

# Artificial Aesthetics

Generative AI, Art and Visual Media



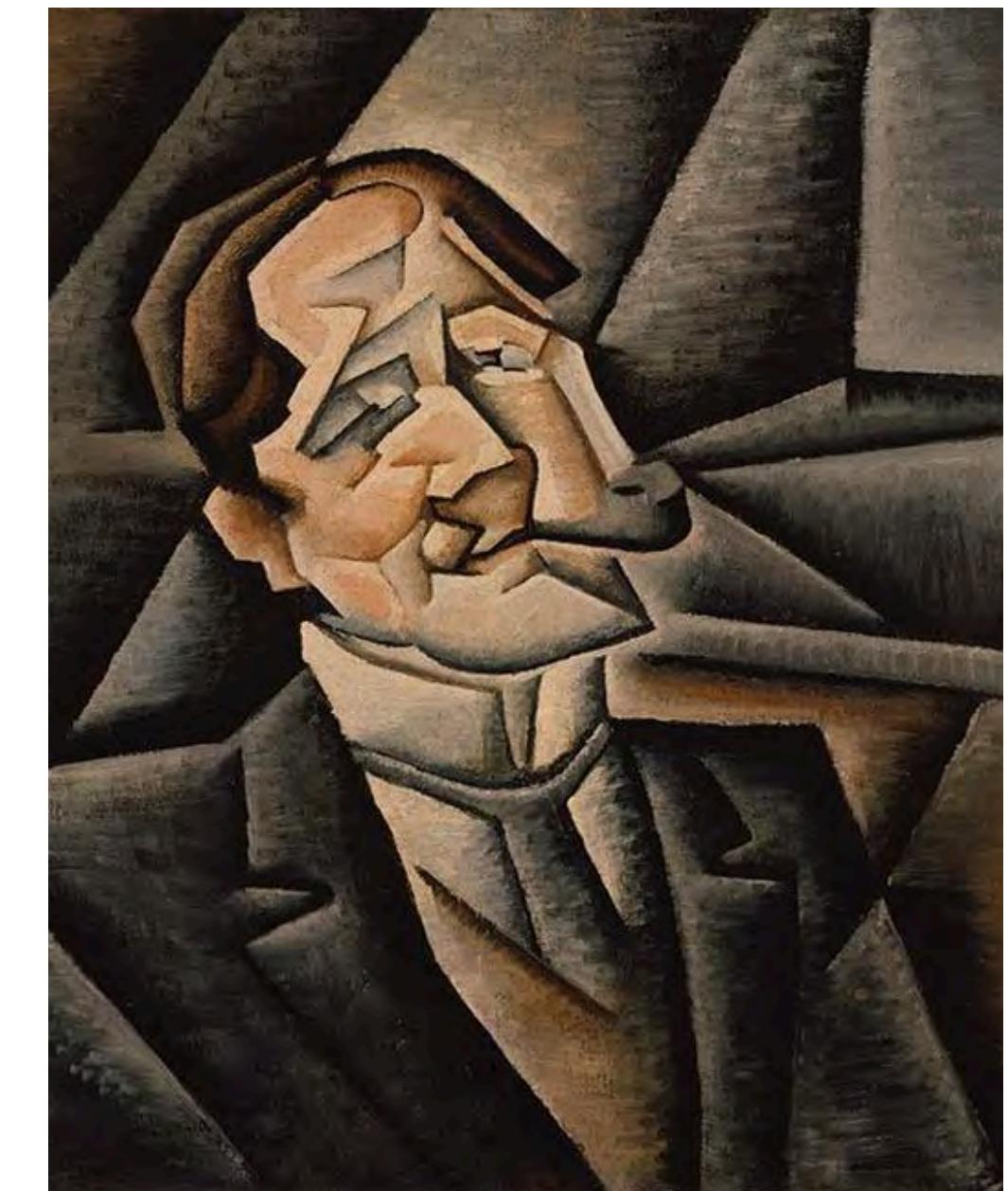
# Choose an Image



<https://kimkobloggt.wordpress.com/2021/07/06/die-geschichte-des-impressionismus/>

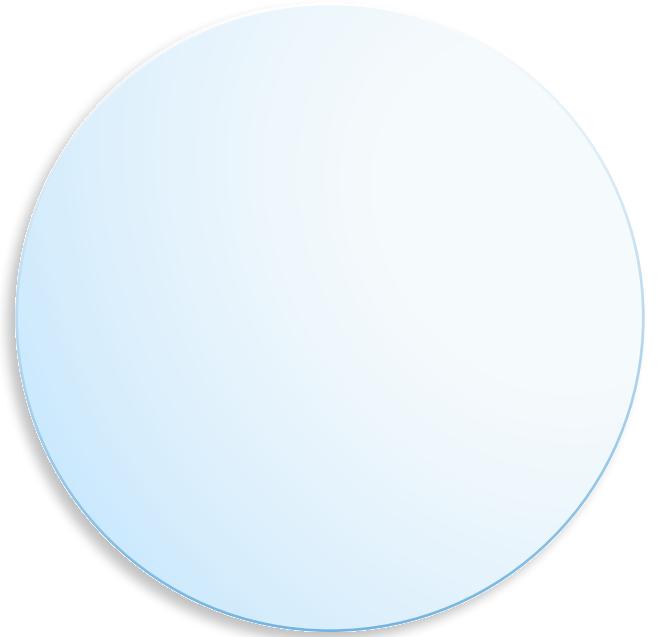


<https://www.kunstplaza.de/kunstepochen/barock-epochen-stil/>

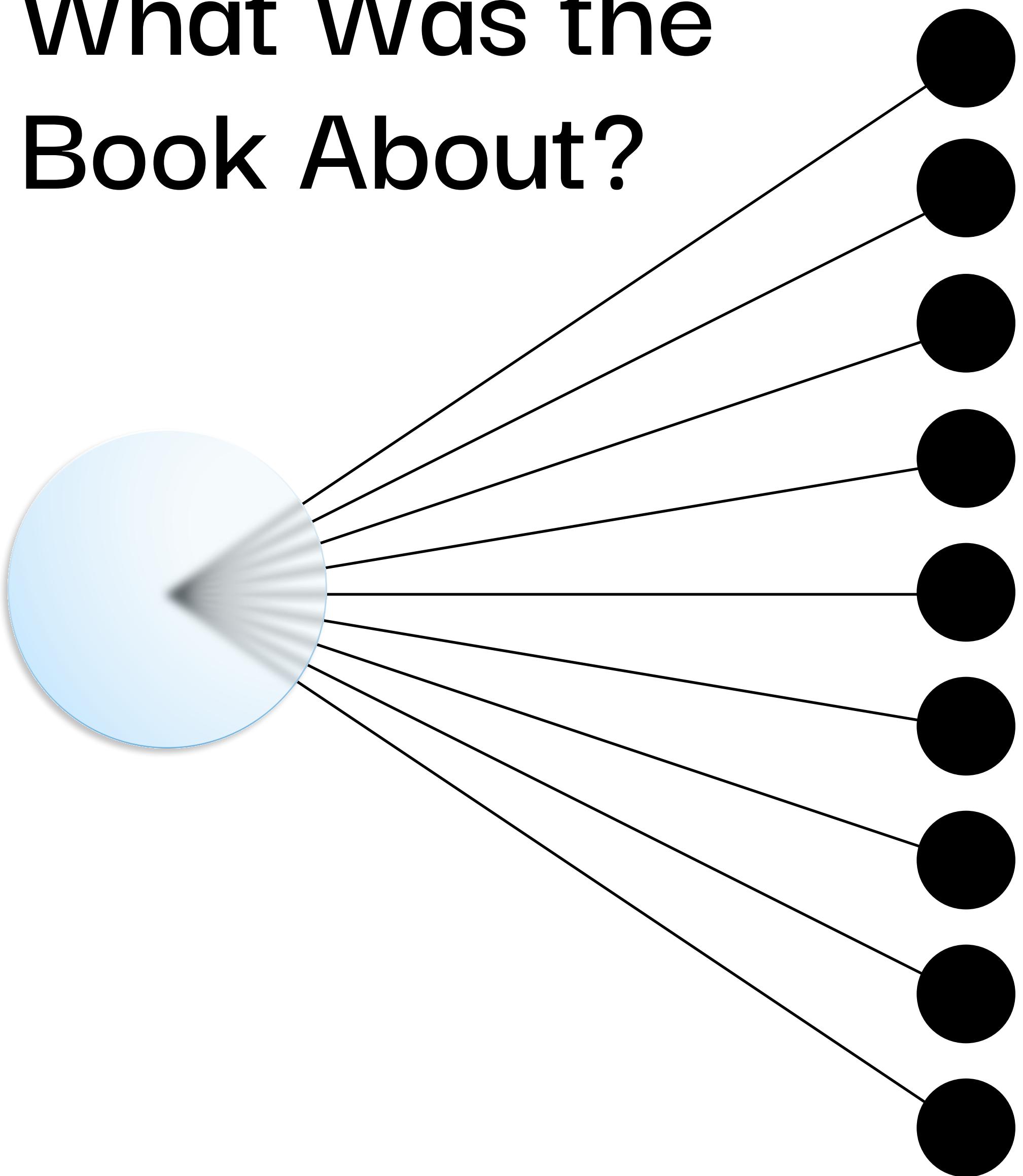


<https://malen-lernen.org/kubismus-geschichte-merkmale-bekannte-kuenstler/>

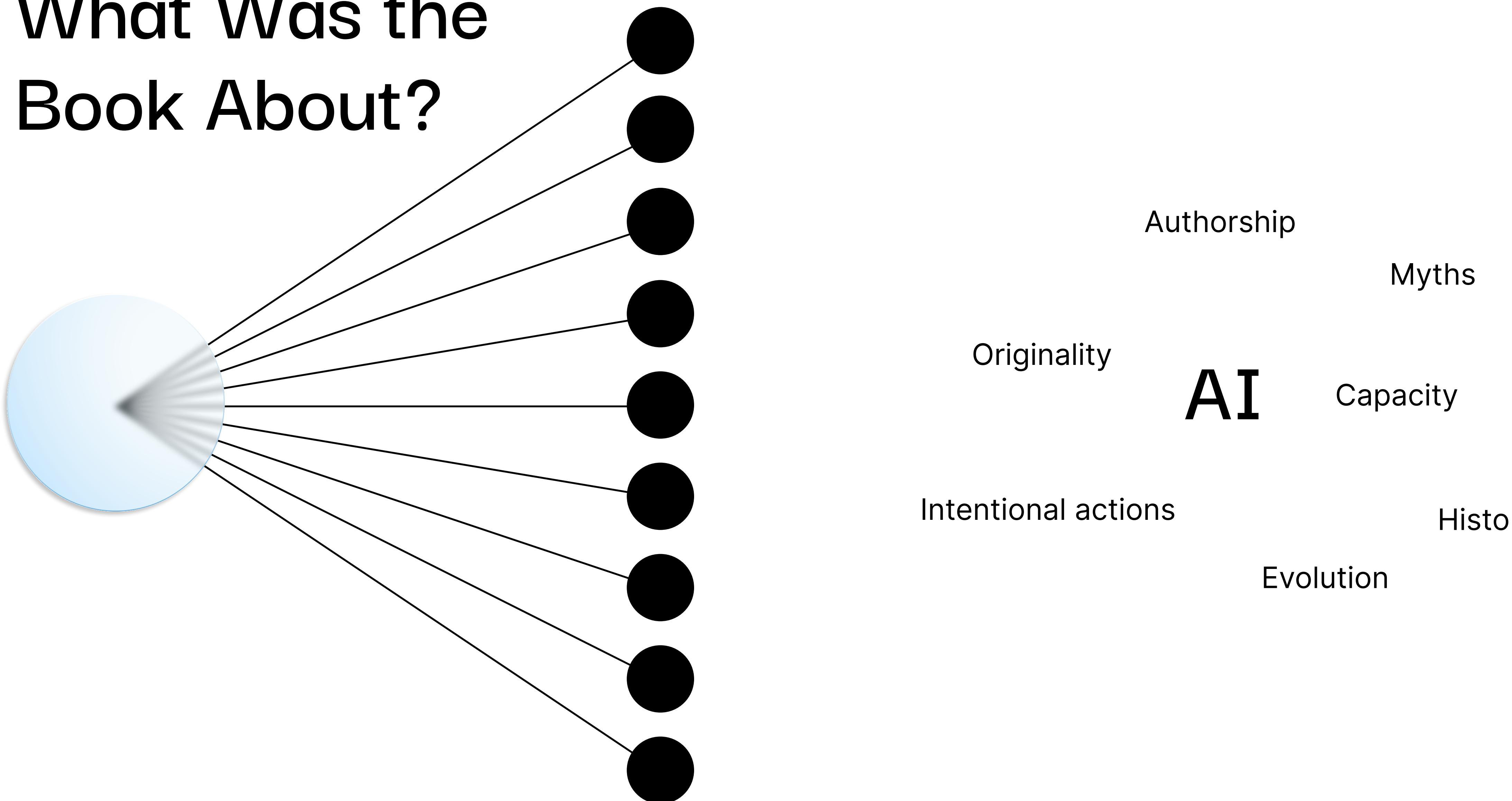
# What Was the Book About?



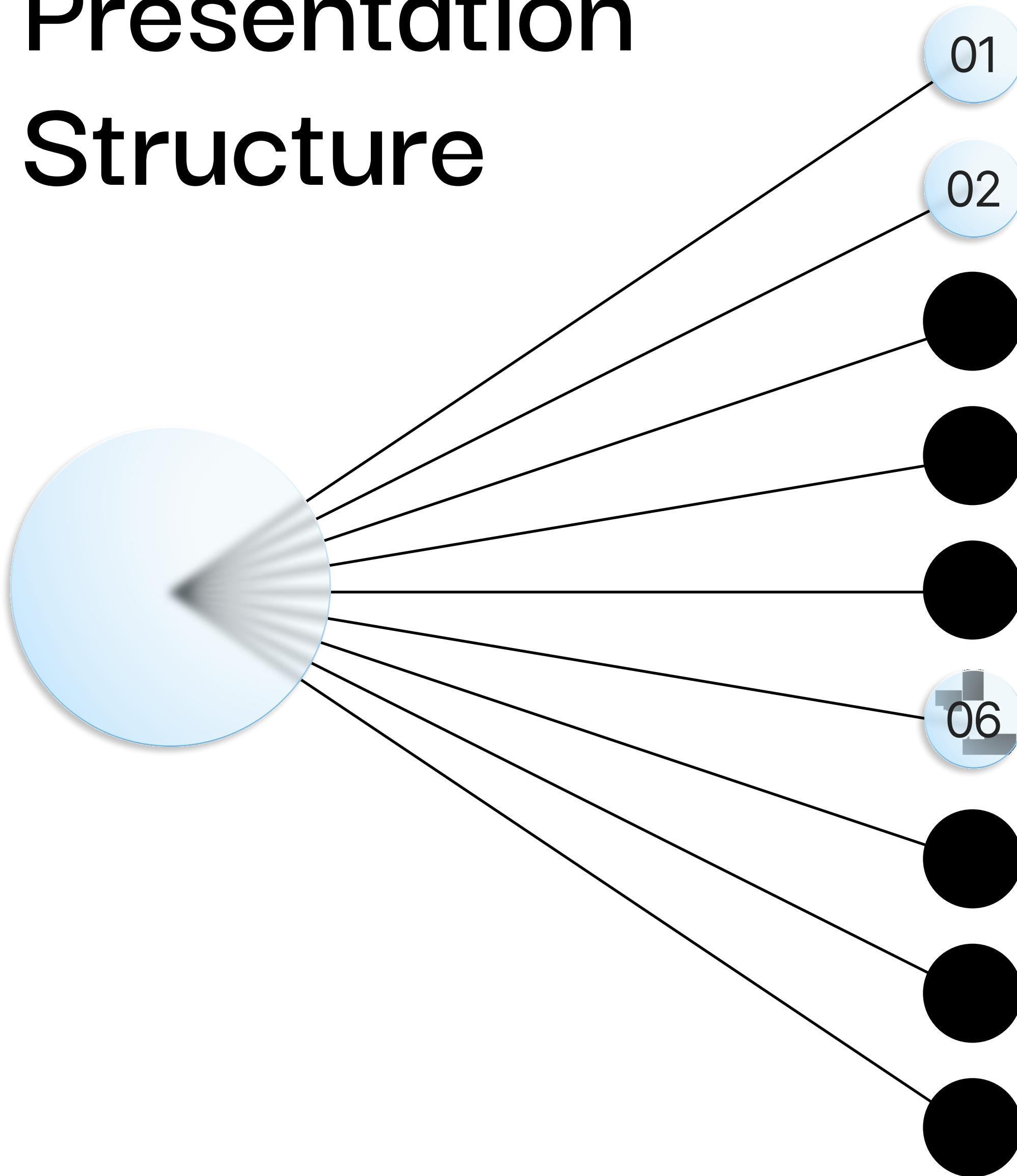
# What Was the Book About?



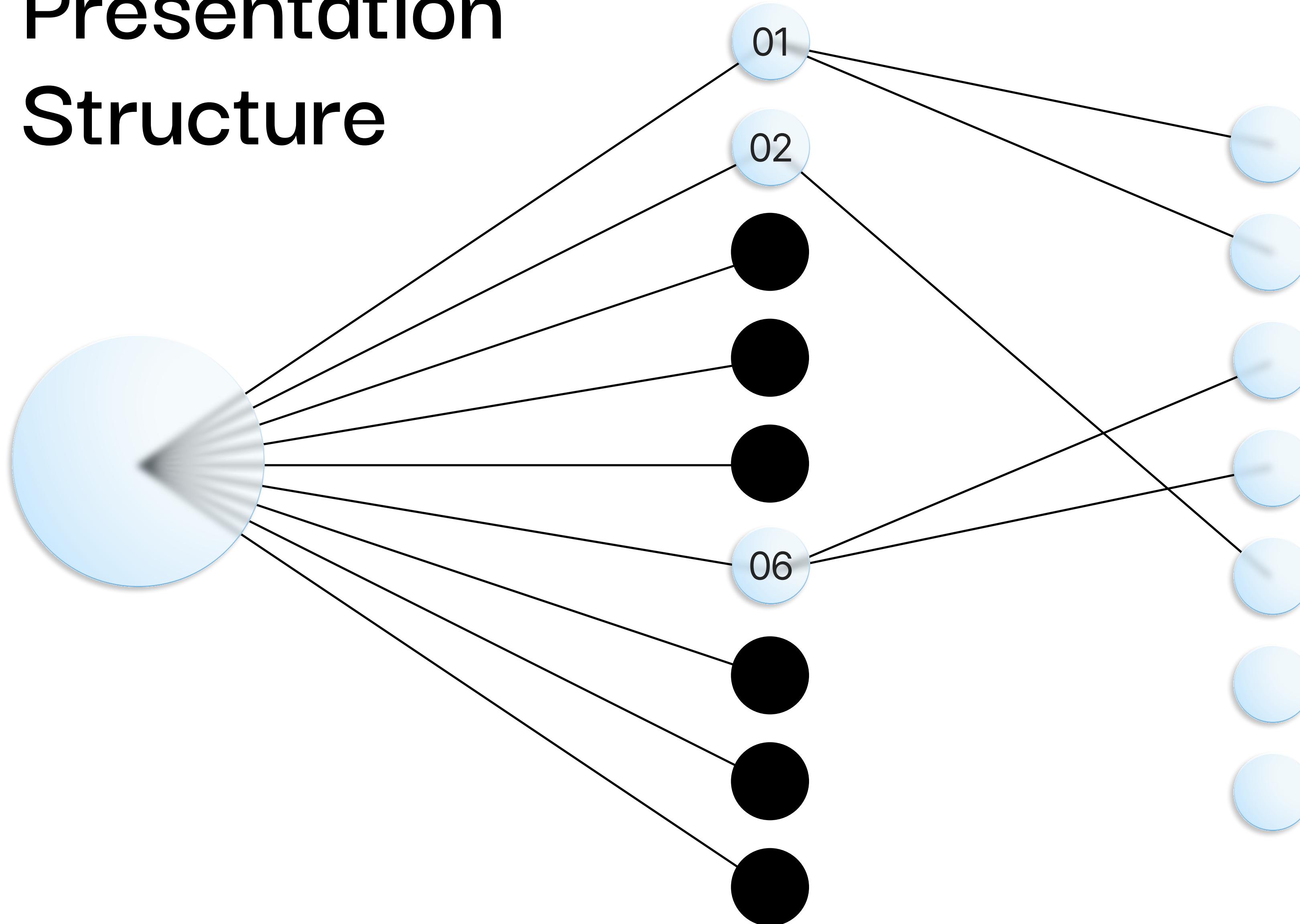
# What Was the Book About?



# Presentation Structure

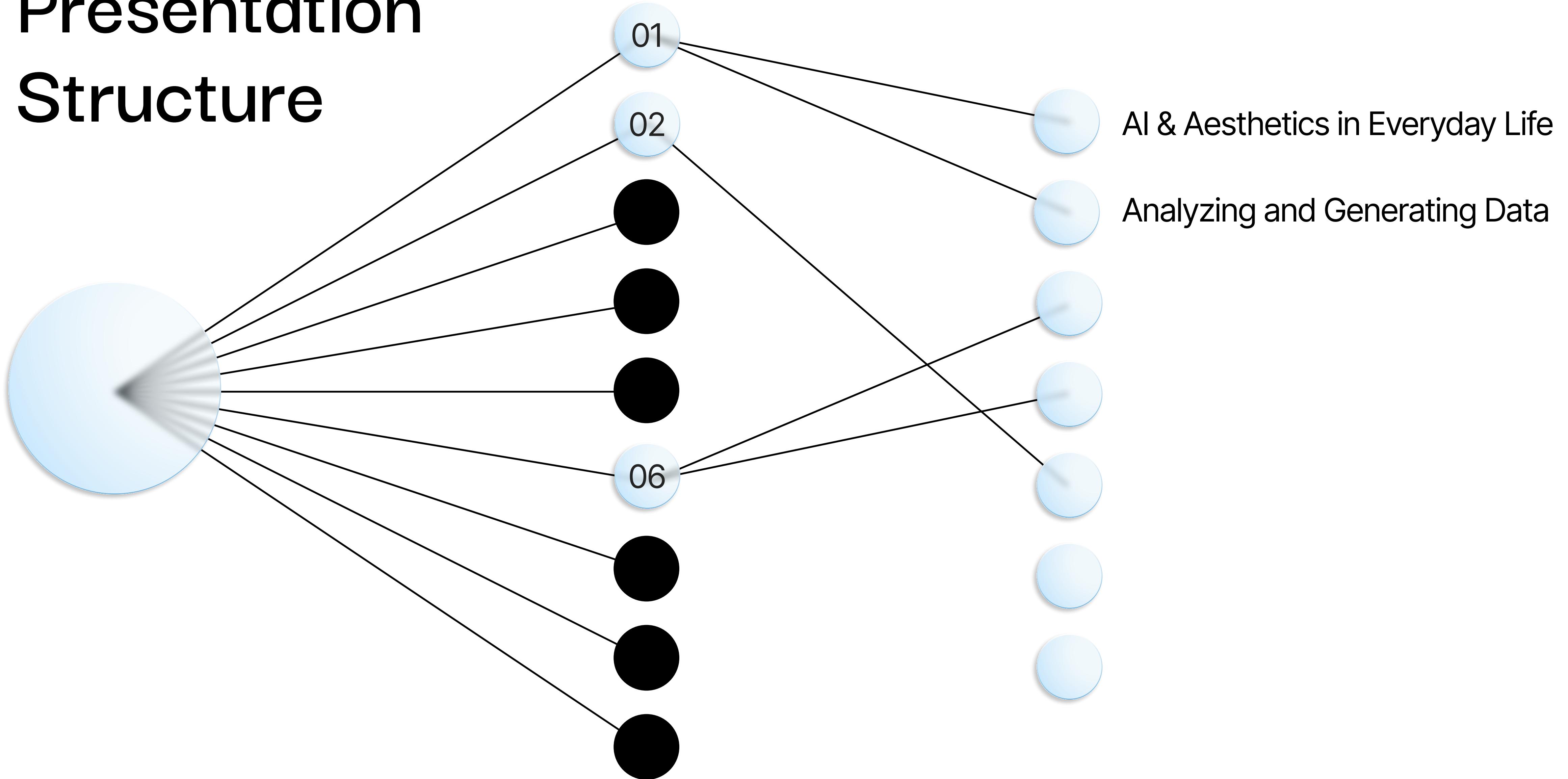


# Presentation Structure

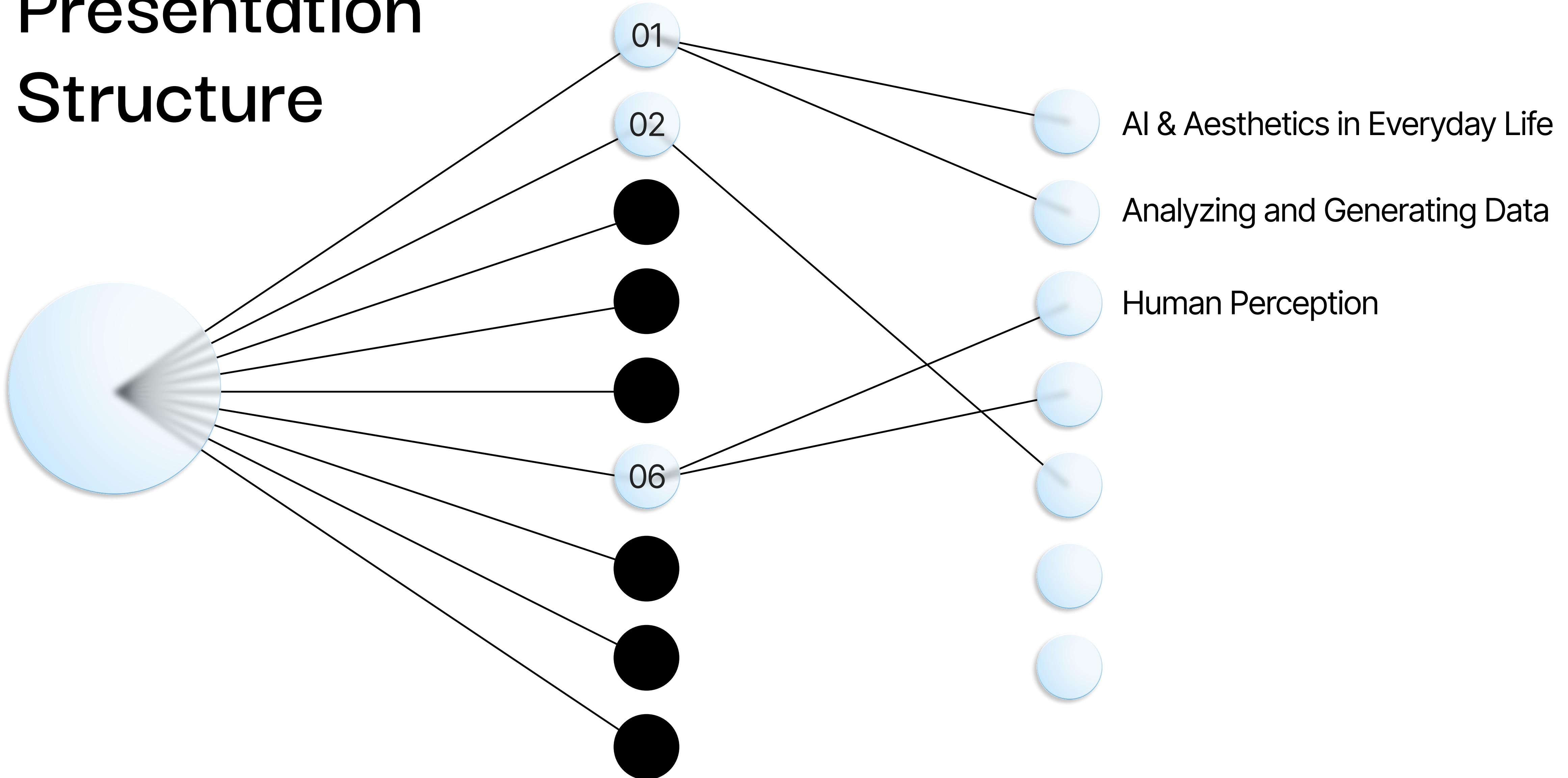


# AI & Aesthetics in Everyday Life

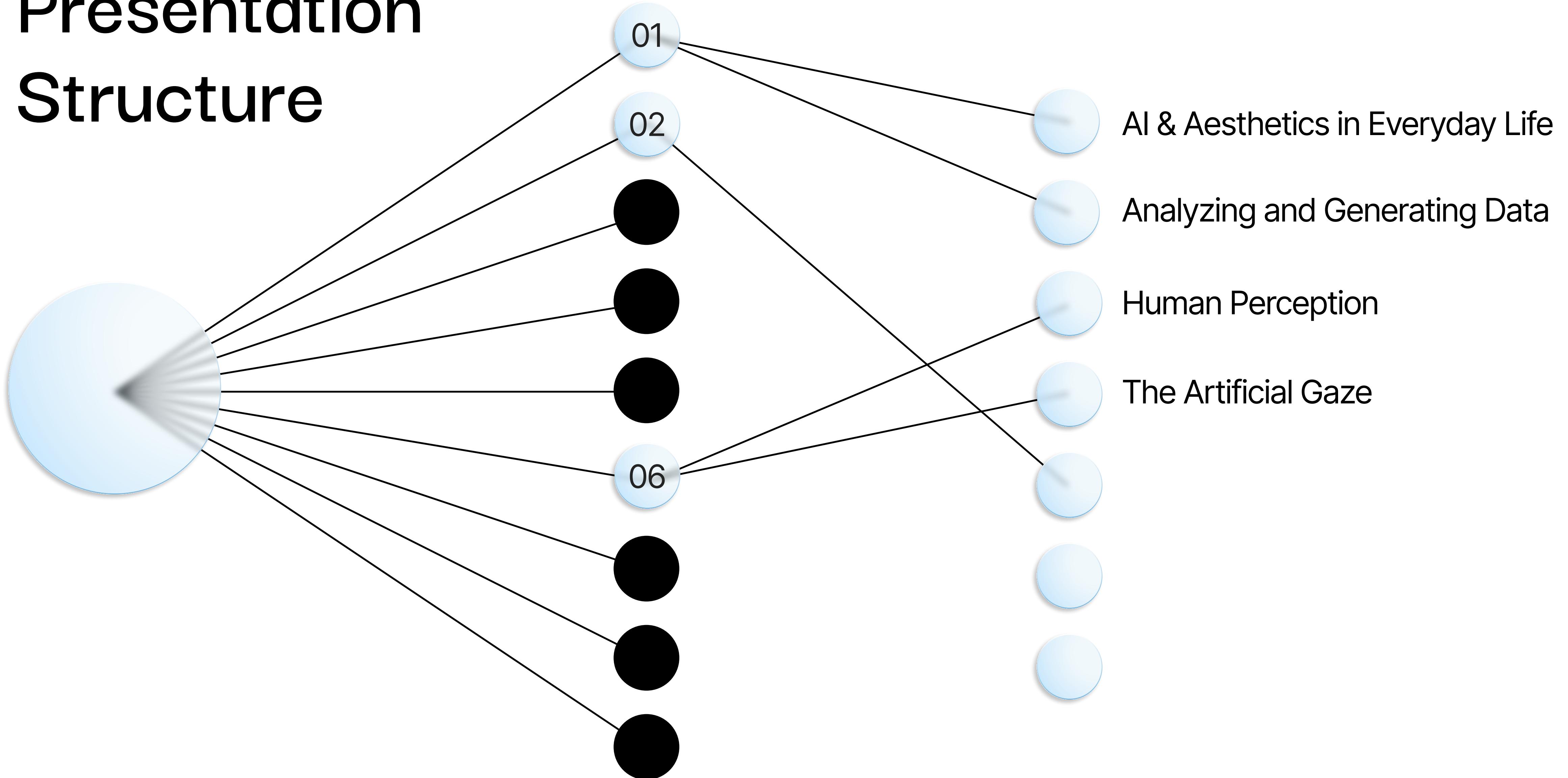
# Presentation Structure



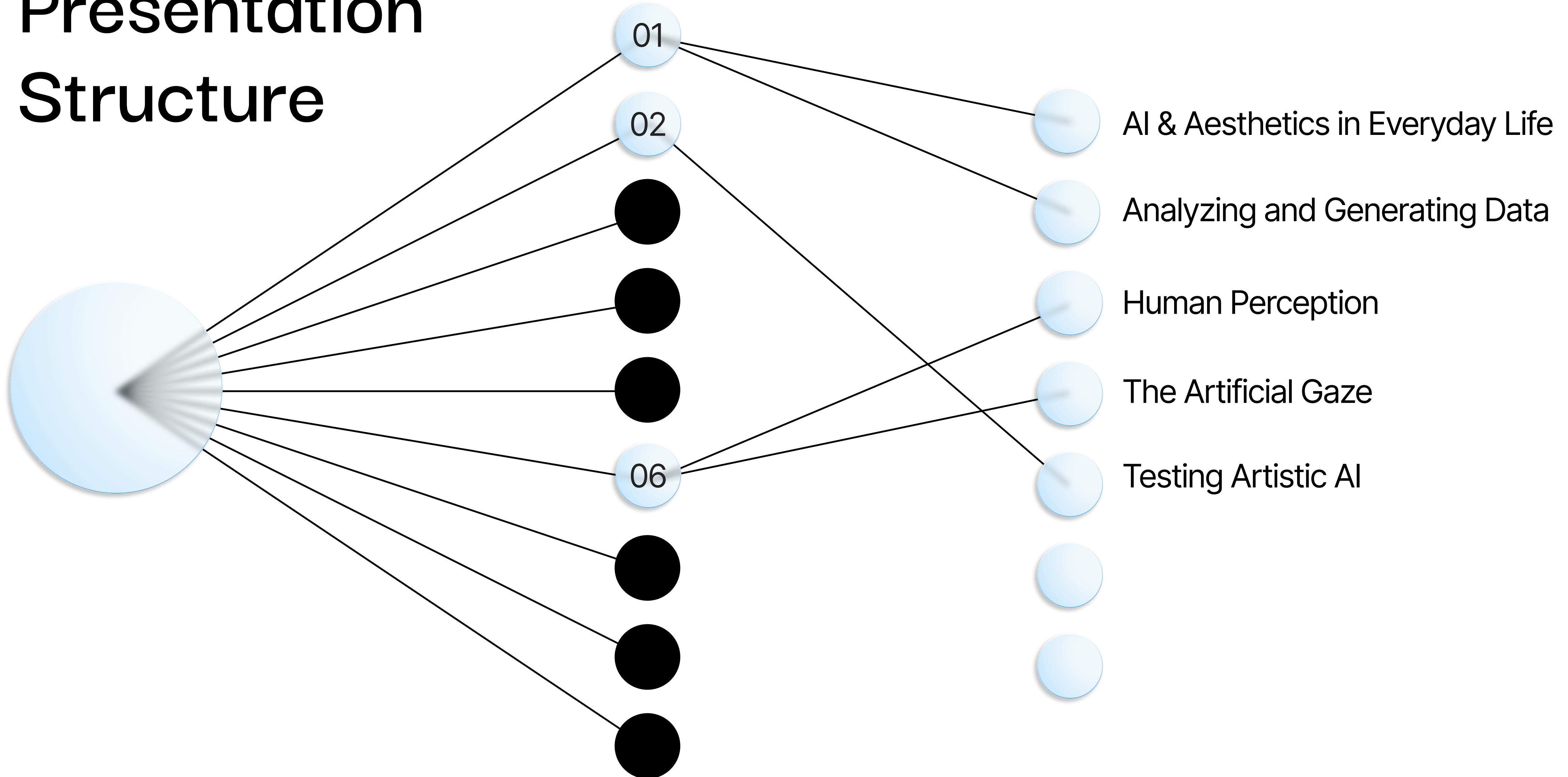
# Presentation Structure



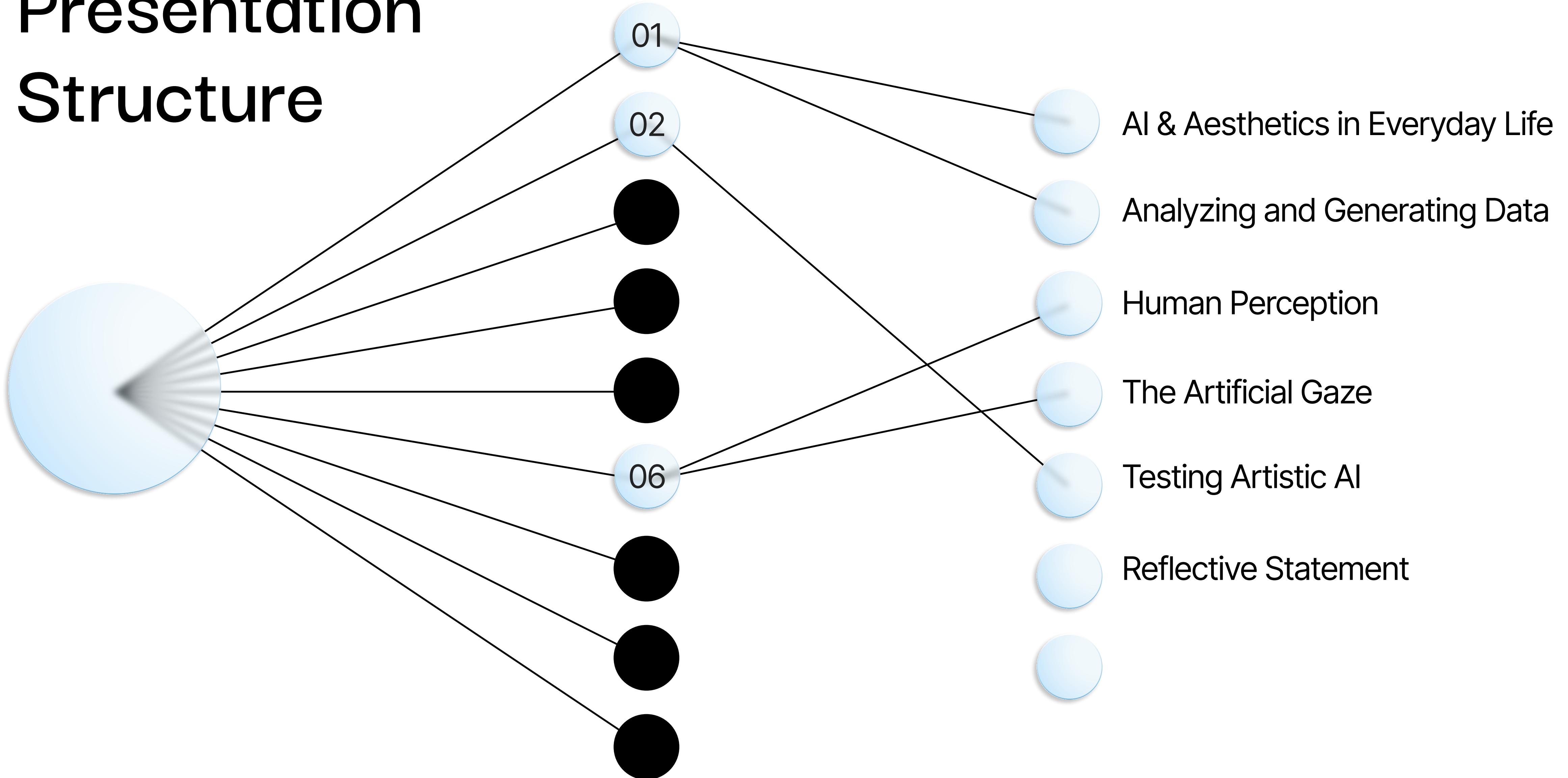
# Presentation Structure



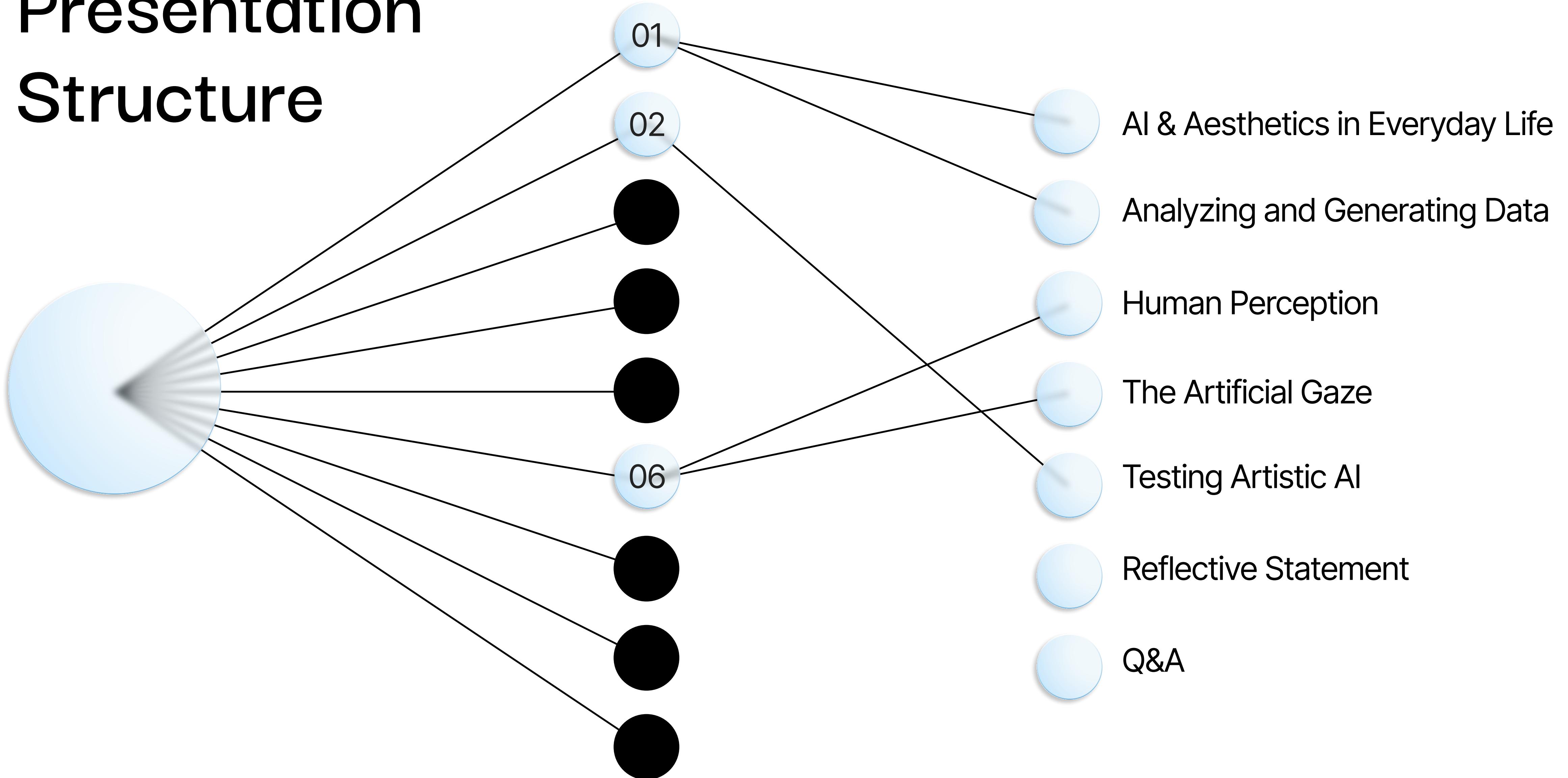
# Presentation Structure



# Presentation Structure



# Presentation Structure



# Authors



**Lev Manovich**

Theorist, artist, and professor known for his research on digital culture and new media.



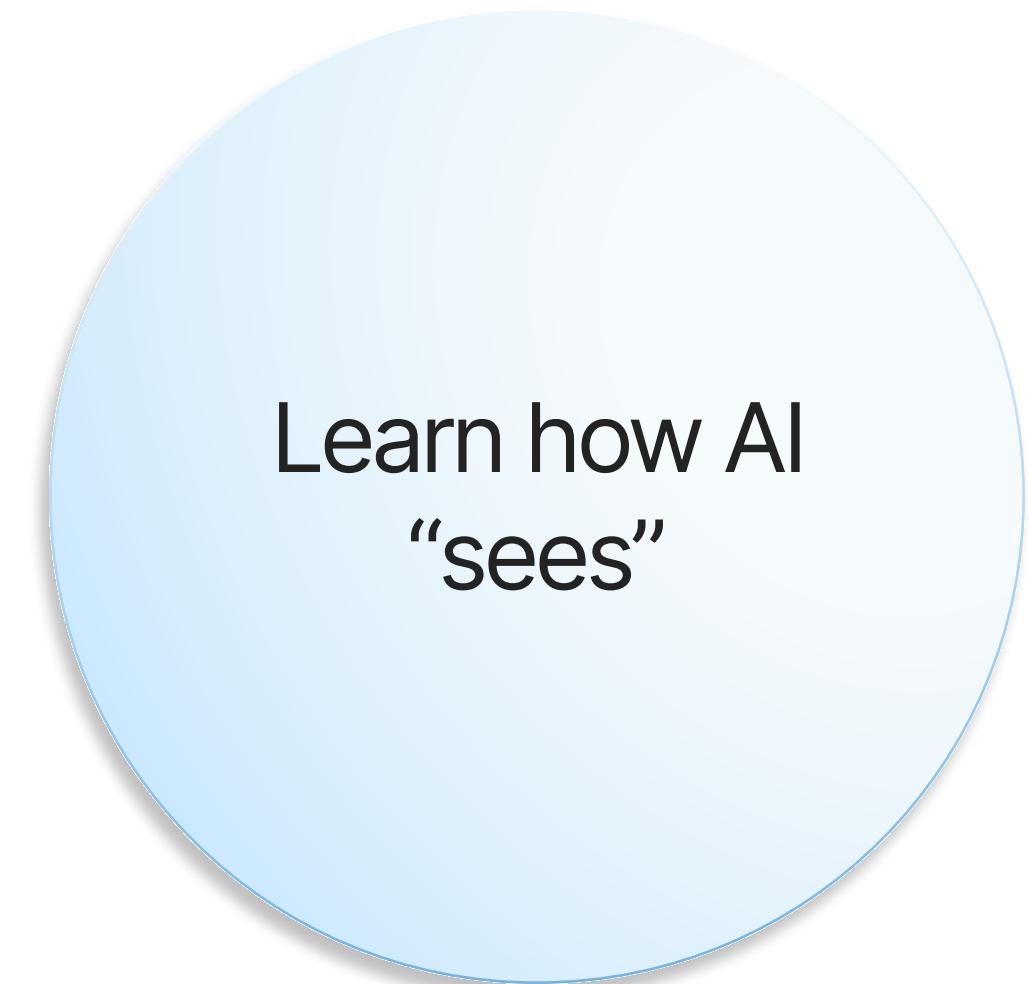
**Emanuele Arielli**

Professor of philosophy and aesthetics, specializing in communication and experimental psychology of art.

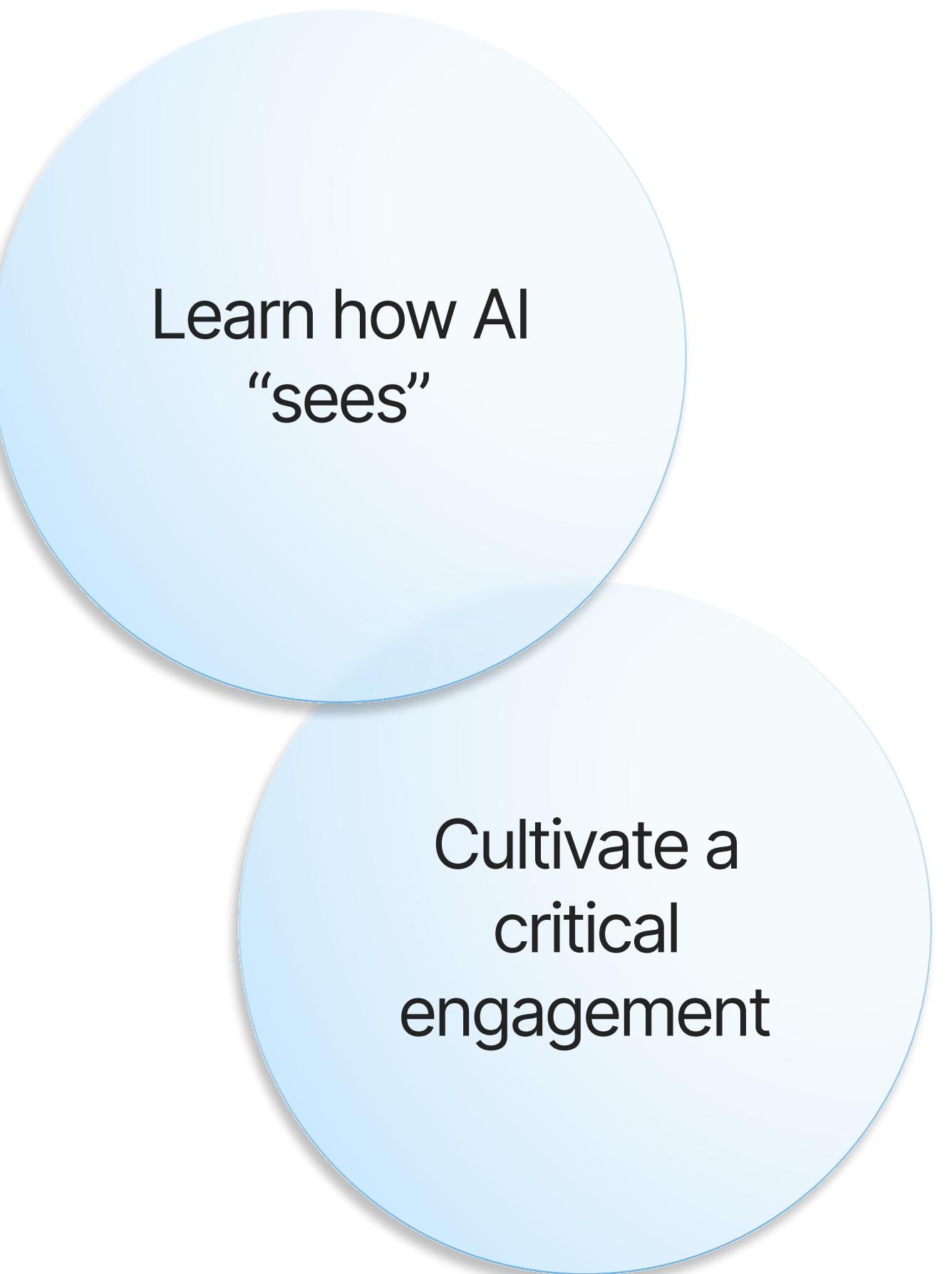
# And, Why Should We Care?



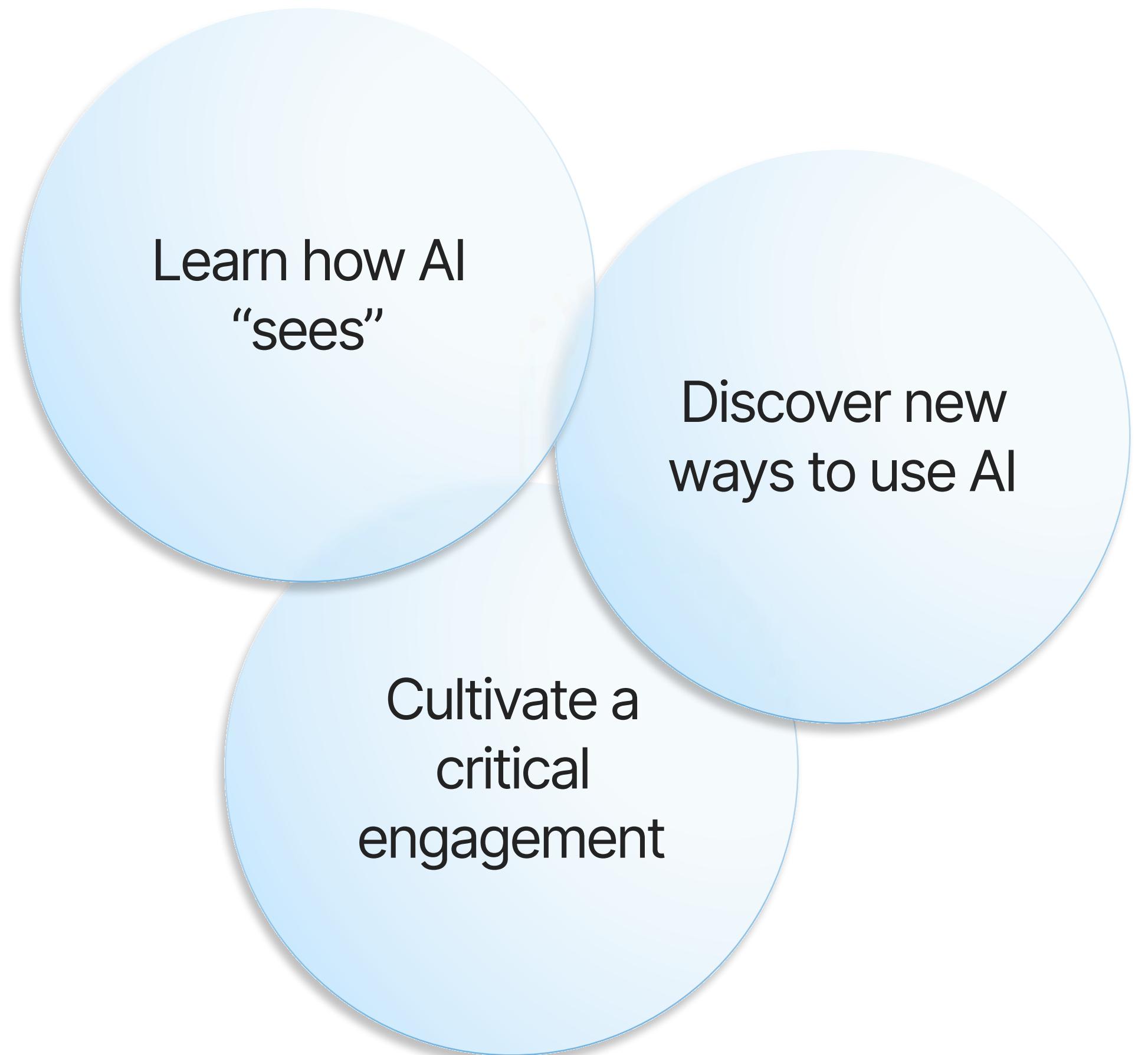
# And, Why Should We Care?



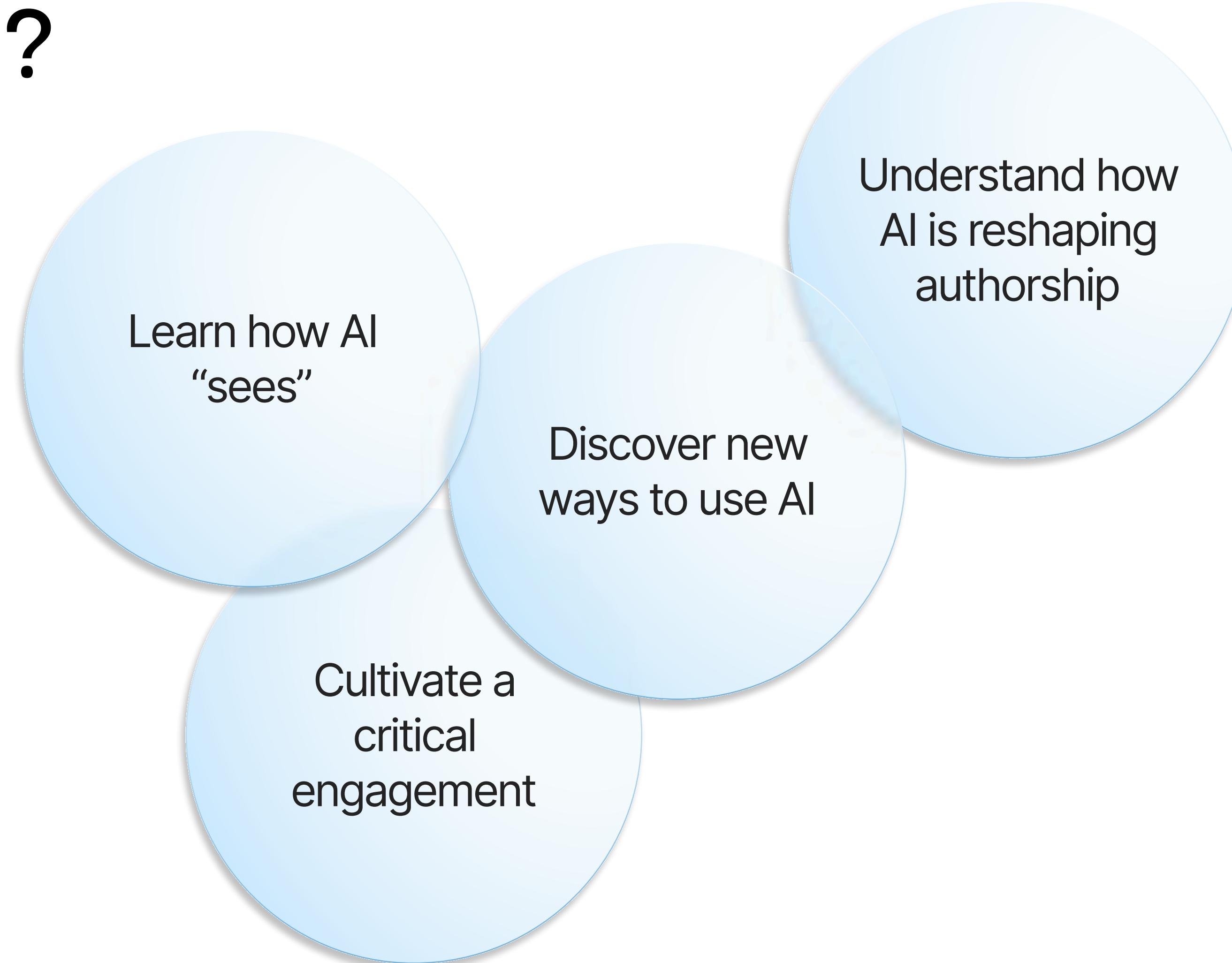
# And, Why Should We Care?



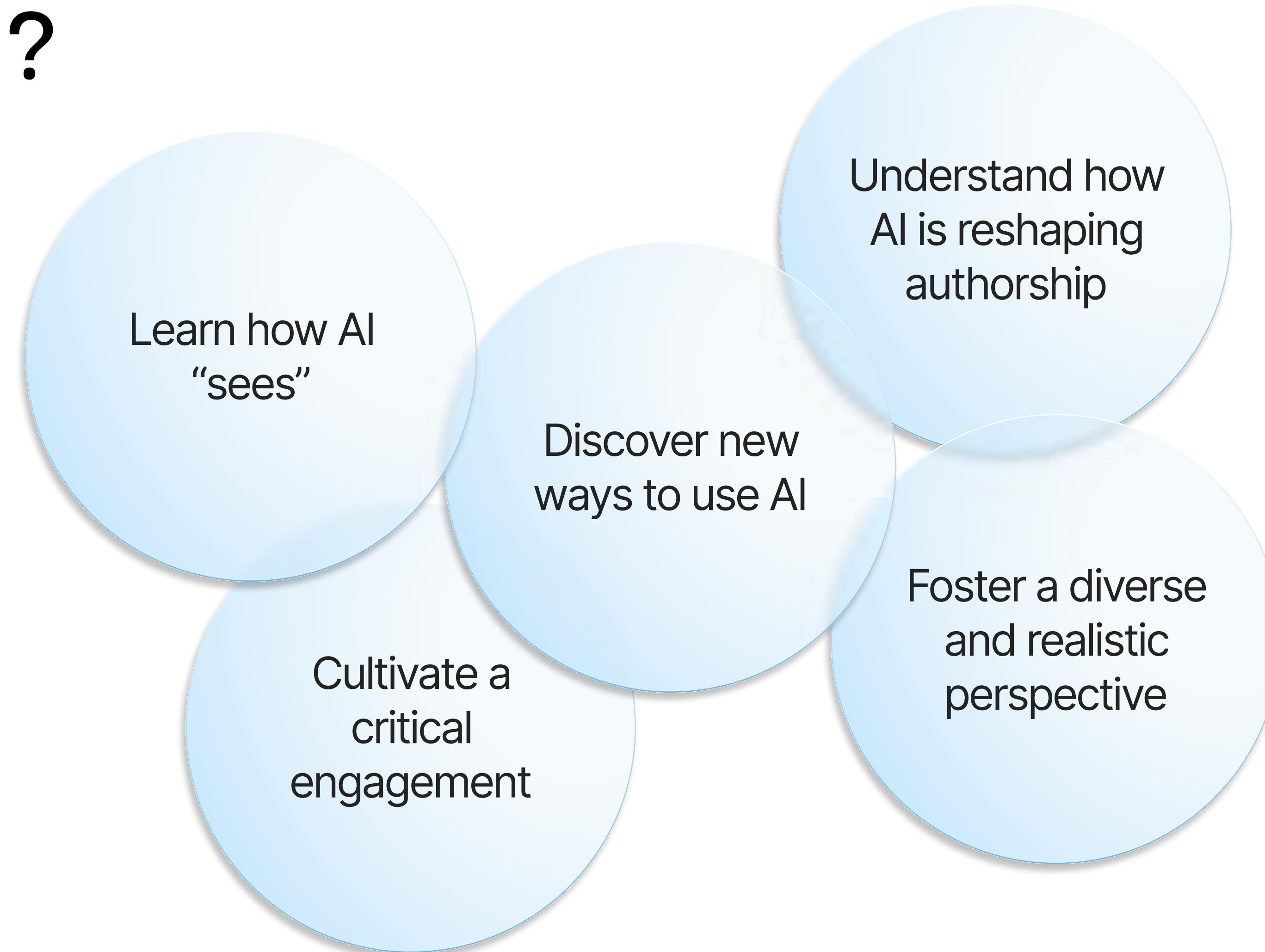
# And, Why Should We Care?



# And, Why Should We Care?

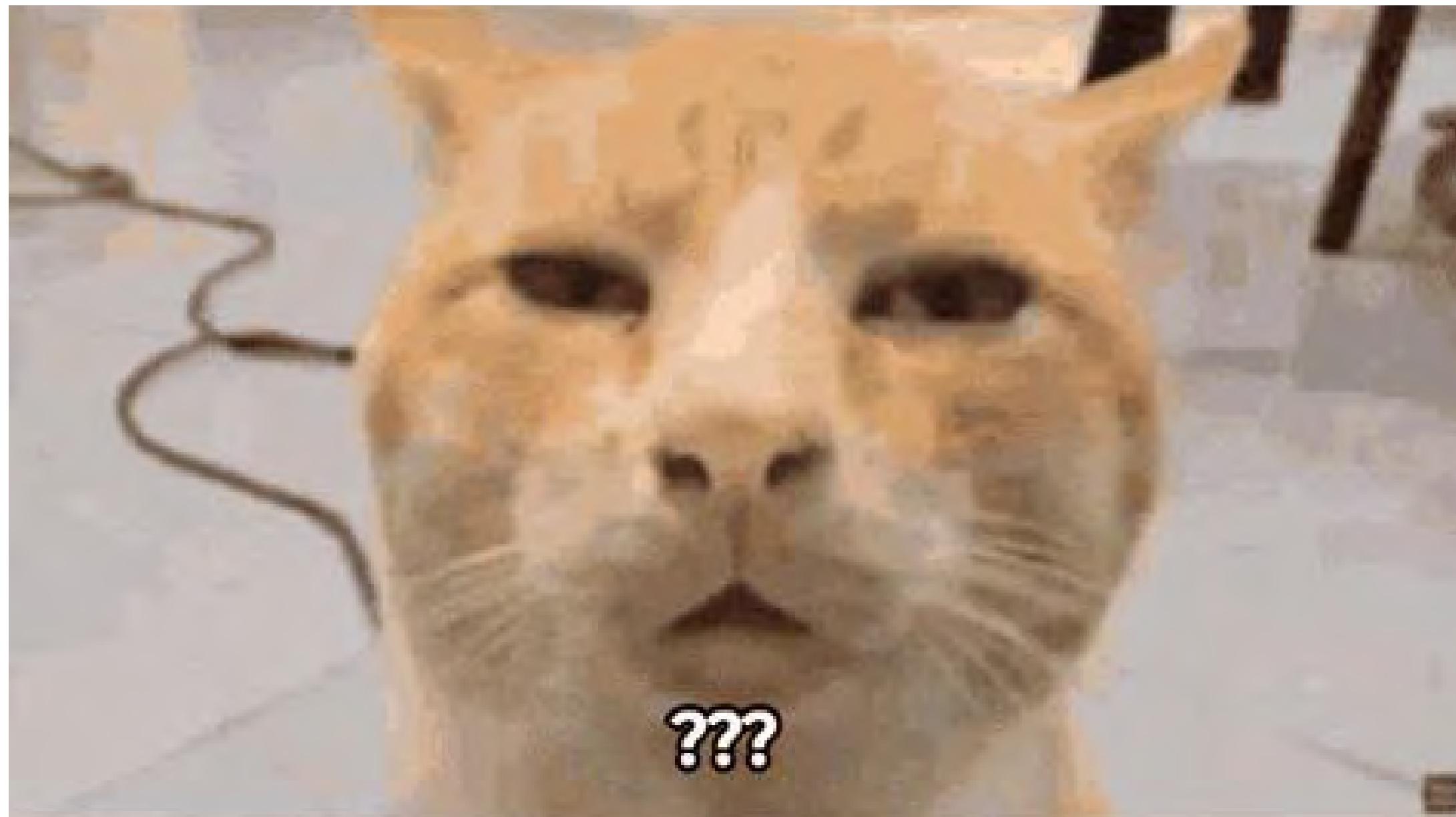


# And, Why Should We Care?



# AI & Aesthetics in Everyday Life

# What Exactly Is Aesthetics?



# Aesthetics

“

Is the domain of subjective judgments of taste

# Aesthetics

“

is the domain of subjective judgments of taste

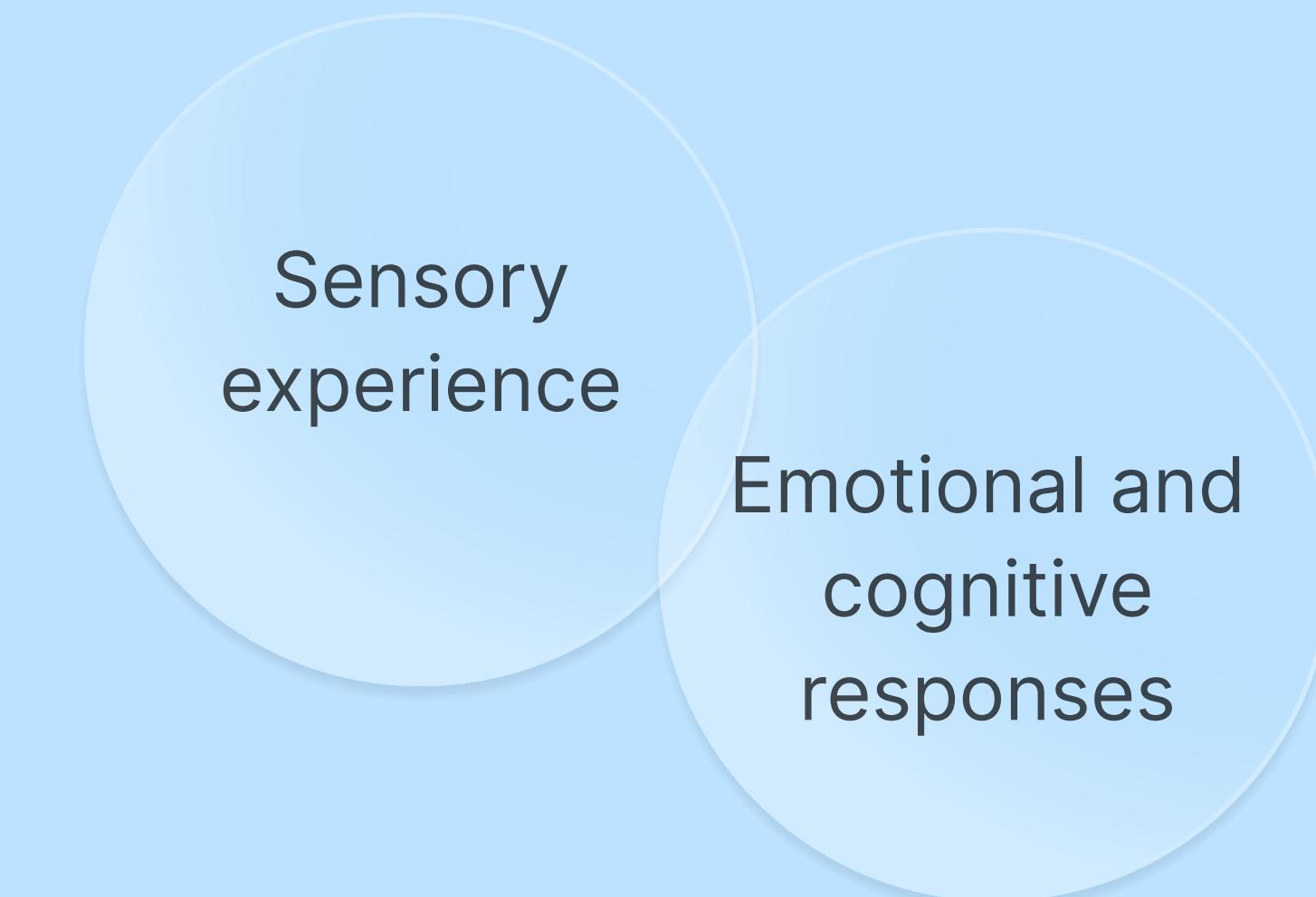


Sensory  
experience

# Aesthetics

“

is the domain of subjective judgments of taste

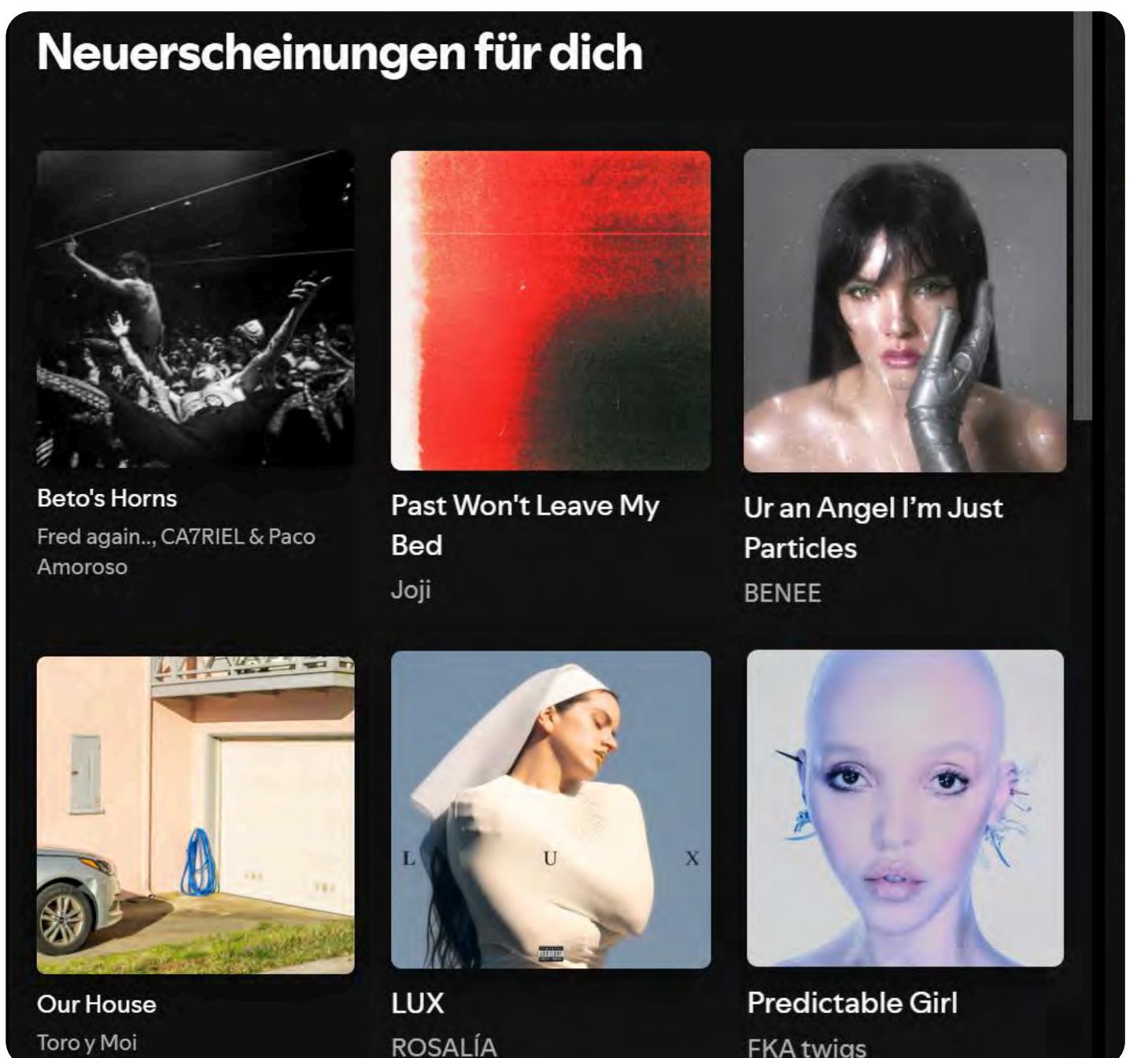


# Computational Tools

# Computational Tools

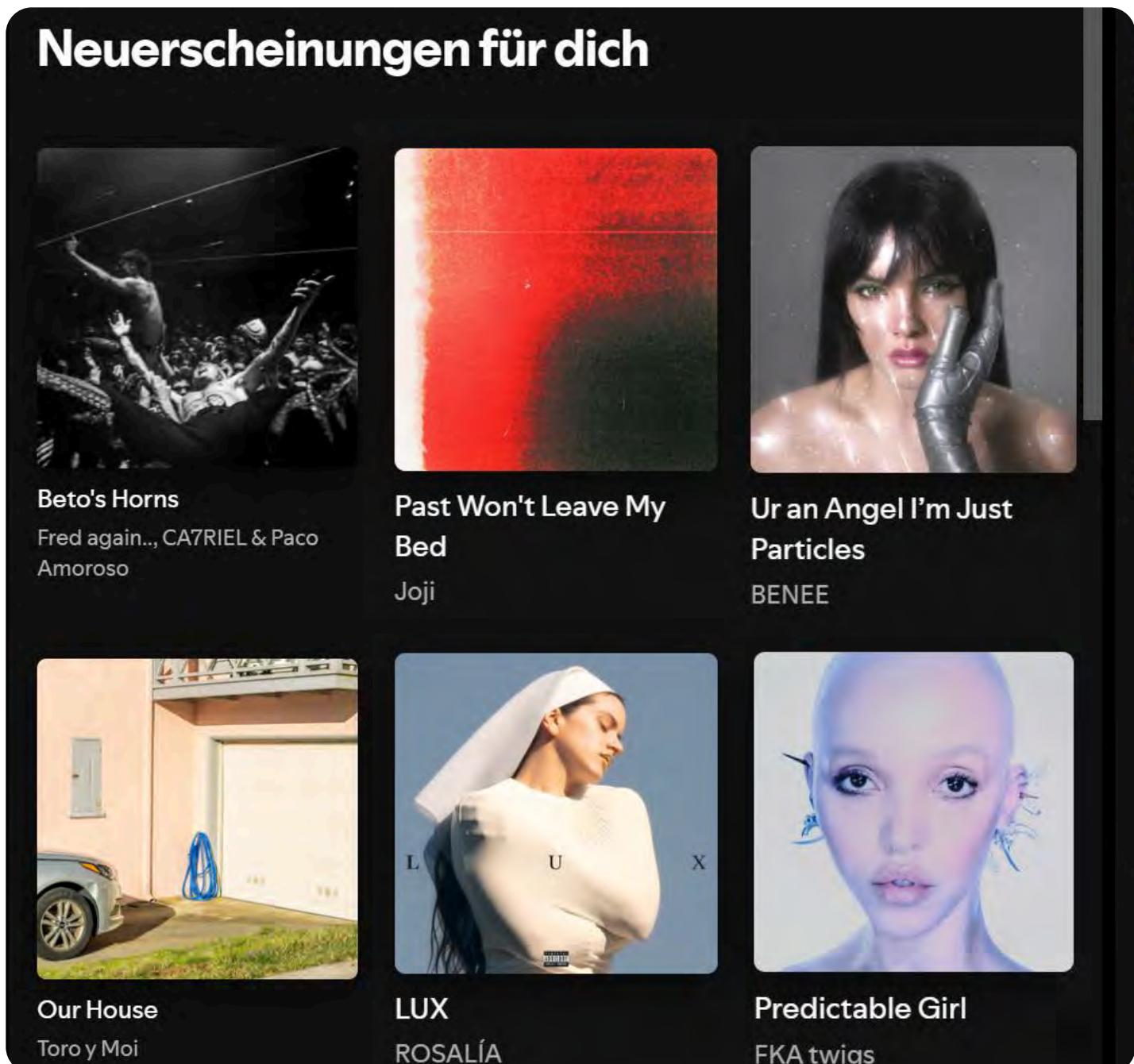
Recommend personalized content

Instagram Explore, Spotify, ...



# Computational Tools

Recommend personalized content  
Instagram Explore, Spotify, ...

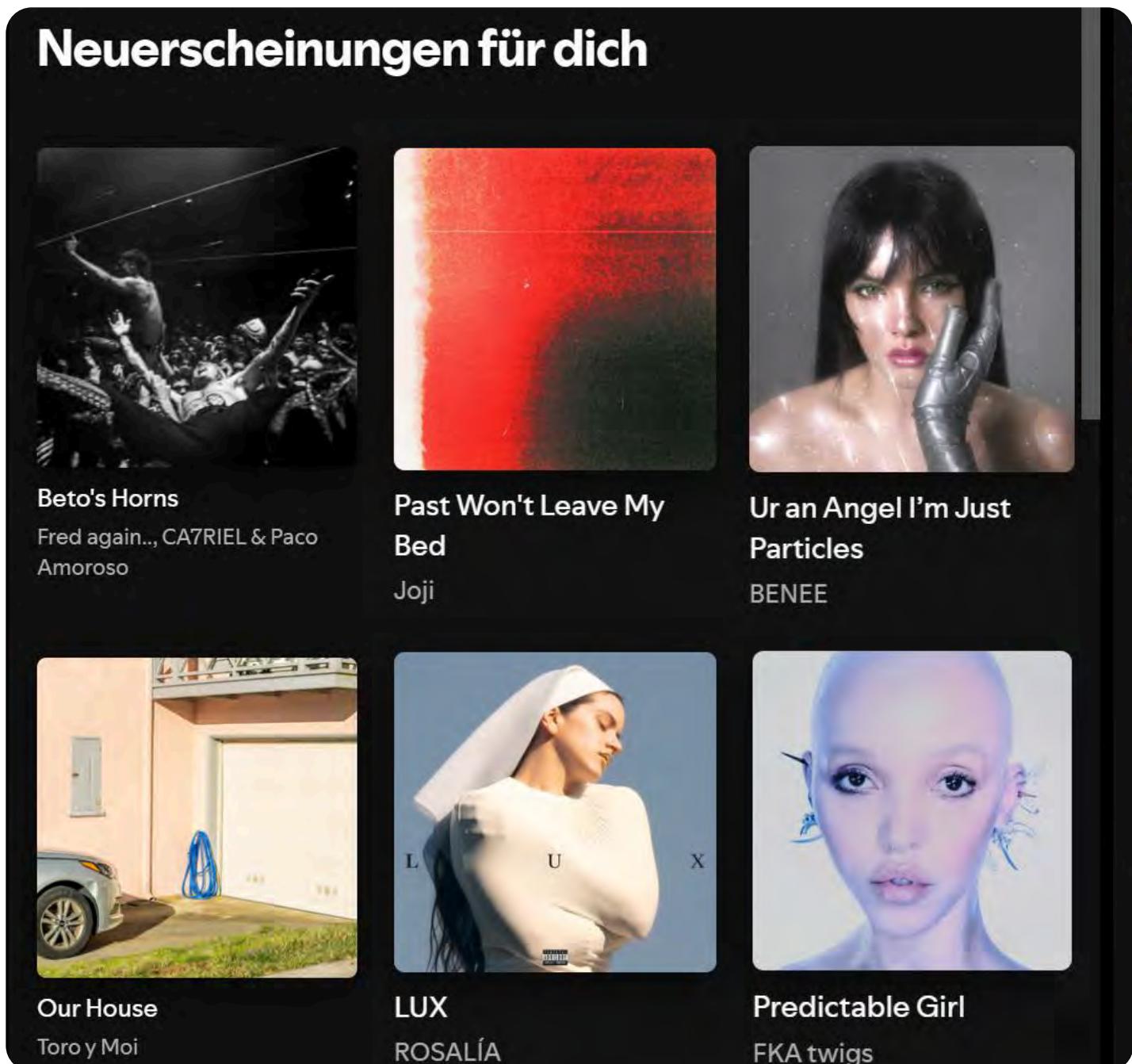


Analyze artistic patterns  
Brush stroke, use of color, ...



# Computational Tools

Recommend personalized content  
Instagram Explore, Spotify, ...



Analyze artistic patterns  
Brush stroke, use of color, ...



Generate new content  
Images, Music, ...



**Does AI really understand  
aesthetics?**

# Analyzing and Generating Artifacts

# Artifact

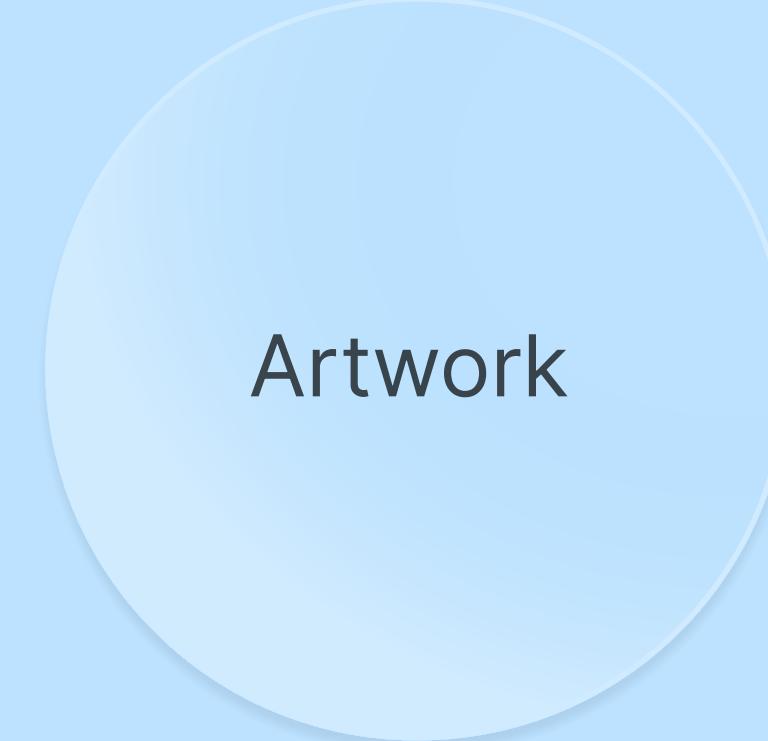
“

An object made or modified by a human being, typically one of cultural or historical interest

# Artifact

“

An object made or modified by a human being, typically one of cultural or historical interest

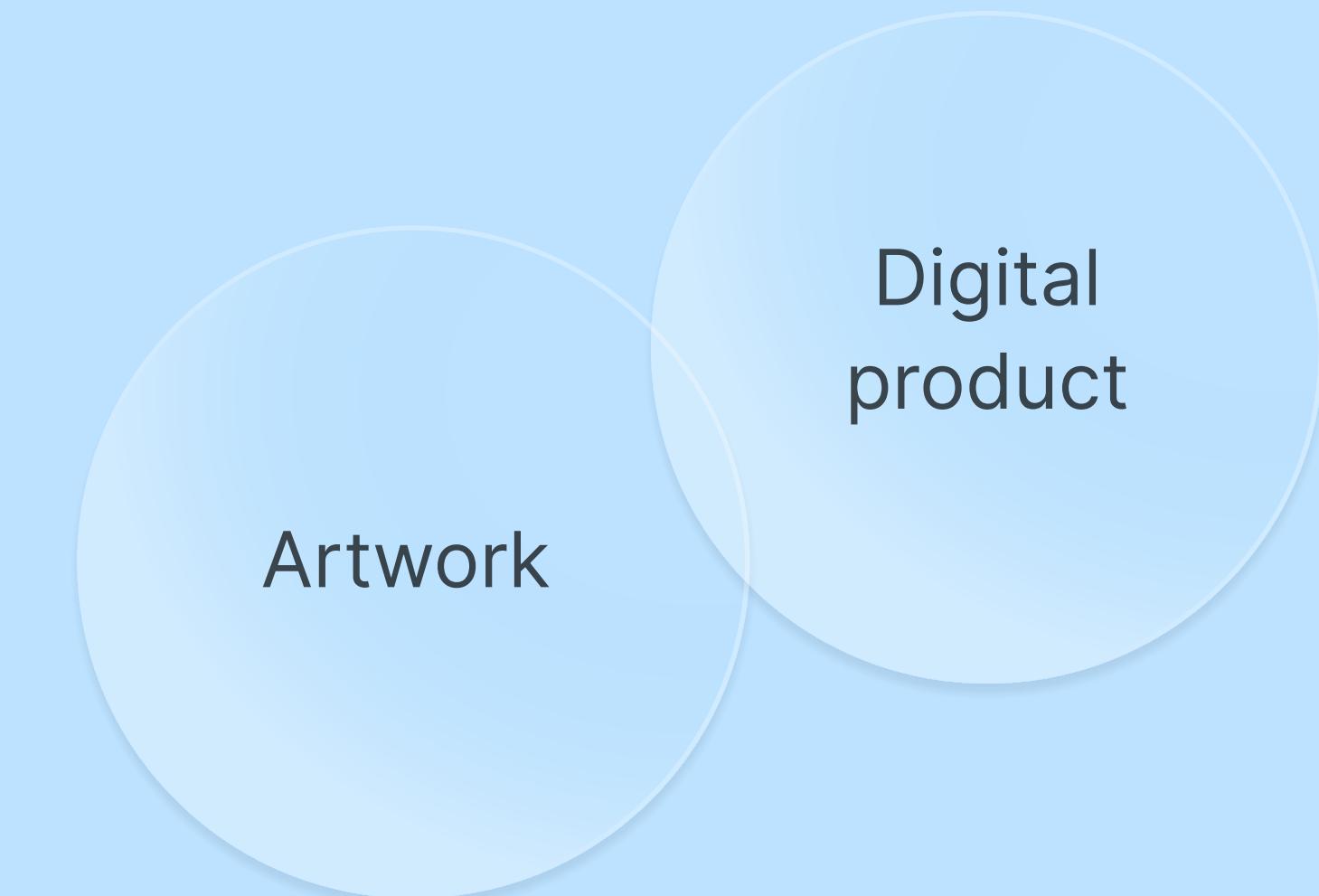


Artwork

# Artifact

“

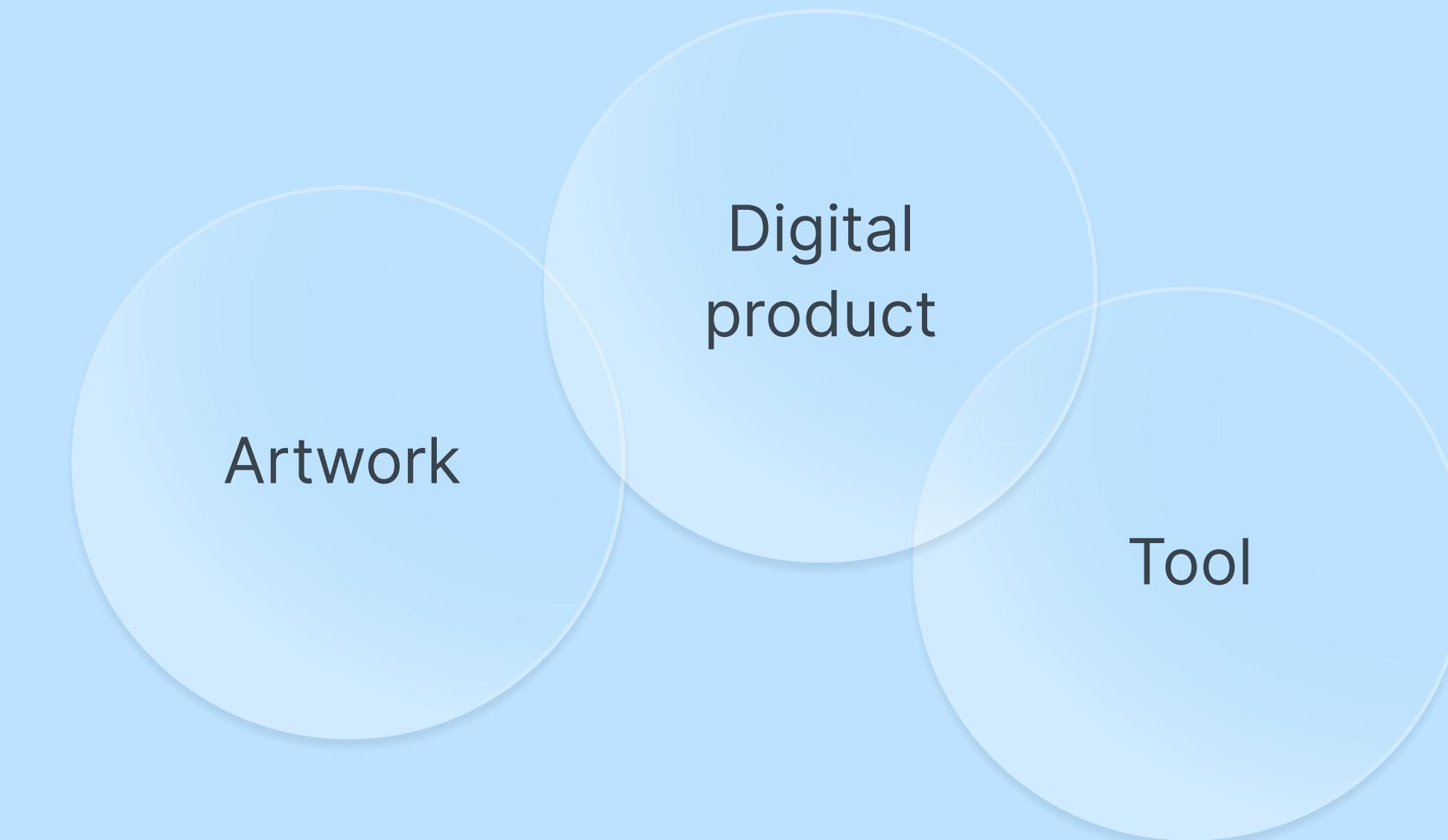
An object made or modified by a human being, typically one of cultural or historical interest



# Artifact

“

An object made or modified by a human being, typically one of cultural or historical interest



# Analyzing Rembrandt



# Analyzing Rembrandt



- Use of color
- Brush strokes
- Lighting

# Analyzing Rembrandt

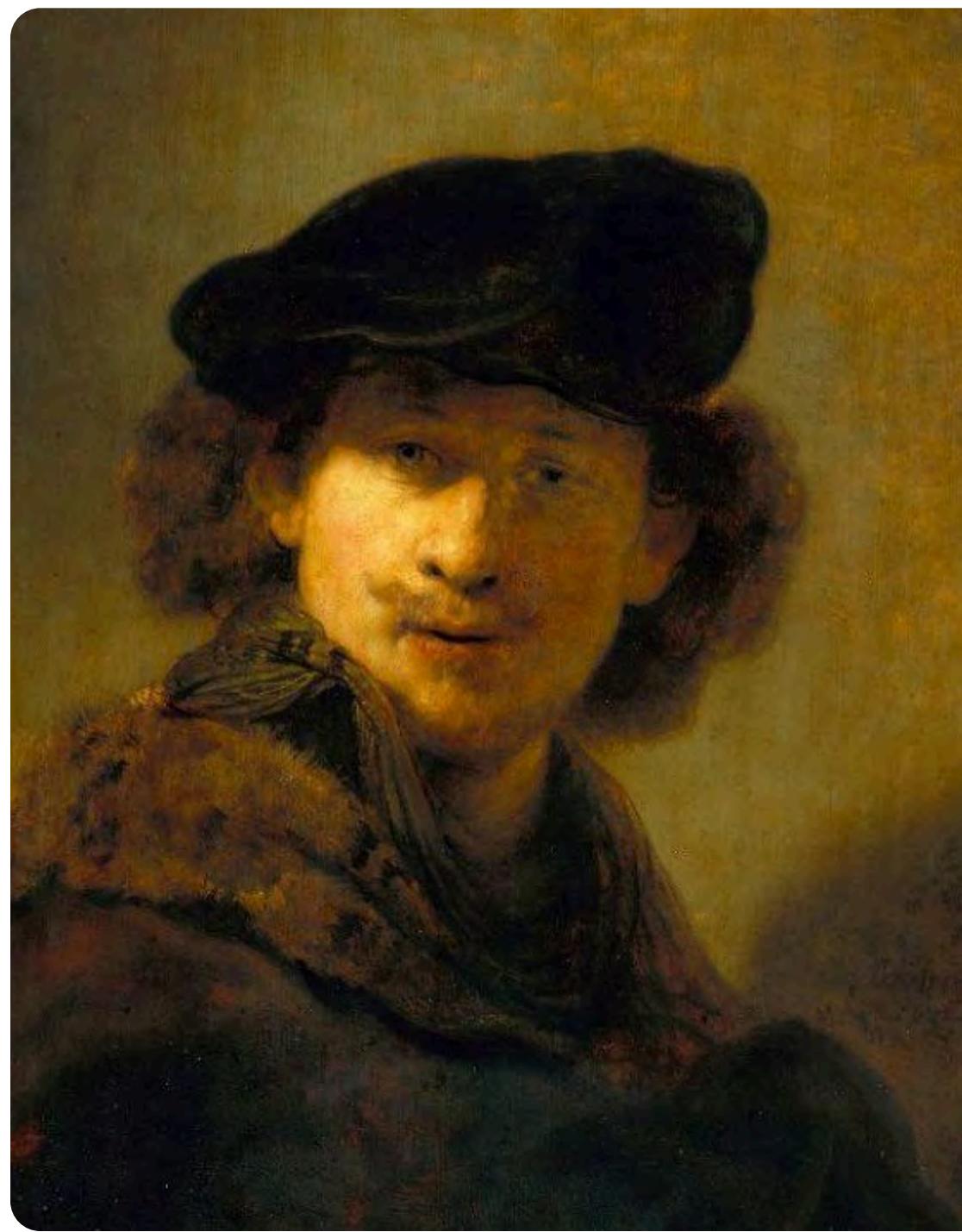
# Analyzing Rembrandt



- Recognizable style
- Repetition

**Well-defined problems**

# Analyzing Rembrandt



- Recognizable style
- Repetition

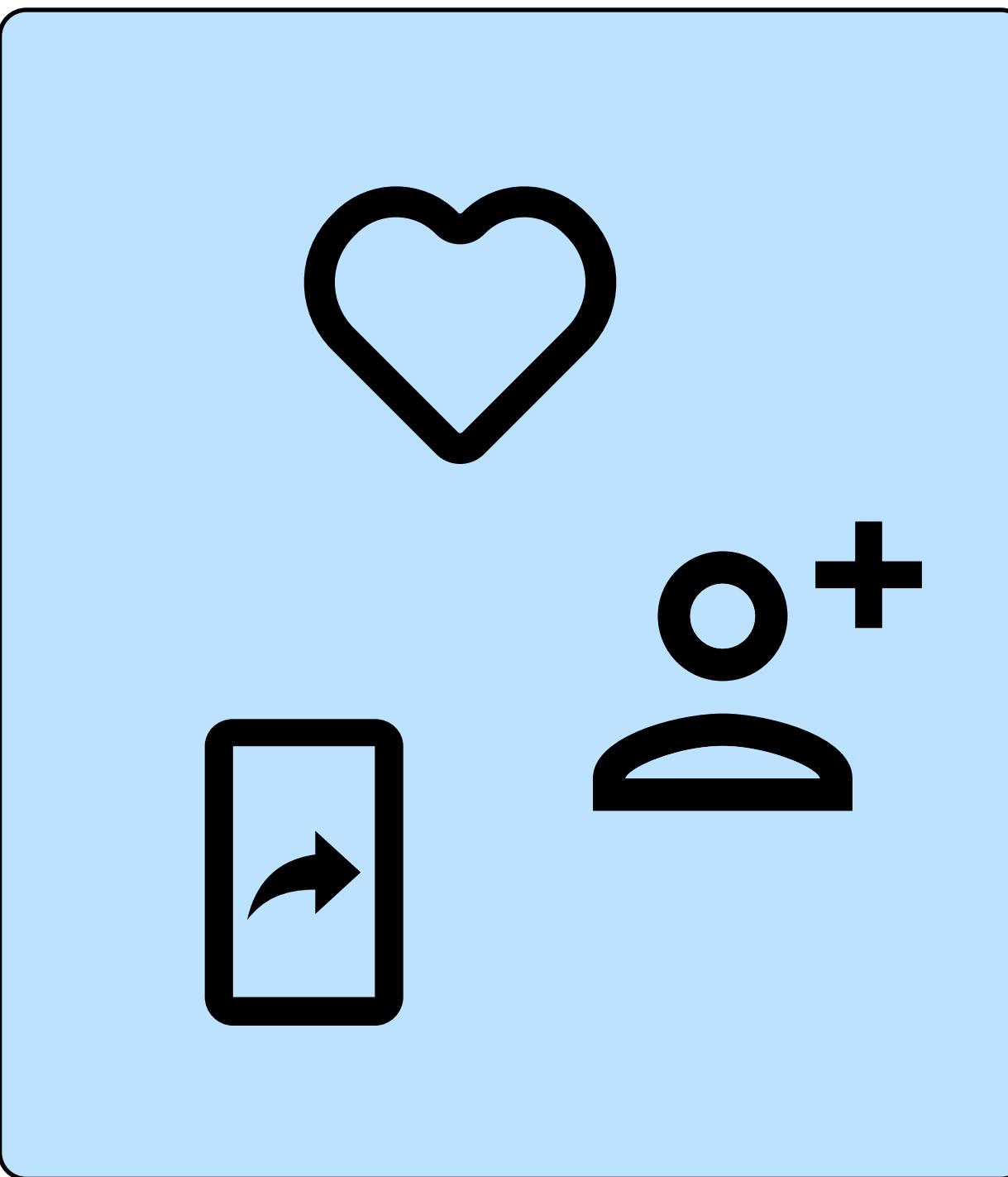
**Well-defined problems**



- No compositional rules
- No logical repetition

**III-defined tasks**

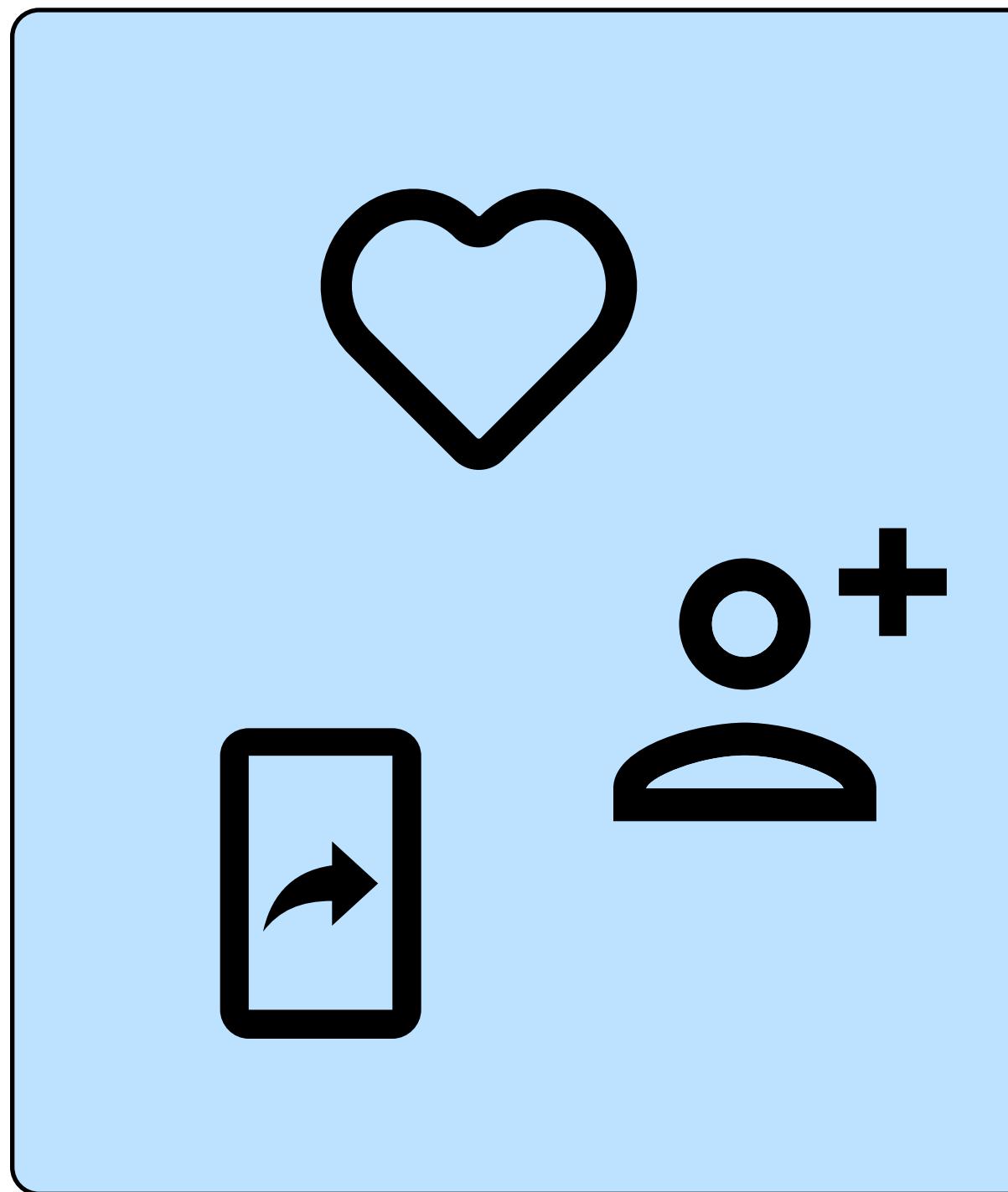
# Analyzing Aesthetics



- Likes, shares, follows
- Consumption behavior

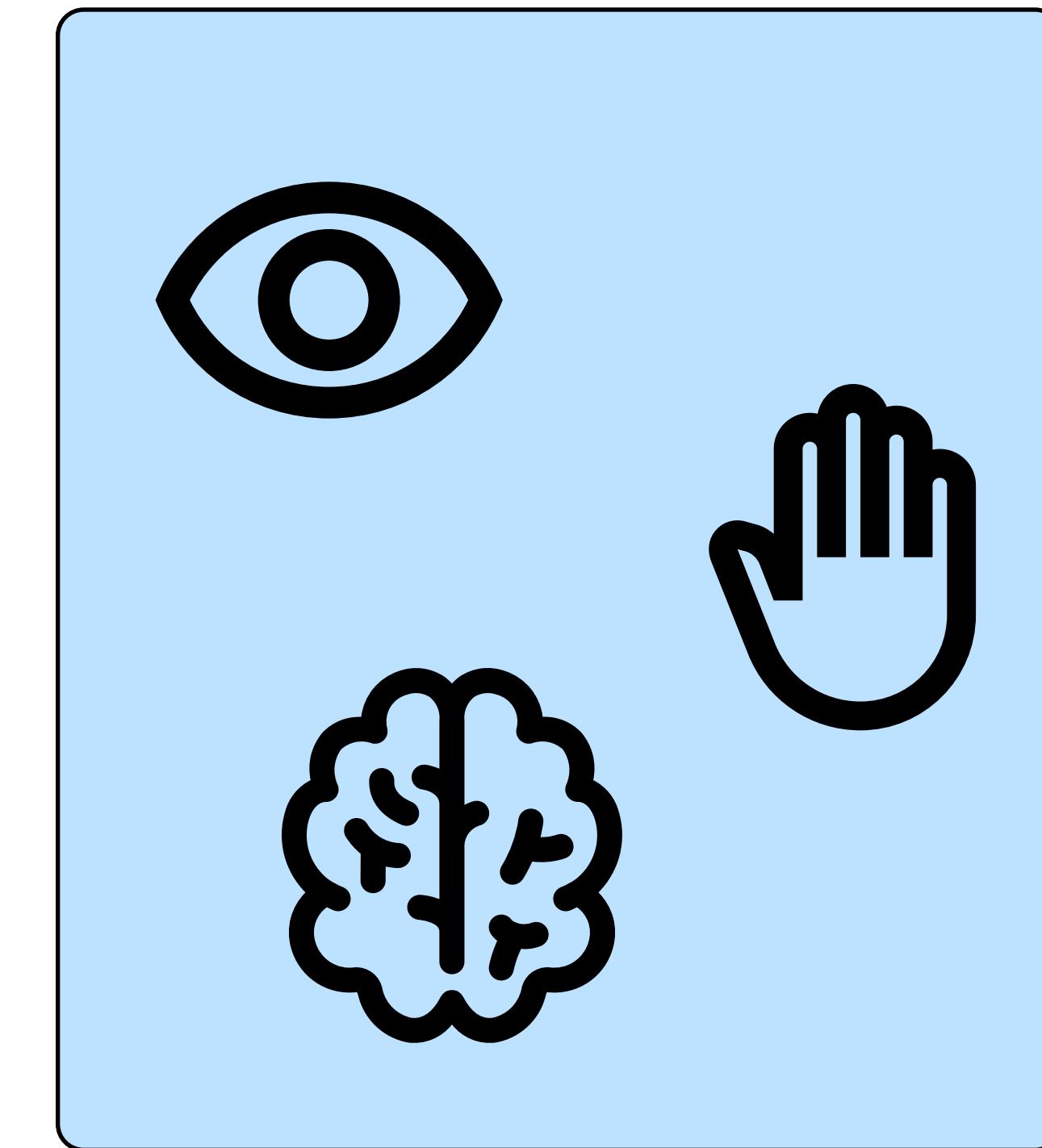
**Well-defined aesthetic behavior**  
→ Studying objects

# Analyzing Aesthetics



- Likes, shares, follows
- Consumption behavior

**Well-defined aesthetic behavior**  
→ Studying objects



- Sensory experience
- Emotional and cognitive responses to perception

**Ill-defined aesthetic behavior**  
→ Studying subjects

**Does AI really understand  
aesthetics?**

No.



**AI might understand what we  
may like, but not how much.**



**What must AI be capable of to truly understand our aesthetic perception?**

# Approaches in Aesthetics Research

# Approaches in Aesthetics Research

## Studying Objects — Computational Method

- Big data from consumer behaviors.
- Extract features from popular artifacts.
- Track individual data to avoid assuming universal preferences

# Approaches in Aesthetics Research

## Studying Objects — Computational Method

- Big data from consumer behaviors.
- Extract features from popular artifacts.
- Track individual data to avoid assuming universal preferences

## Studying Subjects — Experimental Method

- Controlled condition: specific artifacts and instructions (rate all images from 1-10)
- Isolated variables (changing only the color, texture, or shape)
- Physiological measurements (heart rate, ...)

# Challenges in Experimental Research

# Challenges in Experimental Research

## Difficulty isolating features

- Need of many experiments if only one factor changes (color, shape, texture)
- Variables can influence each other

# Challenges in Experimental Research

## Difficulty isolating features

- Need of many experiments if only one factor changes (color, shape, texture)
- Variables can influence each other

## Defining the measured response

- What is the meaning of “aesthetic experience”?
- Is the response a simple like? A complex critical judgment? A consumption behavior?

# Challenges in Experimental Research

## Difficulty isolating features

- Need of many experiments if only one factor changes (color, shape, texture)
- Variables can influence each other

## Preferences depend on many factors

- Geographical location
- Cultural background
- Change of mood
- Personal history

## Defining the measured response

- What is the meaning of “aesthetic experience”?
- Is the response a simple like? A complex critical judgment? A consumption behavior?



# Why should artificial systems learn aesthetics? What is the goal?



# Why Should AI Learn Aesthetics?

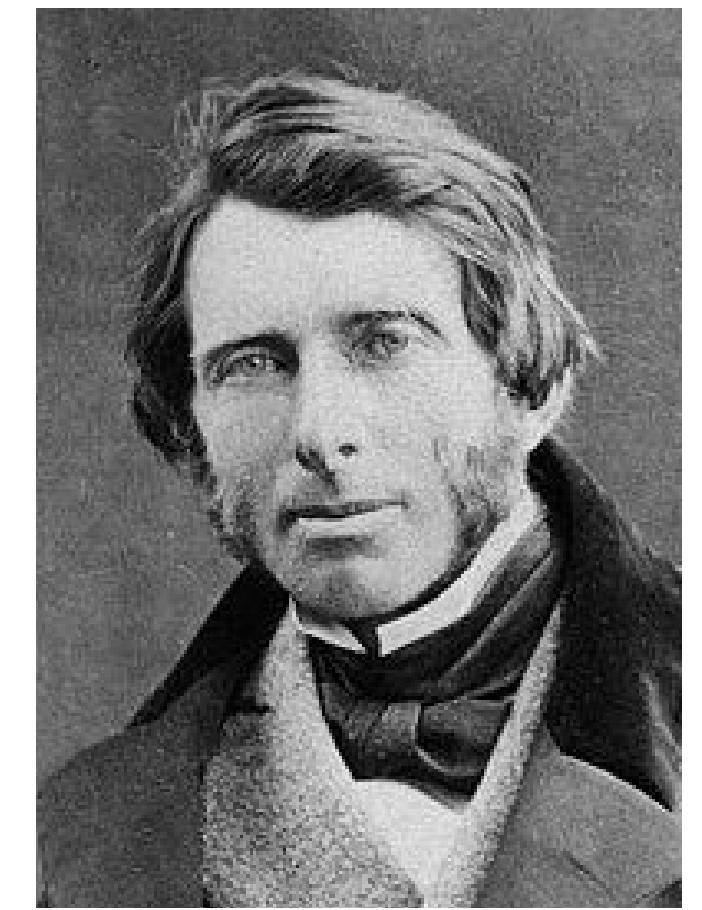
# Why Should AI Learn Aesthetics?

## Generating subjects

- Modeling a person's aesthetic judgement  
→ Simulate how people would behave and react to an artifact

# Human Perception

# The Innocent Eye



John Ruskin  
8 Feb 1819 – 20 Jan 1900

- Term defined by John Ruskin, an english polymath
- A childlike way of seeing artifacts without attaching symbolic meaning
- Artificial systems lack consciousness → kind of innocent eye

# The Innocent Eye



# The Innocent Eye



# The Innocent Eye



# Perception Concepts

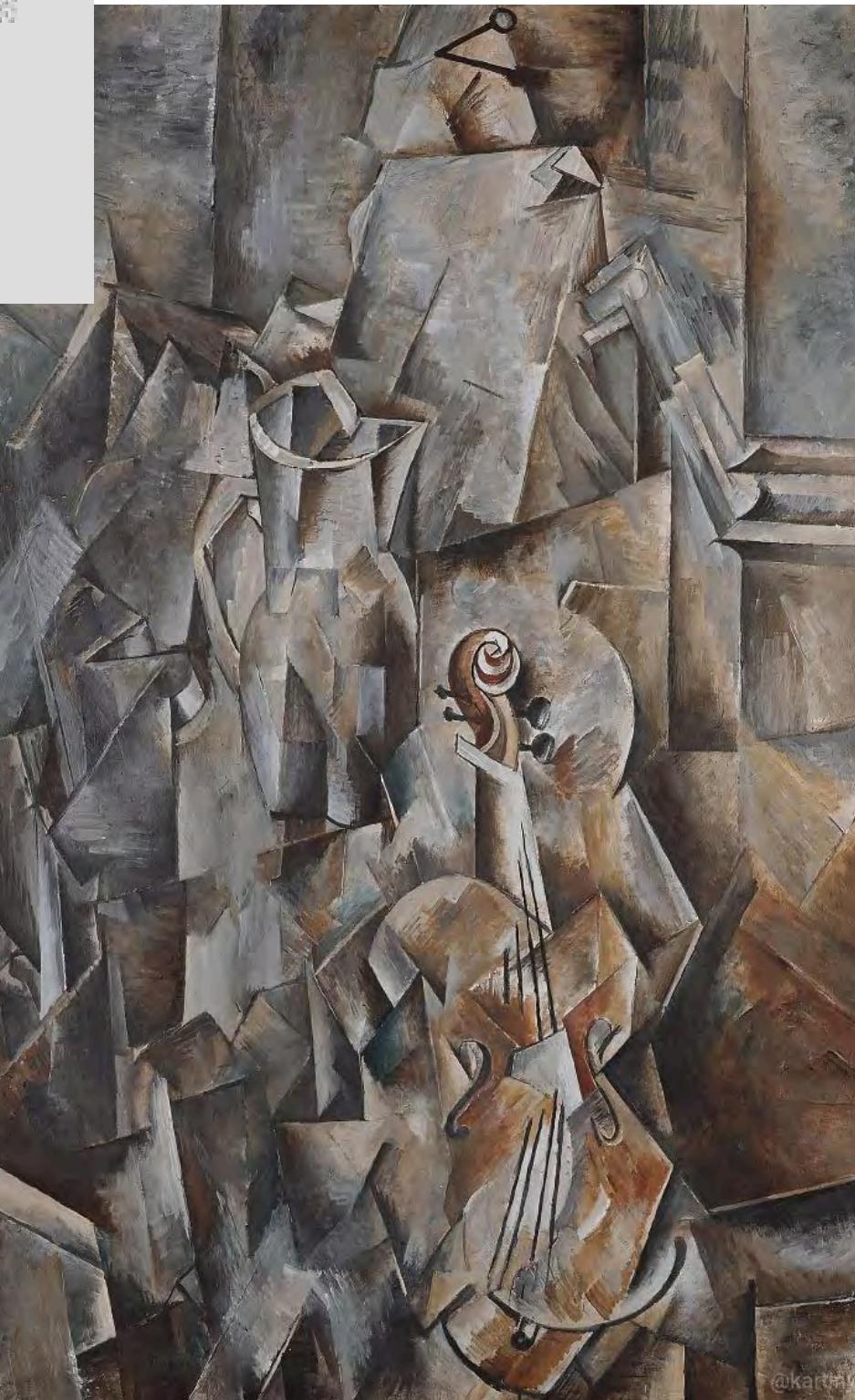


## 1. Gestalt laws

# Perception Concepts



1. Gestalt laws



2. Imperfection

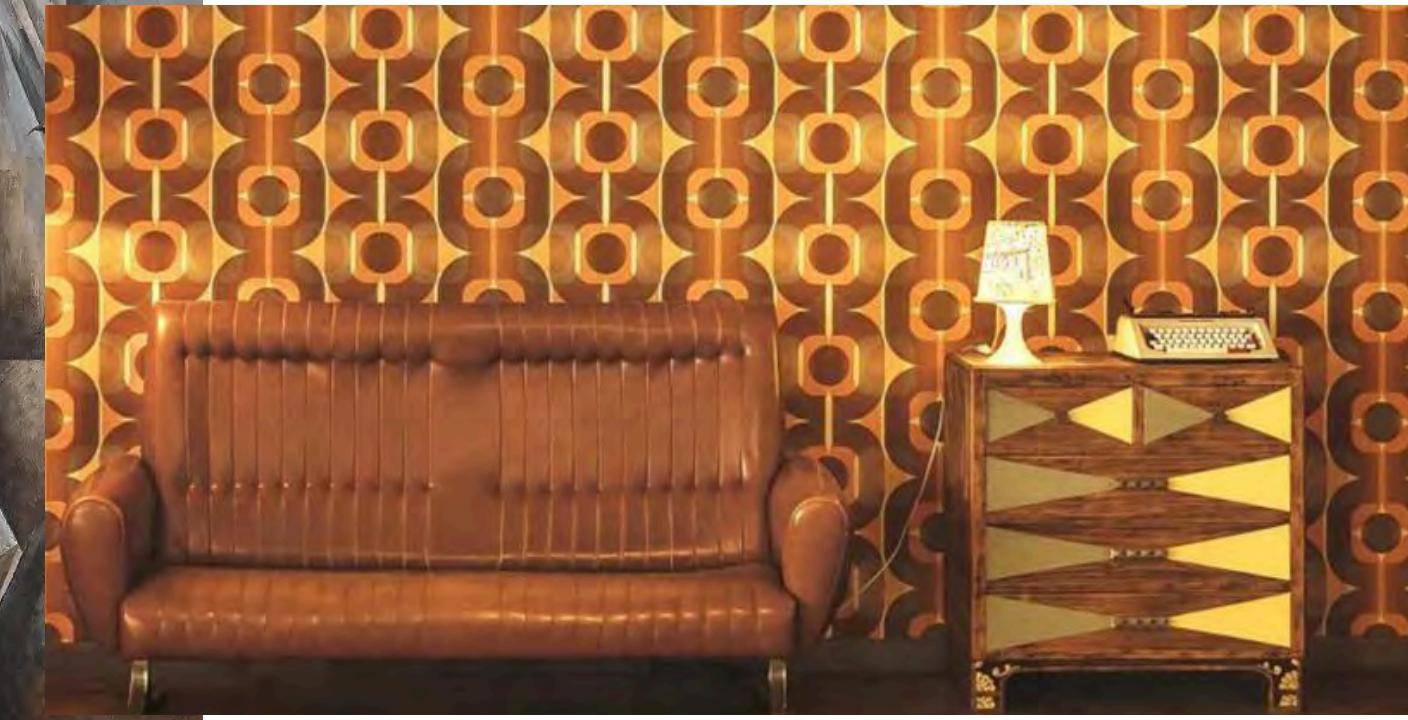
# Perception Concepts



1. Gestalt laws

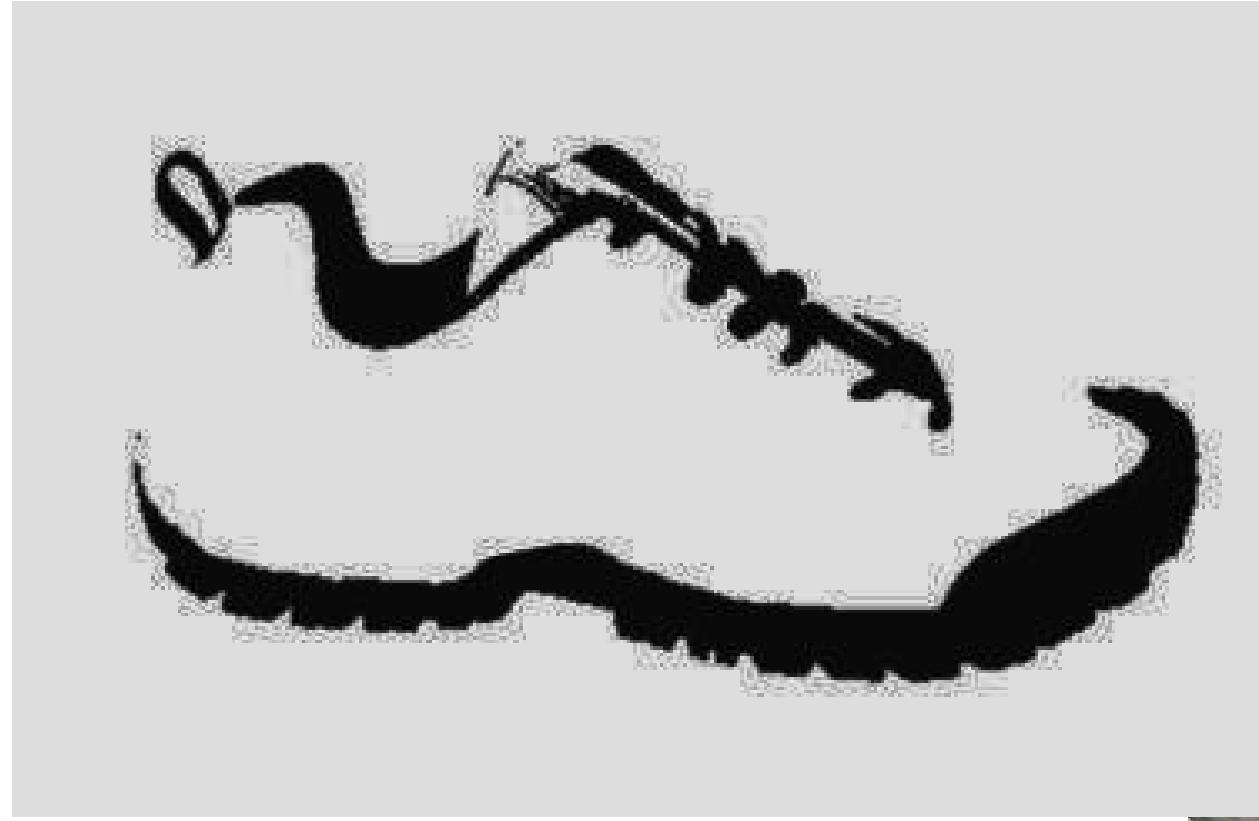


2. Imperfection

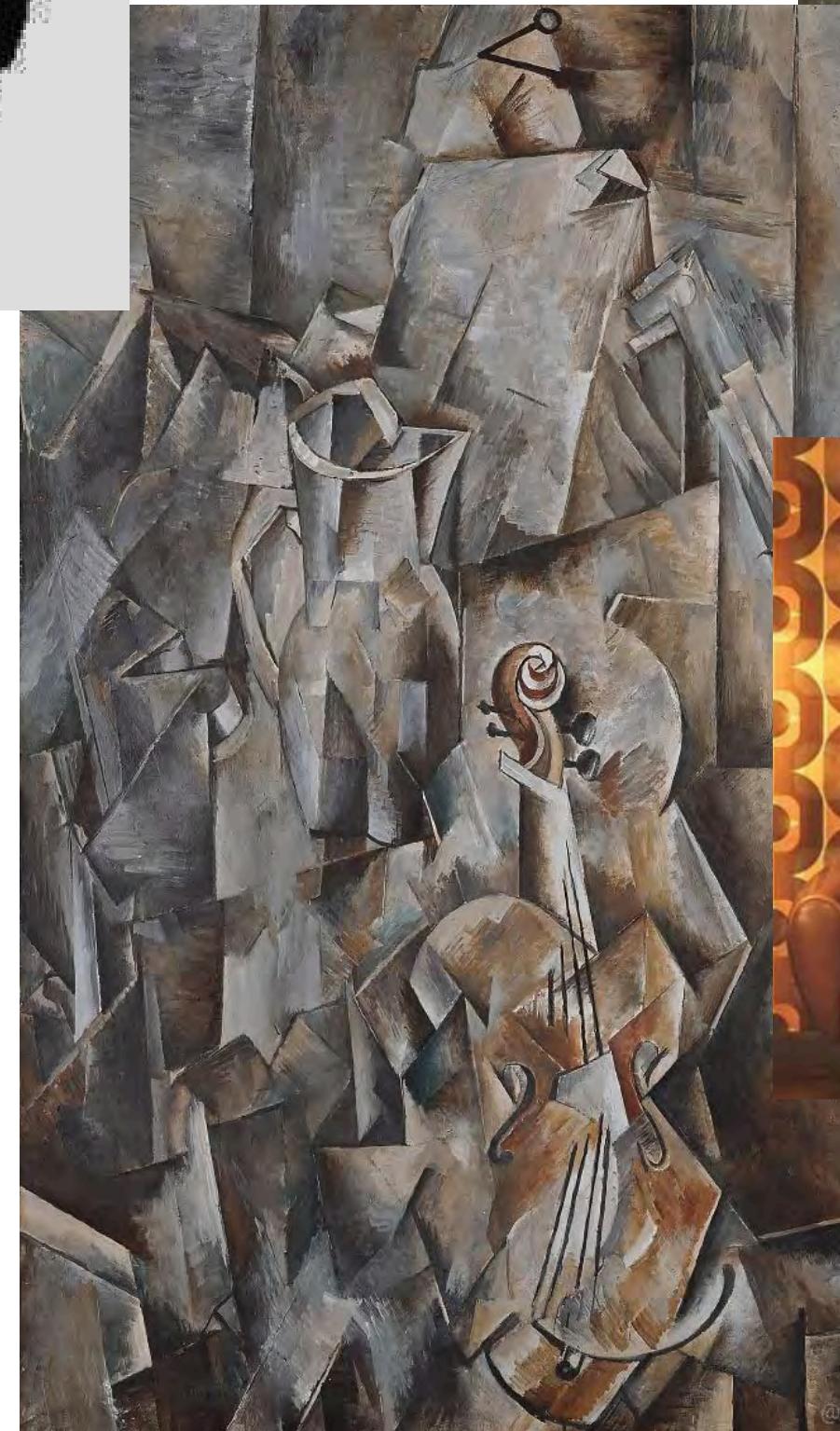


3. Shifts of perception

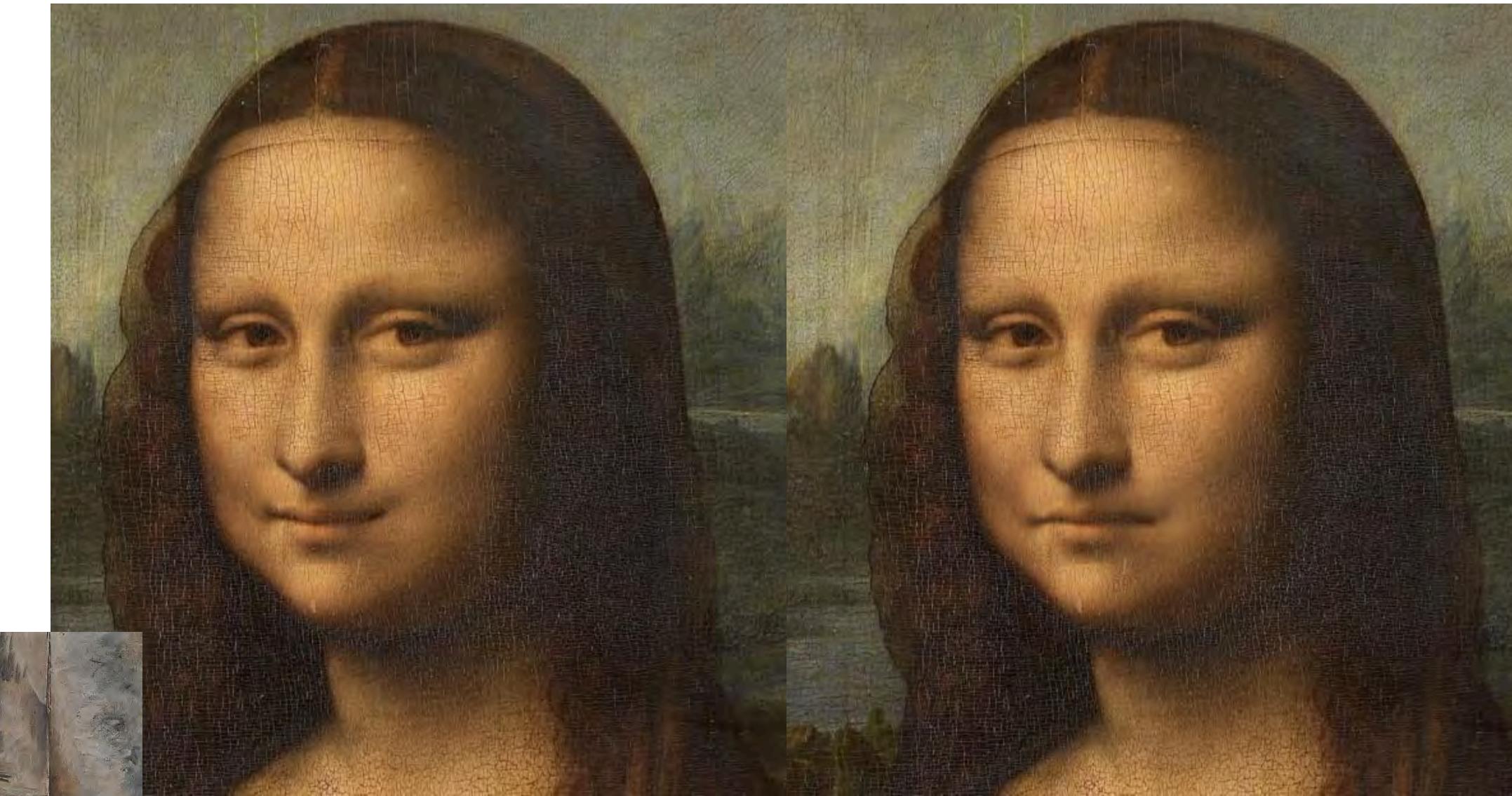
# Perception Concepts



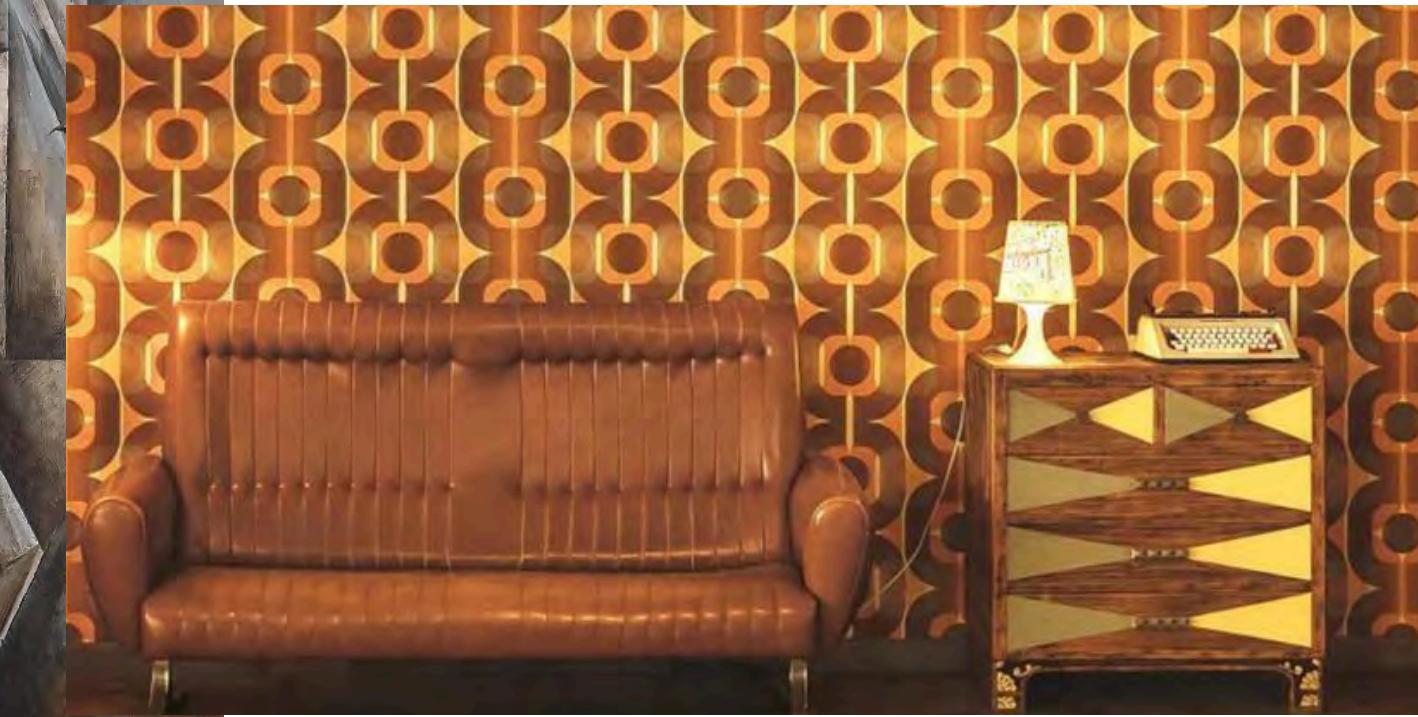
1. Gestalt laws



2. Imperfection



4. Optical illusions



3. Shifts of perception

**What must AI be capable of to truly understand our aesthetic perception?**

Gestalt laws

**What must AI be capable of to truly understand our aesthetic perception?**

Gestalt laws

**What must AI be capable of to truly understand our aesthetic perception?**

Imperfection as a quality

Gestalt laws

**What must AI be capable of to truly understand our aesthetic perception?**

Shifts of perception

Imperfection as a quality

Gestalt laws

Optical illusions

**What must AI be capable of to truly understand our aesthetic perception?**

Shifts of perception

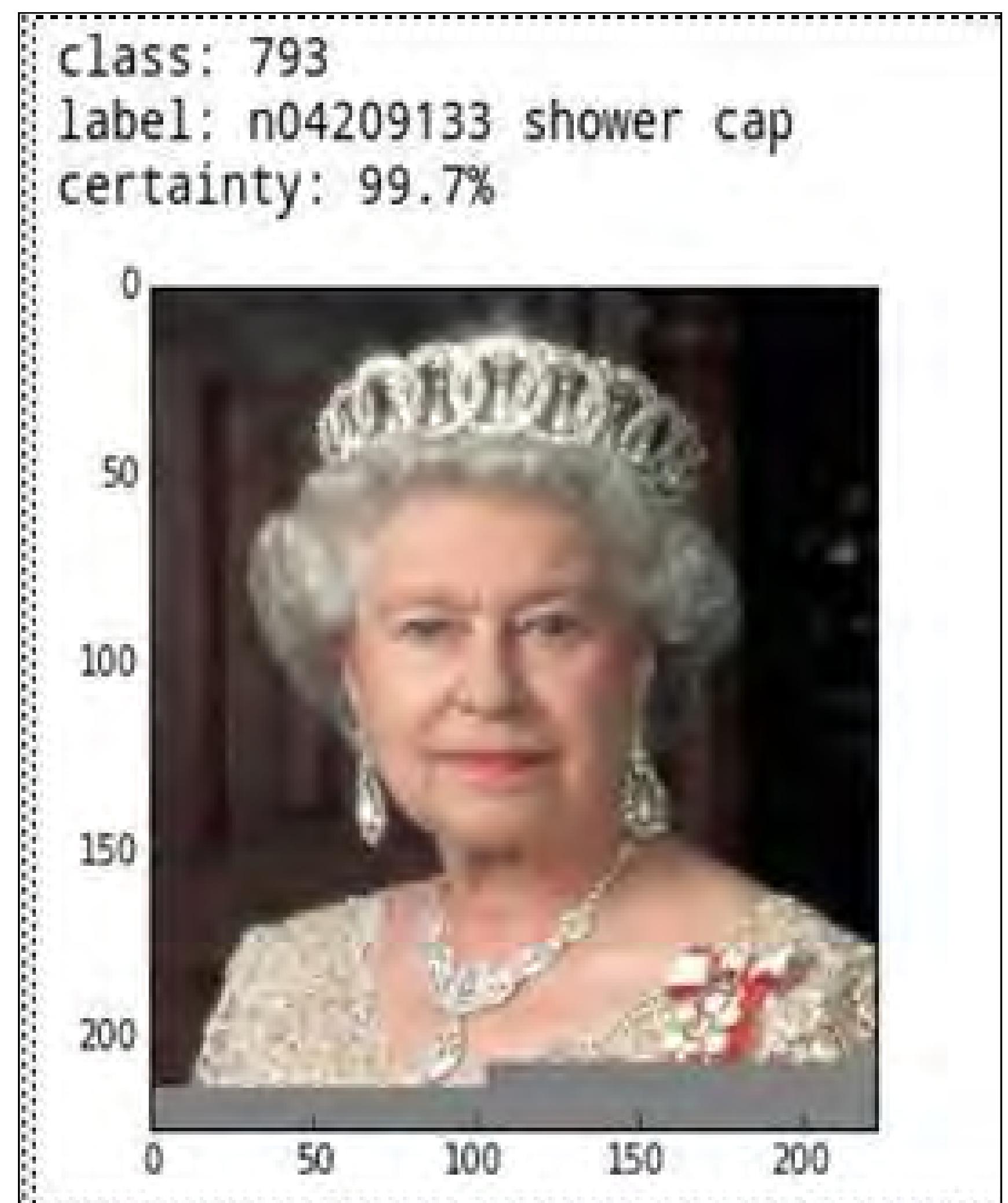
Imperfection as a quality

# The Artificial Gaze

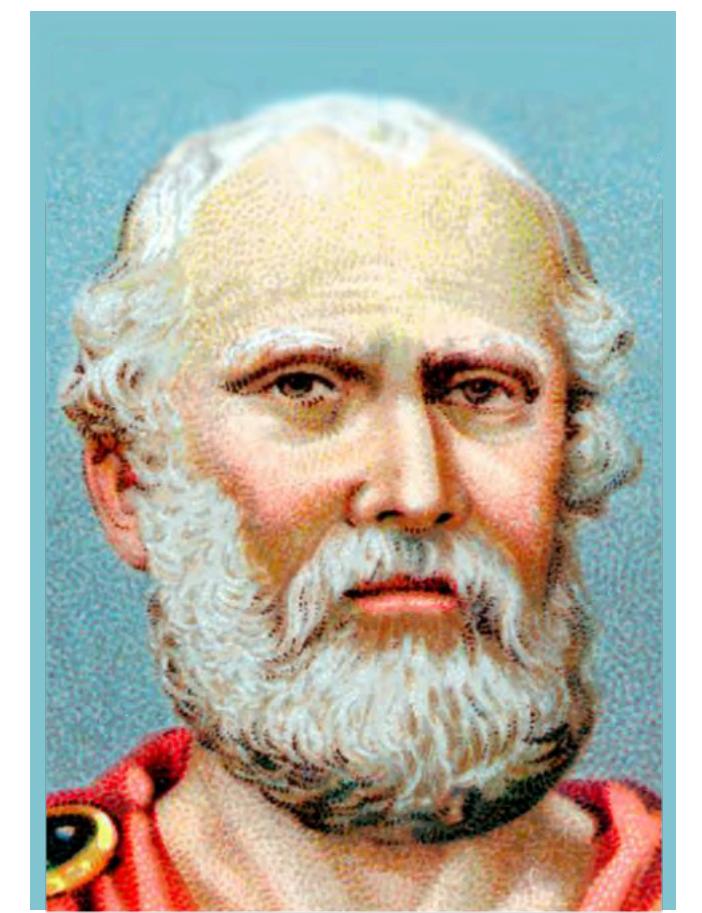
# Potentials in Pattern Recognition

## Unveiling connections

- Ai analyzes the crown as a “shower cap”
- Error highlights similarity
- Artificial systems could discover historically unfound associations



# Artificial Platonism

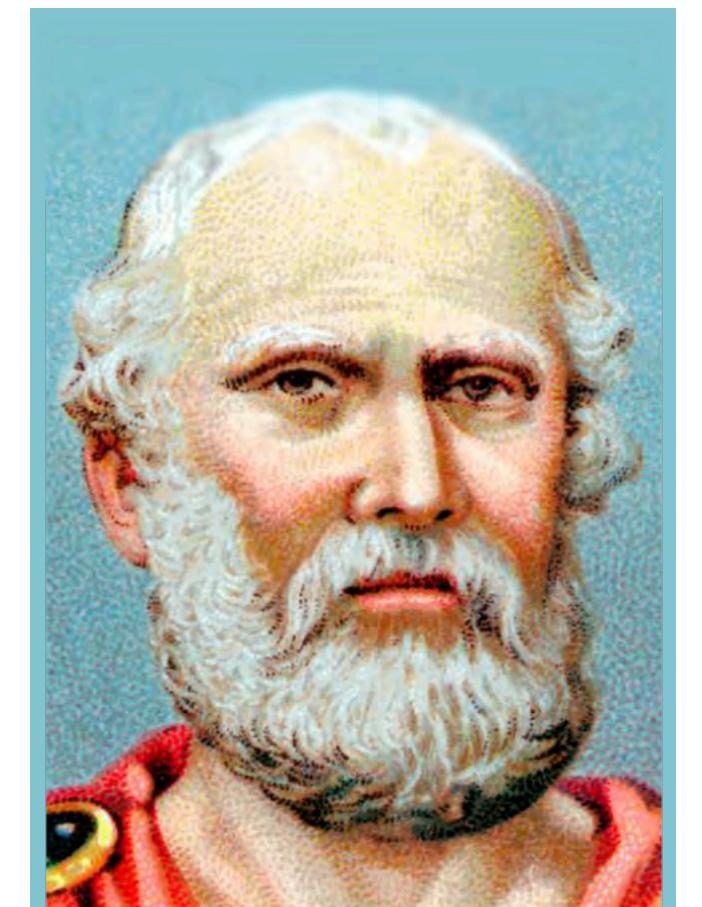


Platon  
428/427 v. Chr. -  
348/347 v. Chr.

# Artificial Platonism

## Platonism

The belief in a higher realm of perfect forms/ideas that are the truth behind the imperfect, changing world we perceive.

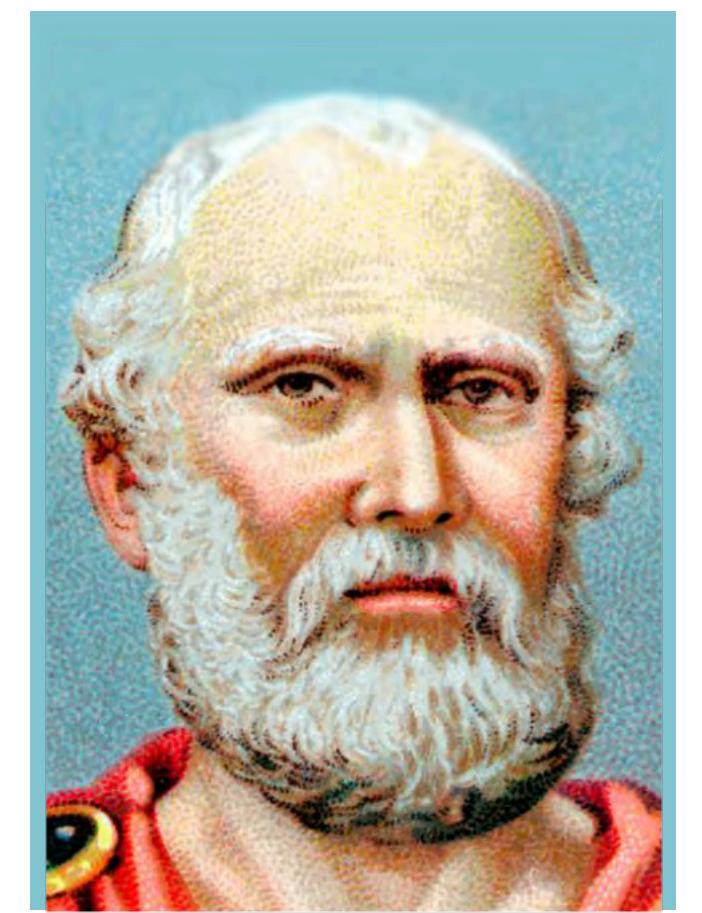


Platon  
428/427 v. Chr. -  
348/347 v. Chr.

# Artificial Platonism

## Platonism

The belief in a higher realm of perfect forms/ideas that are the truth behind the imperfect, changing world we perceive.



Platon  
428/427 v. Chr. -  
348/347 v. Chr.

## Artificial Platonism

Belief that artifacts embody a specific essence that can be extracted and used.

# Artificial Platonism

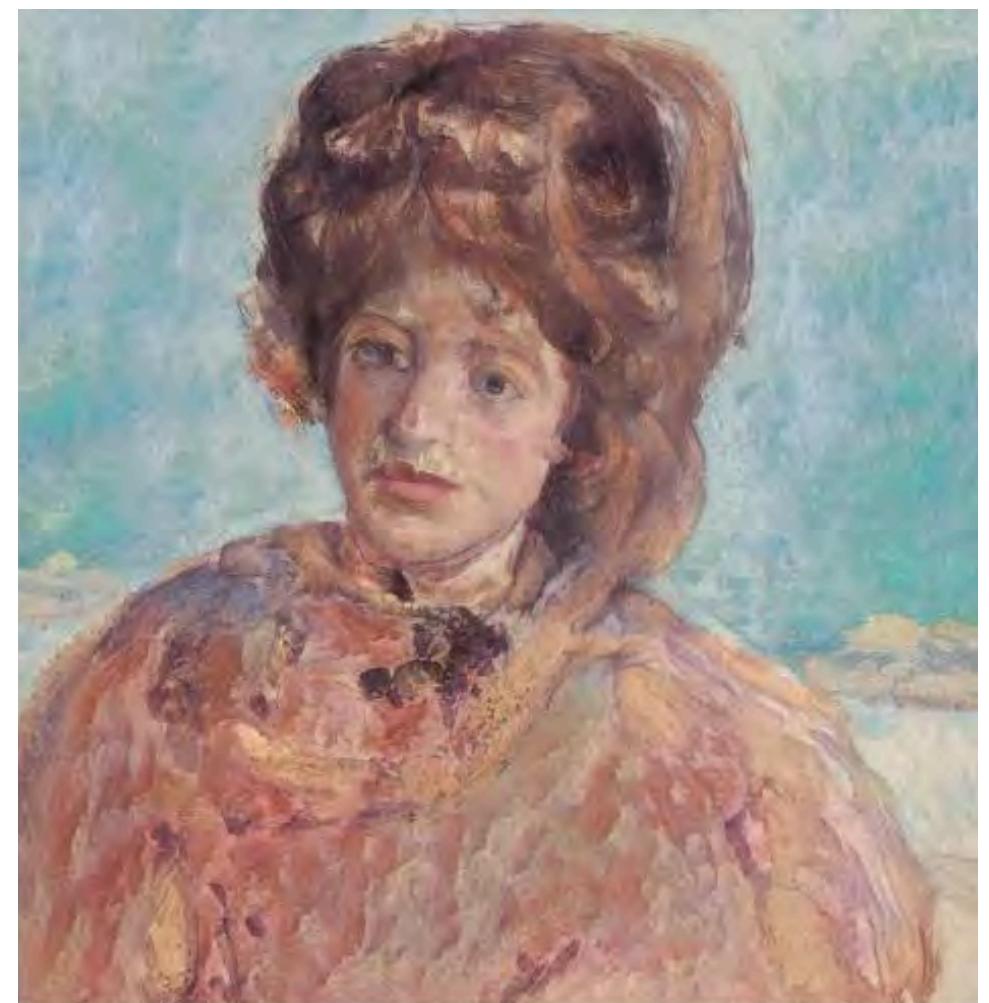


## “Essence”

- Use of color
- Brush strokes
- Lighting



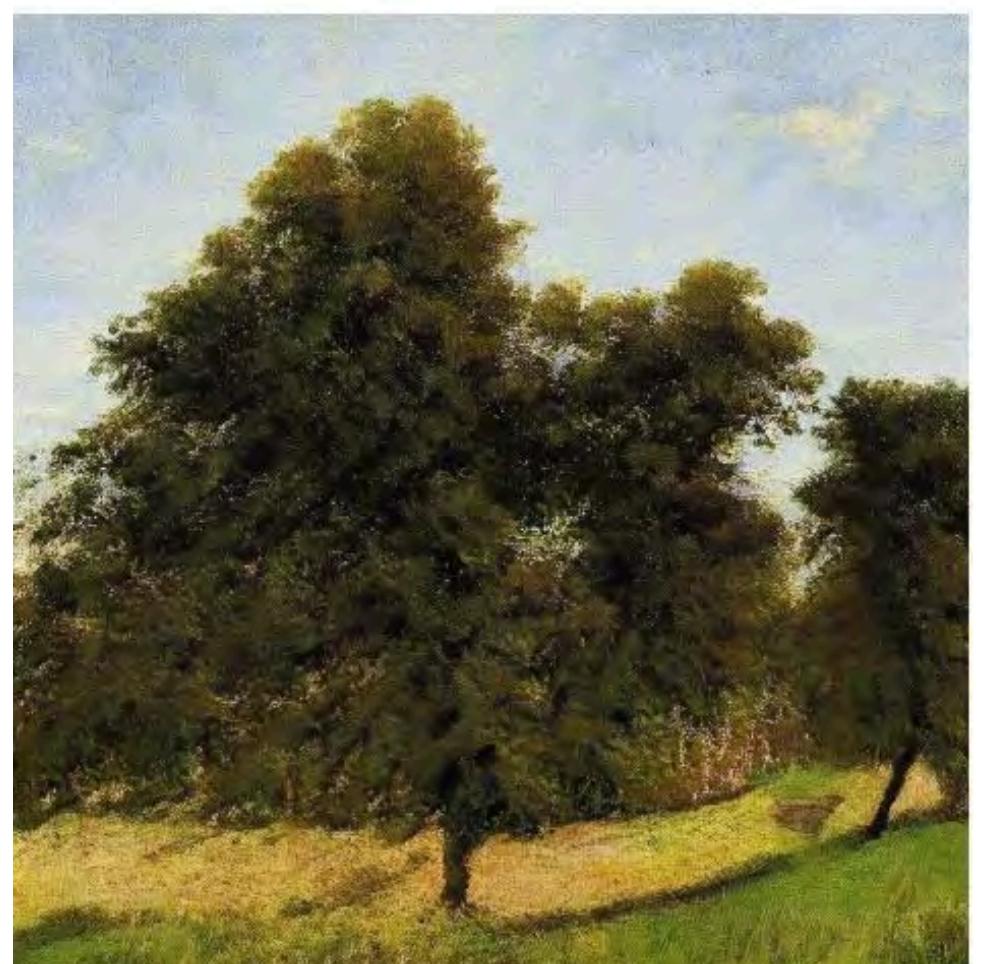
# Original and Variation– Relationship Shift



# Original and Variation– Relationship Shift

## Phase 1

- Generated content is viewed as an extension of the original works



# Original and Variation–Relationship Shift

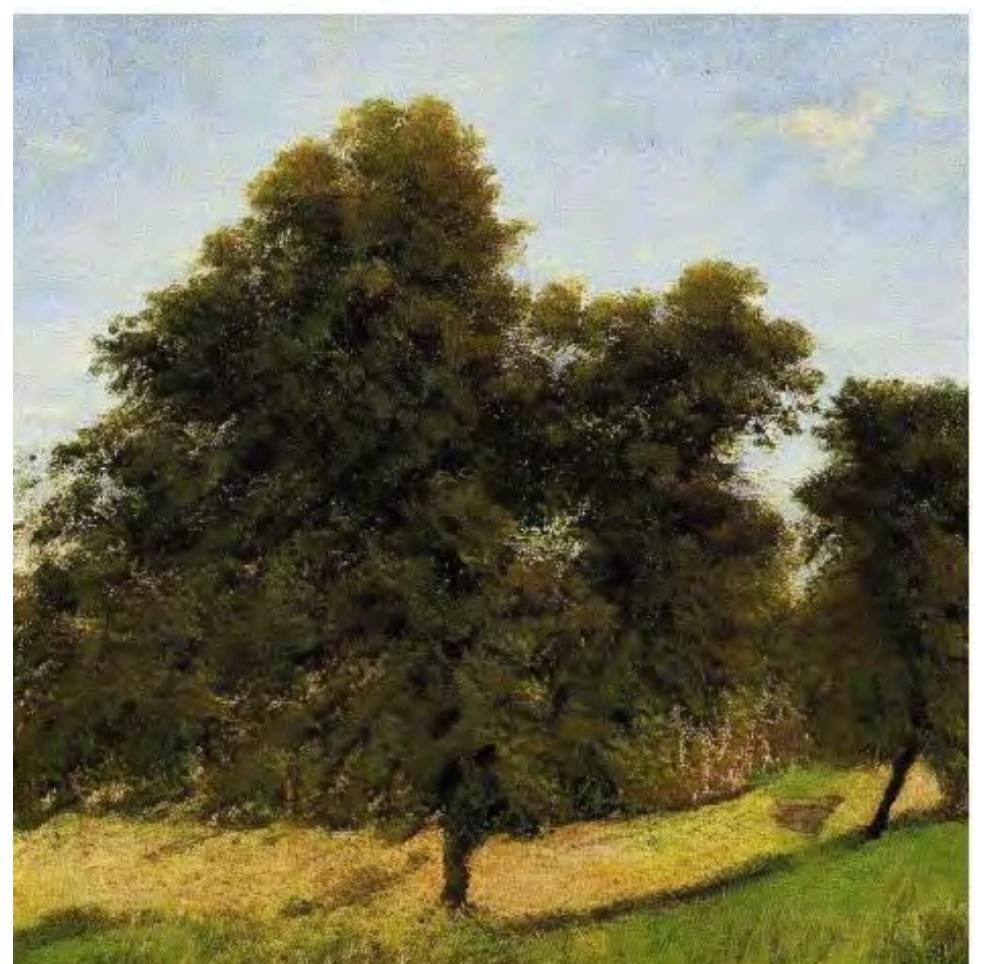
## Phase 1

- Generated content is viewed as an extension of the original works



## Phase 2

- Intermediate phase: unclear if we observe a variation or the original (déjà-vu effect)
- Final Stage: Generated content dominates (we see the variations in the original work)



# Original and Variation–Comparison Remixes

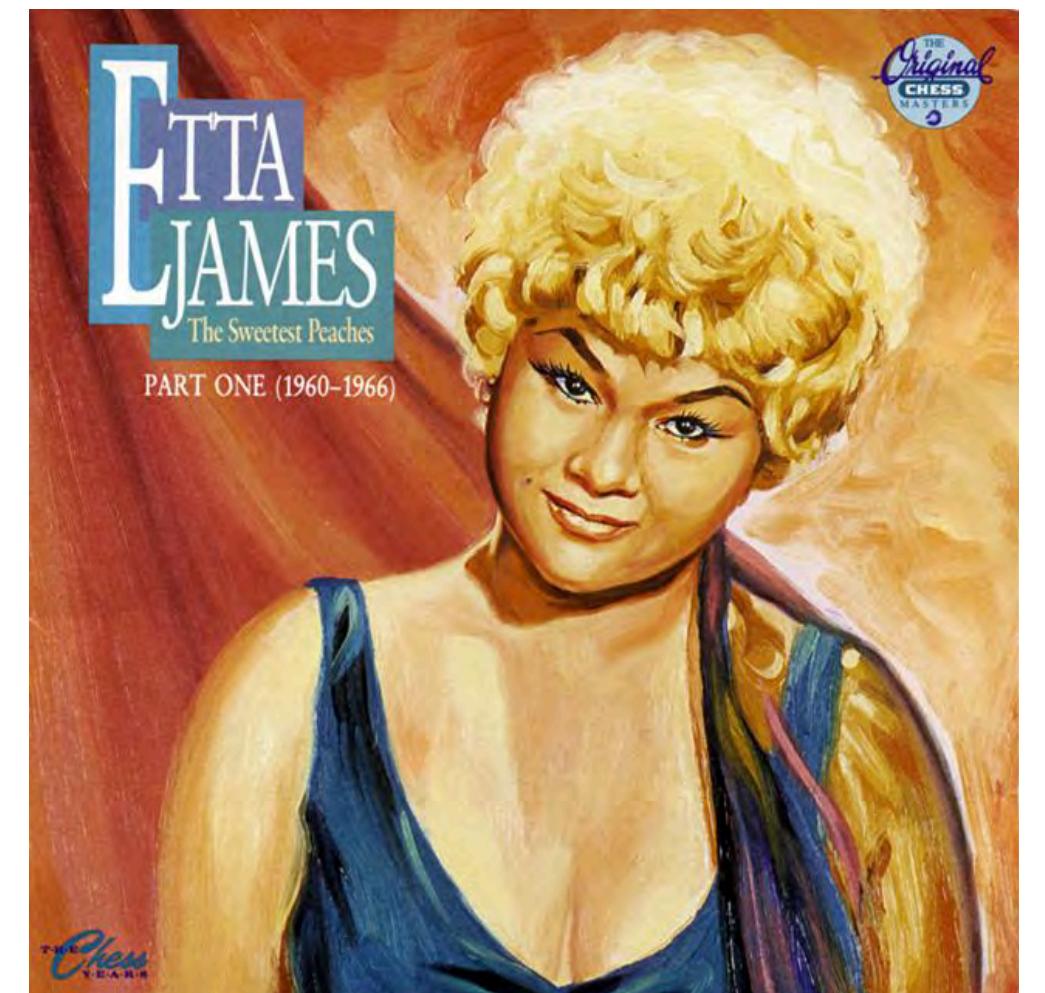
## Avicii - "Levels"

- young generation perceive it through the lens of the cover often preferring it



## Etta James - "Something's Got a Hold on Me"

- Older listeners recognize the favored original

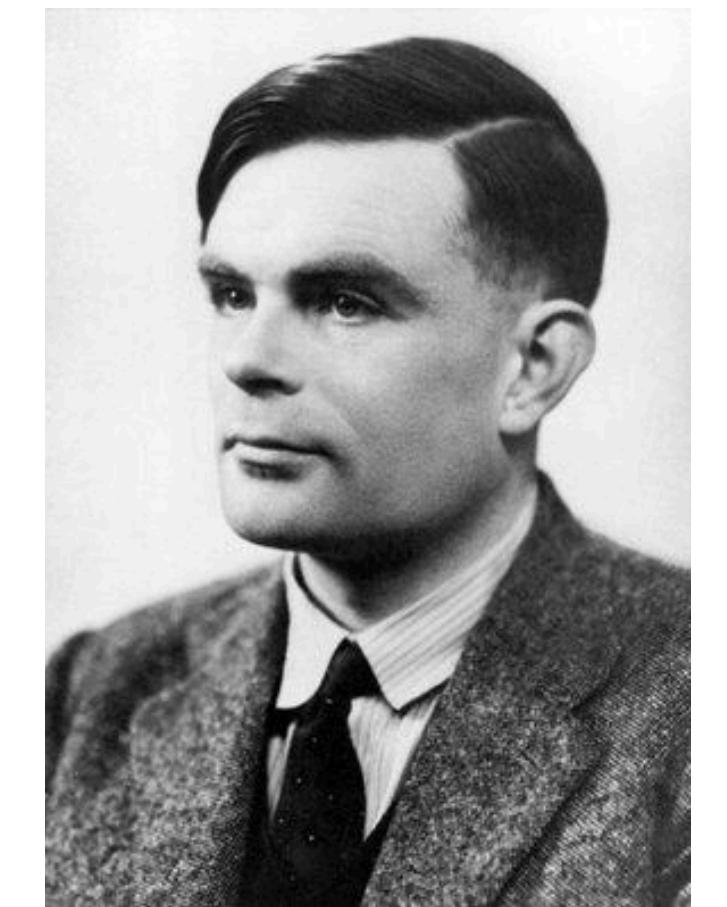




**Should we start protecting different styles and moods instead of just the artifact itself?**

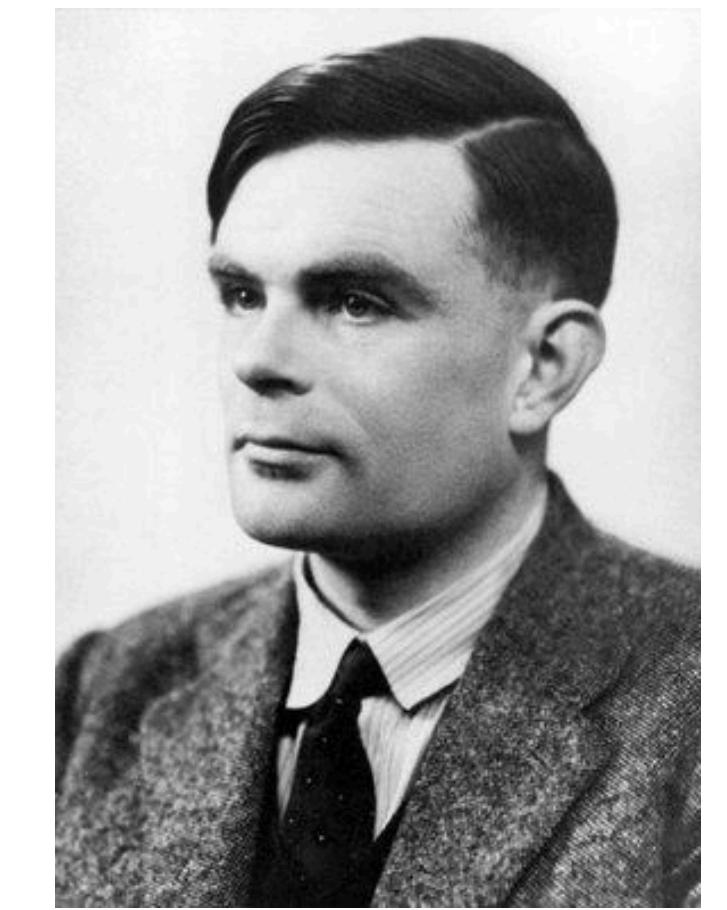
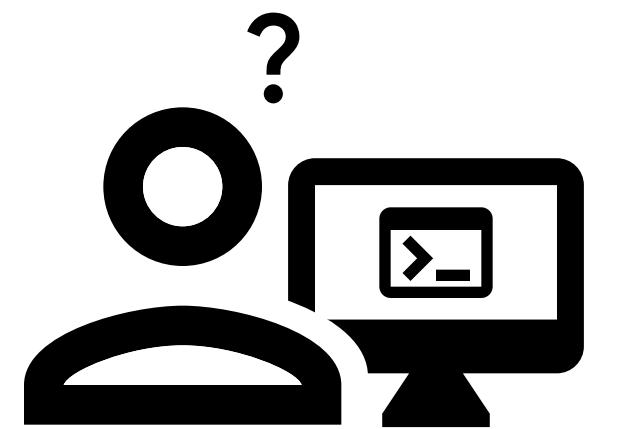
# Testing Artistic AI

# What is the Turing Test?



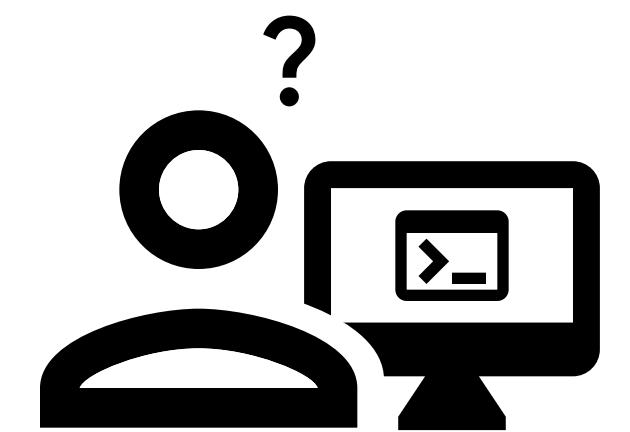
Alan Turing  
23 Jun 1912 – 7 Jun 1954

# What is the Turing Test?

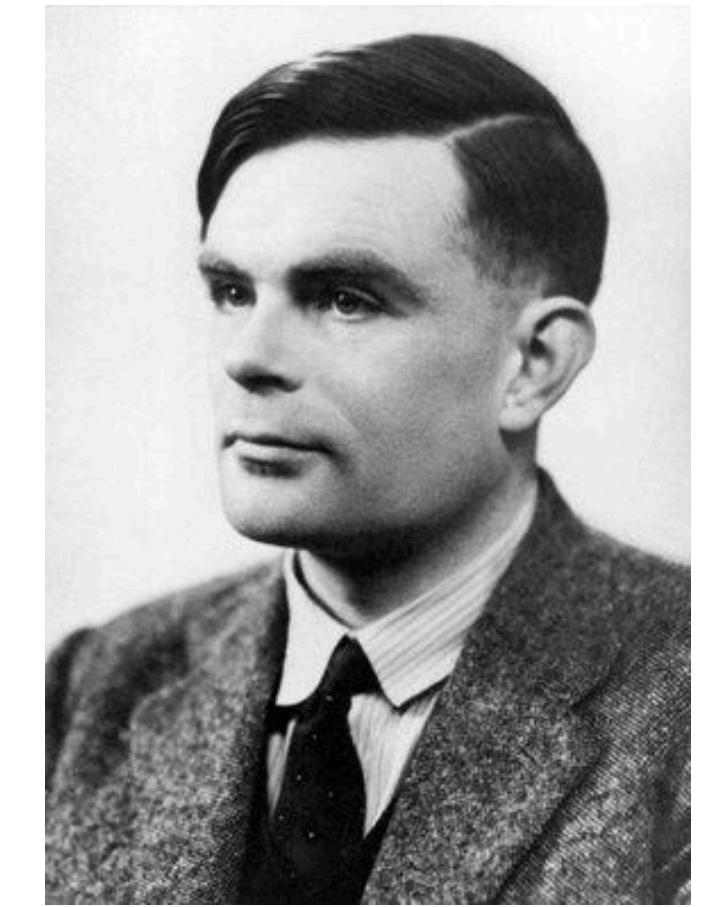


Alan Turing  
23 Jun 1912 – 7 Jun 1954

# What is the Turing Test?

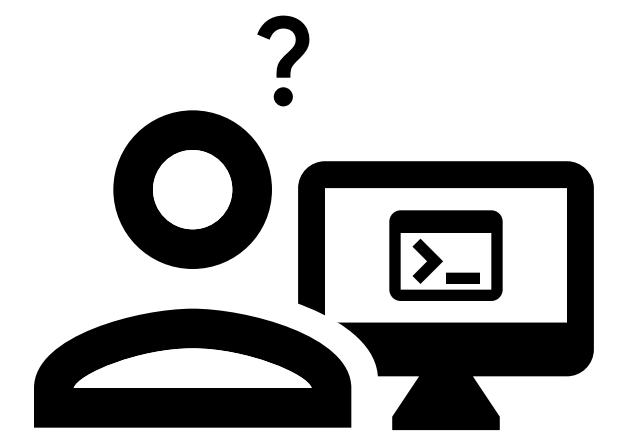


1.

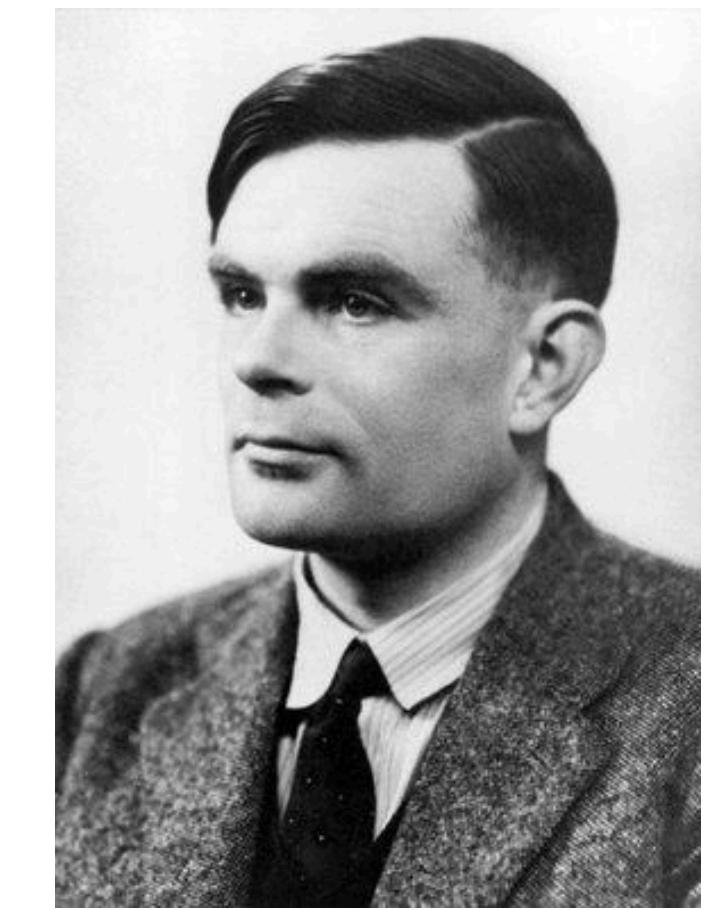


Alan Turing  
23 Jun 1912 – 7 Jun 1954

# What is the Turing Test?



1. A black and white icon depicting a stylized human head profile facing left, with a question mark above it. To its right is a computer monitor displaying a command-line interface with a greater-than sign (>) and a dash (-).
2. A black and white icon of a computer monitor displaying a command-line interface with a greater-than sign (>) and a dash (-).



Alan Turing  
23 Jun 1912 – 7 Jun 1954

# Parameters for Testing Artistic AI Today

# Parameters for Testing Artistic AI Today

- What datasets should AI have access to?
- Who should the AI compete against?
- If professionals, what defines a professional?

# Parameters for Testing Artistic AI Today

- What datasets should AI have access to?
- Who should the AI compete against?
- If professionals, what defines a professional?



# Parameters for Testing Artistic AI Today

- What datasets should AI have access to?
- Who should the AI compete against?
- If professionals, what defines a professional?

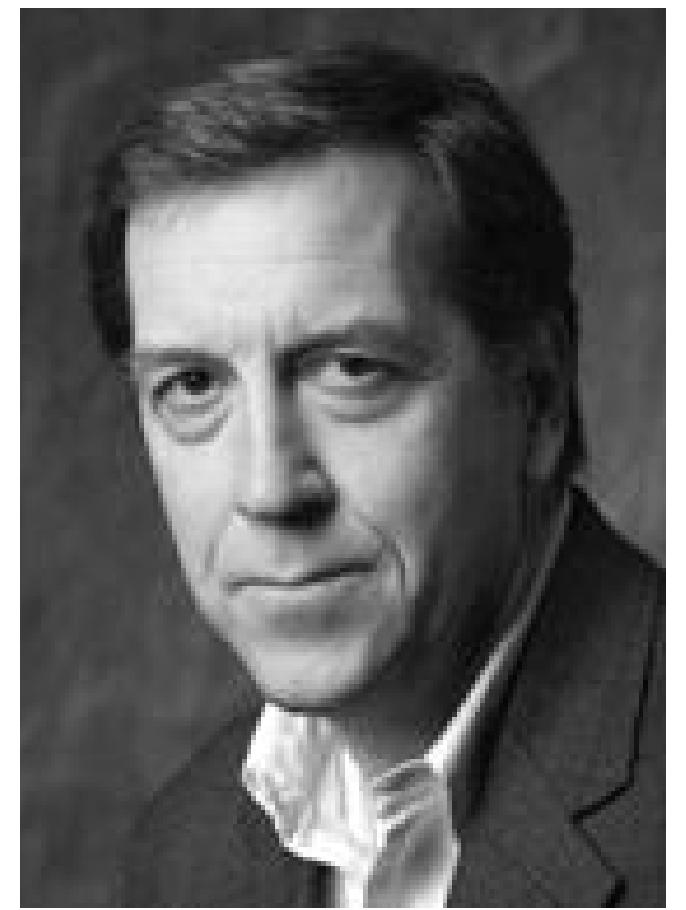


# Parameters for Testing Artistic AI Today

- What datasets should AI have access to?
- Who should the AI compete against?
- If professionals, what defines a professional?

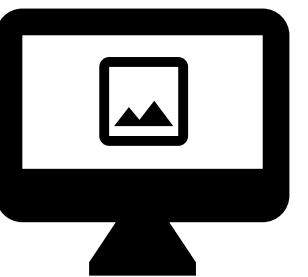
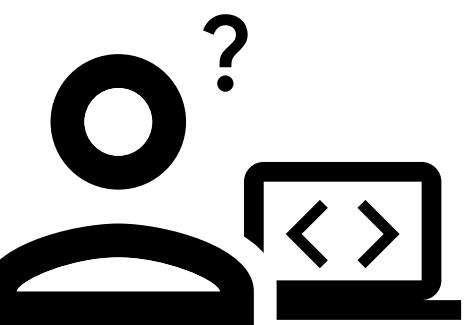


# Alternative Tests— The Lovelace Test



Selmer Bringsjord  
November 24, 1958

- Requires AI to produce an artifact
- Output shouldn't be explainable by AI's programmer
- Demands genuine originality



---

**The primary challenge now is to remain patient and maintain a positive outlook.**

# Reflective Statement

# Reflective Statement

## Negative aspects

- First Chapters quite superficial
- Frequent repetition throughout the book, making it tiring to read
- The abundance of hypothetical questions challenged the structure of a coherent narrative

# Reflective Statement

## Negative aspects

- First Chapters quite superficial
- Frequent repetition throughout the book, making it tiring to read
- The abundance of hypothetical questions challenged the structure of a coherent narrative

## Positive aspects

- Exploration of the foundations of perception and its theory
- Showing a deep reflection on the potential implementations of artificial systems
- Provoked many questions, to think about such as:
  - What constitutes an aesthetic experience?
  - How do we determine whether someone is truly “professional”?

# Q&A

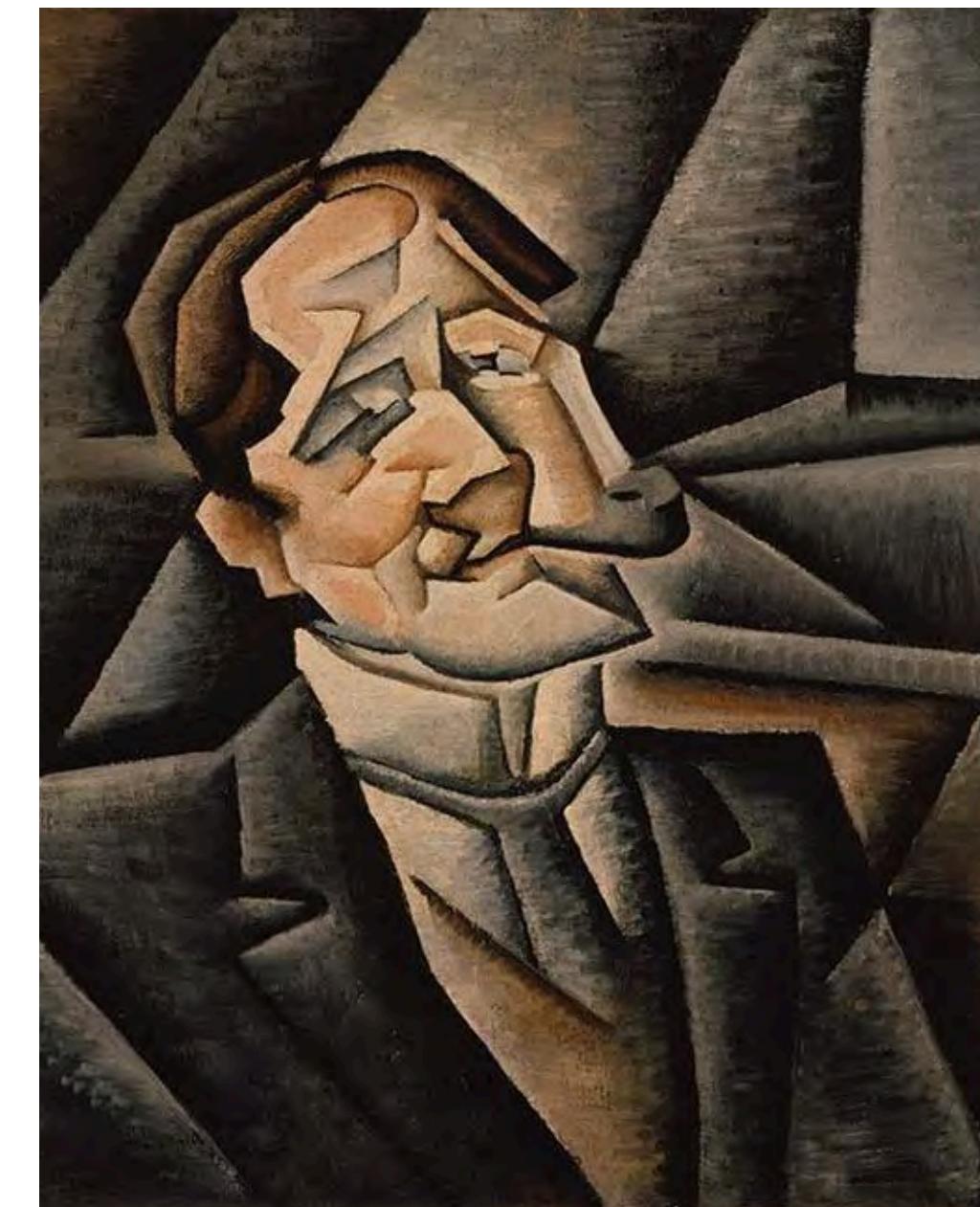
# Choose an Image



<https://kimkobloggt.wordpress.com/2021/07/06/die-geschichte-des-impressionismus/>



<https://www.kunstplaza.de/kunstepochen/barock-epochen-stil/>



<https://malen-lernen.org/kubismus-geschichte-merkmale-bekannte-kuenstler/>



### Question 01

**What is your aesthetic experience with this image?**

- How would you rate it? (1-10, 10 is the best)
- What was your emotional and cognitive response?
- Where did this response come from? (Personal history, cultural background, use of color)

---

## Question 02

**Imagine a future where AI can predict  
your aesthetic judgment and create new  
songs from your favorites.  
Would you like this feature?**

### Question 03

**Does art lose value for you once AI is involved—or only beyond a certain point?**

**“Progress begins with  
curiosity and trust.”**

