

Artificial Aesthetics

Generative AI, Art and Visual Media



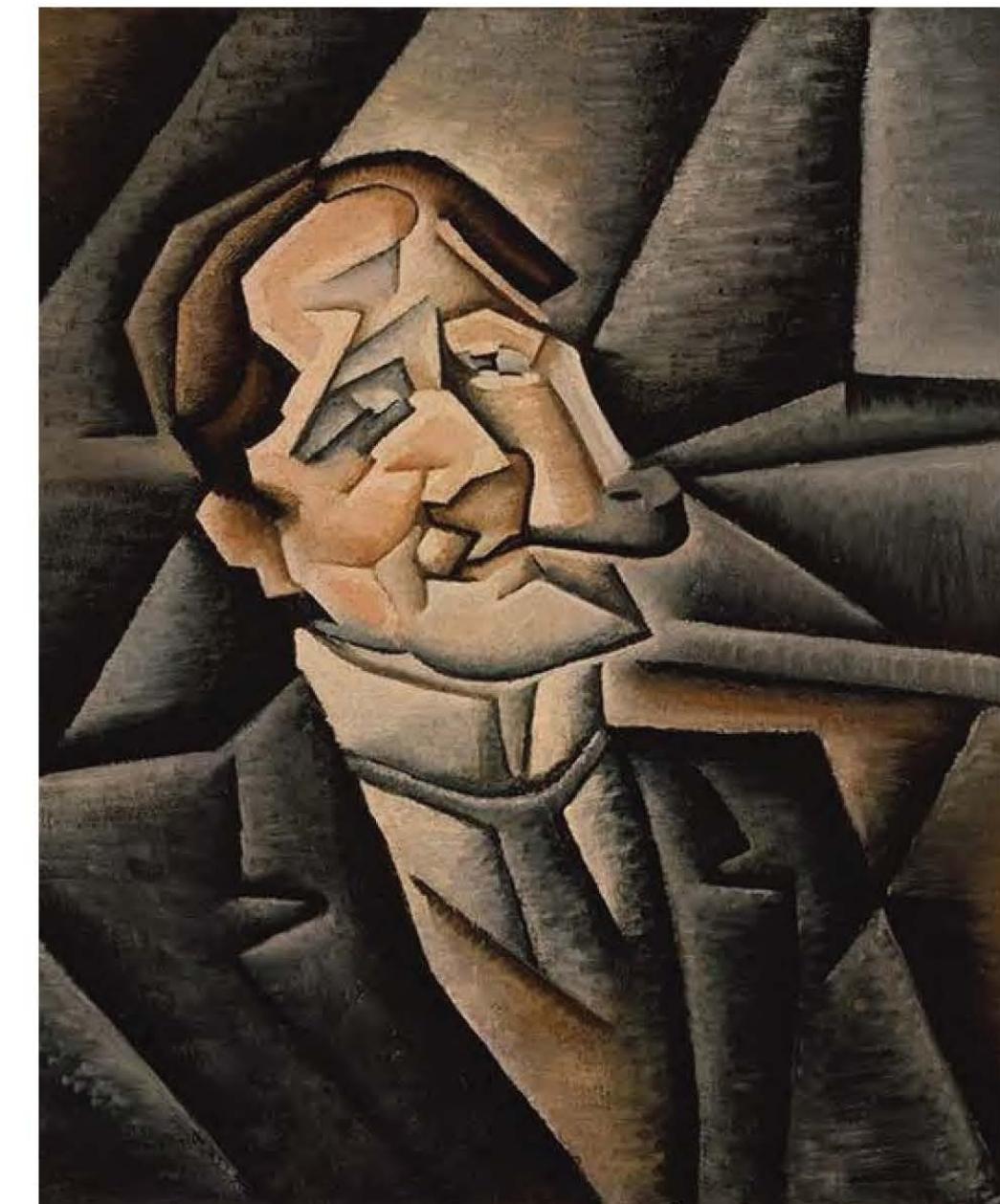
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<https://kimkobloggt.wordpress.com/2021/07/06/die-geschichte-des-impressionismus/>

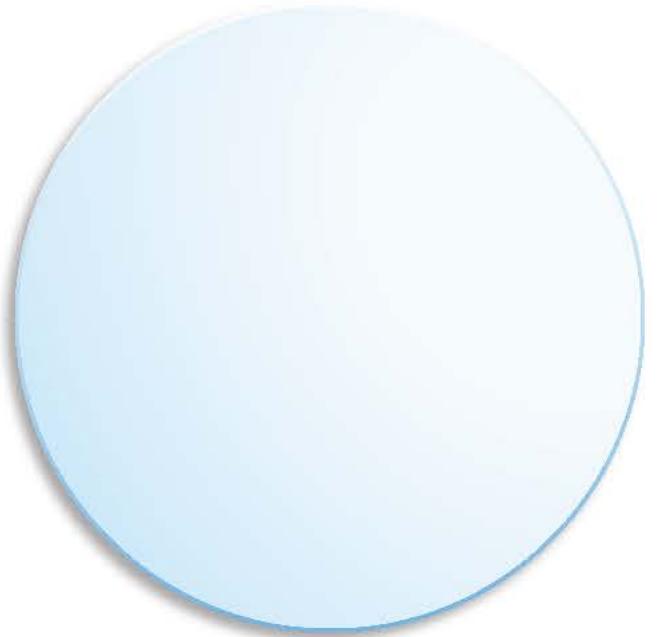


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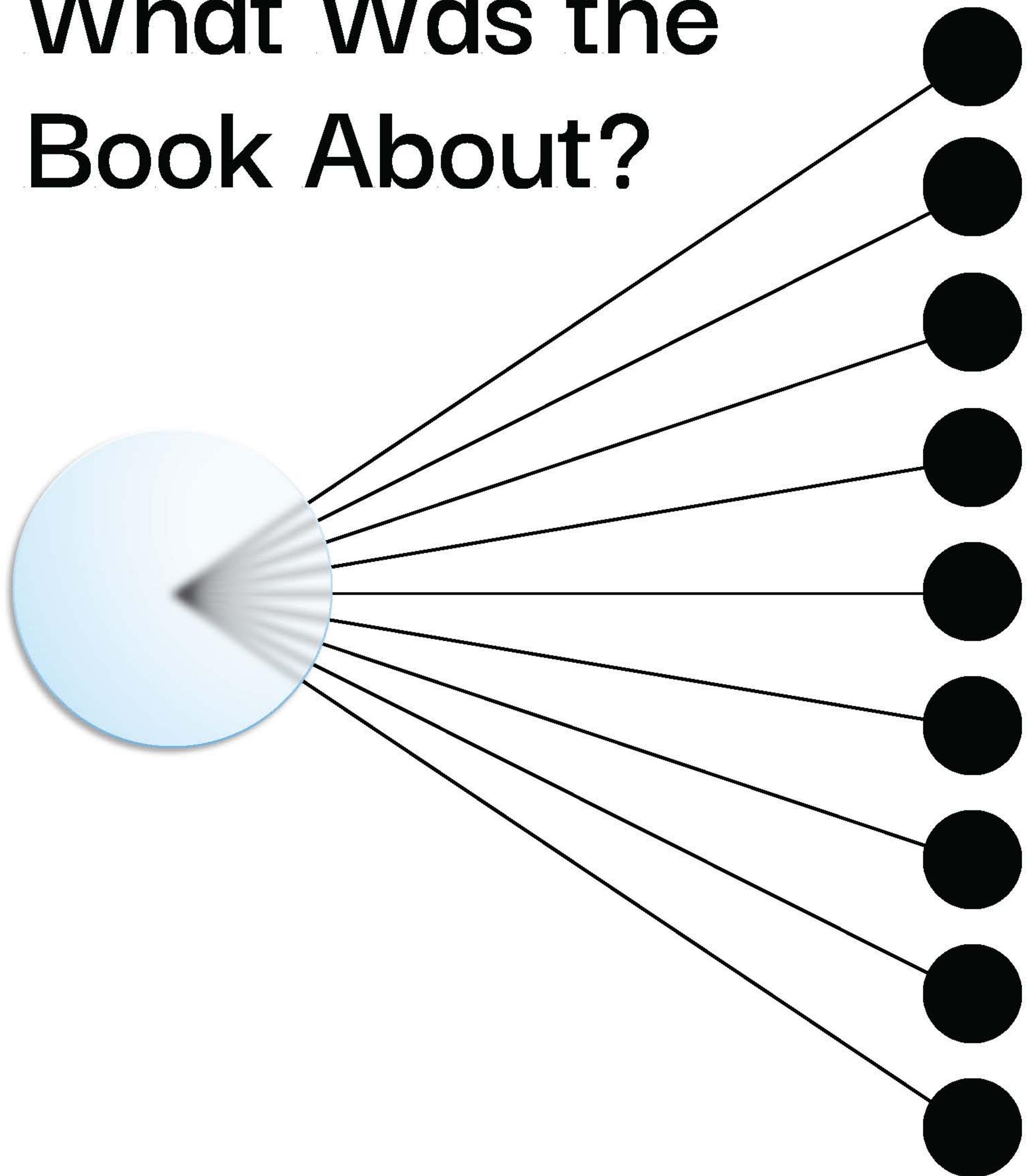


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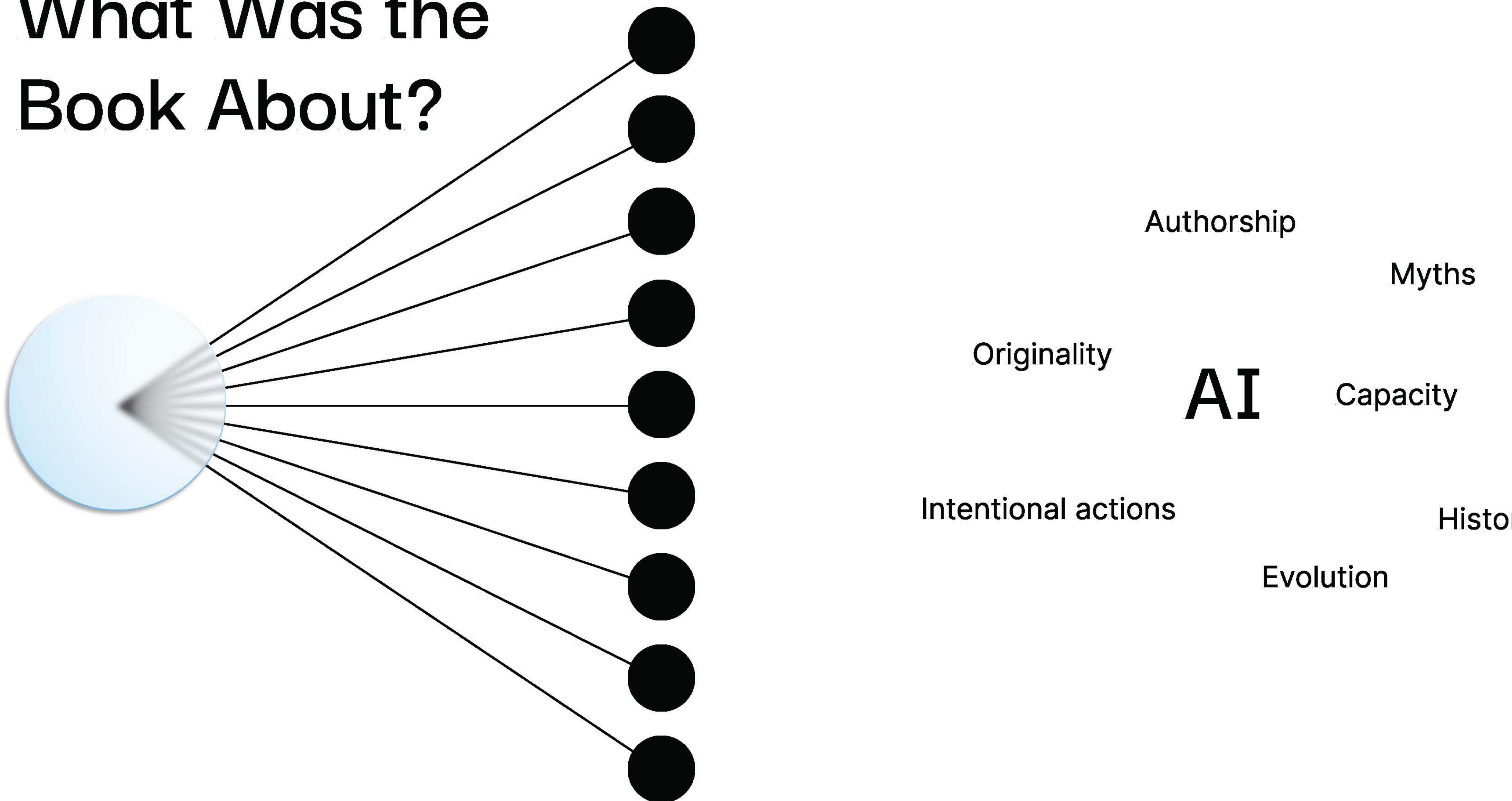
What Was the Book About?



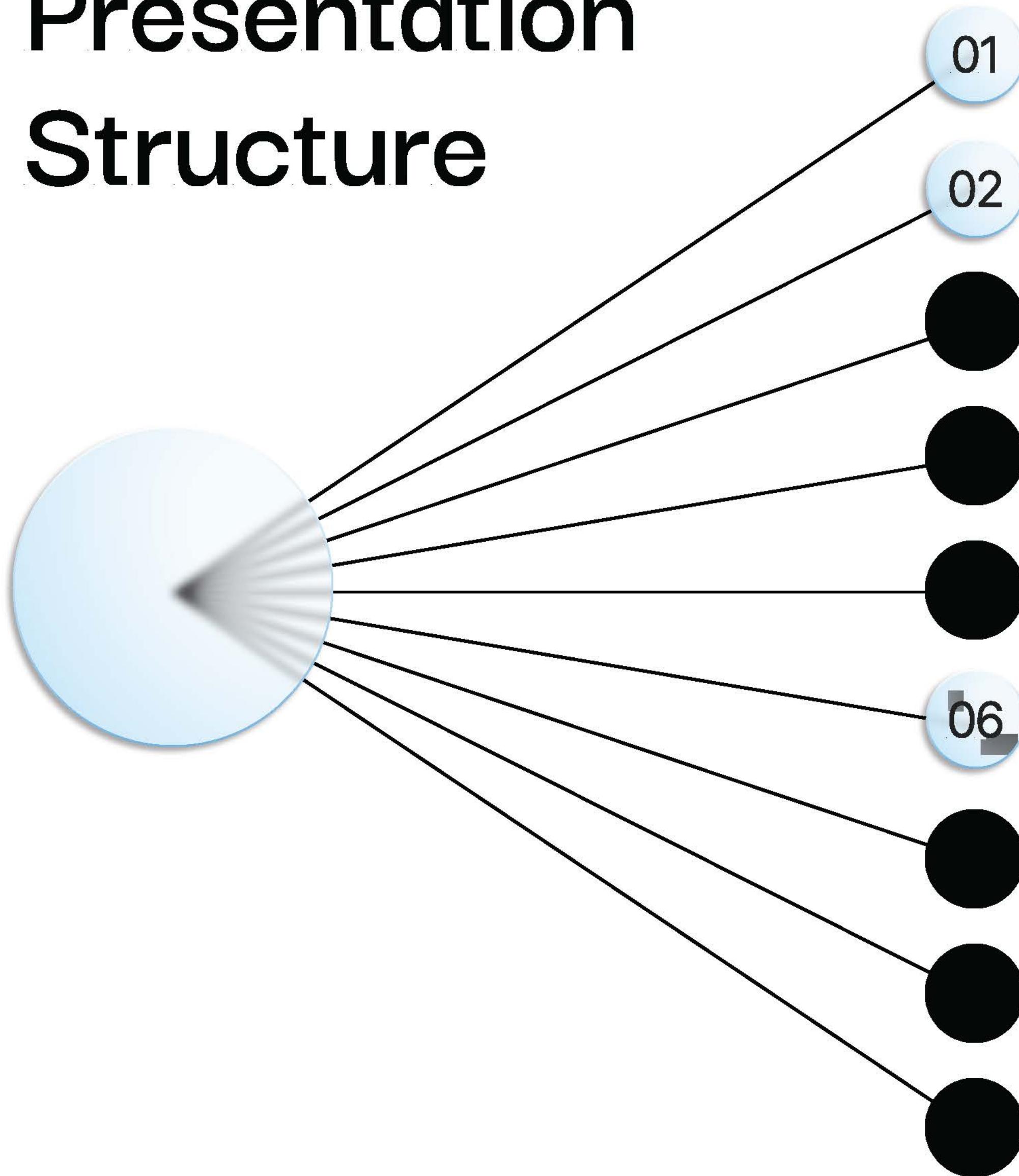
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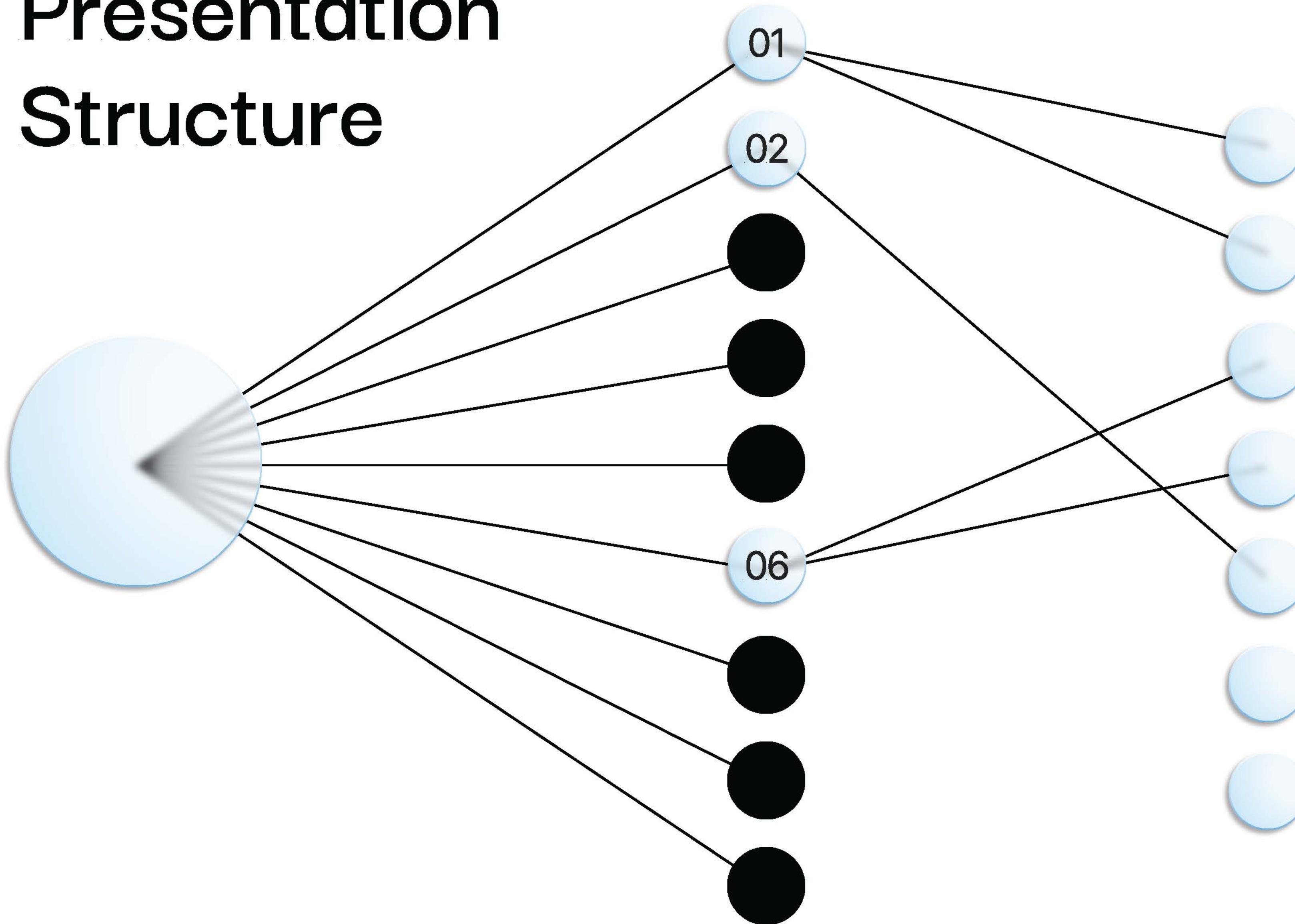
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Presentation Structure

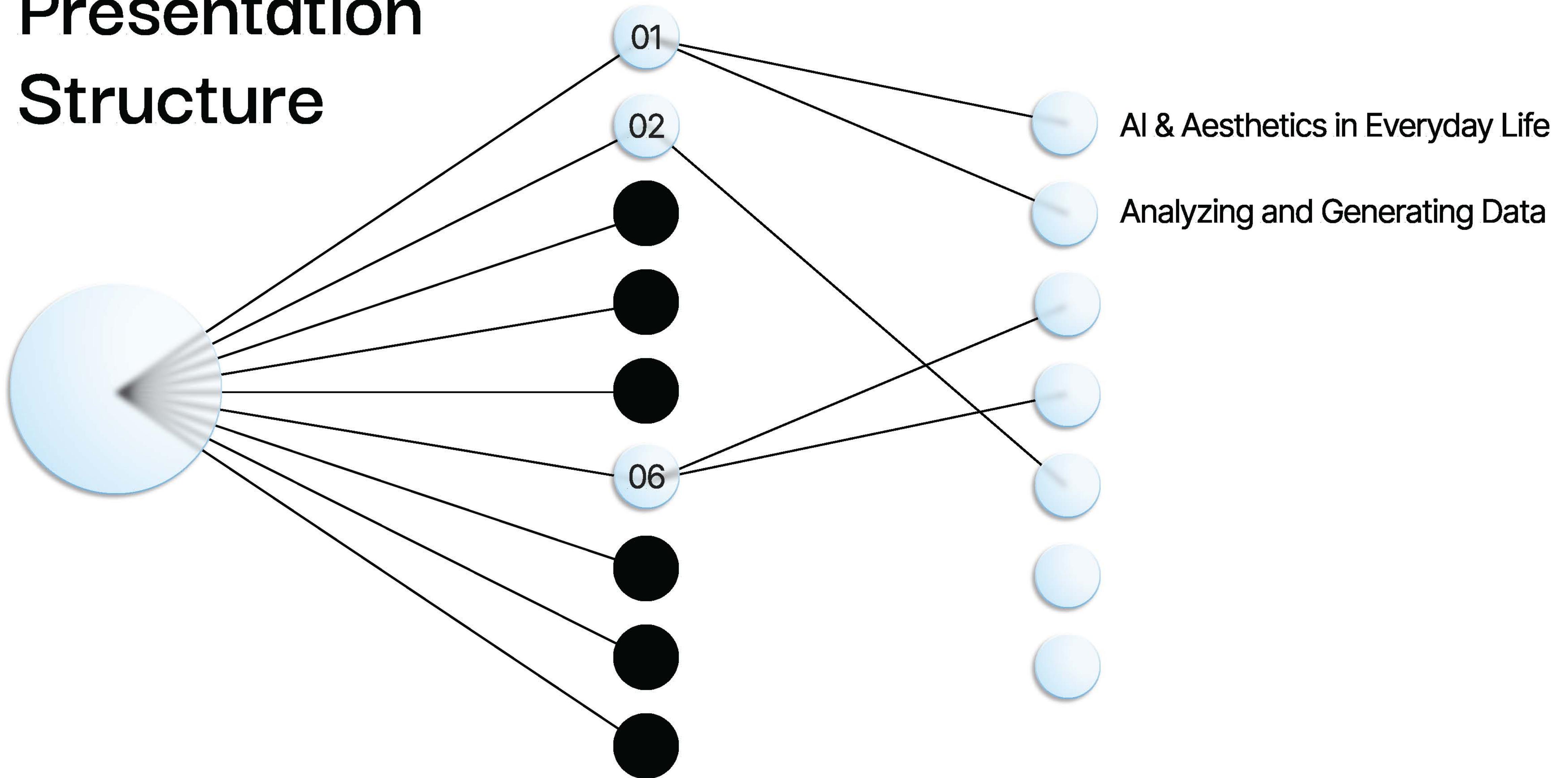


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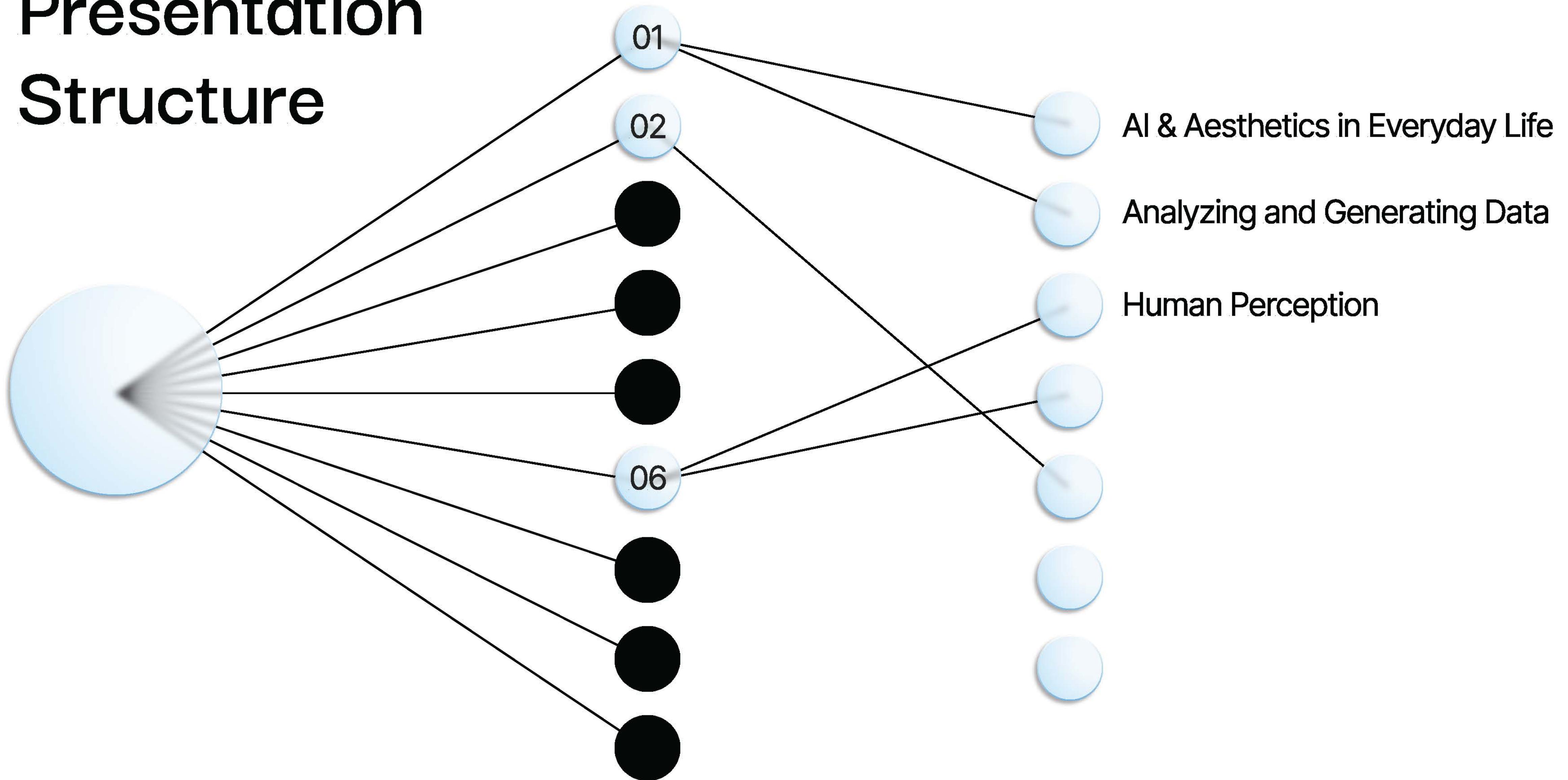


AI & Aesthetics in Everyday Life

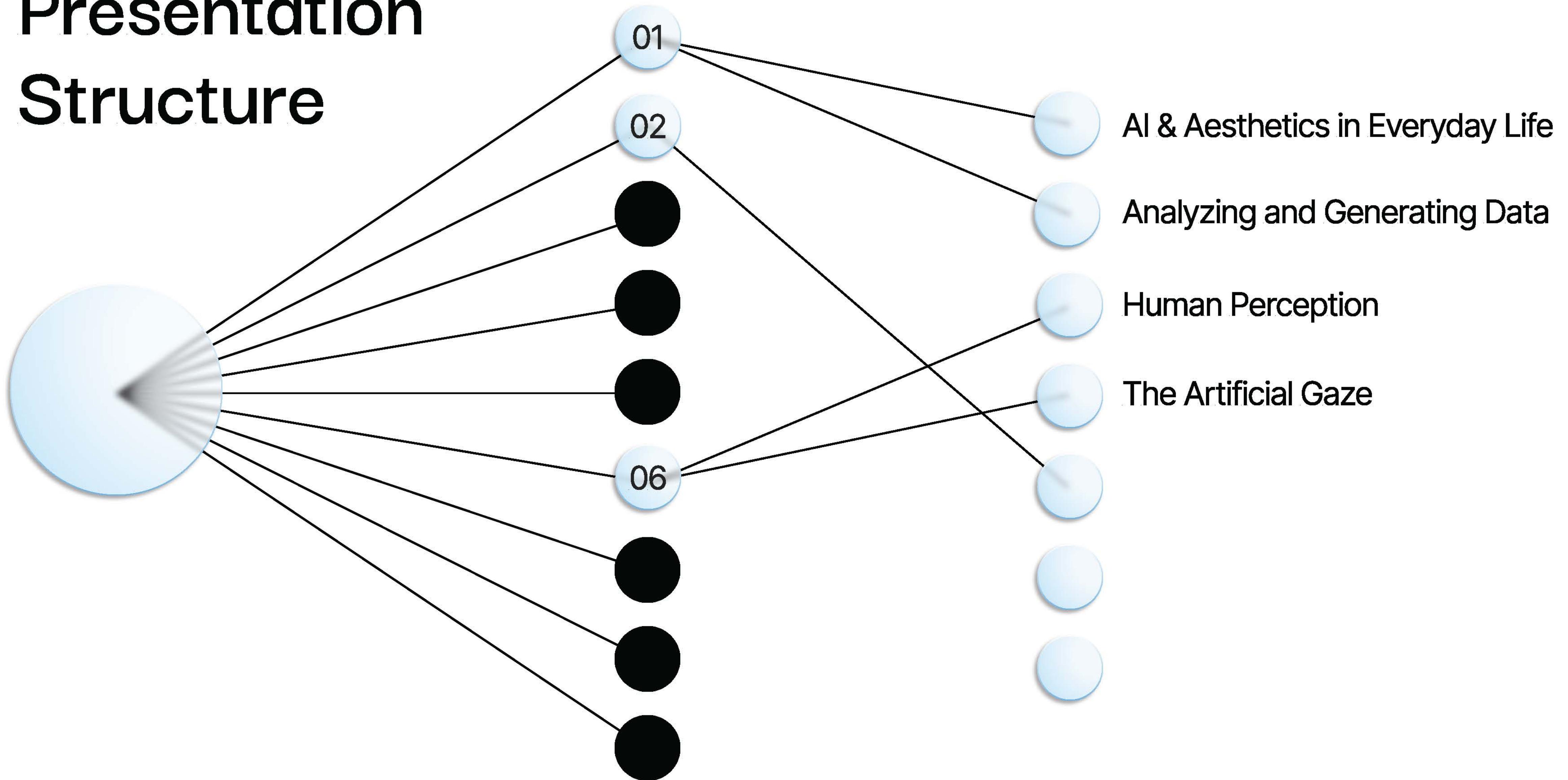
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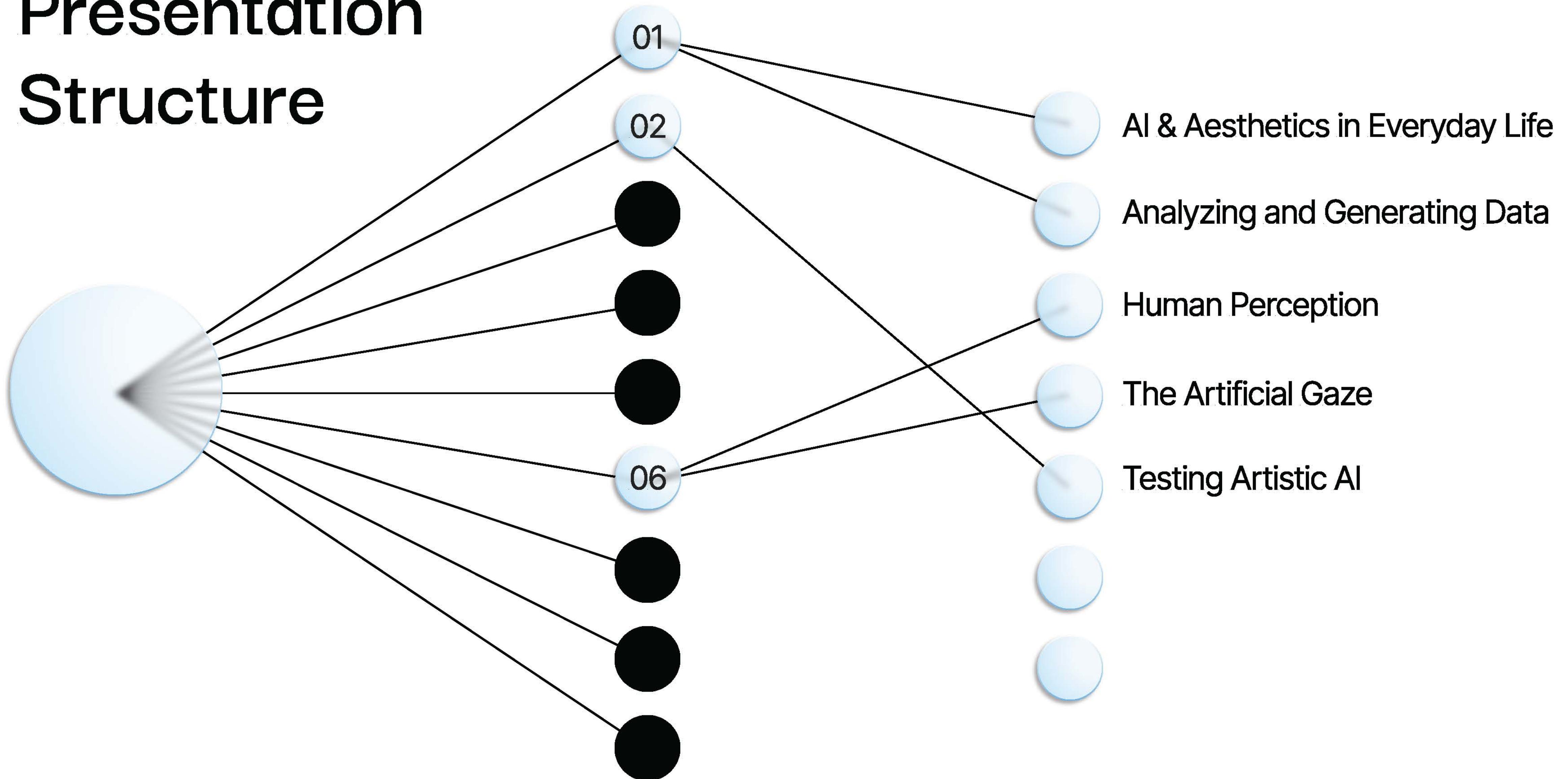
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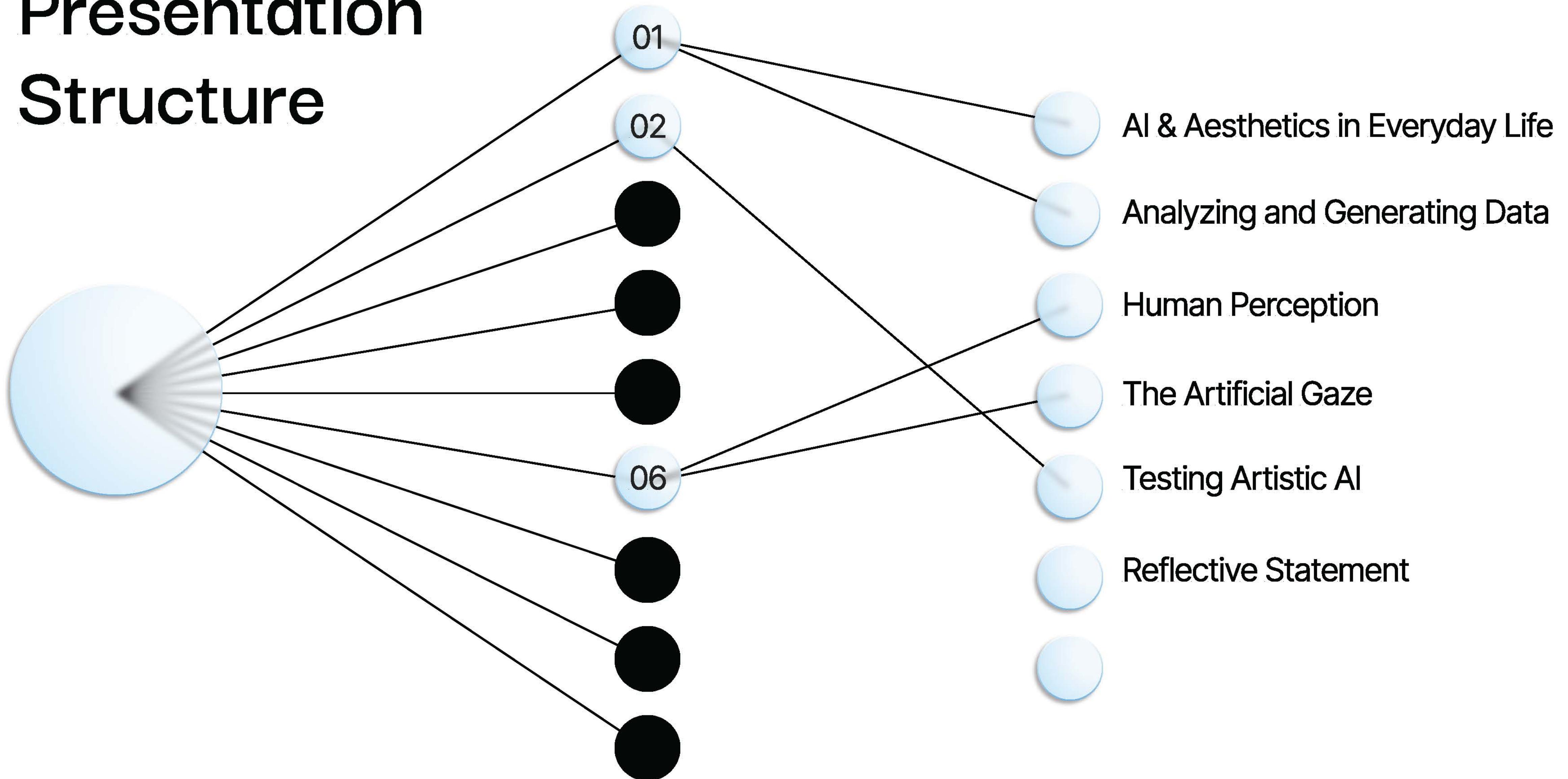
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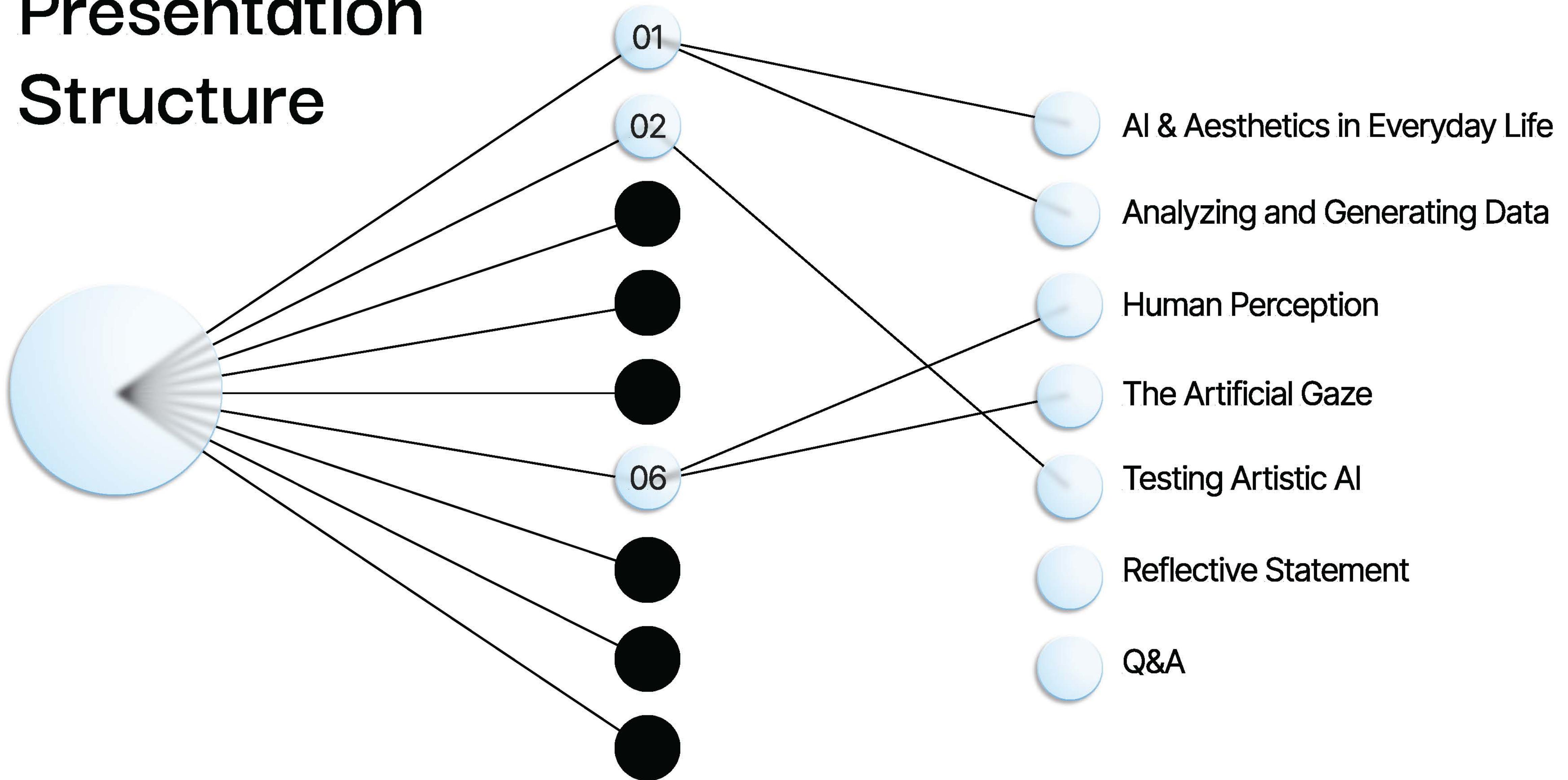
Presentation Structure



Presentation Structure



Presentation Structure



Authors



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https://de.wikipedia.org/wiki/Lew_Manowitsch



Emanuele Arielli

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<https://iuav.academia.edu/EmanueleArielli>

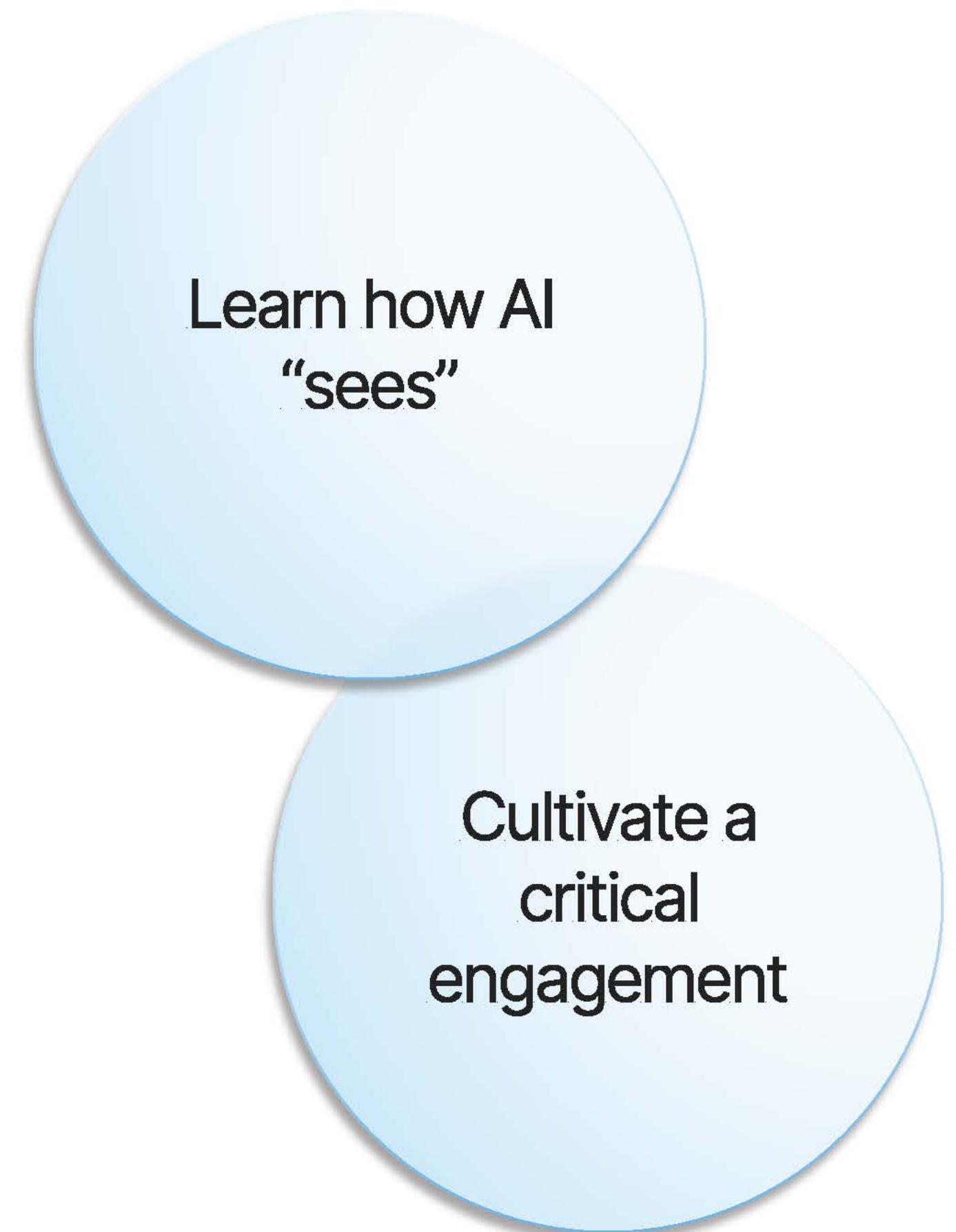
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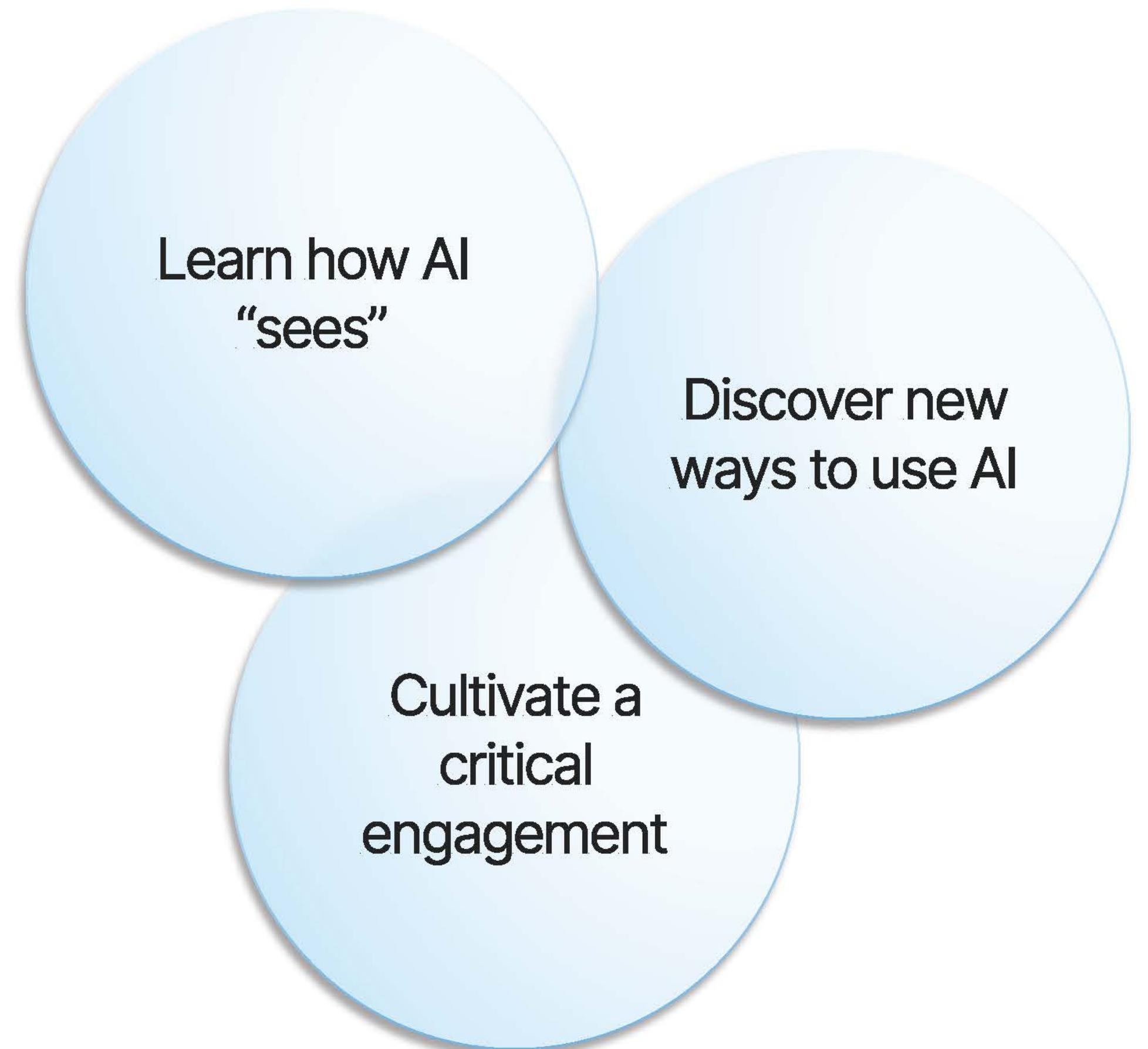
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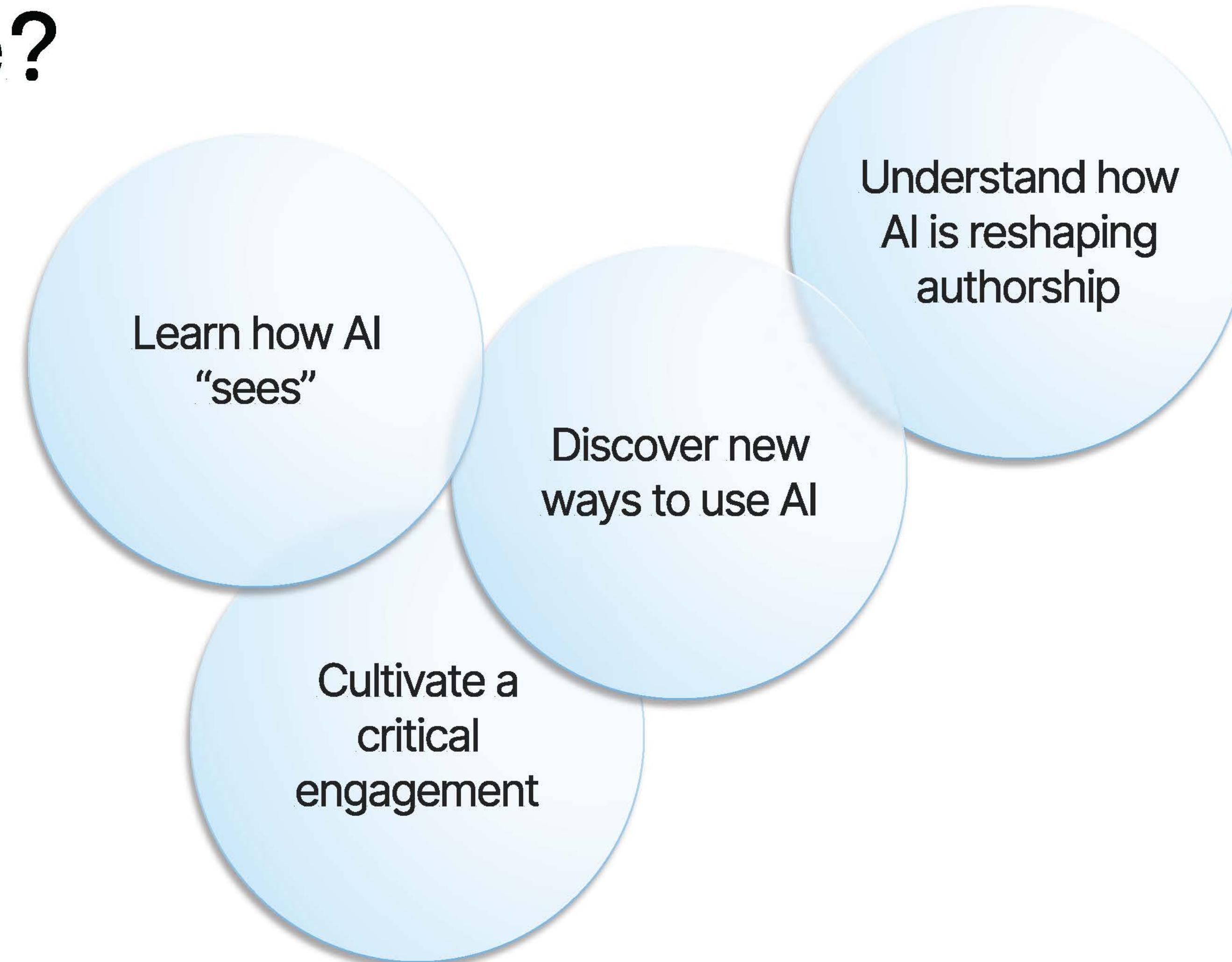
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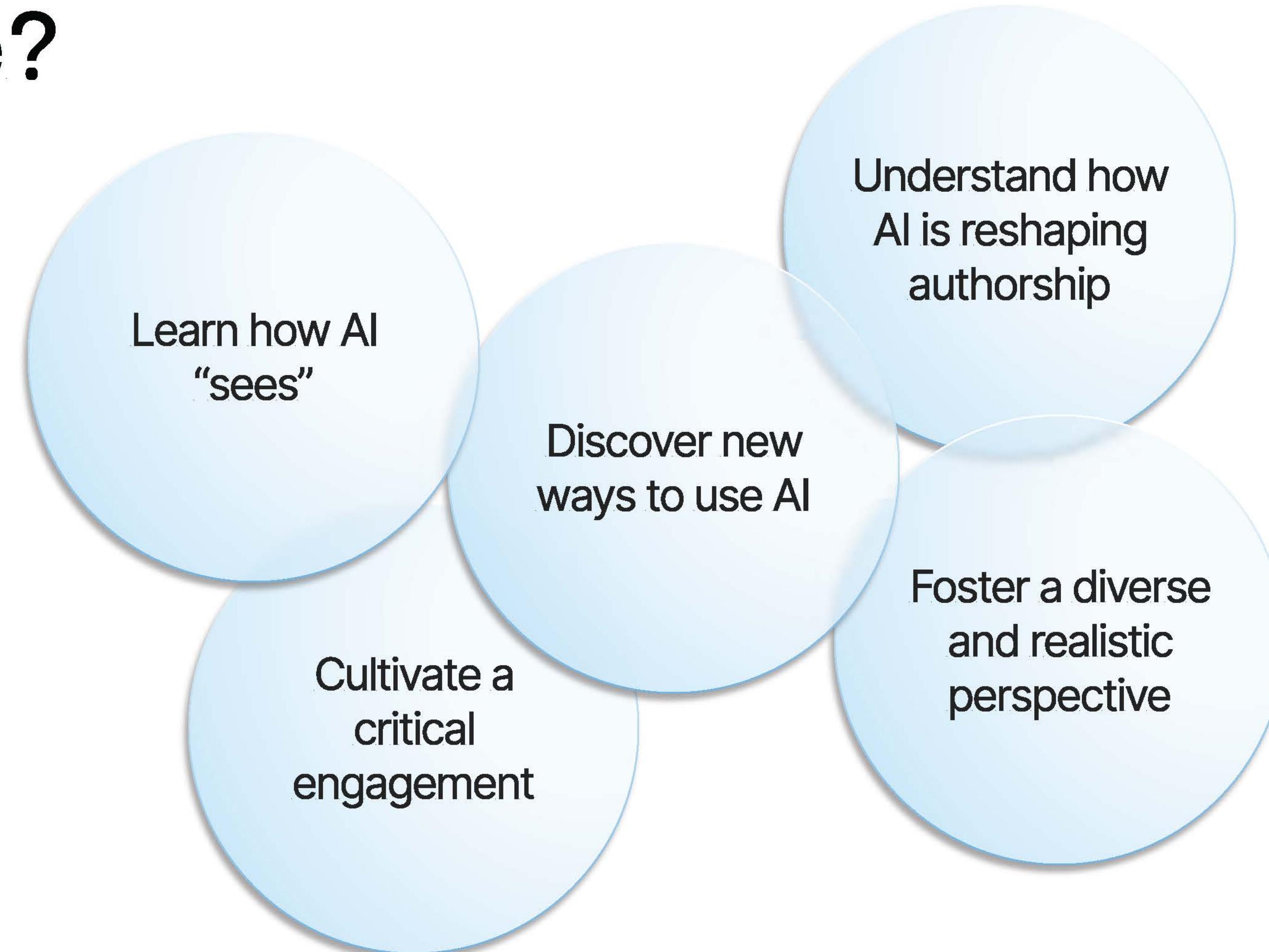
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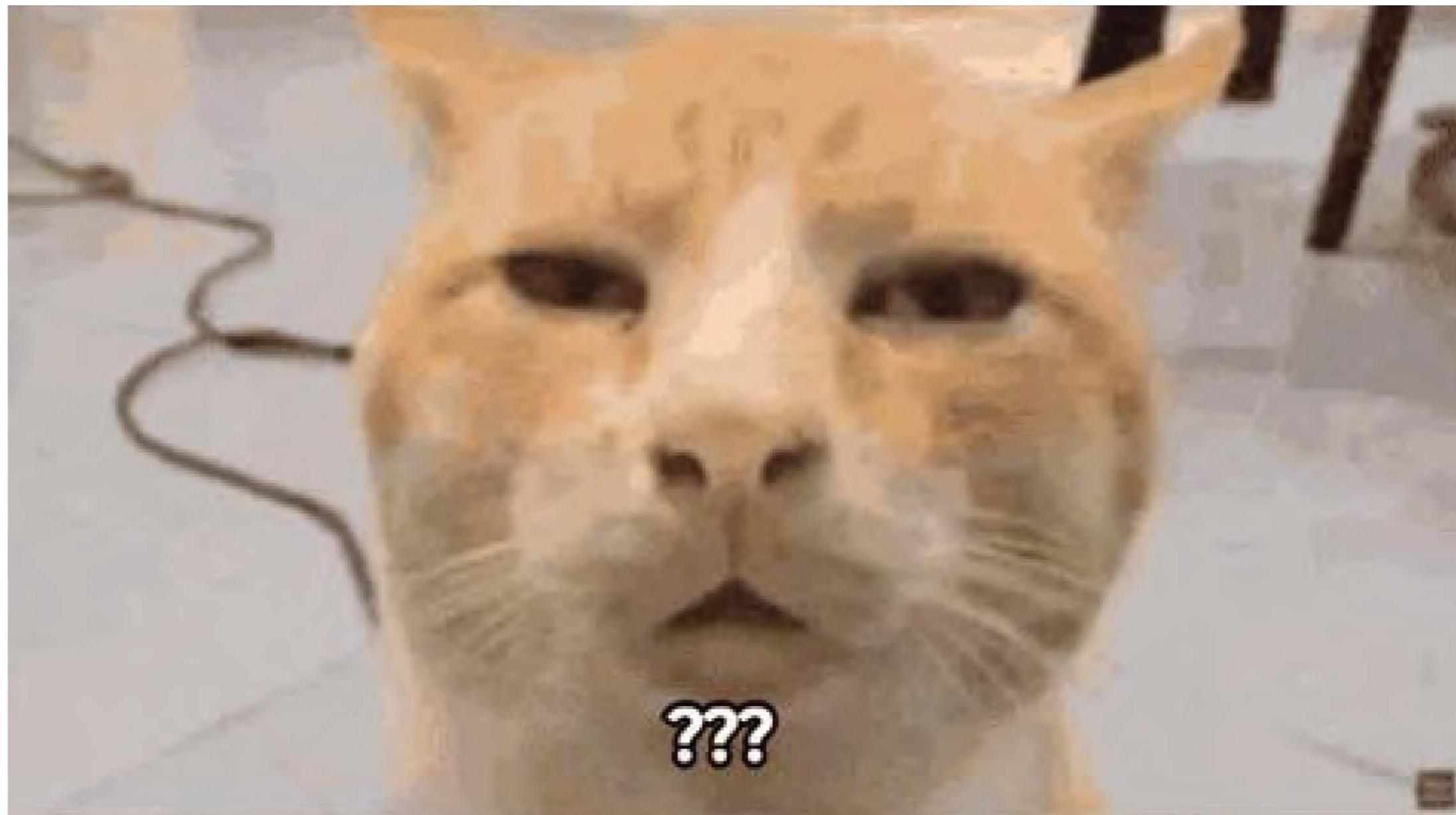


And, Why Should We Care?



AI & Aesthetics in Everyday Life

What Exactly Is Aesthetics?



Aesthetics

“

Is the domain of subjective judgments of taste

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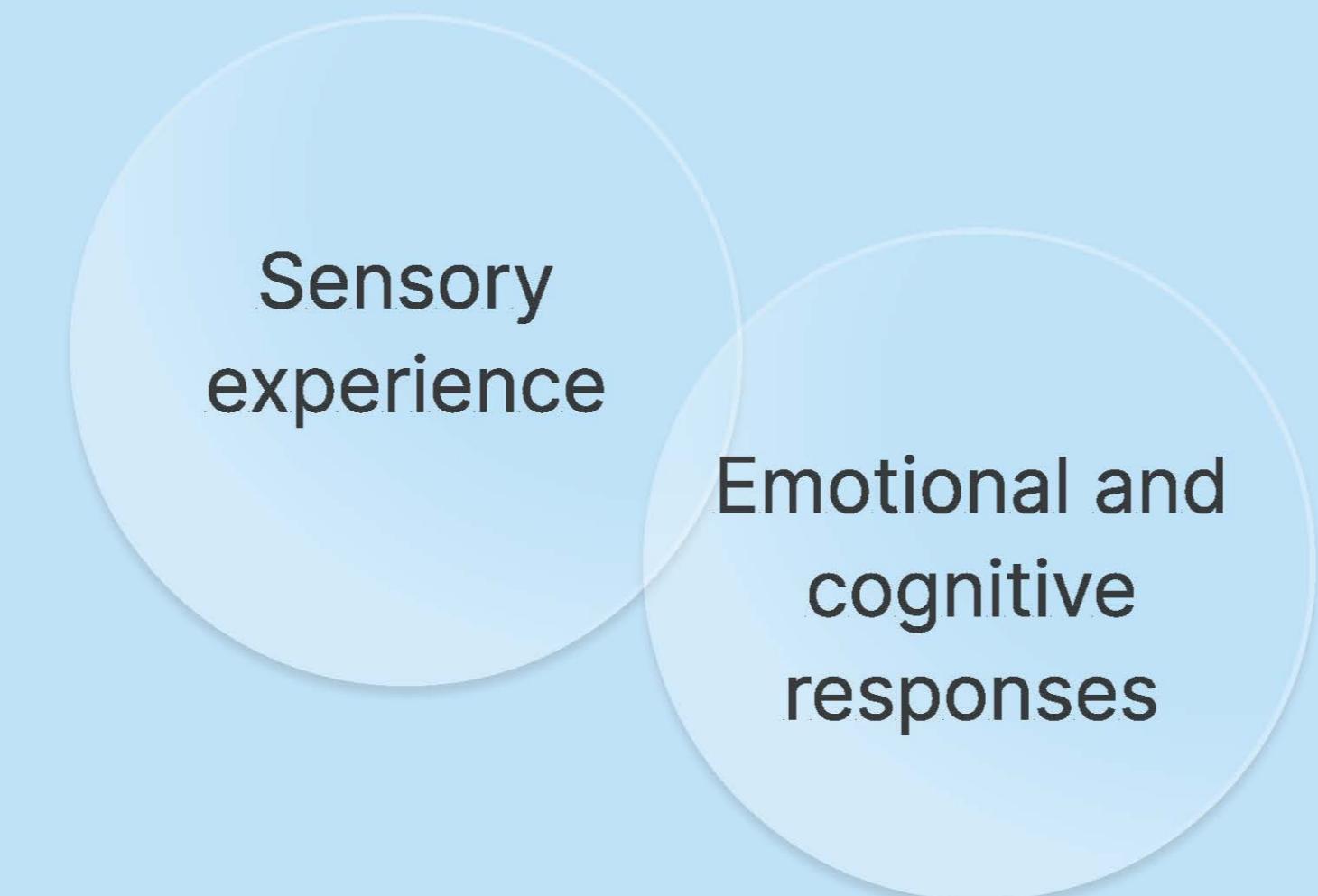


Sensory
experience

Aesthetics

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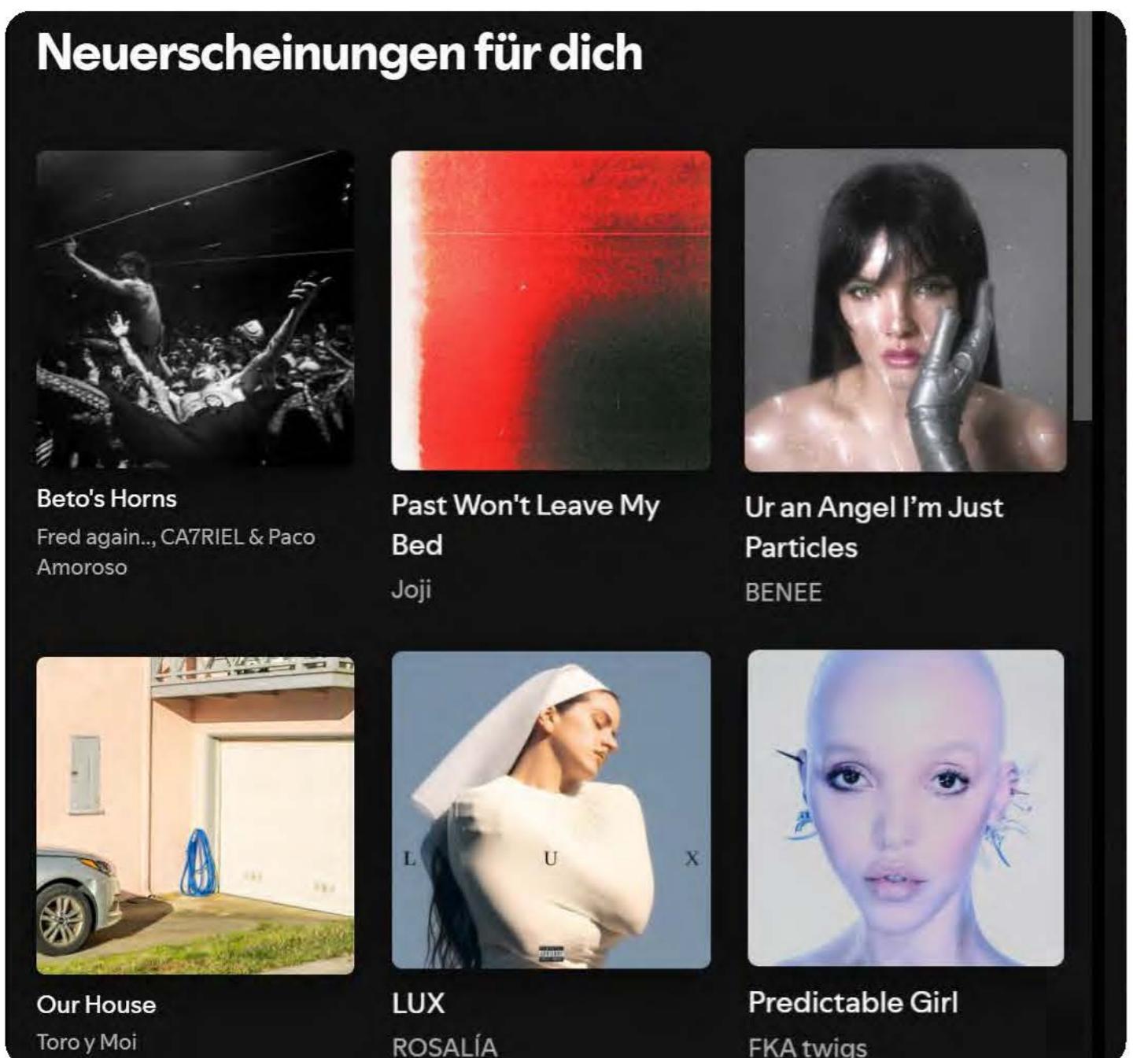


Computational Tools

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Recommend personalized content

Instagram Explore, Spotify, ...



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Instagram Explore, Spotify, ...

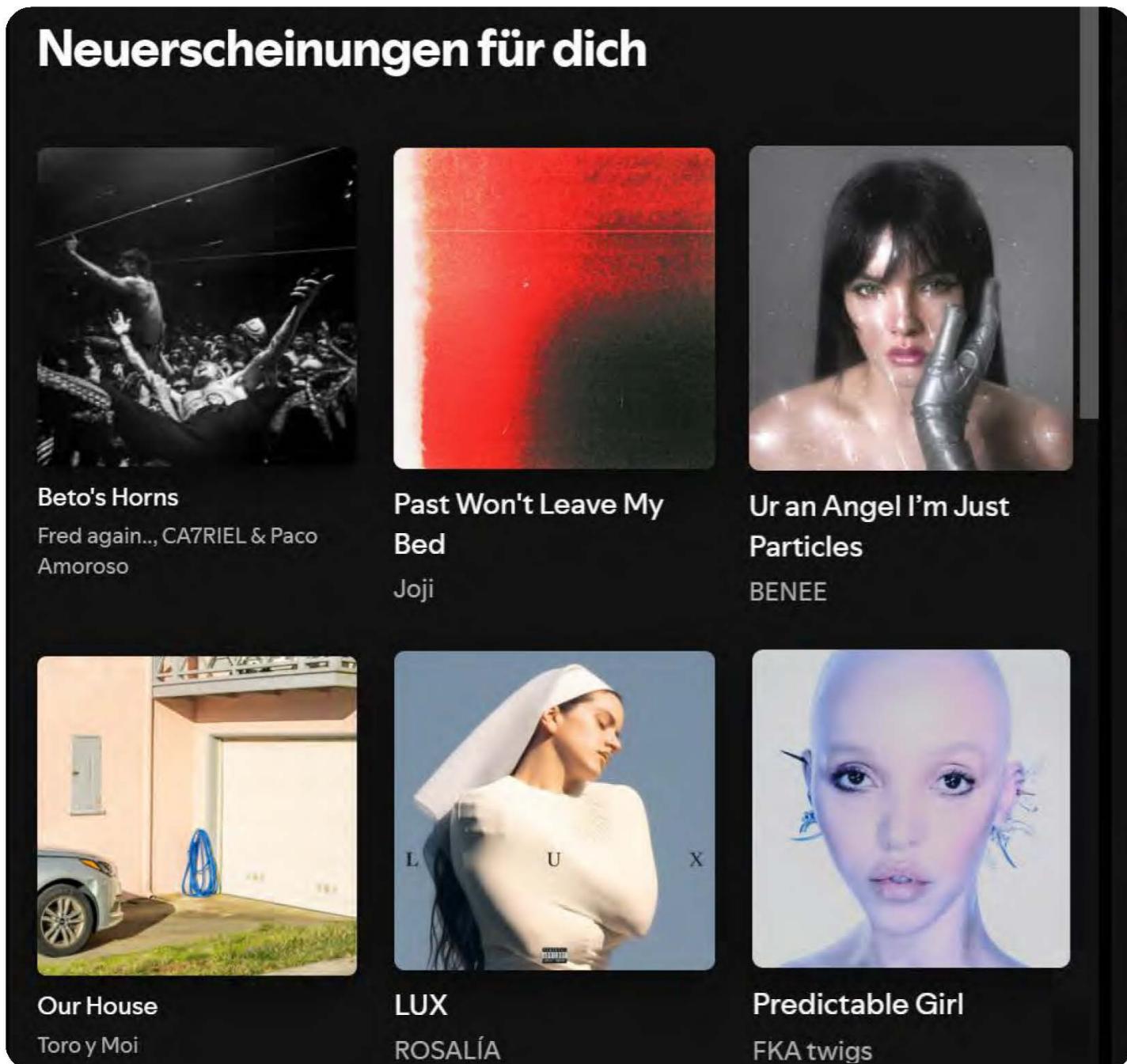


Analyze artistic patterns
Brush stroke, use of color, ...



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

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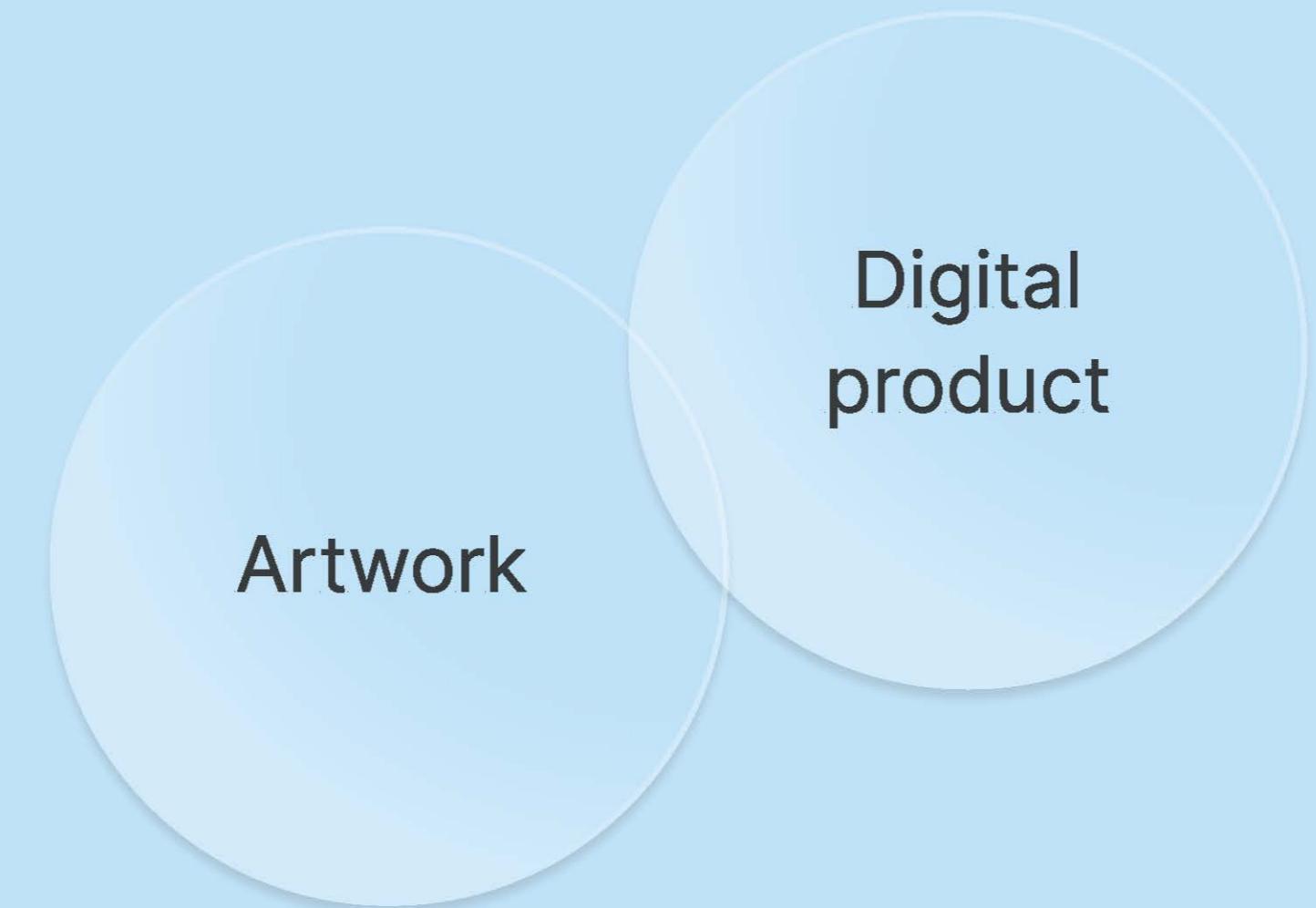


Artwork

Artifact

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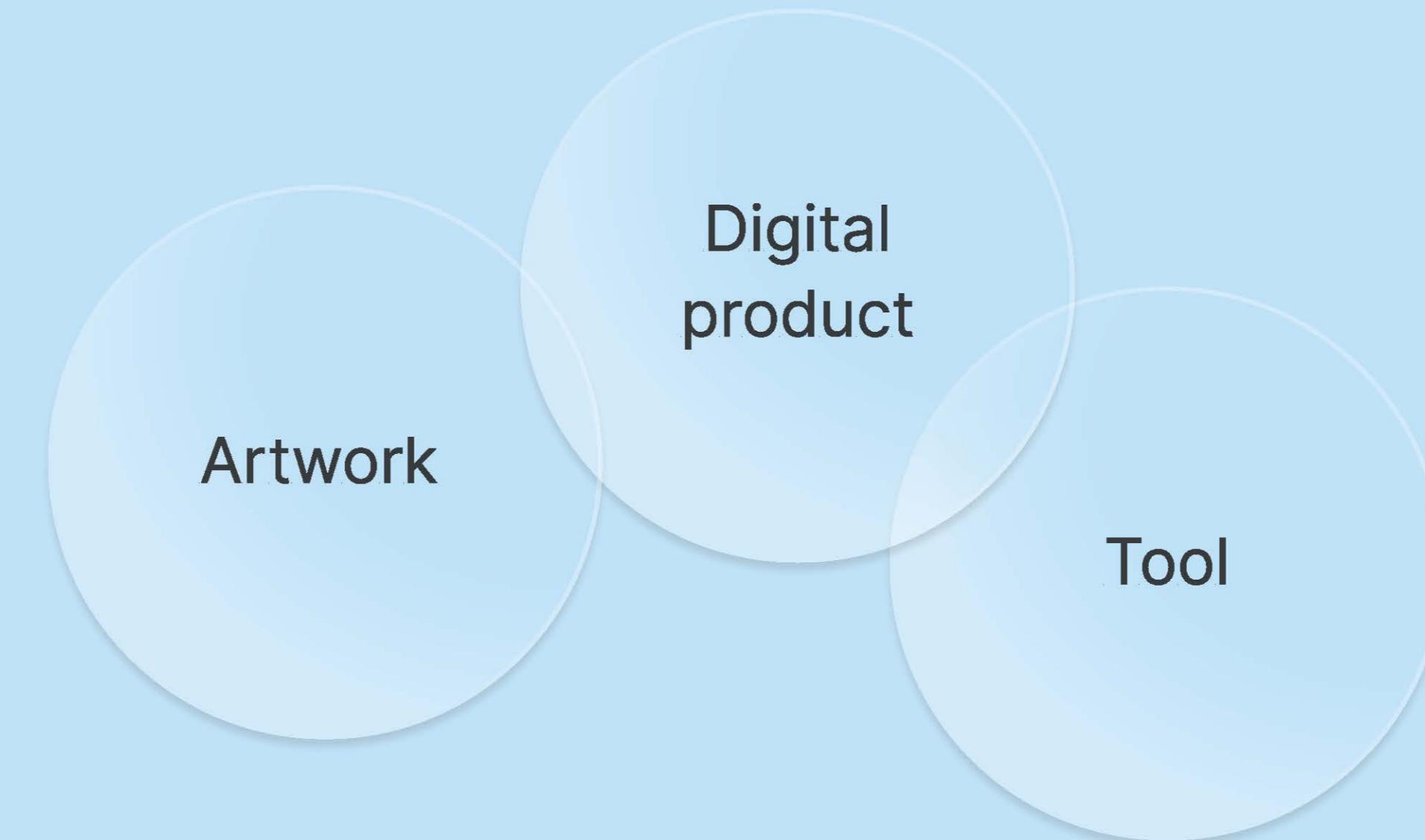
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Analyzing Rembrandt

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- Recognizable style
- Repetition

Well-defined problems

Analyzing Rembrandt



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- Repetition

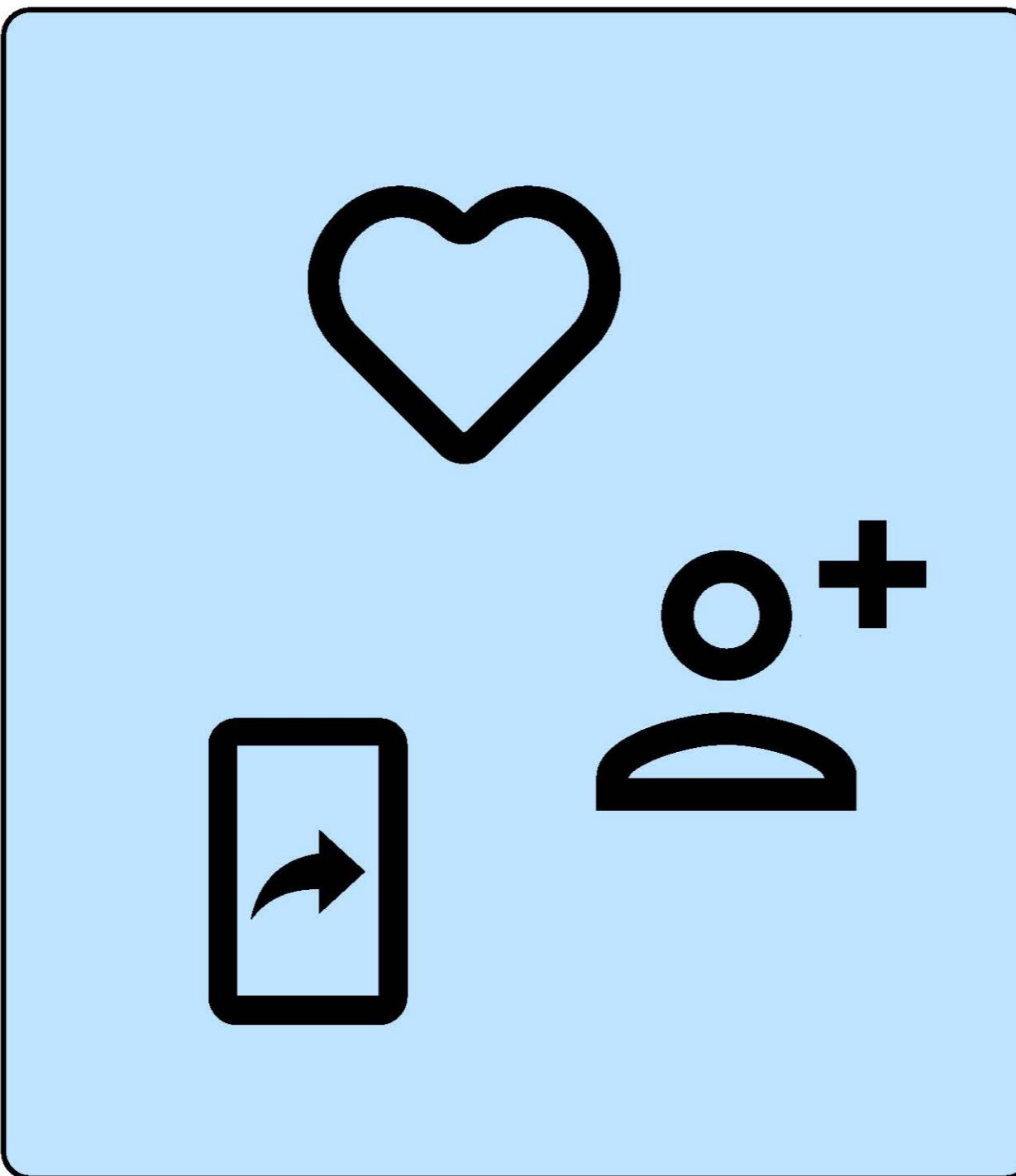
Well-defined problems



- No compositional rules
- No logical repetition

III-defined tasks

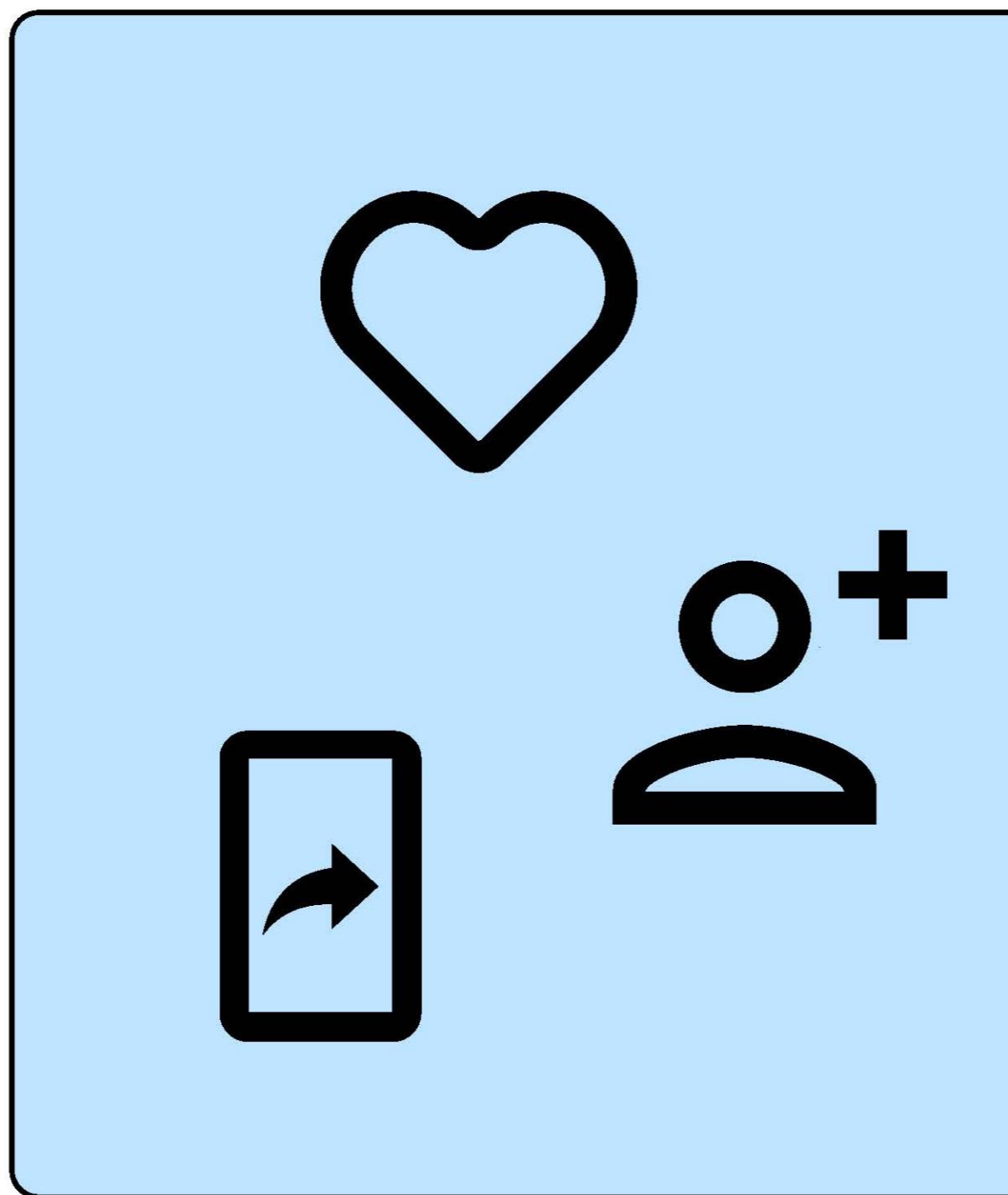
Analyzing Aesthetics



- Likes, shares, follows
- Consumption behavior

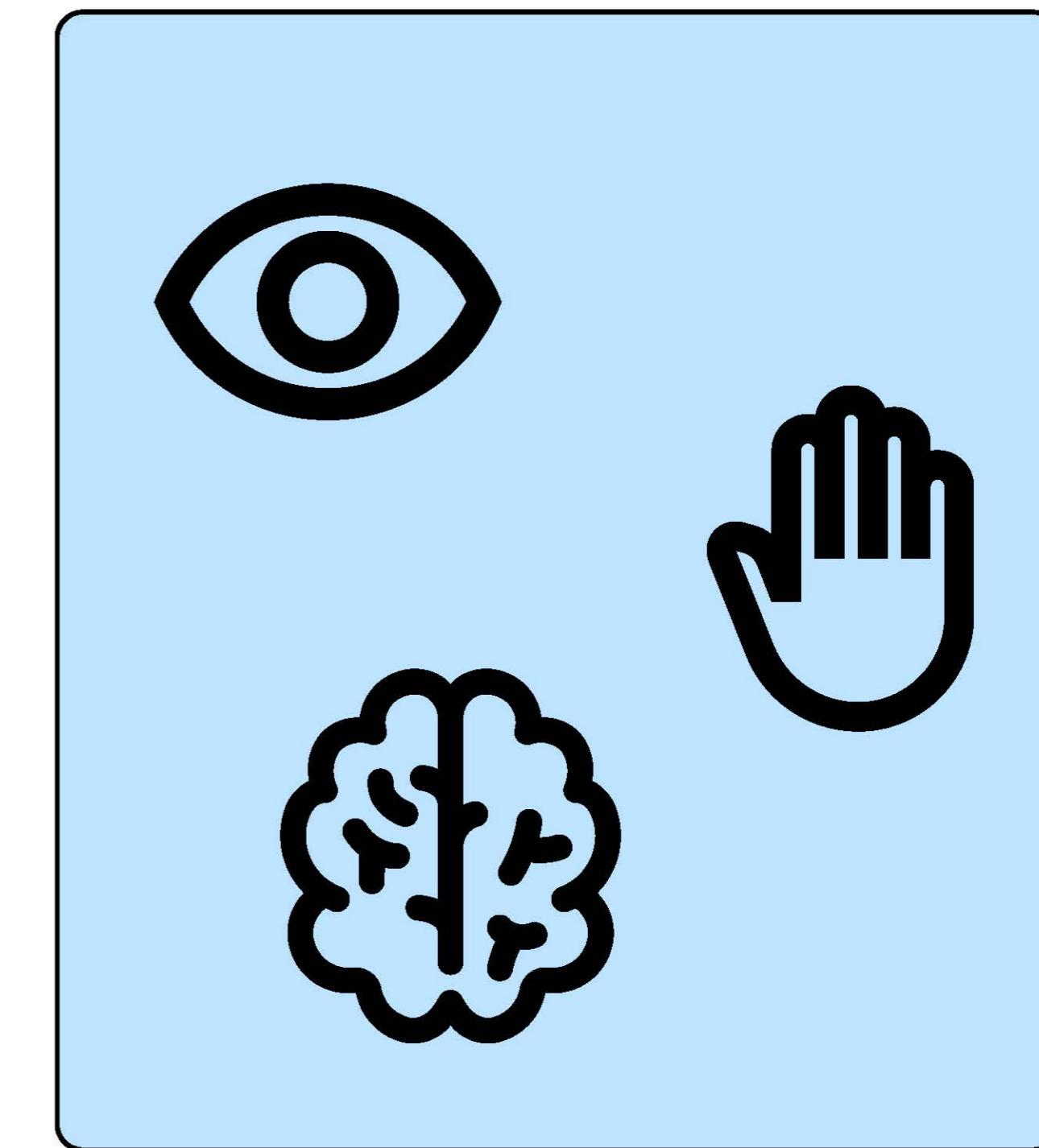
Well-defined aesthetic behavior
→ Studying objects

Analyzing Aesthetics



- Likes, shares, follows
- Consumption behavior

Well-defined aesthetic behavior
→ Studying objects



- Sensory experience
- Emotional and cognitive responses to perception

III-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

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Studying Objects — Computational Method

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

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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

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Difficulty isolating features

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

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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

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Preferences depend on many factors

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

Defining the measured response

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- 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?

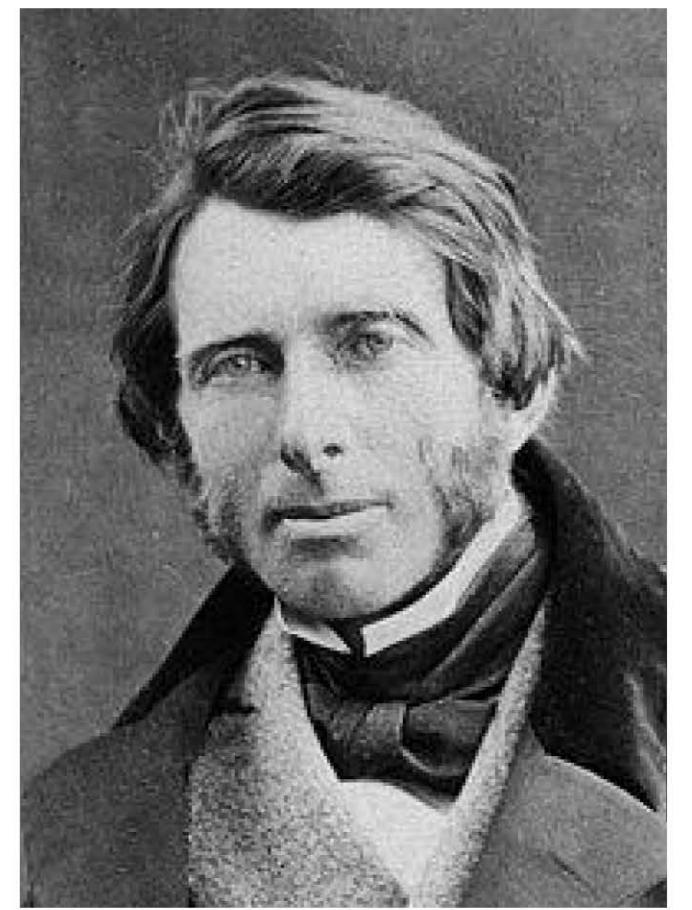
Why Should AI Learn Aesthetics?

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

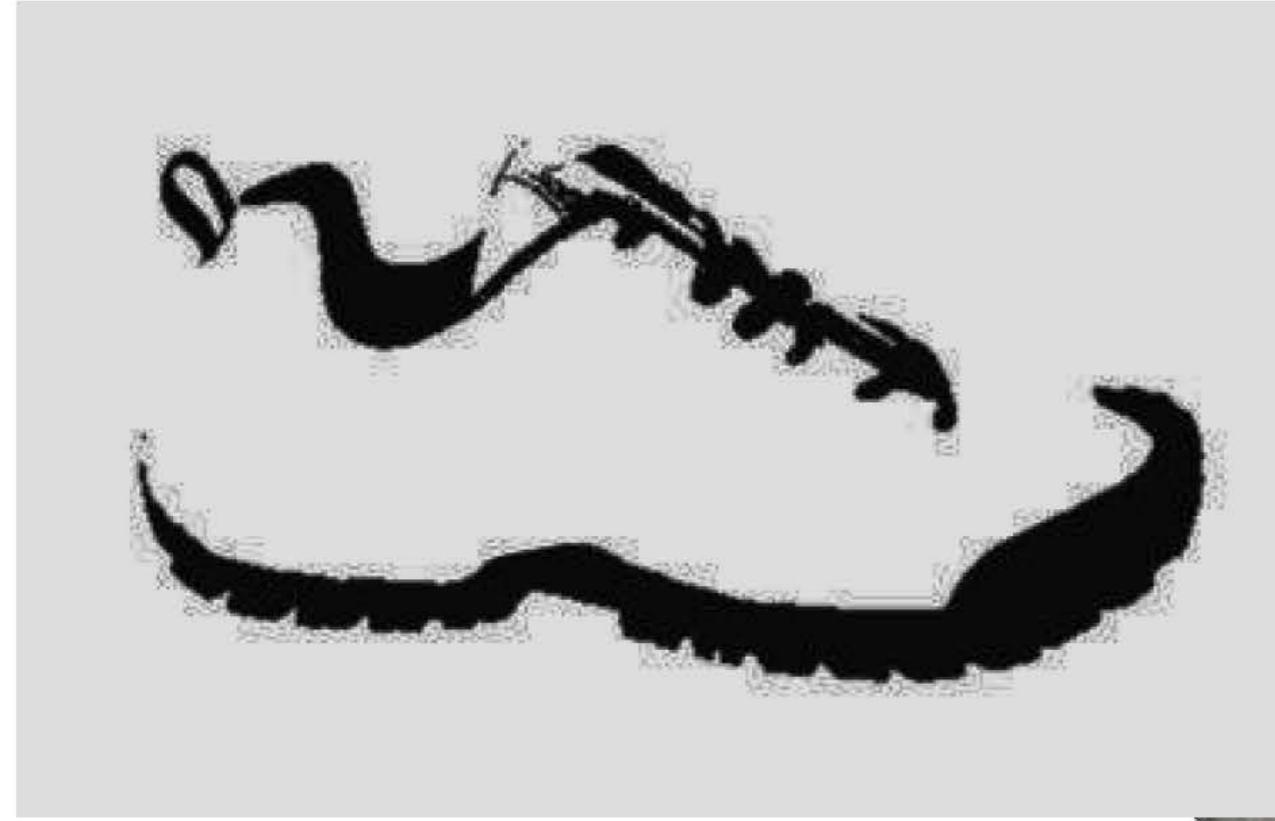


1. Gestalt laws



2. Imperfection

Perception Concepts



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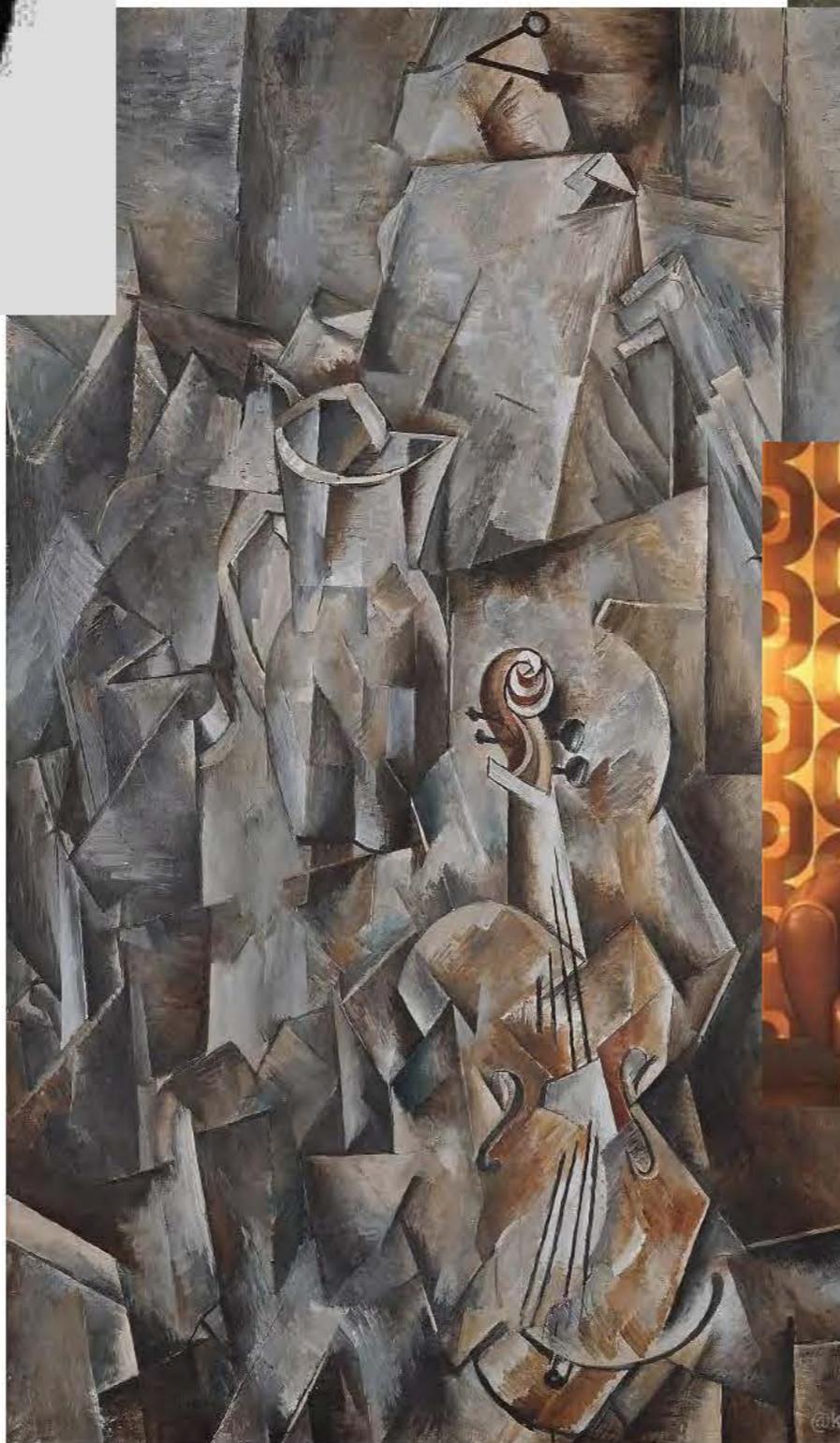


3. Shifts of perception

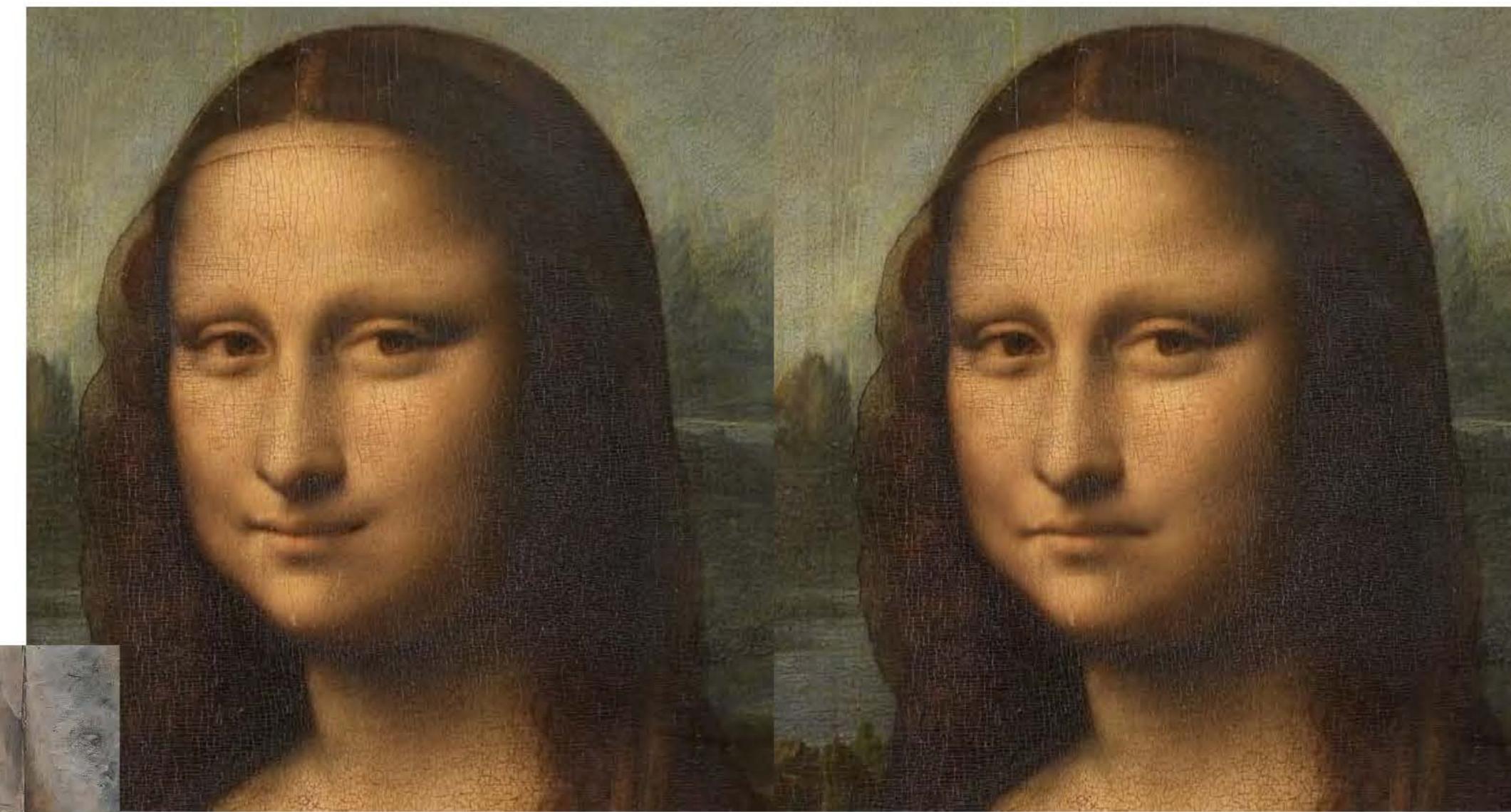
Perception Concepts



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4. Optical illusions



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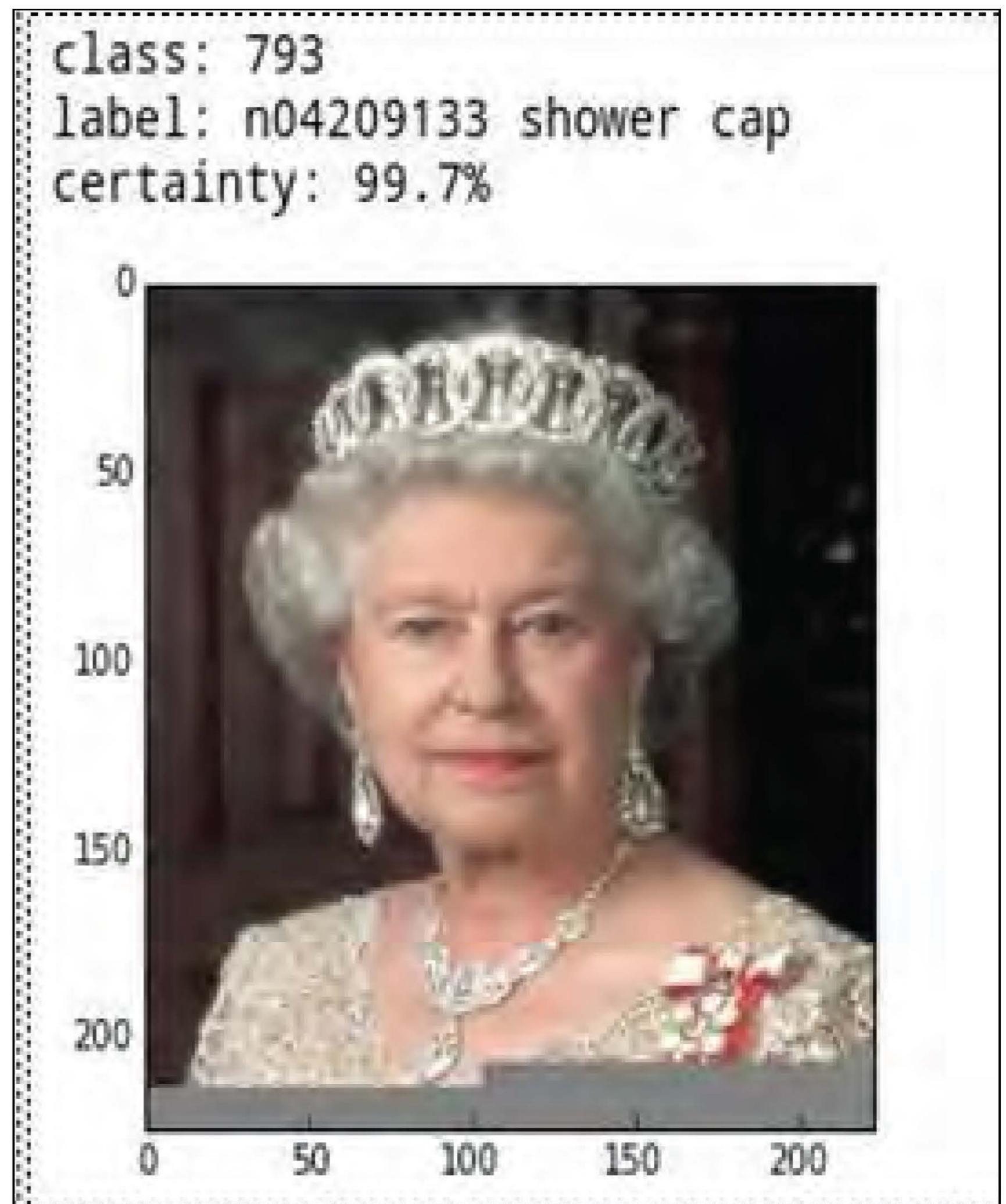
Imperfection as a quality

The Artificial Gaze

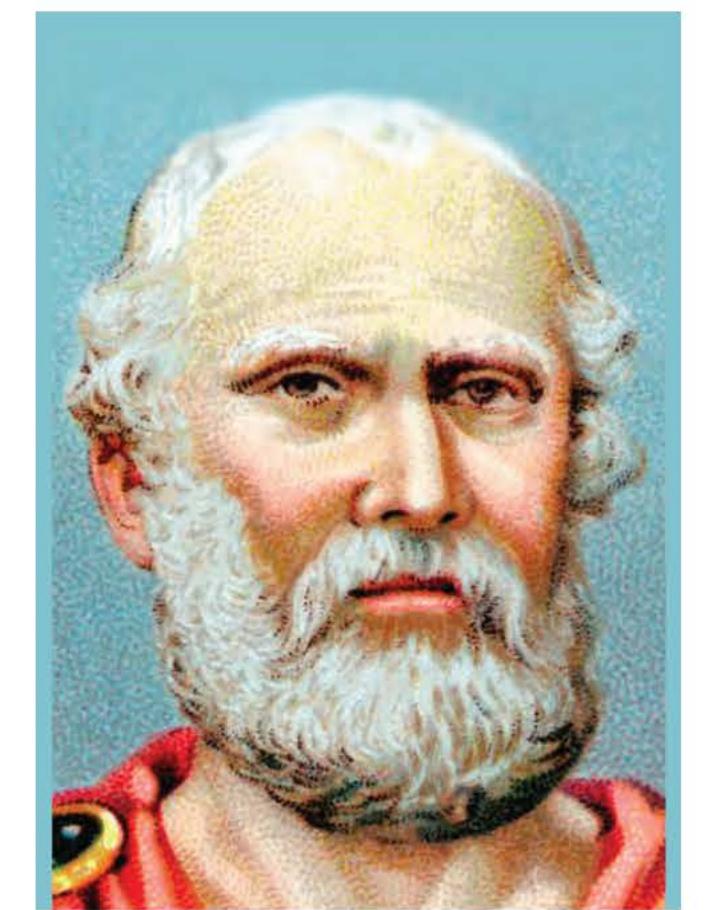
Potentials in Pattern Recognition

Unveiling connections

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



Artificial Platonism

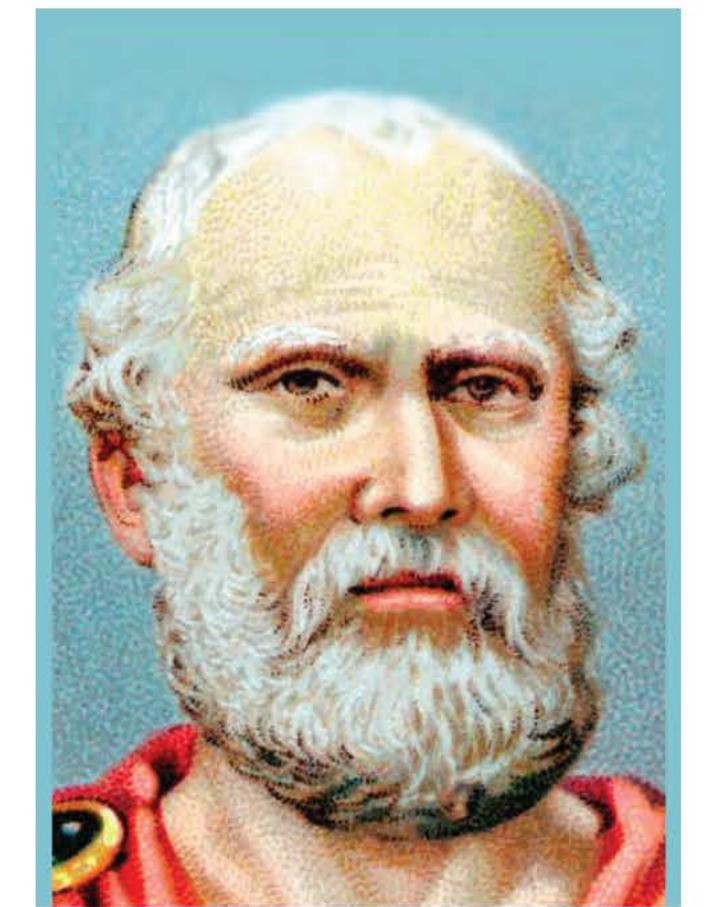


Platon
428/427 v. Chr. -
348/347 v. Chr.

Artificial Platonism

Platonism

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

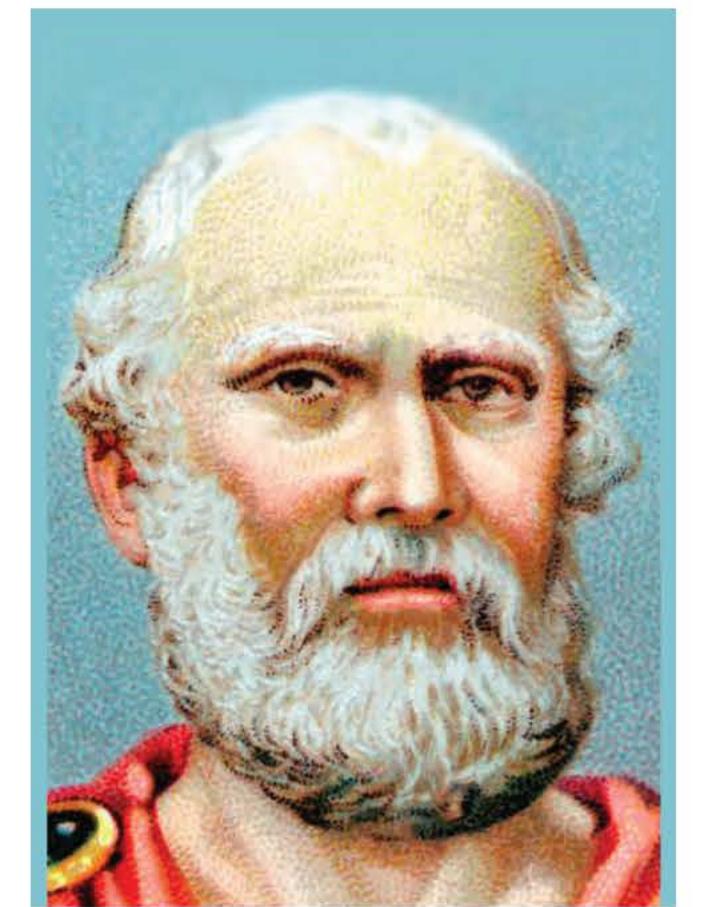


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Artificial Platonism

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

Artificial Platonism

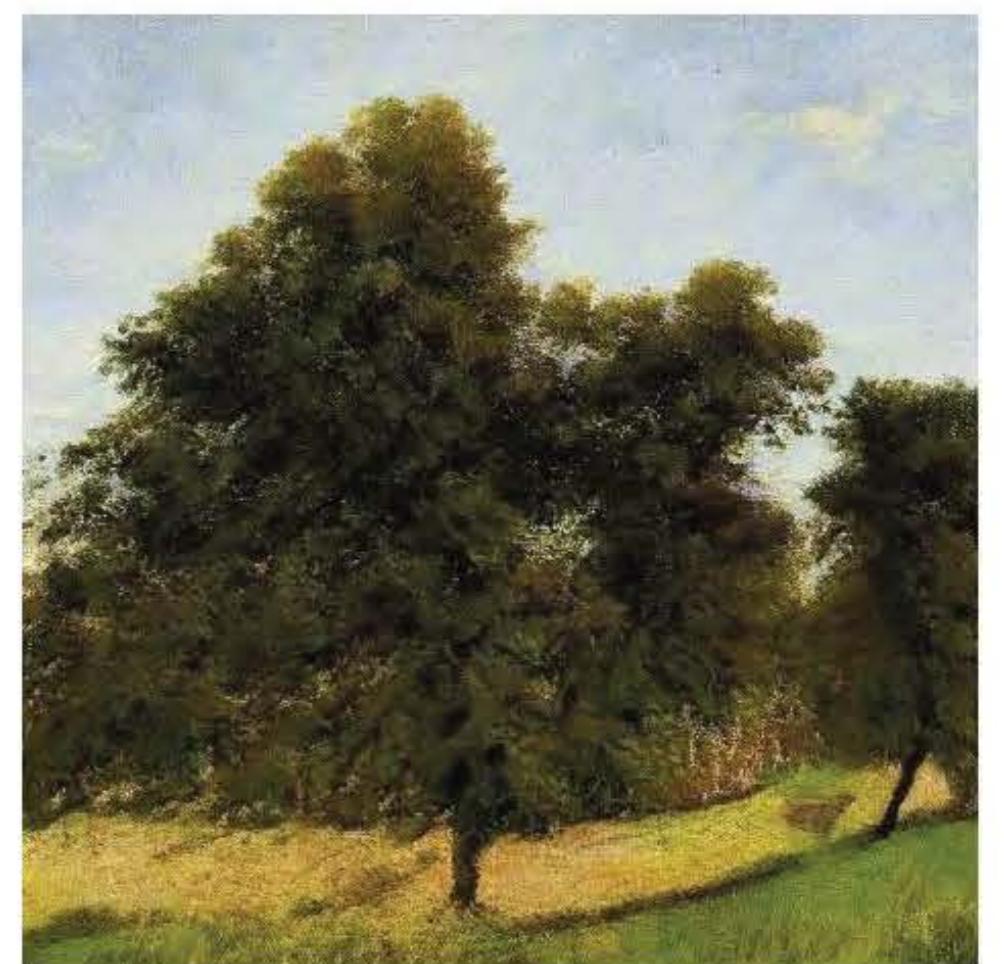
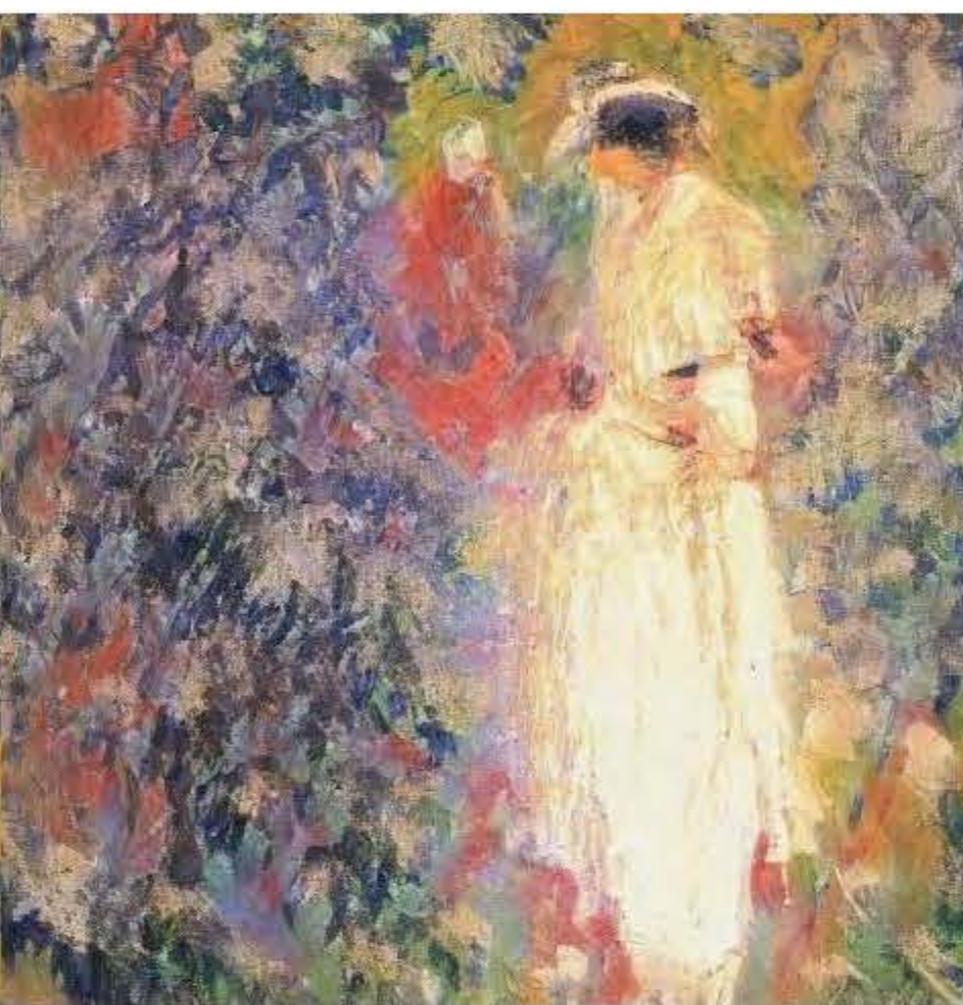


“Essence”

- Use of color
- Brush strokes
- Lighting



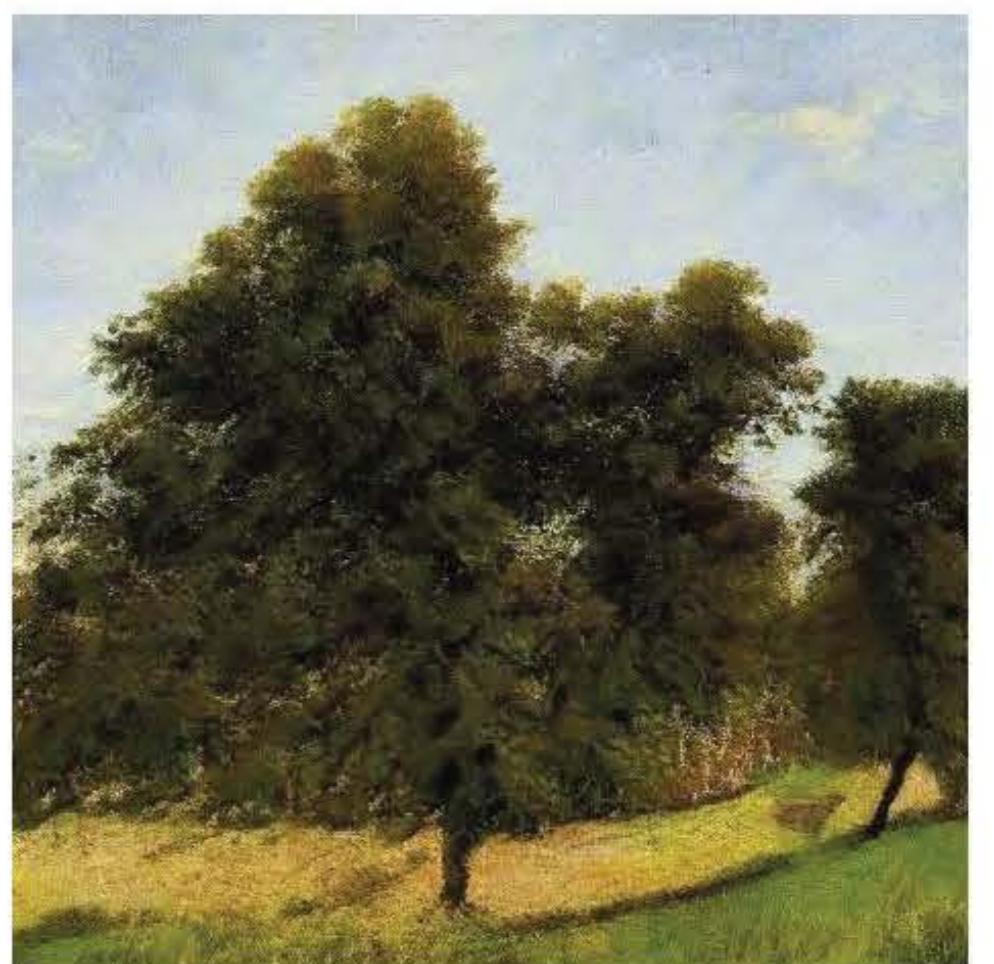
Original and Variation— Relationship Shift



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

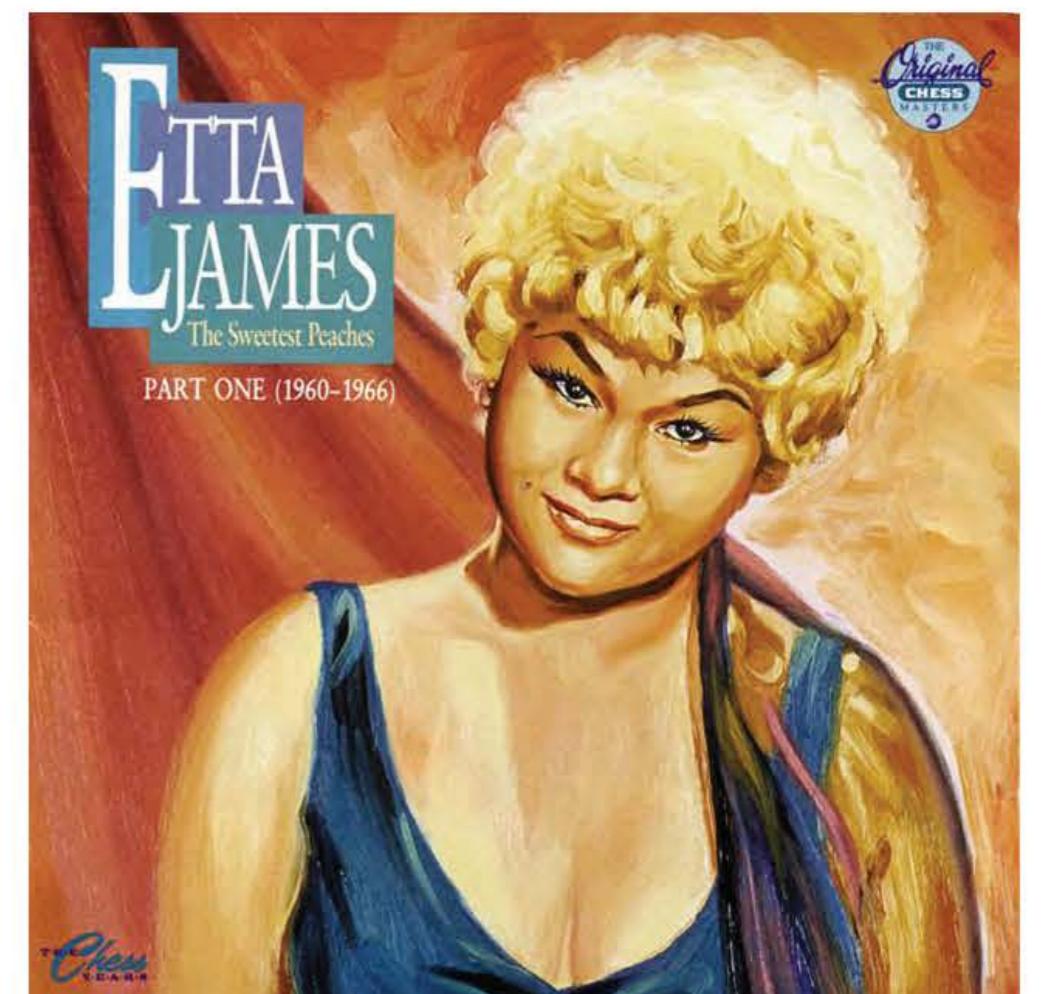
Avicii - "Levels"

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



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

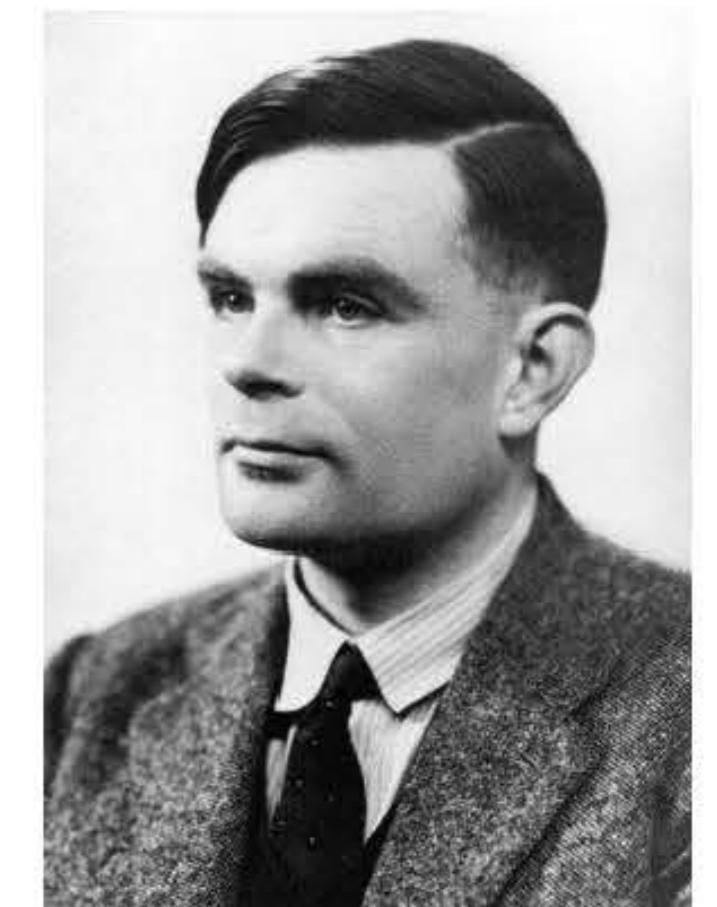
- Older listeners recognize the favored original



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

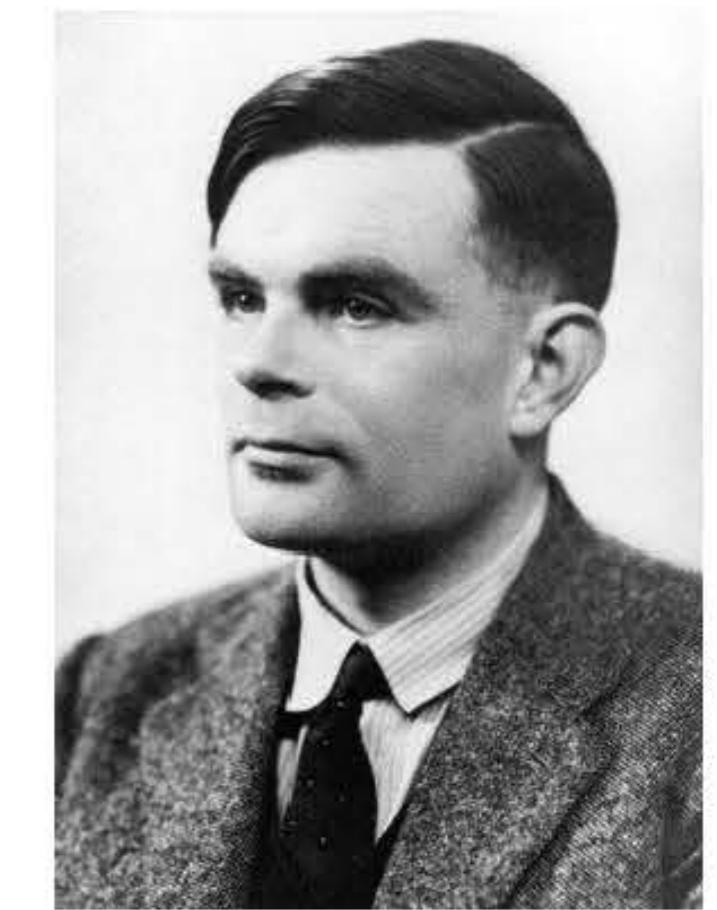
Testing Artistic AI

What is the Turing Test?



Alan Turing
23 Jun 1912 – 7 Jun 1954

What is the Turing Test?



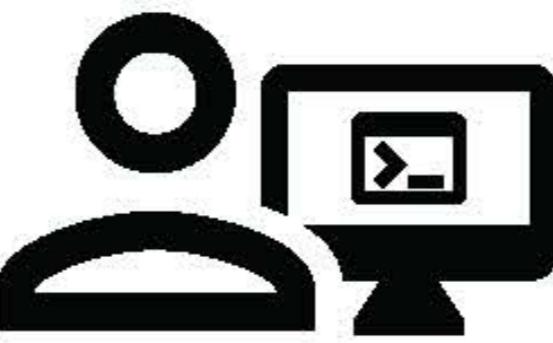
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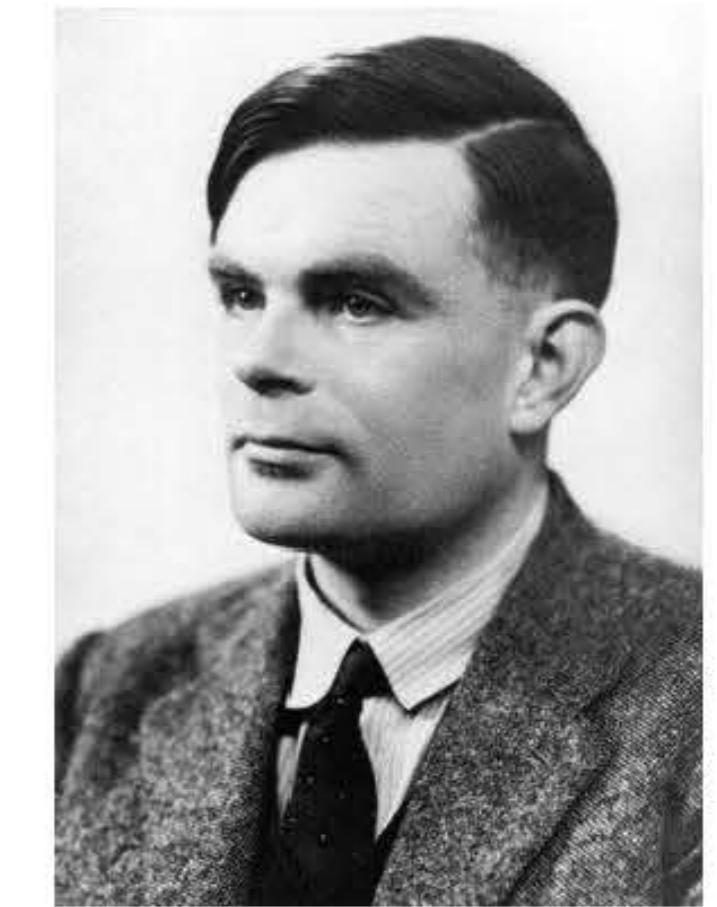


1.



Alan Turing
23 Jun 1912 – 7 Jun 1954

What is the Turing Test?



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Parameters for Testing Artistic AI Today

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

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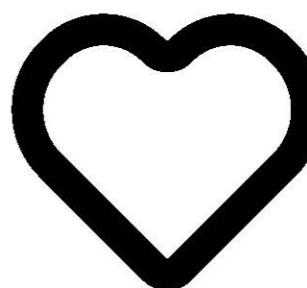
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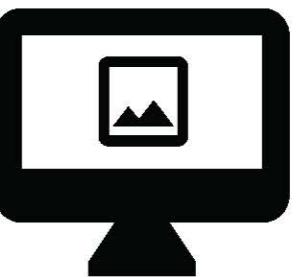
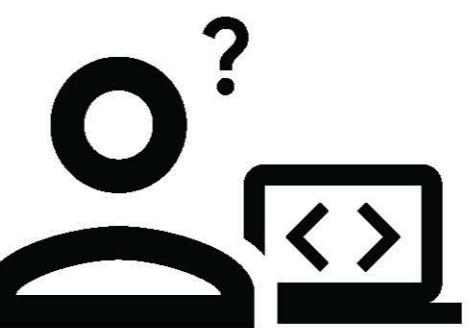


Alternative Tests— The Lovelace Test



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

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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

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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

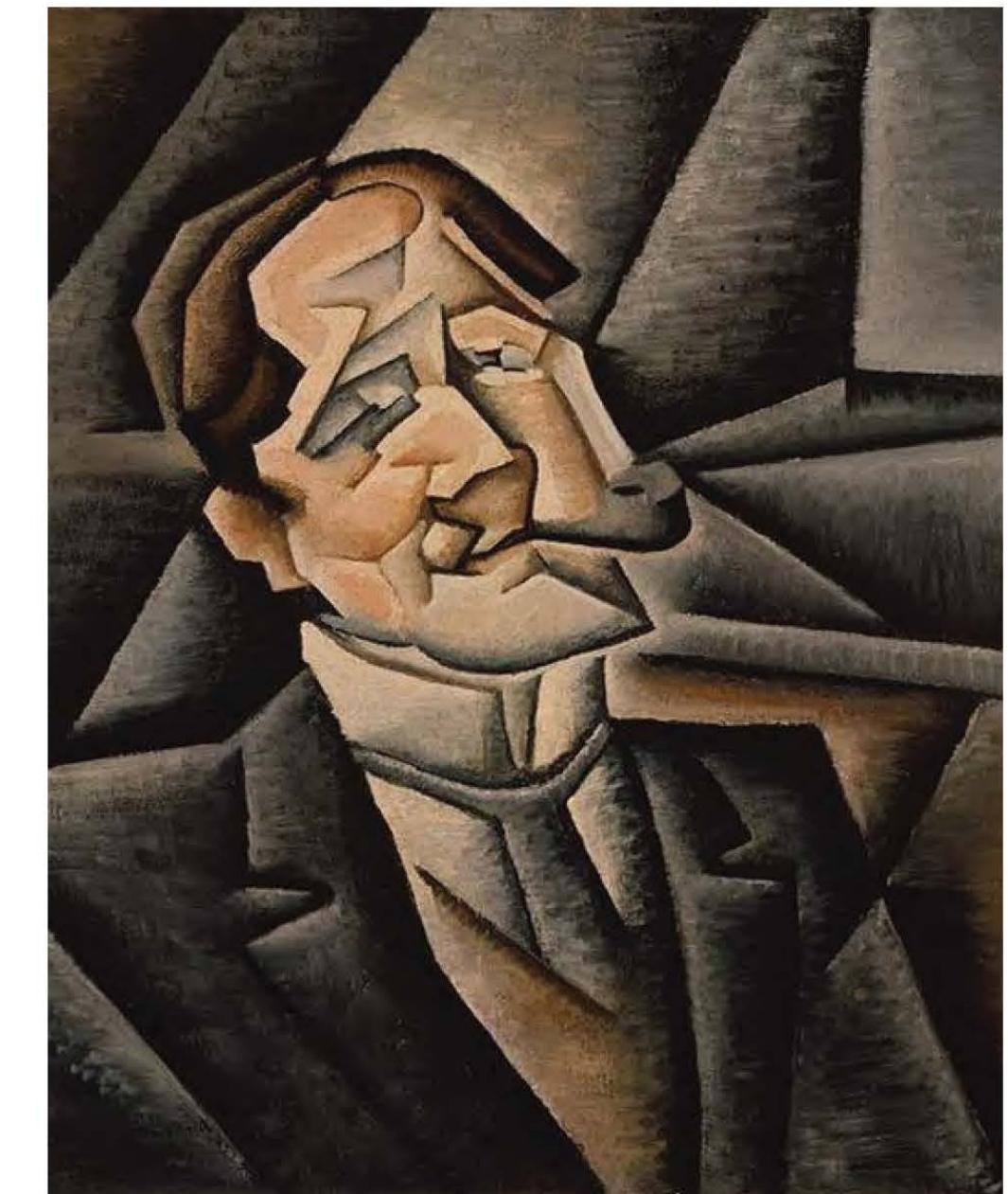
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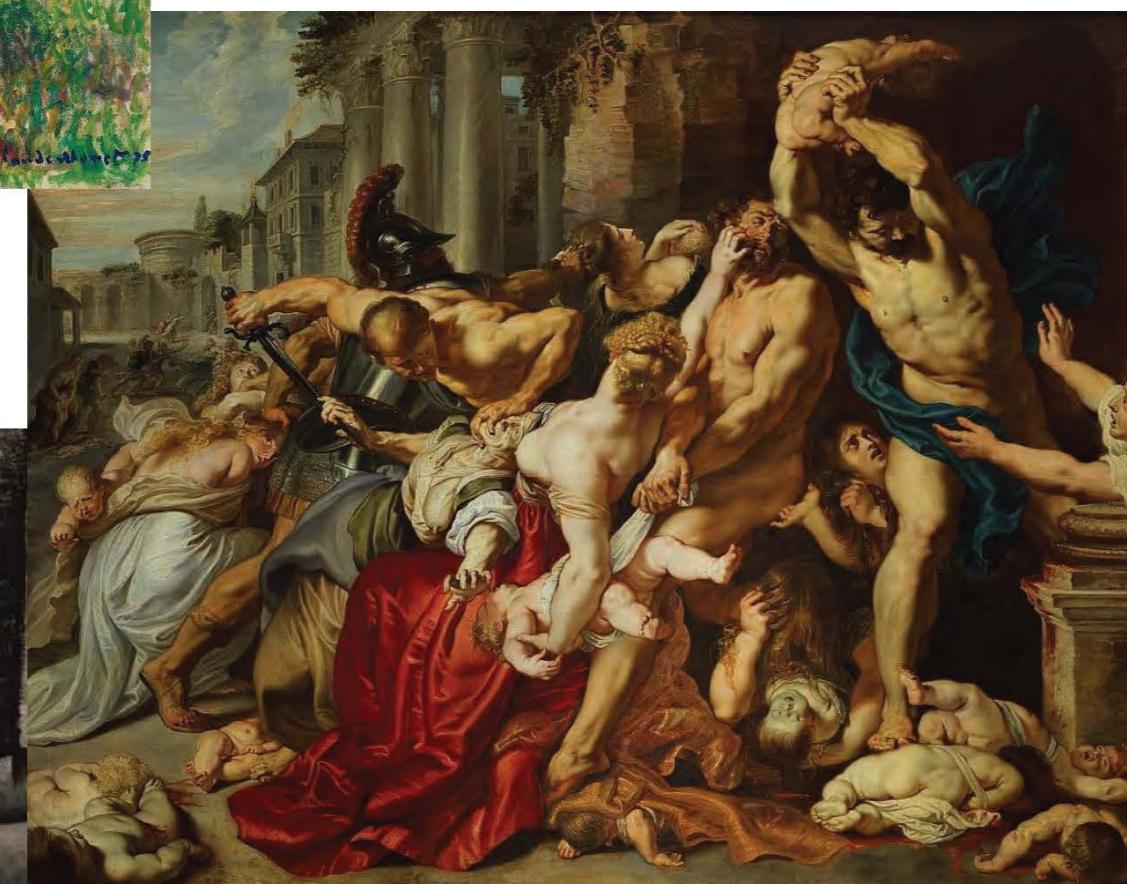
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<https://www.kunstplaza.de/kunstepochen/barock-epochen-stil/>



<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.”**



Thank you