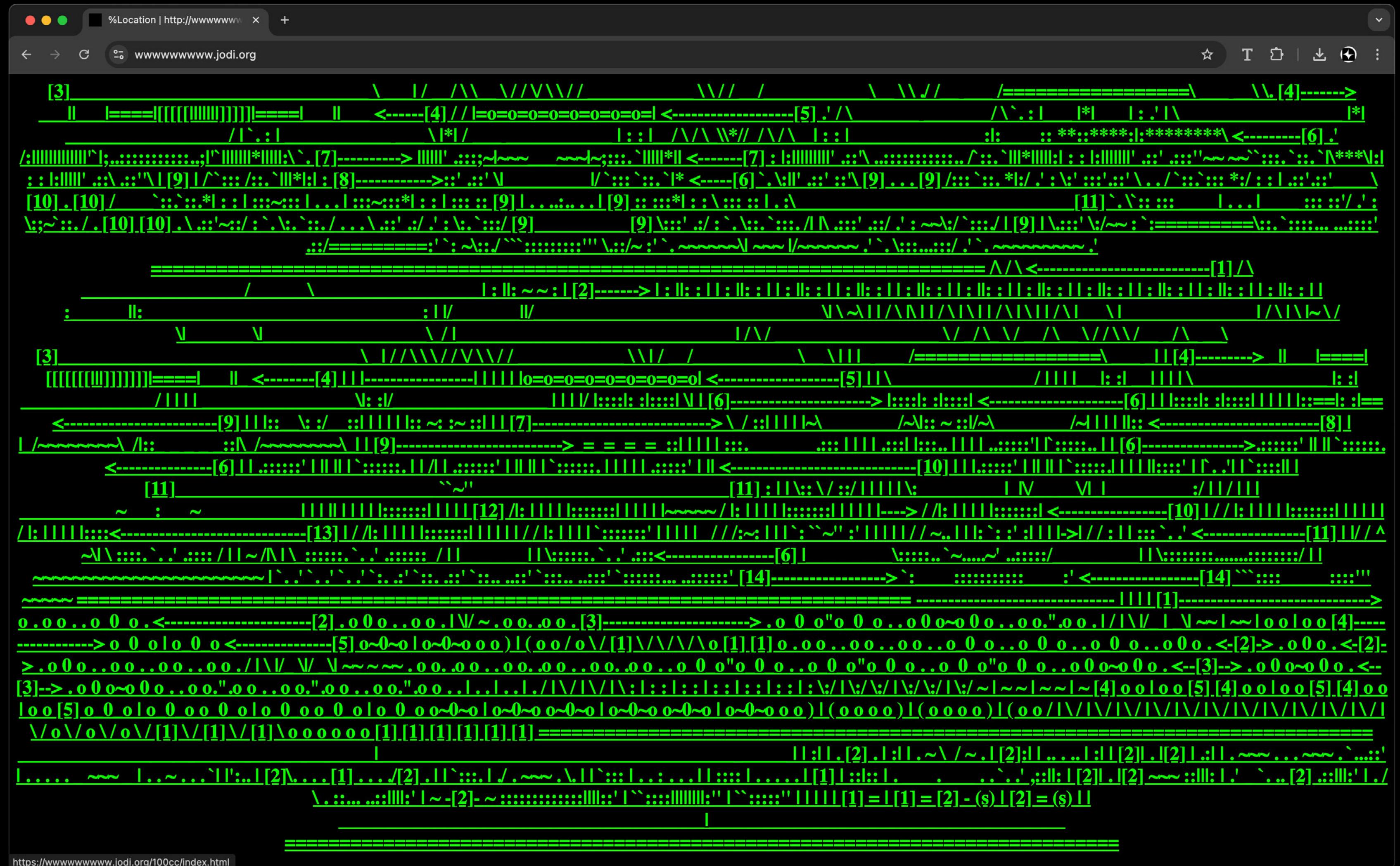
Terminator and the useless machine



[https://www.youtube.com/
watch?v=138ngzytmJw](https://www.youtube.com/watch?v=138ngzytmJw)

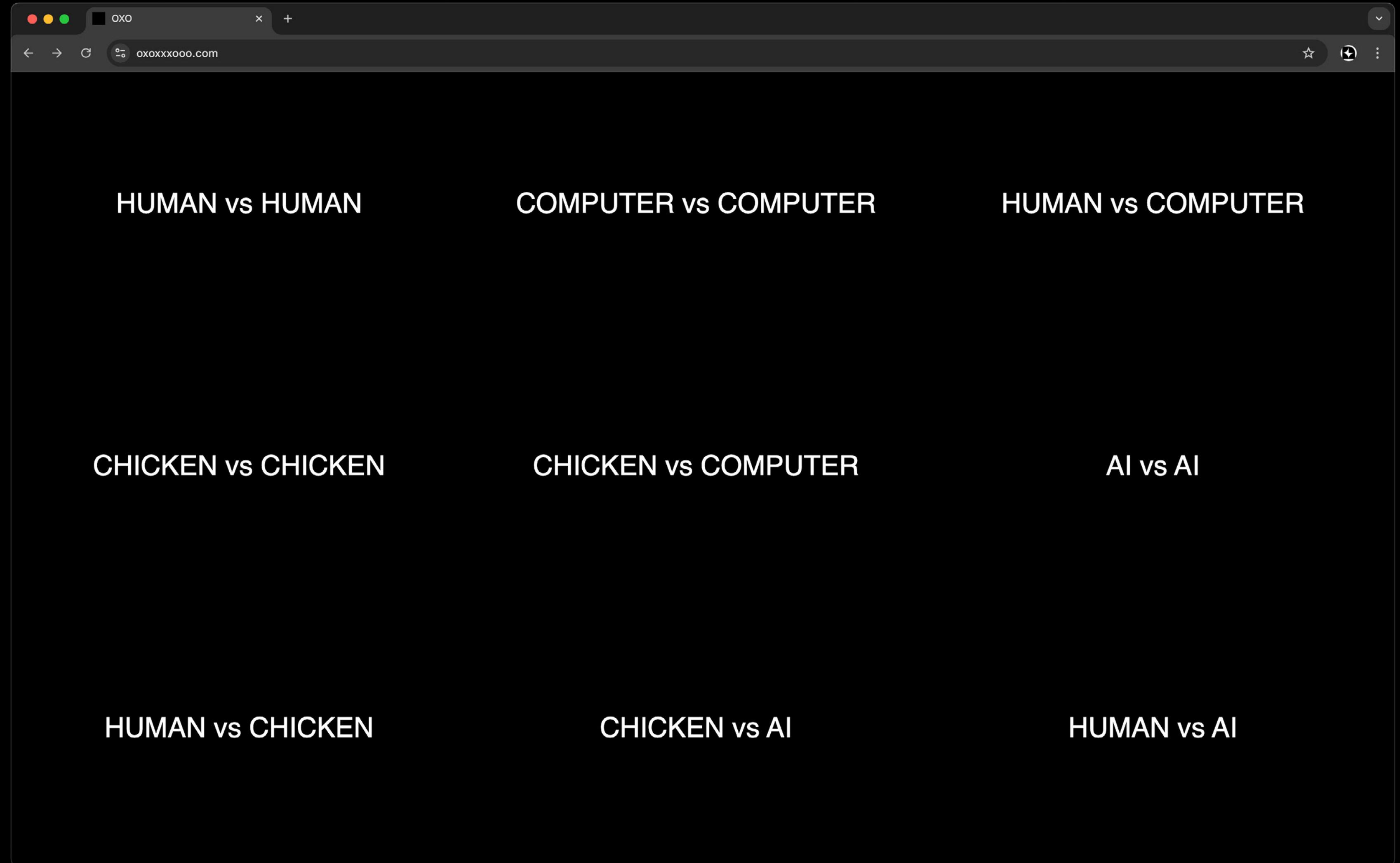
Terminator and the useless machine

1995 Jodi

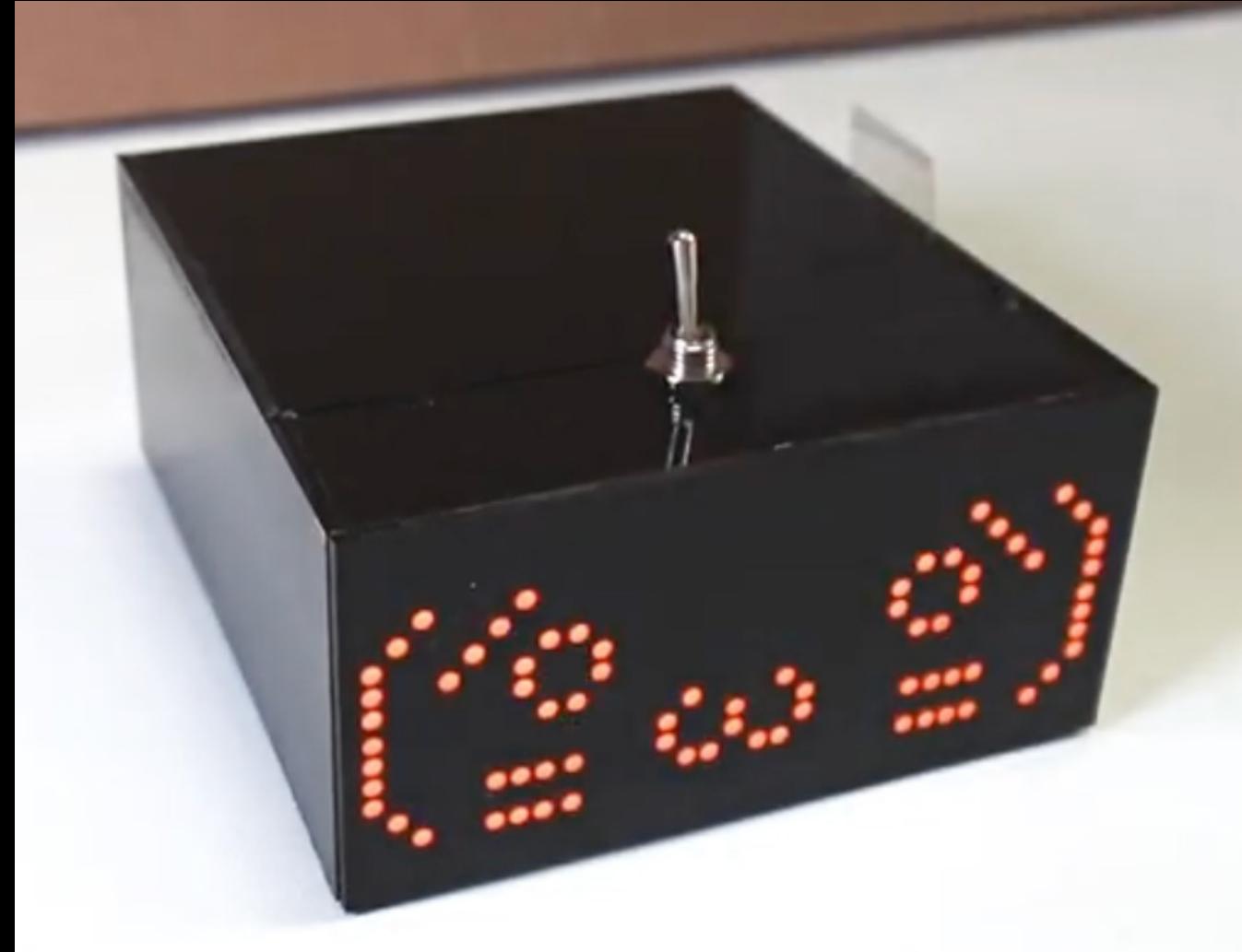


Terminator and the useless machine

2018



<https://oxoxxxxoo.com/>



The hottest programming language

```
function setup() {
```

```
)  
)\_/  
\(_)/
```

```
why  
}
```

```
function draw() {
```

```
)      ((    ()  
(      ))   )  
)      //   ()  
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[ // : | _,-~__<`_) - ~-->> <  
[ // : | - _ ~ _ o) __)) , _ - ' > >- >  
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| | | / | | | | / | I == | | ( _____ ( _____ )  
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~~~~~,
```

```
oo1  
}
```

The hottest programming language

023

2

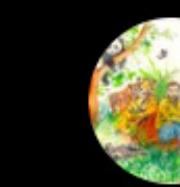
```
function setup() {
```

)) \ / (\(_)/

Wny
}

```
function draw() {
```

Ool
}



 **Andrej Karpathy** 
@karpathy

The hottest new programming language is English

Traduci pos

9:14 PM · 24 gen 2023 · **8,6 Mln** visualizzazioni

Q 1.39

↑↓ 7.905

49.894

4.827

↑

 Leggi 1.391 risposte

Andrej Karpathy, an early member of OpenAI and former Director of Artificial Intelligence and Autopilot Vision at Tesla

The hottest programming language

2025

function setup() {

Vibe coding describes
a chatbot-based approach to creating software
where

\(\) /
the developer

describes a project or task
to a large language model (LLM),
which

generates code based on the prompt.

The developer

does not review or edit the code,
but solely uses tools and execution results to evaluate it
and asks the LLM for improvements.

Unlike traditional AI-assisted coding or pair programming,

the human developer

- avoids examination of the code,
- accepts AI-suggested completions without human review,
- and focuses more on iterative experimentation
than code correctness or structure.



Andrej Karpathy ✅
@karpathy

The hottest new programming language is English

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Leggi 1.391 risposte

Advocates of vibe coding say that

it allows even amateur programmers
to produce software without the extensive training
and skills required for software engineering.

Critics point out

- a lack of accountability,
- maintainability,
- and the increased risk of introducing security
vulnerabilities in the resulting software.

The hottest programming language

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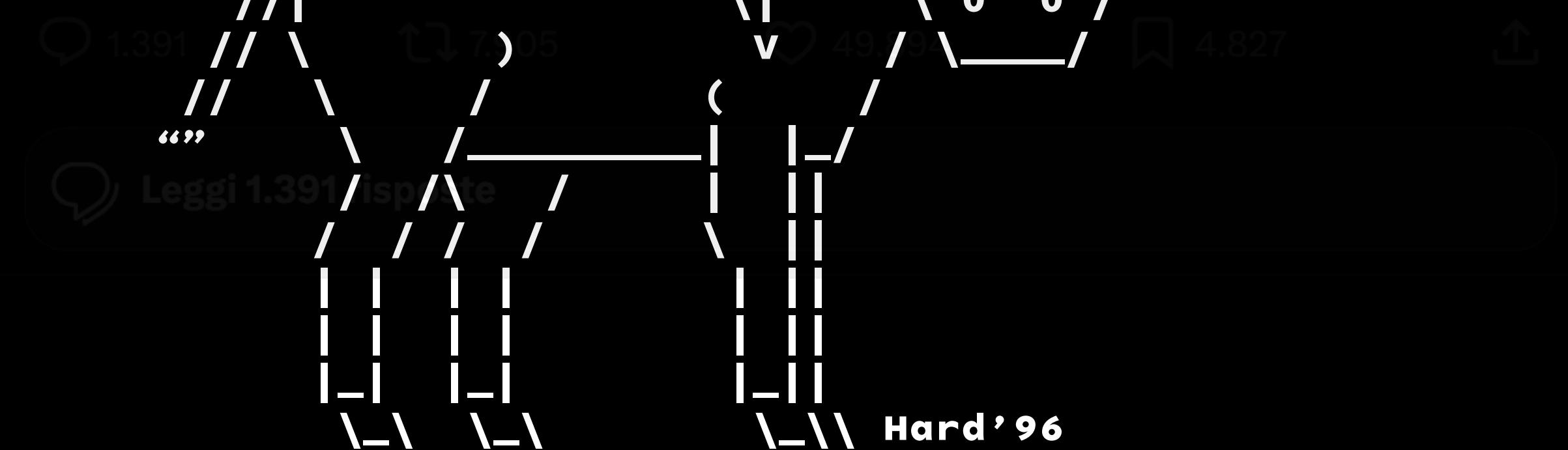
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Algorithmic thinking – Humanlike robots and robotlike humans

“Can you turn on the light, please?”

```
IF light == off  
THEN turn_on_light
```

Natural Language

Subject to interpretation
and intended for other human beings

Programming Language

Has a single, unambiguous meaning
and is intended for the machine

Algorithmic thinking – Humanlike robots and robotlike humans

*“The use of tools
and the repetition of sequences of instructions
transformed our ancestors’ hands
and eventually made them human”*

From ancient applied arts
to contemporary computing,
cultures have always had a strong bond with algorithms
since their earliest forms.

The algorithmic approach was first defined
much earlier than computers

as a sequence of repeated operations and instructions
performed by humans or machines



Dàmaso Rundulfe, *Dixit Algorizmi,
the garden of knowledge*, 2022.

Paraphrased from Space Caviar and Sheida Ghomashchi,
“Curator’s statement” from “Dixit Algorizmi,
the garden of knowledge”, 2022.

Penelope on the loom,
drawing from a vase

Algorithmic thinking – Humanlike robots and robotlike humans



John William Waterhouse,
Penelope and the Suitors (1912)

*“So by day she'd weave at her great and growing web –
by night, by the light of torches set beside her,
she would unravel all she'd done. Three whole years
she deceived us blind, seduced us with this scheme.”*

Homer, The Odyssey,
Book 2, lines 115-118.



```
WHILE Ulysses == away
    weave_cloth(day)
    IF night
        unravel_cloth()
    END IF
END WHILE
```

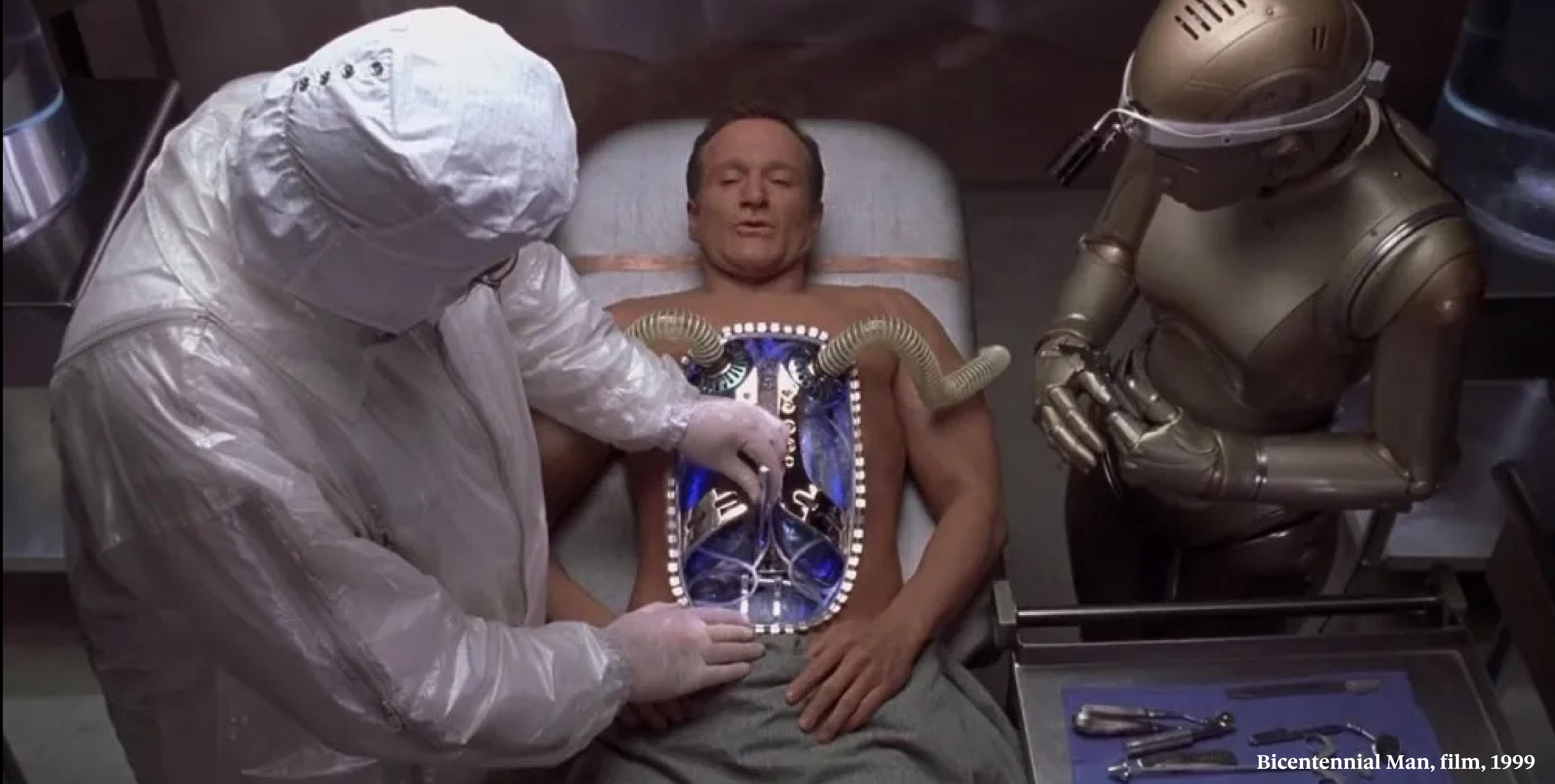


Algorithmic thinking - Humanlike robots and robotlike humans



```
IF light == green  
    THEN go()  
  
ELSE IF light == yellow  
    THEN slow_down()  
  
ELSE IF light == red  
    THEN stop()  
  
END IF
```

Algorithmic thinking – Humanlike robots and robotlike humans



Bicentennial Man, film, 1999

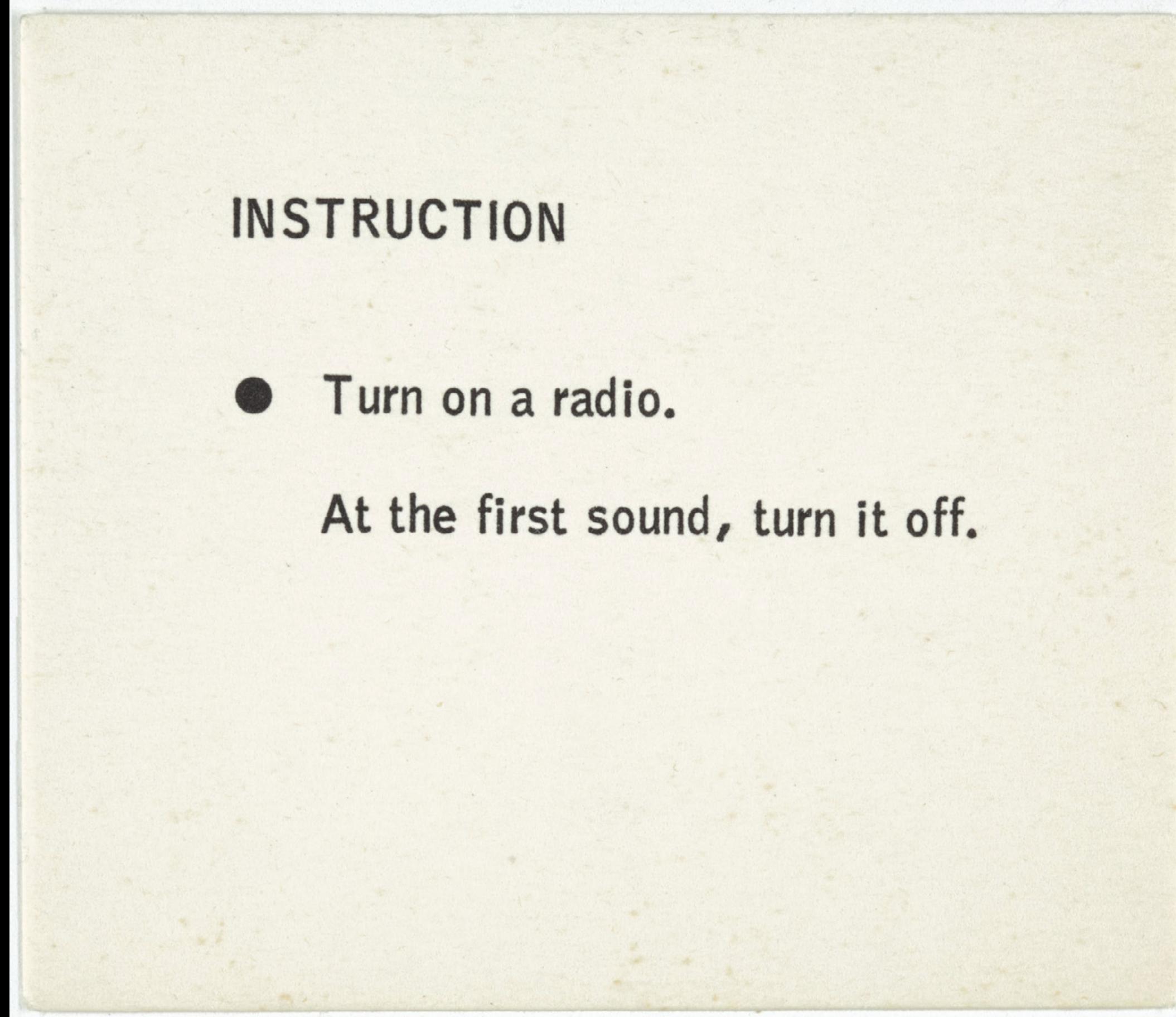
Algorithmic thinking – Humanlike robots and robotlike humans

The screenshot shows the p5.js Reference page with a dark theme. The left sidebar includes links for Reference, Tutorials, Examples, Contribute, Community, and About, along with buttons for Start Coding and Donate. A 'Jump to' dropdown menu lists categories like Shape, Color, Typography, Image, Transform, Environment, 3D, and Rendering. The main content area is titled 'Foundation' and contains a grid of terms:

| | | | |
|---|---|---|--|
| class A template for creating objects of a particular type. | console Prints a message to the web browser's console. | for A way to repeat a block of code when the number of iterations is known. | function A named group of statements. |
| if A way to choose whether to run a block of code. | let Declares a new variable. | Array A list that keeps several pieces of data in order. | Boolean A value that's either true or false. |
| Number A number that can be positive, negative, or zero. | Object A container for data that's stored as key-value pairs. | String A sequence of text characters. | while A way to repeat a block of code. |

The bottom navigation bar is highlighted in yellow and includes links for p5.js, Resources, Information, and Socials, along with links for Download, Contact, Copyright, Privacy Policy, Terms of Use, GitHub, Instagram, X, YouTube, Discord, and Forum.

Algorithmic thinking - Humanlike robots and robotlike humans



```
turn_on(radio)  
WAIT UNTIL sound_detected(radio)  
turn_off(radio)
```

Algorithmic thinking – Humanlike robots and robotlike humans

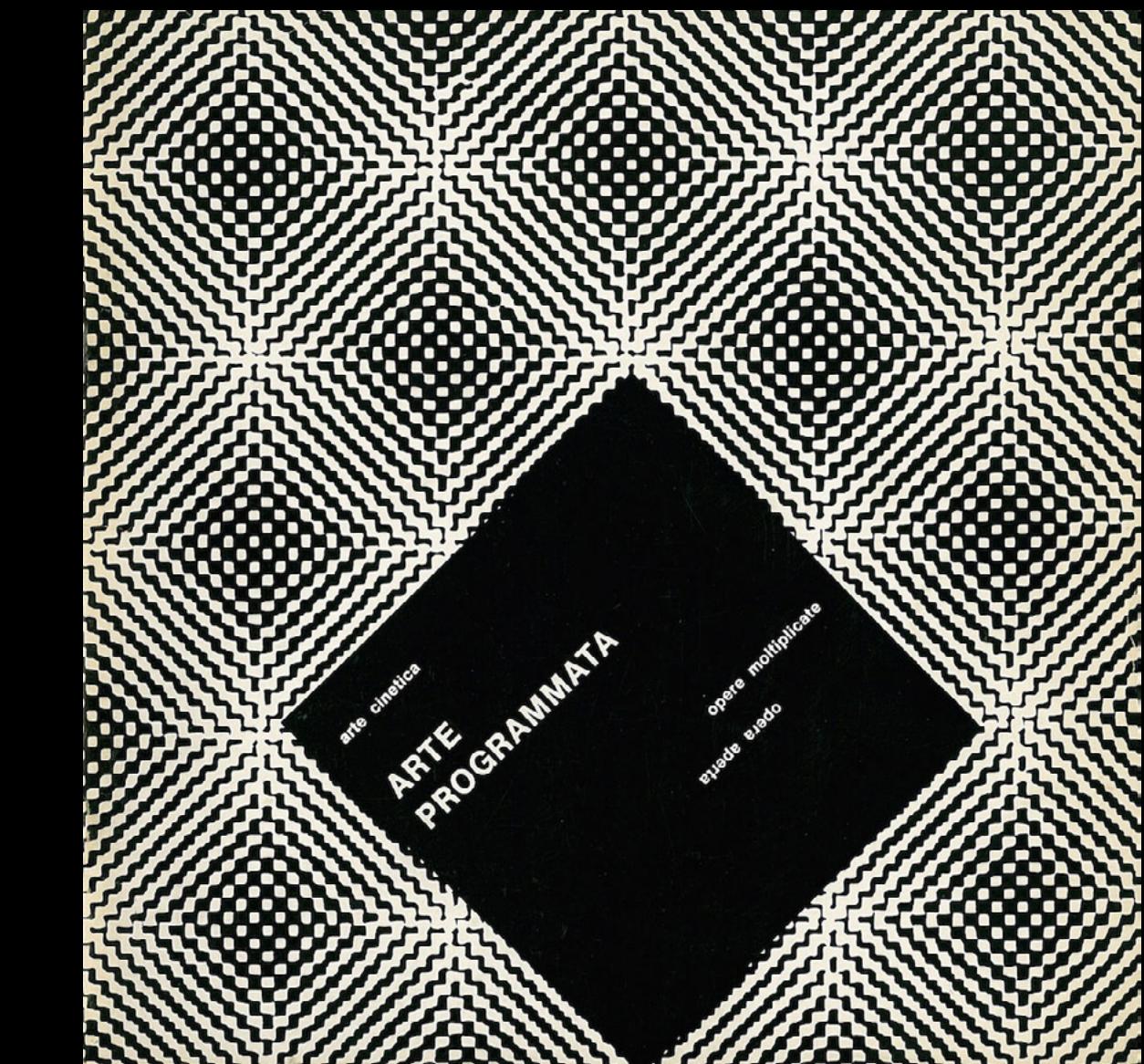
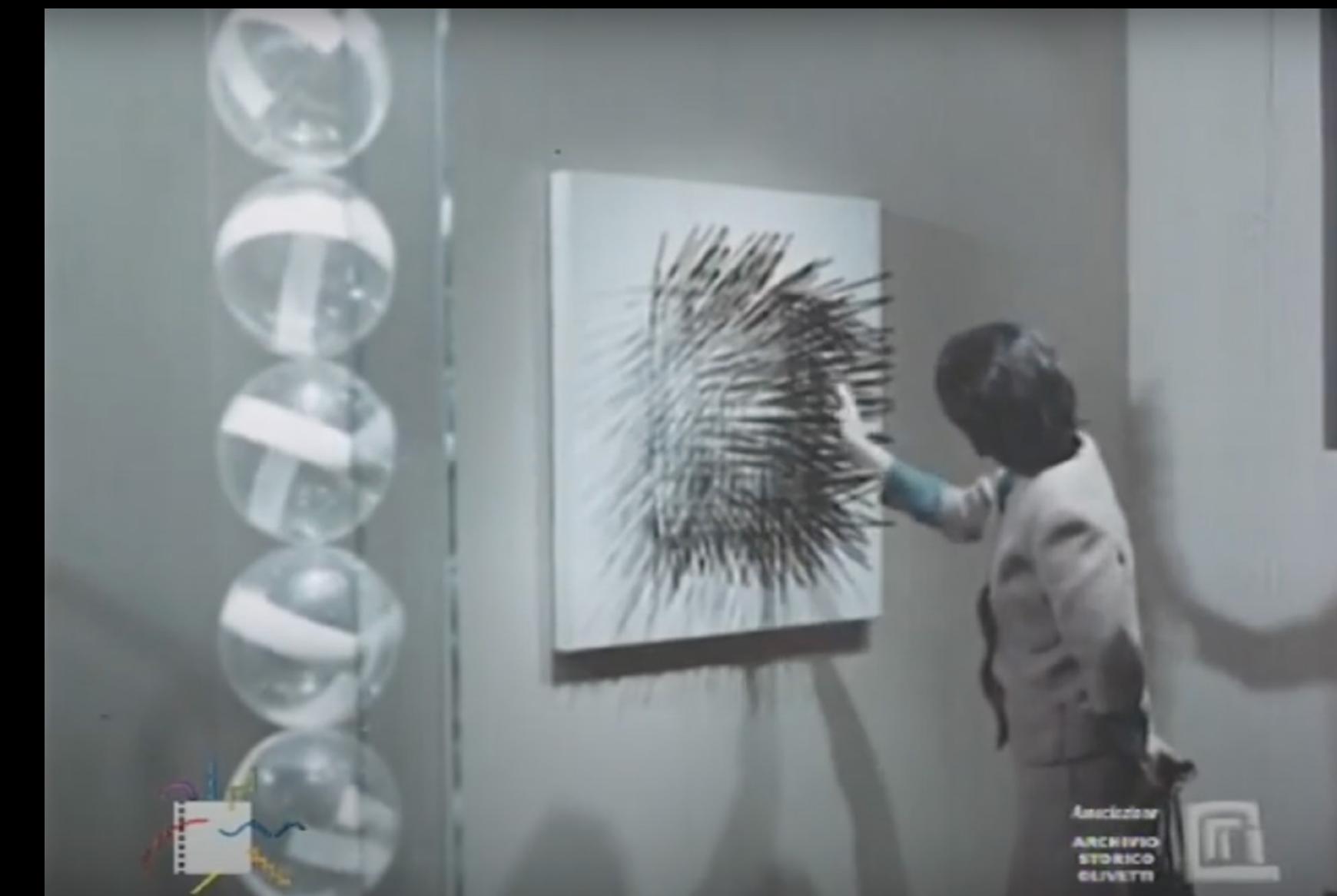
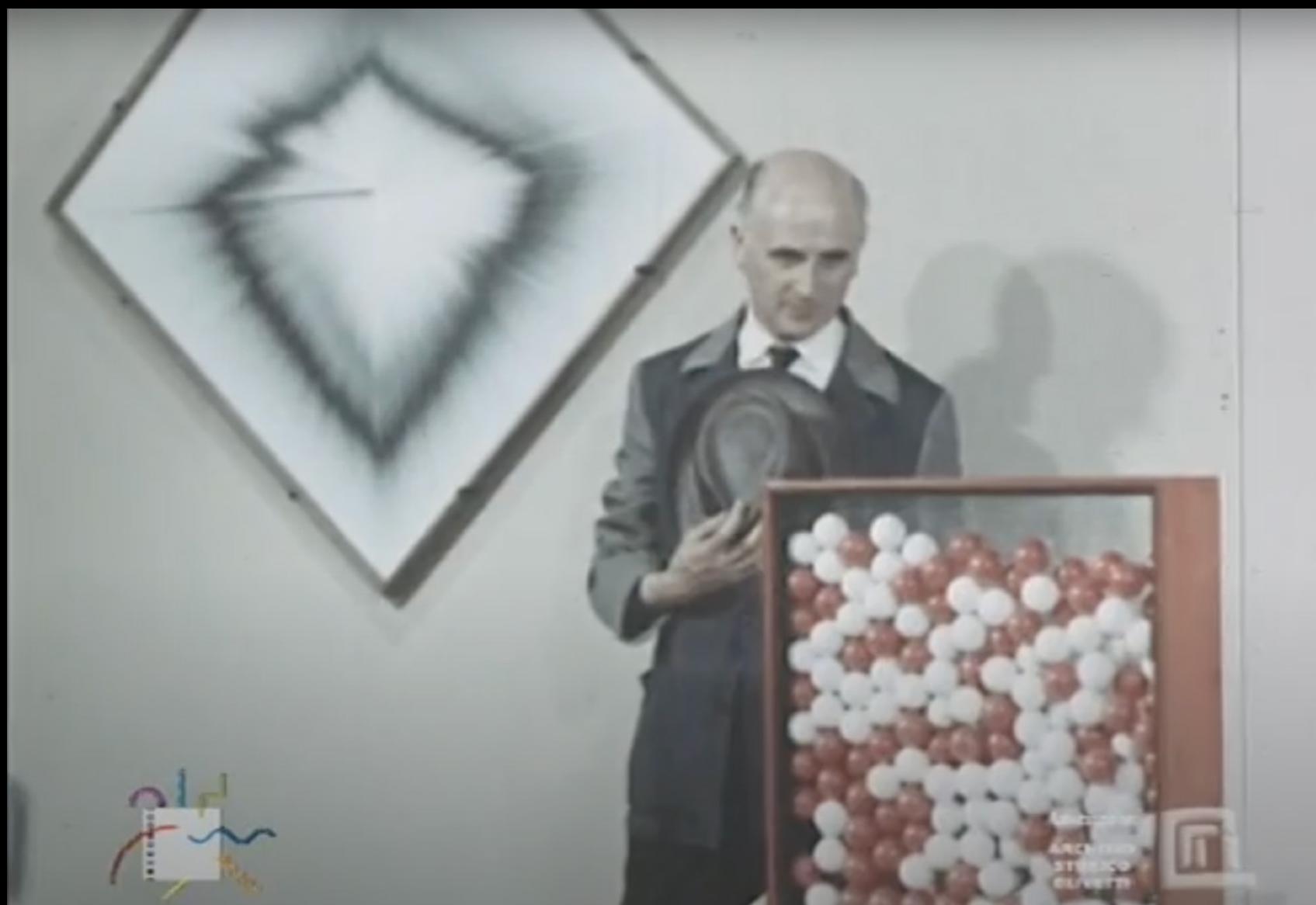


```
PREPARE stones  
FOR each stone  
THROW stone into pond  
WAIT until ripples appear  
  
OBSERVE ripples  
IF ripples == square THEN  
    END  
ELSE  
    REPEAT  
END IF  
END FOR
```

Tentativo di formare dei quadrati invece che dei cerchi attorno a un sasso che cade nell'acqua
Gino de Dominicis, 1968.

Algorithmic thinking – Humanlike robots and robotlike humans

Arte Programmata
1962



Frames from a video
of the exhibition
“Arte programmata”

“Arte programmata. Arte cinetica
opere moltiplicate, opera aperta.”
Copertina del catalogo della mostra

Bruno Munari, Giorgio Soavi,
Umberto Eco

Algorithmic thinking - Humanlike robots and robotlike humans

PREPARAZIONE

COME PREPARARE LA PASTA CON LE SARDE



Per realizzare la pasta con le sarde, per prima cosa pulite il finocchietto selvatico eliminando le parti più coriacee dei gambi 1. In una pentola portate a bollire 3 litri di acqua, poi aggiungete il finocchietto e fatelo bollire per 3-4 minuti se tenero, oppure 10-12 minuti se tardivo 2. Scolate il finocchietto 3 e tenete l'acqua di cottura da parte.



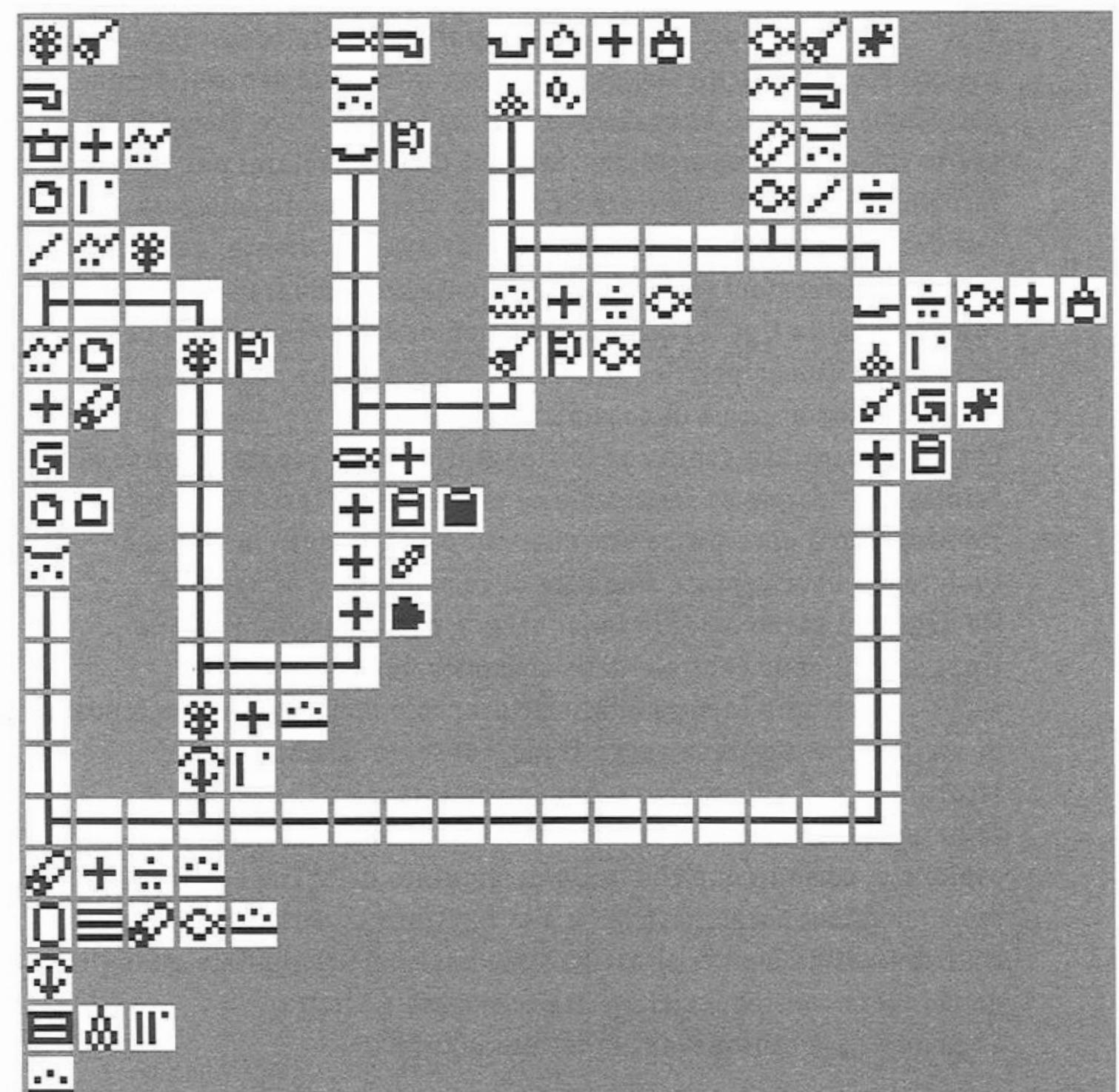
Trasferite il finocchietto in un colino e schiacciatelo per eliminare l'acqua in eccesso 4. Aggiungete il liquido ottenuto all'acqua di cottura tenuta da parte 5. Infine tritate il finocchietto 6.



Preparate l'acqua allo zafferano: tostate i pistilli di zafferano in un pentolino per un paio di minuti 7, poi sfumate con l'acqua 8 e portate a bollore 9. Quando comincerà a bollire, spegnete il fuoco e lasciate riposare per 15-20 minuti.

| | | | | |
|----------------|----------|---------------|--------------|------------------|
| ✿ finocchietti | ▲ sugo | □ bollire | ≡ a strati | ◀ padella |
| ✿ acqua salata | ■ sale | ✗ dividere | ❖ stufare | □ pirofila |
| ✿ pasta | ■ pepe | ✗ scolare | ❖ servire | ■ forno |
| ✿ acciughe | ■ pinoli | ■ mescolare | ■ pentola | ÷ metà |
| ✿ cipolle | ■ uvetta | ■ tritare | ■ padellino | 10 minuti |
| ✿ olio | ✿ pulire | ✿ fuoco lento | ■ casseruola | 20 minuti |
| ✿ sarde | ■ lavare | ✿ non rompere | ✿ canovaccio | ○ all'imbiondire |
| ✿ soffritto | + unire | ✿ coprire | ✿ cucchiaio | □ al dente |

Duccio lunari, Raffaele Preosti.



Giallozafferano.it

Giovanni Lussu,
La lettera uccide, 1999.

Let's start cooking!



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<https://wud-workshop.github.io/>