ARTPEER: Artistic Alignment via Reflection-based Prompt Evolution with Simulated Artist

Kaustubh Kumar*
IIT Patna
2201mm14_kaustubh@iitp.ac.in

Ashutosh Ranjan
TCS Research
ashutosh.ranjan2@tcs.com

Vivek Srivastava
TCS Research
srivastava.vivek2@tcs.com

Shirish Karande
TCS Research
shirish.karande@tcs.com

Abstract

Art inspiration, whether from a specific artist, artwork, or movement, is a common anchor in text to image generation for artistic alignment. Although recent advances in generative models have led to impressive visual output, they often lack grounding in artistic intent, context, persona, and evolving self-reflection that are hallmarks of human creativity. Their output may drift from the intended artistic and symbolic logic present in the art inspiration due to prompt ambiguity, latent biases, or model hallucinations. We present ARTPEER, a framework for robust artistic alignment that places reflection-guided prompt evolution inside the generation loop. ARTPEER builds simulated artist persona from biographical, stylistic and iconographic knowledge, enabling them to act as domain-specific critics. In a Socratic reflection dialogue, the persona-aligned artist agent questions a generation agent, identifies deviations, and iteratively refines the prompt until both stylistic and conceptual alignment is achieved. We validate the effectiveness of the proposed framework through qualitative and quantitative evaluation in challenging settings. ARTPEER robustly aligns art that is more meaningful and contextually relevant than existing state-of-the-art methods.

1 Introduction

The growing presence of AI-generated art in exhibitions, competitions, and creative communities has elevated artistic alignment as a central research challenge. Prestigious events such as the Lumen Prize [3], RobotArt [4], and the Ars Electronica AI in Art award [2] increasingly evaluate not just visual quality but conceptual fidelity, narrative depth, and the integrity of artistic intent. In this setting, inspiration drawn from an artist, movement, or theme must extend beyond stylistic resemblance to reflect the symbolic, cultural, and interpretive logic that grounds meaning in art [38]. As AI-native creators increasingly rely on prompt iteration to guide their process, it is essential to move beyond static pipelines and build systems that can simulate the evolving and reflective nature of creativity. Robust artistic alignment must therefore account for both stylistic and conceptual fidelity.

Current generative systems often frame alignment in narrow terms, treating it as a matter of stylistic fidelity [7, 66, 70, 71, 77, 81]. These models are trained to reproduce surface-level features, such as color palettes, compositions, and textures, while overlooking the deeper reasoning processes that guide artistic decisions. As a result, generated works may visually match a reference, but lack the contextual or conceptual coherence necessary to reflect its significance [31]. These limitations are

*Work done during the internship at TCS Research

39th Conference on Neural Information Processing Systems (NeurIPS 2025) Creative AI Track.

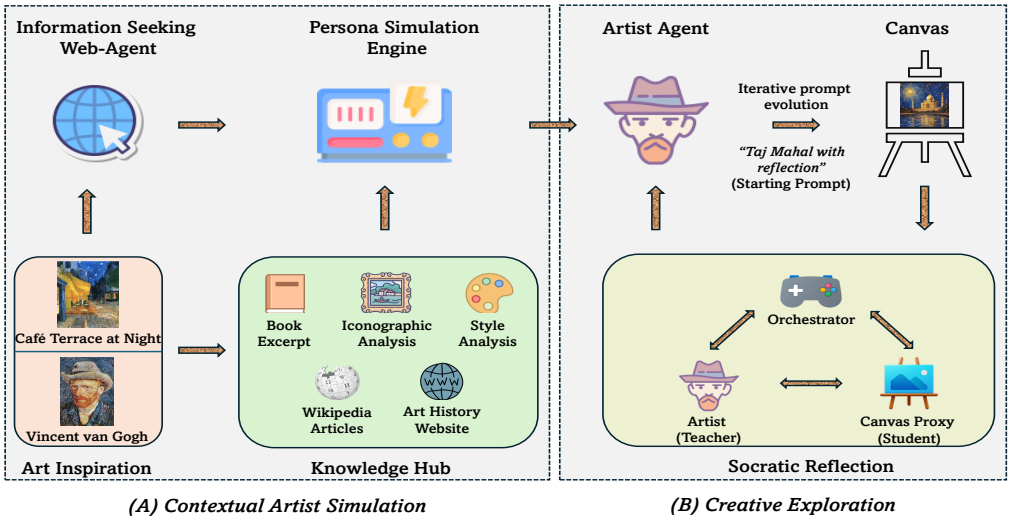


Figure 1: Architecture of our proposed framework ARTPEER with two foundational components: (i) contextual artist simulation and (ii) creative exploration. We simulate the artist based on the persona derived from various knowledge sources conditioned on the art inspiration. To personalize the art inspiration for a novel context, the simulated artist agent performs iterative prompt evolution leveraging the Socratic reflection of the personalization.

amplified by prompt-based workflows, where small changes in phrasing can introduce substantial ambiguity, causing models to deviate from the intended creative anchor. Achieving robustness in artistic alignment, therefore, requires systems that can maintain coherence under ambiguity, adapt over iterative refinement, and reason about alignment beyond surface mimicry.

This paper introduces ARTPEER, a computational framework for robust artistic alignment that embeds artistic reasoning within the generative process. Instead of encoding artistic influence as a static token or embedding, ARTPEER instantiates an evolving artist agent informed by biographical, stylistic, and iconographic knowledge. This agent is not a passive component, but an active participant in generation. It engages in a Socratic dialogue with a generation agent, critiquing intermediate outputs, identifying misalignments, and iteratively refining prompts. This prompt evolution loop enables the system to converge on outputs that exhibit both visual fidelity and conceptual integrity.

In doing so, we reframe artistic alignment as a problem of robust creative reasoning. Rather than simply trying to replicate what an artist might produce, ARTPEER models how an artist might think, adapt to ambiguity, refine intent, and draw connections across references. Embedding reflection, critique, and adaptation into generation, our framework moves toward systems that treat creativity not just as a product to imitate but as a process to reason along.

2 Related Work

Early work on neural style transfer demonstrated how deep features can blend content and artistic style from separate images [36]. Subsequent approaches greatly improved efficiency and flexibility, from perceptual-loss networks for real-time style transfer [41] to feed-forward models enabling arbitrary style application via adaptive instance normalization [40]. Beyond transferring style to a given content image, generative adversarial networks introduced style-focused architectures. StyleGAN's latent space disentangled high-level attributes from fine details, allowing controllable style mixing in generated images [43]. Likewise, multi- domain and few-shot image translation GANs [51] demonstrated how a model could learn to apply new visual styles or domains with limited examples. More recent diffusion- based models can be personalized to user-provided exemplars. Techniques like Textual Inversion [34] and DreamBooth [64] fine-tune or extend text-to-image models to bind novel concepts or styles to trigger words, enabling generation "in the style of" a particular image or subject. However, these fine-tuning approaches often face a trade-off: they may overfit to the reference style or subject, suffering from content leakage or loss of diversity [64, 44]. Recent efforts address this by

Vincent van Gogh (*Café Terrace at Night*)

My journey through art is a landscape of vibrant colour and profound introspection. I was born Vincent Willem van Gogh in 1853, in the Netherlands' serene and solemn lands. Despite the warmth of family and the kindly spirit of my brother, Theo, I often found myself at odds with the world around me. In art, I found my sanctuary, an evolving language of bold contrasts and emotive brushstrokes, echoing my inner dialogues with nature and the ineffable mysteries of existence. In Paris, the pulsating heart of modern art, my palette expanded alongside my consciousness, absorbing the luminescent hues of the Impressionists yet driven by an urgency transcending their fleeting captures of light. My brushwork grew expressive, a spontaneous dance upon canvas, and my strokes became embodiments of emotional resonance, a cry against mere surface appearances toward something raw and elemental. I defied norms with impassioned ferocity, often at the expense of convention but always in pursuit of truth. My application of paint is thick and gestural, yet deliberate—a tactile engagement echoing the rhythms within me. I never sought to merely replicate nature, but to infuse her with emotion, to portray not just how the steppe or night appears, but how they stir the soul. My Café Terrace at Night emerges from this vivid dance of colour and line, a scene animated by yellows and blues that glow beneath the nocturnal sky. The cobblestone street, a symphony of blues and browns, carries the viewer inward, framed by the café's warm light a communal embrace amidst solitude. Each swirl and point of light in night sky reaches for the intangible and spiritual, merging earthly bonds with celestial dreams. Mine is a narrative soaked in the hues of yellow, symbolising the sunlit joy of creation and the inner truth of one's pursuit. In each painting lies an ode to life's ongoing struggle a tribulation entwined with beauty. I hope to capture the divine pulse of life itself, to breathe upon the canvas not with idle re-creation but with revelation. Through my art, I implore you to glimpse the interplay of light and shadow, to sense in the star-strewn night a dialogue of wonder and the unknown a reminder that amid chaos, beauty may unfurl.

Figure 2: Persona of Vincent van Gogh for the artwork *Café Terrace at Night* across four personality dimensions: ■ Contextual influences, ■ Self-awareness and identity formation, ■ Creative disobedience, ■ Creativity as problem-solving.

updating only small subsets of model parameters or adding lightweight adapter layers to inject a new style. For example, StyleDrop [66] achieves high-fidelity style mimicry by tuning <1% of parameters of a large text-to-image model, even from a single style image. FineStyle [77] further improved few-shot style personalization with fine-grained control by synthesizing additional concept-specific training pairs and using cross-attention adapters. Yet, even these advanced personalization techniques treat style alignment as a one-shot mapping problem; once the model is tuned or a style embedding learned, there is no mechanism to iteratively correct or refine generations that deviate from the desired style. In contrast, our approach keeps the model's output aligned with an artistic style through an interactive loop of critique and prompt refinement, rather than a single pass. Refer to Appendix A for a detailed discussion of the related works.

3 Our Approach

3.1 Contextual Artist Simulation

Replicating an artist's creative process requires modelling the influence of context and intent, whereas prior works [73, 8, 82] fix style as static visual attributes, overlooking other dynamics. We address this by representing the artist along four dimensions outlined in [68]: ***contextual influences***, ***self-awareness and identity formation***, ***creative disobedience***, and ***creativity as problem-solving and problem finding***. These dimensions are operationalised through three components:

1. **Knowledge Hub**: It provides the initial foundation for persona creation by compiling information from standard sources as mentioned in Figure 1(A). **Iconographic analysis** identifies and interprets recurring symbols, motifs, and compositional patterns in *art inspiration* [60, 56, 57], highlighting visual themes that inform *self-awareness and identity formation*. **Style analysis** identifies style elements such as brushwork, color palette, and spatial composition in art inspiration[47][37], establishing stylistic boundaries, and detecting variations that may indicate *creative disobedience*. **Wikipedia entries** summarize biographical details, ensuring that the persona reflects well-established facts about the artist's career and life. **Art history websites** provide an account of the artist's position within movements or periods, enriching the *contextual influences* dimension with relevant historical and cultural context. **Book excerpts** provide factual accounts and critical observations about art inspiration, offering evidence of *creativity as problem-solving* in response to artistic or environmental factors. The prompt framework for each component, along with examples and detailed explanations, is provided in the Appendix B.1
2. **Information Seeking Web-Agent**: It acquires work-specific details that are not included in the Knowledge Hub. This includes personal correspondence revealing the artist's thoughts during creation [67], preparatory sketches showing compositional changes [29][5], notes on pigment or

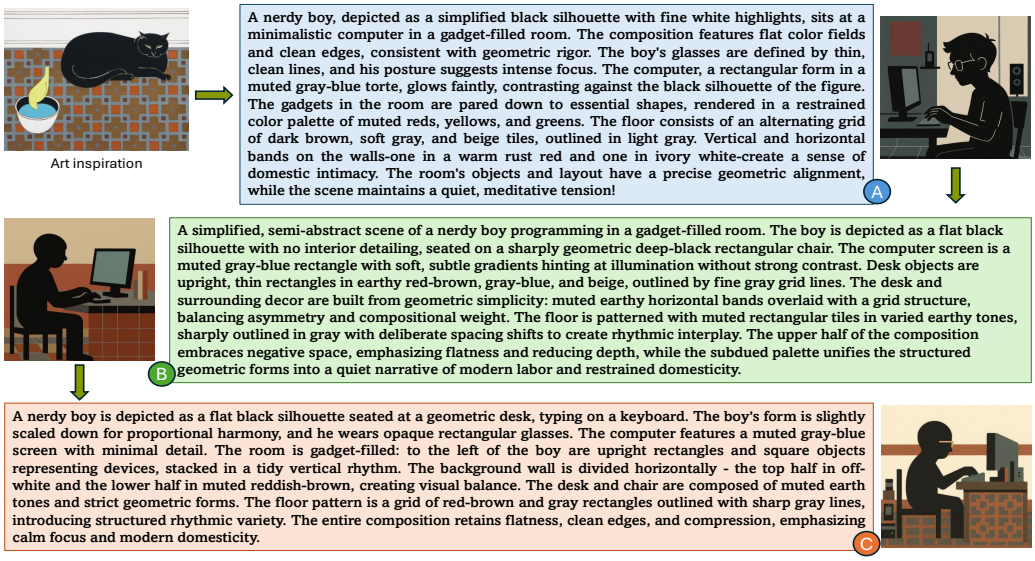


Figure 3: **Prompt evolution** example with ARTPEER. The starting prompt is: "*A nerdy boy programs at a computer in a gadget-filled room*" and the art inspiration is *Cat Canary* by Will Barnet. We show the generated image and the corresponding prompt with (A) Artist persona, (B) first Socratic reflection, and (C) third Socratic reflection.

tool choices, working habits, and records of commissions specifying constraints. It also gathers information on environmental and lighting conditions, as well as early critical or peer responses that shaped revisions. Drawing on such material, it reconstructs the circumstances of production and reveals how the artist adapted to technical, environmental, or institutional constraints. It further compares the work with others in the artist's corpus or with contemporaneous pieces, identifying points of stylistic divergence or thematic change. These insights refine the *contextual influences* dimension and strengthen the *creativity as problem-solving* dimension by showing concrete cases of adaptation and innovation. The detailed prompt used for this component and the model specifications are provided in Appendix B.2.

3. **Persona Simulation Engine**: It generates a persona that works as a system prompt, enabling the LLM agent to emulate the artist's style, decision-making, and logic. This is done by bringing together three streams of input: contextual and stylistic data from the Knowledge Hub, situational and comparative evidence from the Information Seeking Web-Agent, and structured analysis using Noël Carroll's art criticism framework [6]. Carroll's framework provides clear stages of description, interpretation, and evaluation so that the persona not only reflects what the artist did, but also articulates how meaning and value are constructed. It also introduces a critical reflective layer that goes beyond factual accumulation. Thus, enabling the persona to assess and defend creative decisions in a way that parallels the artist's own evaluative voice. By combining these analyses with factual input from other components, the engine shapes a persona as illustrated in Figure 2. Thus, reflecting the artist's decisions and context, addressing *self-awareness and identity formation* and *creativity as problem-solving*. A detailed description of Carroll's framework and art criticism theory, together with the full Persona Simulation Engine prompt and an additional persona example, is provided in Appendix B.3

3.2 Creative Exploration

Modelling an artist's persona offers a valuable entry point for generating stylistically informed images, but it does not ensure conceptual coherence or creative depth. Aligning artistic intent with coherent images requires iterative evolution. As [53] shows, contextual dialogue enables identifying and correcting errors, with each iteration bringing outputs closer to the intended concept. Building on these insights, our system introduces *Creative Exploration*, designed to model the back-and-forth nature of creative decision-making. It is achieved through a multi-agent conversation between the following agents (as illustrated in Figure 1(B)):

Art inspiration	Keyword	StyleSSP	StyleLoRA	Persona	Reflection 1	Reflection 2	Reflection 3
Canonical	23.42	29.70	25.35	23.59	20.23	18.70	18.20
Non-Canonical	28.04	30.46	25.08	25.27	20.37	17.98	17.46
Overall	25.73	30.08	25.21	24.43	20.30	18.34	17.83

Table 1: ArtFID (↓) scores for canonical and non-canonical art inspirations across different techniques. *Persona* denotes the image generated with the prompt produced by the simulated artist agent. *Reflection i* denotes the image generated after the ith round of Socratic reflection.

- **Artist Agent:** Acts as a teacher in the Socratic loop, using the constructed persona to transform the user's input into a contextual style-sensitive prompt. It critiques generated drafts, identifies thematic or stylistic deviations, and poses guiding questions to refine the concept.
- **Canvas Proxy:** Acts as a student in the Socratic loop, answering the Artist Agent's questions about the generated image. Its responses explain alignment or deviation from the intended art inspiration, informing the Artist Agent's iterative refinements.
- **Orchestrator:** Orchestrates the iterative loop between Artist Agent and Canvas Proxy, maintaining coherence, tracking refinements, and deciding when to stop based on convergence criteria.

Inspired by recent work on Socratic learning ([46],[50]), our framework replaces rule-based corrections with a teacher-student dialogue between the Artist Agent and Canvas Proxy. Grounded in the artist's worldview, this loop refines prompts through critical reasoning which can be seen in Figure 3. Further details of the Creative Exploration process, along with the one round of Socratic dialogue for Claude Monet's Impression, Sunrise, are provided in Appendix C

4 Experiments

We evaluate ARTPEER on 10 art inspirations, split evenly between canonical (e.g., *Café Terrace at Night*, *Mona Lisa*) and non-canonical works (e.g., *Girl at the Gate*, *Horse and Cart*). This distinction allows us to test whether ARTPEER can move beyond simple memorisation and produce stylistically consistent results for both familiar and lesser-known sources. Moreover, the curated dataset spans diverse art movements, eras, and techniques, enabling evaluation of a method's ability to generalise across varied stylistic demands. Reference prompts are drawn from the *Open Image Preferences v1* dataset [32], with stylistic terms removed to ensure style originates solely from the method. The complete list of art inspirations considered in this study can be found in Appendix D.1.

To provide a rigorous and comprehensive assessment of our method, we compare ARTPEER with three baselines that represent complementary approaches to stylisation:

- **Keyword Prompting**: Prompts are directly augmented with phrases such as *"in the {artist's} {art inspiration} style"*. *For example:* "Father and son playing tennis in Edvard Munch's *The Scream* style."
- **StyleSSP** [74]: A state-of-the-art, training-free method for stylisation that takes content image and style image as input. It outperforms methods like StyleID [45], InstantStyle-Plus [76], StyleAlign [80], InstantStyle [52], DiffuseIT [30], InST [65], and DiffStyle [48].
- **StyleLoRA** [33]: It is a LoRA-based technique that jointly learns LoRA weights for only two blocks of SDXL[62] UNet from a single image using a generic prompt ("A [v]") , enabling state-of-the-art style adaptation with efficient, implicit separation of style and content.

More details on baselines can be found in Appendix D.2.

We use *ArtFID* [72] to quantitatively evaluate the artistic alignment capability of different techniques. It does so by combining FID [39] (visual distribution fidelity) and LPIPS [78] (patch-level content similarity).

$$\text{ArtFID} = (1 + \text{LPIPS}) \cdot (1 + \text{FID}) \tag{1}$$

Lower values of Equation 1 indicate better alignment and correlate with human preference.

We conduct experiments using GPT-4 series models. GPT-4o [58] handles all agent-based reasoning (Artist Agent, Canvas Proxy), with GPT-4.1 (vision) enabling image inspection and query generation, and the GPT-4 image model producing final outputs. Prompt evolution stops when the ArtFID [72] score change between evolution loop is below 1.0. StyleSSP and StyleLoRA use SDXL for image generation and stylization.

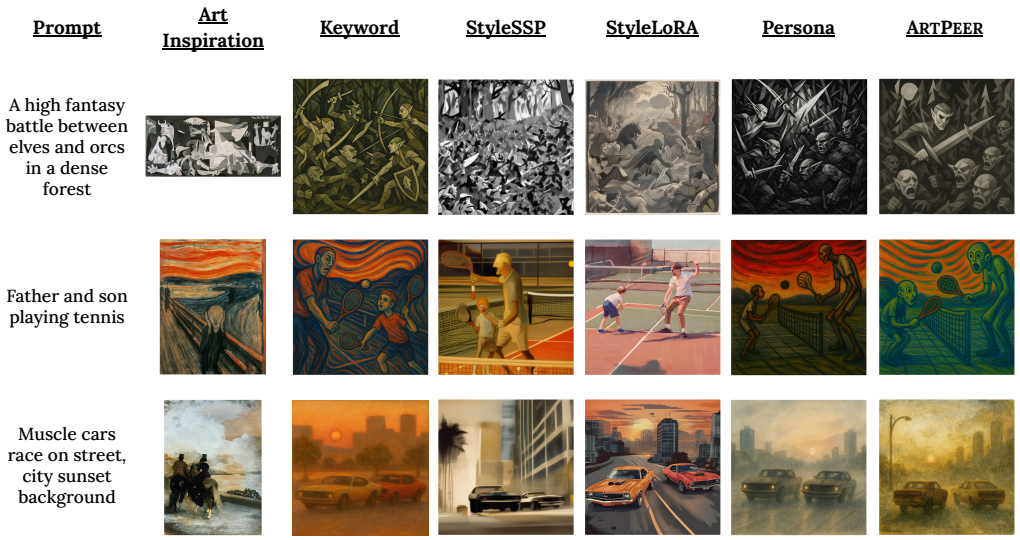


Figure 4: Qualitative comparison of personalized art across different techniques. We present examples for three art inspirations: *Guernica* by Pablo Picasso, *The Scream* by Edvard Munch, and *Two Riders by a Lake* by Edgar Degas. Results are shown without SKG-based style deviation feedback to the Orchestrator Agent.

5 Results and Analysis

We present the quantitative and qualitative findings in Table 1 and Figure 4 respectively. We present additional examples in Section E of the Appendix. Our analysis reveals key observations. For canonical artworks, StyleLoRA outperforms keyword prompting, whereas for non-canonical artworks the trend reverses, with a notably larger performance gap. This is likely because canonical styles are well represented in the model training data, which makes simple style-related keywords sufficient to achieve high fidelity. In contrast, image-based style transfer methods such as StyleSSP fail to capture fine-grained artistic details, which function more as static filters than as adaptive style models. Furthermore, ARTPEER consistently achieves superior performance in both canonical and non-canonical categories. The prompts generated by the simulated artist persona exhibit strong artistic fidelity, and the Socratic reflection stage further enhances the alignment between the generated image and the intended artistic style.

Figure 3 illustrates the iterative refinement of prompts to enhance stylistic fidelity. Initially in (A), the Artist persona captures overall composition but omits Barnet's characteristic flattened geometry; this is rectified in (B) with the phrase *"flat black silhouette with no interior detailing"*. In (C), color mismatches are resolved through precise spatial and chromatic descriptors, yielding closer alignment with the target style. Comparable evolutions are evident in the Appendix Figures 20 and 19, where the phrase *"scatter light and shadow unpredictably across the flock"* emerges from the Artist Agent's reasoning to invoke spontaneity, thus capturing Monet's transient, atmospheric effects.

6 Ethical Considerations

Simulating an artist as an autonomous agent opens new possibilities for computational creativity but also raises ethical questions. These systems influence interpretation, risking shifts in authorship, loss of nuance, and the privileging of certain cultural viewpoints. They may reshape the human-machine relationship in art, fueling debates on authenticity and ownership. To enrich rather than diminish the creative landscape, such systems must be transparent, inclusive in their influences, and respectful of the cultural heritage they engage with. This work attempts to engage with these considerations through design choices that promote diversity of influence, process transparency, and cultural sensitivity.

References

[1] Smarthistory: The center for public art history, 2023. Accessed: 2025-08-08.

[2] Ai in art award – ars electronica prix, 2025. Accessed: 2025-08-08.

[3] The lumen prize for art and technology, 2025. Accessed: 2025-08-08.

[4] Robotart competition, 2025. Accessed: 2025-08-08.

[5] Impression, sunrise: The saga of a legendary painting.... Website — Maison et jardins de Claude Monet – Giverny, n.d. Includes dating of the painting (13 November 1872 at 7:35 am) and its history.

[6] Takaya Arita, Reiji Suzuki, Wenxian Zheng, and Fuminori Akiba. Assessing llms in art contexts: Critique generation and theory of mind evaluation. *arXiv preprint arXiv:2504.12805*, 2025.

[7] Dar-Yen Chen, Hamish Tennent, and Ching-Wen Hsu. Artadapter: Text-to-image style transfer using multi-level style encoder and explicit adaptation. In *Proceedings of the IEEE/CVF conference on computer vision and pattern recognition*, pages 8619–8628, 2024.

[8] Xiang Chen, Zhiwei Li, Ming Gao, and Yun Zhao. Styleblend: Enhancing style-specific content creation in text-to-image diffusion models. *arXiv preprint arXiv:2502.09064*, 2025.

[9] WikiArt contributors. Café terrace at night — WikiArt, 2025. Accessed: 2025-08-09.

[10] WikiArt contributors. Cat and canary — WikiArt, 2025. Accessed: 2025-08-09.

[11] WikiArt contributors. Girl at the gate — WikiArt, 2025. Accessed: 2025-08-09.

[12] WikiArt contributors. Guernica — WikiArt, 2025. Accessed: 2025-08-09.

[13] WikiArt contributors. Horse and cart — WikiArt, 2025. Accessed: 2025-08-09.

[14] WikiArt contributors. Impression, sunrise — WikiArt, 2025. Accessed: 2025-08-09.

[15] WikiArt contributors. Mona lisa — WikiArt, 2025. Accessed: 2025-08-09.

[16] WikiArt contributors. The scream — WikiArt, 2025. Accessed: 2025-08-09.

[17] WikiArt contributors. Two riders by a lake — WikiArt, 2025. Accessed: 2025-08-09.

[18] WikiArt contributors. A walk at dusk — WikiArt, 2025. Accessed: 2025-08-09.

[19] Wikipedia contributors. Caspar david friedrich — Wikipedia, the free encyclopedia, 2025. Accessed: 2025-08-09.

[20] Wikipedia contributors. Claude monet — Wikipedia, the free encyclopedia, 2025. Accessed: 2025-08-09.

[21] Wikipedia contributors. Edgar degas — Wikipedia, the free encyclopedia, 2025. Accessed: 2025-08-09.

[22] Wikipedia contributors. Edvard munch — Wikipedia, the free encyclopedia, 2025. Accessed: 2025-08-09.

[23] Wikipedia contributors. George clausen — Wikipedia, the free encyclopedia, 2025. Accessed: 2025-08-09.

[24] Wikipedia contributors. Georges seurat — Wikipedia, the free encyclopedia, 2025. Accessed: 2025-08-09.

[25] Wikipedia contributors. Leonardo da vinci — Wikipedia, the free encyclopedia, 2025. Accessed: 2025-08-09.

[26] Wikipedia contributors. Pablo picasso — Wikipedia, the free encyclopedia, 2025. Accessed: 2025-08-09.

[27] Wikipedia contributors. Vincent van gogh — Wikipedia, the free encyclopedia, 2025. Accessed: 2025-08-09.

[28] Wikipedia contributors. Will barnet — Wikipedia, the free encyclopedia, 2025. Accessed: 2025-08-09.

[29] Dallas Museum of Art. Loving vincent | dma collection: preliminary drawing for van gogh's café terrace at night. DMA Blog (Uncrated), 2017. Discusses the preparatory chalk/ink/graphite drawing at DMA for Café Terrace at Night.

[30] Yifan Du, Yahui Liu, et al. Diffuseit: Training-free style transfer with iterative diffusion. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.

[31] Ahmed Elgammal, Bingchen Liu, Mohamed Elhoseiny, and Marian Mazzone. Can: Creative adversarial networks, generating" art" by learning about styles and deviating from style norms. *arXiv preprint arXiv:1706.07068*, 2017.

[32] Hugging Face. Learning from human preferences on image generation. `https://huggingface.co/blog/image-preferences`, 2024. Accessed: 2025-08-07.

[33] Yarden Frenkel, Yael Vinker, Ariel Shamir, and Daniel Cohen-Or. Implicit style-content separation using b-lora. In *European Conference on Computer Vision*, pages 181–198. Springer, 2024.

[34] Rinon Gal, Yuval Alaluf, Yuval Atzmon, Or Patashnik, Amit Haim Bermano, Gal Chechik, and Daniel Cohen-or. An image is worth one word: Personalizing text-to-image generation using textual inversion. In *The Eleventh International Conference on Learning Representations*.

[35] Sagar Gandhi and Vishal Gandhi. Personalized image generation from an author writing style. *arXiv preprint arXiv:2507.03313*, 2025.

[36] Leon A Gatys, Alexander S Ecker, and Matthias Bethge. Image style transfer using convolutional neural networks. In *Proceedings of the IEEE conference on computer vision and pattern recognition*, pages 2414–2423, 2016.

[37] E. H. Gombrich. *Art and Illusion: A Study in the Psychology of Pictorial Representation*. Princeton University Press, Princeton, NJ, 1960.

[38] Aaron Hertzmann. Can computers create art? *The Machine as Art/The Machine as Artist*, page 121.

[39] Martin Heusel, Hubert Ramsauer, Thomas Unterthiner, Bernhard Nessler, and Sepp Hochreiter. Gans trained by a two time-scale update rule converge to a local nash equilibrium. In *Advances in neural information processing systems*, volume 30, 2017.

[40] Xun Huang and Serge Belongie. Arbitrary style transfer in real-time with adaptive instance normalization. In *Proceedings of the IEEE international conference on computer vision*, pages 1501–1510, 2017.

[41] Justin Johnson, Alexandre Alahi, and Li Fei-Fei. Perceptual losses for real-time style transfer and super-resolution. In *European conference on computer vision*, pages 694–711. Springer, 2016.

[42] Erez Karpas, Tim Miller, Shirin Sohrabi, Brian Williams, and Peng Yu. Information-seeking agents. In *Proceedings of the International Conference on Automated Planning and Scheduling (ICAPS)*, volume 32, pages 375–385, 2022.

[43] Tero Karras, Samuli Laine, and Timo Aila. A style-based generator architecture for generative adversarial networks. In *Proceedings of the IEEE/CVF conference on computer vision and pattern recognition*, pages 4401–4410, 2019.

[44] Gihoon Kim, Hyungjin Park, and Taesup Kim. Regularized personalization of text-to-image diffusion models without distributional drift. *arXiv preprint arXiv:2505.19519*, 2025.

[45] Hyeonwoo Kim, Dongho Lee, et al. Styleid: Identity preserving style transfer with diffusion models. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition (CVPR)*, 2023.

[46] Hyung Won Kim, Hyung Ju Park, Jaesung Shin, Sang-goo Park, and Xiang Lisa Zhang. Socratic learning from synthetic students. In *ICLR*, 2023.

[47] Fred S. Kleiner. *Gardner's Art Through the Ages: A Global History*. Cengage Learning, Boston, MA, 15th edition, 2016.

[48] Hyungjin Lee, Sangwoo Park, et al. Diffstyle: Style transfer with diffusion models. In *Proceedings of the IEEE/CVF Winter Conference on Applications of Computer Vision (WACV)*, 2023.

[49] Kimin Lee, Hao Liu, Moonkyung Ryu, Olivia Watkins, Yuqing Du, Craig Boutilier, Pieter Abbeel, Mohammad Ghavamzadeh, and Shixiang Shane Gu. Aligning text-to-image models using human feedback. *arXiv preprint arXiv:2302.12192*, 2023.

[50] Xiaoyu Li, Lianhui Wang, Percy Liang, Matt Gardner, and Luke Zettlemoyer. Socratic questioning for language models. In *NeurIPS*, 2022.

[51] Ming-Yu Liu, Xun Huang, Arun Mallya, Tero Karras, Timo Aila, Jaakko Lehtinen, and Jan Kautz. Few-shot unsupervised image-to-image translation. In *Proceedings of the IEEE/CVF international conference on computer vision*, pages 10551–10560, 2019.

[52] Zhengkai Liu, Zongxi Xu, Weijiang Zhao, Mingqi Song, Meng Wang, Zhiqiang Huang, and Xiang Wang. Instantstyle: Free lunch towards style-preserving in text-to-image generation. *arXiv preprint arXiv:2404.02733*, 2024.

[53] Aman Madaan, Xiang Lin, Yuwei Yang, Graham Neubig, Wenpeng Yin, Saurabh Bhambri, and Abhishek Gupta. Self-refine: Iterative refinement with self-feedback. In *ACL*, 2023.

[54] Aman Madaan, Niket Tandon, Prakhar Gupta, Skyler Hallinan, Luyu Gao, Sarah Wiegreffe, Uri Alon, Nouha Dziri, Shrimai Prabhumoye, Yiming Yang, et al. Self-refine: Iterative refinement with self-feedback. *Advances in Neural Information Processing Systems*, 36:46534–46594, 2023.

[55] Oscar Mañas, Pietro Astolfi, Melissa Hall, Candace Ross, Jack Urbanek, Adina Williams, Aishwarya Agrawal, Adriana Romero-Soriano, and Michal Drozdzal. Improving text-to-image consistency via automatic prompt optimization. *Transactions on Machine Learning Research*.

[56] Marjorie Münsterberg. Iconographic analysis. `https://writingaboutart.org/pages/iconographicanalysis.html`. Accessed: 2025-08-10.

[57] NumberAnalytics. Decoding art: Iconographic analysis in art history. `https://www.numberanalytics.com/blog/iconographic-analysis-art-history`. Accessed: 2025-08-10.

[58] OpenAI. Gpt-4o technical report. `https://openai.com/index/gpt-4o`, 2024. Accessed: 2025-08-07.

[59] OpenAI. Introducing chatgpt agent. `https://openai.com/index/introducing-chatgpt-agent/`, 2024.

[60] Erwin Panofsky. *Studies in Iconology: Humanistic Themes in the Art of the Renaissance*. Oxford University Press, New York, 1939.

[61] Erwin Panofsky. *Meaning in the Visual Arts*. Doubleday, Garden City, NY, 1955.

[62] Alexander Podell, Lucy Tunstall, Sai Vemprala, Katherine Crowson, Chitwan Gao, Rishabh Chugh, et al. Sdxl: Improving latent diffusion models for high-resolution image synthesis. 2023. Accessed: 2025-08-07.

[63] Jielin Qiu, Yi Zhu, Xingjian Shi, Florian Wenzel, Zhiqiang Tang, Ding Zhao, Bo Li, and Mu Li. Benchmarking robustness of multimodal image-text models under distribution shift. *Journal of Data-centric Machine Learning Research*.

[64] Nataniel Ruiz, Yuanzhen Li, Varun Jampani, Yael Pritch, Michael Rubinstein, and Kfir Aberman. Dreambooth: Fine tuning text-to-image diffusion models for subject-driven generation. In *Proceedings of the IEEE/CVF conference on computer vision and pattern recognition*, pages 22500–22510, 2023.

[65] Han Shi, Wei Zhang, et al. Inst: Instant neural style transfer with diffusion models. In *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*, 2023.

[66] Kihyuk Sohn, Nataniel Ruiz, Kimin Lee, Daniel Castro Chin, Irina Blok, Huiwen Chang, Jarred Barber, Lu Jiang, Glenn Entis, Yuanzhen Li, et al. Styledrop: text-to-image generation in any style. In *Proceedings of the 37th International Conference on Neural Information Processing Systems*, pages 66860–66889, 2023.

[67] Vincent Van Gogh. Letter w07 to wilhelmina van gogh, arles, 9 & 16 september 1888. Web page, WebExhibits, 1888. Translated by Robert Harrison.

[68] Filiberto Vargas. Examining the creative process of visual artists: A phenomenological study. 2025.

[69] Bram Wallace, Meihua Dang, Rafael Rafailov, Linqi Zhou, Aaron Lou, Senthil Purushwalkam, Stefano Ermon, Caiming Xiong, Shafiq Joty, and Nikhil Naik. Diffusion model alignment using direct preference optimization. In *Proceedings of the IEEE/CVF Conference on Computer Vision and Pattern Recognition*, pages 8228–8238, 2024.

[70] Haofan Wang, Peng Xing, Renyuan Huang, Hao Ai, Qixun Wang, and Xu Bai. Instantstyle-plus: Style transfer with content-preserving in text-to-image generation. *CoRR*, 2024.

[71] Ye Wang, Tongyuan Bai, Xuping Xie, Zili Yi, Yilin Wang, and Rui Ma. Sigstyle: Signature style transfer via personalized text-to-image models. In *Proceedings of the AAAI Conference on Artificial Intelligence*, volume 39, pages 8051–8059, 2025.

[72] Matthias Wright and Björn Ommer. Artfid: Quantitative evaluation of neural style transfer. In *DAGM German Conference on Pattern Recognition*, pages 560–576. Springer, 2022.

[73] Jiaming Wu, Chen Zheng, Yifan Xu, and Wei Li. Stylear: Customizing multimodal autoregressive model for style-aligned text-to-image generation. *arXiv preprint arXiv:2505.19874*, 2025.

[74] Ruojun Xu, Weijie Xi, XiaoDi Wang, Yongbo Mao, and Zach Cheng. Stylessp: Sampling start-point enhancement for training-free diffusion-based method for style transfer. In *Proceedings of the Computer Vision and Pattern Recognition Conference*, pages 18260–18269, 2025.

[75] Yizhong Xu, Rui Zhong, Bill Yuchen Chen, Tongshuang Wang, Noah A. Smith, Yejin Choi, and Hannaneh Hajishirzi. Tool-augmented large language models in the age of generative ai: A survey. In *Proceedings of the Annual Meeting of the Association for Computational Linguistics (ACL)*, 2024. arXiv:2401.06201.

[76] Zongxi Xu, Zhengkai Liu, Weijiang Zhao, Mingqi Song, Meng Wang, Zhiqiang Huang, and Xiang Wang. Instantstyle-plus: Style transfer with content-preserving in text-to-image generation. *arXiv preprint arXiv:2407.00788*, 2024.

[77] Gong Zhang, Kihyuk Sohn, Meera Hahn, Humphrey Shi, and Irfan Essa. Finestyle: Fine-grained controllable style personalization for text-to-image models. *Advances in Neural Information Processing Systems*, 37:52937–52961, 2024.

[78] Richard Zhang, Phillip Isola, Alexei A Efros, Eli Shechtman, and Oliver Wang. The unreasonable effectiveness of deep features as a perceptual metric. In *Proceedings of the IEEE conference on computer vision and pattern recognition*, pages 586–595, 2018.

[79] Saizheng Zhang, Emily Dinan, Jack Urbanek, Arthur Szlam, Douwe Kiela, and Jason Weston. Personalizing dialogue agents: I have a dog, do you have pets too? In *Proceedings of the 56th Annual Meeting of the Association for Computational Linguistics (Volume 1: Long Papers)*, pages 2204–2213, 2018.

[80] Xuan Zhang, Yue Li, et al. Stylealign: Aligning text-to-image diffusion models for style consistency. In *Proceedings of the IEEE/CVF International Conference on Computer Vision (ICCV)*, 2023.

[81] Matthew Zheng, Enis Simsar, Hidir Yesiltepe, Federico Tombari, Joel Simon, and Pinar Yanardag Delul. Stylebreeder: Exploring and democratizing artistic styles through text-to-image models. *Advances in Neural Information Processing Systems*, 37:34098–34122, 2024.

[82] Li Zhuoqi, Cheng Liu, and Rui Wang. Content-style disentangled representation for controllable artistic image stylization and generation. *arXiv preprint arXiv:2412.14496*, 2024.

Appendix

A Related Work **13**

A.1 Contextual and Persona-Based Generation 13

A.2 Critique and Iterative Refinement 13

A.3 Robustness in Creative Generation 13

B Contextual Artist Simulation **13**

B.1 Knowledge Hub 13

B.2 Information Seeking Web-Agent 19

B.3 Persona Simulation Engine 23

C Creative Exploration **30**

D Experimental Details **35**

D.1 Dataset 36

D.2 Baselines 36

E Result **37**

A Related Work

A.1 Contextual and Persona-Based Generation

Incorporating context or persona information into generative models has been explored primarily in natural language domains. For example, in dialogue systems, conditioning responses on a speaker's persona yields more engaging and consistent interactions [79]. Persona grounding has similarly benefited story generation and interactive fiction, where models maintain character voice or author style [35]. While text-to-image models can mimic the visual style of famous artists by including their names in prompts, this crude form of persona injection lacks deeper grounding in the artist's context or philosophy. The potential of leveraging an artist's biographical and iconographic background to influence generation remains largely unexplored. Some recent works address consistency of characters or contexts in image sequences [64], but do not simulate the persona of an artist or use it to actively guide the creative process. In contrast, ARTPEER explicitly simulates artist personas as part of the generation loop. Grounded in biography and style knowledge, our personas act as domain experts that ensure the generated art remains authentically in-character for the chosen artist or style.

A.2 Critique and Iterative Refinement

Generative AI is increasingly moving from one-shot generation to iterative refinement paradigms, inspired by human creative workflows. In NLP, self-reflection and revision improve output quality [54]. In image generation, prompt optimization systems like OPT2I [55] iteratively rephrase prompts to improve alignment, but focus on literal content fidelity rather than creative or stylistic critique. ARTPEER embeds a critiquing agent with artistic insight into the generation loop, akin to an art teacher reviewing each draft. This differs from prior work by automating nuanced, domain-specific feedback rather than relying on generic metrics or rule-based corrections.

A.3 Robustness in Creative Generation

Robustness in generative art means maintaining alignment with artistic intent under varied conditions, including distribution shifts. Current text-to-image models degrade under minor prompt perturbations [63] and can drift after fine-tuning for personalization [44]. Alignment approaches such as RLHF for diffusion models [49, 69] improve preference satisfaction, but operate offline and are not tailored to dynamic style adherence. ARTPEER enhances robustness by embedding domain knowledge in a critique-refinement loop, enabling on-the-fly course correction. This adaptive process maintains stylistic fidelity even with unusual prompts or novel content.

B Contextual Artist Simulation

B.1 Knowledge Hub

In this section, we elaborate on the individual components of the Knowledge Hub, detailing the prompts employed for each and illustrating them with relevant examples.

- **Book Excerpt**: This module uses a retrieval-augmented generation (RAG) approach to extract relevant passages from art historical books for a given artwork or artist. Retrieved excerpts are refined for clarity while preserving accuracy, then compiled into a text resource within the Knowledge Hub to support later analyses. An example of the Book Excerpt can be seen in Figure 5
- **Iconographic Analysis**: Iconographic Analysis systematically examines visual element to find symbolic, cultural, and compositional meanings. For every object in an artwork, we assess its identity, historical or religious significance, visual construction, materiality, stylistic attributes, color usage, lighting effects, and compositional role. This process follows a structured prompt as can be seen in Figure 6 that guides the model to analyze each object. An illustrative example of this analysis can be seen in Figure 7. The method draws on established art-historical frameworks such as Panofsky's multi-level method of iconographic interpretation [61], which links form to meaning through cultural context. By grounding the analysis in these art-historical traditions, the framework ensures that interpretations remain faithful to the artwork's cultural, historical, and symbolic contexts while enabling consistent, structured reasoning across diverse artistic styles.

Example of Book Excerpt

- **Claude Monet, Impression: Sunrise** (1872) – Oil on canvas, housed at the Musée Marmottan, Paris.
- A hostile critic first used the term *Impressionism* to describe Monet's work, referencing the painting's sketchy quality and visible brush strokes.
- Monet and his fellow artists later embraced the label for their movement.
- The label originated when *Impression: Sunrise* was exhibited at the first Impressionist show in 1874.
- Although the critic intended the term to be derogatory, by the third Impressionist exhibition in 1878 the artists had adopted it proudly.
- In contrast to traditional academic painters, Monet often painted outdoors (*en plein air*), which enhanced his focus on the interplay of light and color in capturing fleeting atmospheric and climatic effects.
- Advances in scientific studies of light and the invention of chemically synthesized pigments heightened artists' awareness of the variety of colors in nature and expanded their available palette.

Figure 5: Book Excerpt from [47] about *Impression, Sunrise*.

Iconographic Analysis of Artwork

Analyze each object in the image using iconographic principles to extract reusable symbolic logic and design attributes.

1. Object Identity
- What is the object called?
- What is its historical, religious or cultural significance?

2. Visual Construction
- Describe its form (shape, posture, position).
- Describe its material, texture and style (e.g., sculptural, painted, digital, abstract, naturalistic).

3. Color & Light
- How does light or shadow reinforce the object's meaning?

4. Symbolic Meaning
- What concept, narrative, or allegory does the object express?
- Is its symbolism universal, culturally specific or context-dependent?

5. Functional Role in Composition
- Is it a central motif, a supporting detail or an attribute of a figure?
- What emotional, spiritual or intellectual response does it aim to provoke in the viewer?

Figure 6: Framework for Iconographic Analysis of Artwork

Example of Iconographic Analysis

Object: The Boats
Object Identity
- **Name:** Small rowboats.
- **Significance:** Represent travel, exploration, and commerce; in art, they often symbolize life's journey. In Impressionism, they capture everyday harbor life.

Visual Construction
- **Form:** Silhouetted, dark elongated ovals floating on water.
- **Material, texture, style:** Loose, fluid brushstrokes typical of Impressionism, producing a soft, blurred texture.

Color & Light

- **Colors:** Dark tones contrasting with brighter water and sky.
- **Light/Shadow:** Shadowy forms create calm and mystery, emphasizing transience and reflection.

Symbolic Meaning
- **Concept:** Harmony of human presence with nature.
- **Symbolism:** Universally symbolic of journey and tranquility.

Functional Role in Composition
- **Role:** Supportive detail adding life and scale.
- **Emotional impact:** Evokes serenity, reflection, and time's passage.

Object: The Sun
Object Identity
- **Name:** Rising or setting sun.
- **Significance:** Traditionally symbolizes life, power, and renewal.

Visual Construction
- **Form:** Bold circular shape in upper center.
- **Material, texture, style:** Solid, untextured circle serving as focal point.

Color & Light
- **Colors:** Bright orange-red contrasting with cooler tones.
- **Light/Shadow:** Reflection adds warmth and hope.

Symbolic Meaning
- **Concept:** Renewal, hope, passage of time.
- **Symbolism:** Universally symbolic of life and energy.

Functional Role in Composition
- **Role:** Central motif anchoring the scene.
- **Emotional impact:** Inspires contemplation and optimism.

Object: The Reflections on Water
Object Identity
- **Name:** Reflections of sun and sky on water.
- **Significance:** In Impressionism, reflections embody the fleeting quality of light.

Visual Construction
- **Form:** Horizontal brushstrokes following water's surface.
- **Material, texture, style:** Impressionistic strokes creating shimmering effects.

Color & Light
- **Colors:** Cool blues with warm orange streaks for balance.
- **Light/Shadow:** Interplay suggests movement and change.

Symbolic Meaning
- **Concept:** Transience and perception.
- **Symbolism:** Universally symbolic of change and reflection.

Functional Role in Composition
- **Role:** Supportive detail enhancing mood and atmosphere.
- **Emotional impact:** Encourages calmness and contemplation.

Figure 7: Iconographic analysis of Impression, Sunrise.

- **Style Analysis:** The style analysis evaluates an artwork through eleven structured components which include: form, composition, material, technique, color, line, perspective, space, proportion, scale, and texture. They capture reproducible patterns in art inspiration. This structured vocabulary is grounded in formal analysis traditions outlined in Gardner's Art Through the Ages [47]. The approach records measurable attributes such as recurring shape structures, spatial organization, palette tendencies, and depth construction, supporting both interpretive analysis and automated style recognition. The operational prompt and its application can be seen in Figure 8 and Style Analysis of *Impression, Sunrise* can be seen in Figure 9.

Style Analysis of Artwork

Perform a formal analysis of the given artwork using the specialized vocabulary of art history. Follow the structure below. Each item is phrased as a direct instruction for an image-generation model.

- No metaphors or flowery language.
- Use simple, literal terms the model can parse unambiguously.
- Focus on explicit, transferable details so the same structure can be applied to *any* subject-matter.

---

1. Form

Describe the exact shapes and their dimensionality.

- List every major shape (e.g., "sphere", "cube", "cone", "irregular organic blob").
- State whether each shape is a 2-D outline or a 3-D volume.
- Note edge quality: sharp straight edge, softly rounded, or jagged.
- Indicate solidity: opaque, translucent, or transparent.
  Example output: *"Central object: single cylinder, fully three-dimensional, opaque. Two thin 2-D rectangles behind it, edges sharp. One small irregular organic blob in front."*

2. Composition

Explain the placement of shapes inside the frame.

- Specify layout type: symmetrical, asymmetrical, radial, diagonal grid, free-form.
- Identify the primary focal point and its exact position (e.g., "center-left at 40% width, 50% height").
- Mention balance method: equal weight left/right, heavier top, etc.
- Describe any directional flow for the viewer's eye (e.g., "Z-shaped reading path from top-left to bottom-right").
- Note negative space areas and their approximate size or percentage.

3. Material

State the physical or digital medium and its surface qualities.

- Medium examples: oil paint on canvas, matte plastic, brushed steel, digital brush, voxel render.
- Surface feel: smooth, grainy, reflective, matte, semi-gloss.
- Mention visible artefacts (brushstrokes, noise, pixelation) if present.

4. Technique

Describe *how* the medium is applied.

- Application style: thin single coat, thick impasto, layered glazing, flat vector fill, parametric 3-D modeling.
- Precision level: highly precise, loose gestural, or procedurally generated.
- Any special process: airbrush gradient, particle simulation, Boolean subtraction, mesh sculpting.

5. Color

Analyze the artwork's color palette in exhaustive detail. Do not use metaphors; use the precise name of the color. For each significant color, explicitly state which part of the painting it occupies and explain its function (e.g., creating contrast, guiding the eye, symbolic meaning). Do not just provide a list of colors.

6. Line

Catalog the line work.

- Line types: continuous, dashed, dotted, calligraphic, scribble.
- Weight: hairline (<1 px), medium (3–5 px), heavy (>8 px).
- Function: outline contour, internal detail, motion guide, texture hatch.
- Direction: vertical, horizontal, 45° diagonal, curved S-curve, concentric circles.

7. Perspective

Describe the method used to create depth.

- Perspective type: one-point, two-point, isometric, atmospheric fade, orthographic.
- Vanishing-point location(s) in frame coordinates, if relevant.
- Degree of foreshortening on key objects (e.g., "front wheel shortened to 60% true length").
- Horizon line height as a percentage of frame height.

8. Space

Explain the spatial feel.

- Depth range: flat (0 cm), shallow (<20 cm impression), moderate (~1 m impression), deep (>5 m impression).
- Spatial continuity: uninterrupted, segmented panels, collage overlap.
- Viewer position: eye-level, bird's-eye (top-down), worm's-eye (low).

9. Proportion

Define the size ratios between parts.

- Give numeric or percentage ratios where possible (e.g., "head = 1:4 of full figure height").
- Indicate if proportions are naturalistic, idealized (Golden Ratio, canon-of-eighths), or intentionally exaggerated.

10. Scale

State the artwork's physical size *and* internal scale cues.

- Overall canvas size (e.g., "70 cm × 100 cm").
- Relative scale of the main subject to the canvas (e.g., "subject fills 80% height").
- Indicate if the scale is monumental (viewer dwarfed), human-scale, or miniature (fits in hand).

11. Texture

Describe the surface feel, whether real or implied.

- Real texture: raised paint 2 mm thick, coarse canvas weave visible.
- Implied texture: smooth glass rendered with specular highlight, rough bark via high-frequency bump map.
- Specify pattern size (e.g., "grain with 4 px period").
- Link texture to purpose if needed (e.g., "rough texture used to signify an aged surface").

Figure 8: Framework for Style Analysis of Artwork

Example of Style Analysis

Form

- **Shapes**: - Multiple irregular organic blobs for boats. - Circular 2-D outline for the sun. - Irregular blobs for water reflections.
- **Edge quality**: Softly rounded and irregular.
- **Solidity**: Opaque.

Composition

- Layout type: Asymmetrical.
- Primary focal point: Red-orange sun, top center-right at 60% width, 30% height.
- Balance method: Heavier emphasis on the upper portion with the sun drawing focus.
- Directional flow: Vertical path from the sun reflecting in the water downward.
- Negative space: Significant in the lower right area as empty water.

Material

- Medium: Oil paint on canvas.
- Surface feel: Matte.
- Visible artefacts: Noticeable brushstrokes.

Technique

- Application style: Thin single coat with loose gestural strokes.
- Precision level: Loose.
- Special process: None.

Color

- Sky and Water: Predominantly blue-gray with touches of light orange and pink, creating a cool, tranquil atmosphere.
- Sun: Red-orange, contrasting strongly against the blue, emphasizing the focal point.
- Reflections: Red-orange trails across the blue water, mirroring the sun, adding warmth and balance.

Line

- Line types: None significantly prominent, more implied by edges of shapes.
- Weight: Medium, implied in boat shapes.
- Function: Outline contour for defining boats.
- Direction: Curved for the reflections, horizontal for some water motion guides.

Perspective

- Perspective type: Atmospheric fade.
- Vanishing-point location: Not clearly defined due to the impressionistic approach.
- Degree of foreshortening: Not applicable.
- Horizon line height: Approximately 40% of frame height.

Space

- Depth range: Moderate ($\sim$1 m impression).
- Spatial continuity: Uninterrupted.
- Viewer position: Eye-level.

Proportion

- Size ratios: Boats are small relative to the total canvas, about 1:10 of frame width at most.
- Proportion style: Naturalistic but simplified.

Scale

- Overall canvas size: Medium size typical for easel painting.
- Relative scale of main subject to canvas: Central figures (boats) occupy around 20% of height.
- Human-scale: Elements are small but imply life-size boats.

Texture

- Real texture: Brushstrokes visible but smooth overall.
- Implied texture: Water surface reflects light and shadow in soft, smooth transitions.
- Pattern size: Brushstrokes cover roughly 3–5 mm sections.
- Purpose: Rough texture represents the natural flow and reflection of the water surface.

Figure 9: Style Analysis applied to *Impression, Sunrise*.

- **Art History Website**: Websites like [1] offers expert level content on artworks, artists, and art movements from around the world. It integrates expert commentary and thematic essays, allowing one to connect visual detail with historical, cultural, and stylistic contexts. In Knowledge Hub, these websites serves as a reference point for retrieving verified information about art inspiration. One can refer to Figure 10 for example

Example of Art History Website as source

Claude Monet, *Impression, Sunrise* (1872), oil on canvas, 48 x 63 cm (Musée Marmottan, Paris) is widely recognized as the painting that gave its name to

the Impressionist movement. A critic, Louis Leroy, sarcastically described it as "wallpaper in an embryonic state," commenting on its sketchy execution and loose brushwork. Painted in Le Havre, Monet's childhood home and a major port city in Northern France, the work depicts the bright orange sun rising over the harbor, casting reflections across calm rippling waters. Three fishing boats move into the distance toward a mist-shrouded dock under construction. Cool blues, greens, and whites dominate the palette, punctuated by the sun's warm glow, balancing tranquility with the anticipation of the day's industrial activity.

On the surface, the work captures a quiet morning scene, but its technique and subject reveal a broader engagement with modernity, industry, and global exchange. Monet painted this shortly after returning from London, where he had lived to avoid the Franco-Prussian War. The expressive streaks of color in the sky—orange, red, pink, gray, blue, and white—demonstrate his interest in en plein air painting, a method that sought to quickly capture fleeting light and atmospheric effects. While this work was painted from a hotel window, it reflects his experiments with painting outdoors and his embrace of portable materials, such as John Rand's collapsible paint tube, which revolutionized mobility for artists.

The composition also shows the influence of Monet's collection of Japanese prints, particularly Utagawa Hiroshige's *Sudden Shower over Shin-Ōhashi Bridge and Atake* (1857). Monet adopted Hiroshige's use of diagonal spatial arrangement, cropped framing, and a cool, limited palette to evoke a moment's essence. Instead of rigid linear perspective, Monet used overlapping silhouettes of boats and a dark horizontal dock to separate sea and sky, creating a subtly flattened composition. This Japonisme influence connected Monet's art to 19th-century France's fascination with Japanese aesthetics following the opening of Japan to international trade in the 1850s.

At the time Monet painted *Impression, Sunrise*, Le Havre was undergoing significant industrial expansion to support France's growing participation in global trade. Cranes and dockside construction are silhouetted against the mist, marking the city's modernization. Monet painted several views of the port between 1865 and 1880, refining his horizontal brushstroke technique to suggest water movement and atmospheric change. His portrayal was less about literal depiction and more about the impression of a moment—a collection of brushstrokes that conveyed sensation over precise detail.

When shown in the 1874 exhibition of the Anonymous Society of Painters, Sculptors, and Engravers at Nadar's studio, *Impression, Sunrise* stood out for its departure from academic norms. The show rejected the constraints of the official Salon, and Monet's modern harbor scene—lacking mythological, historical, or moralizing subjects—sparked debate. Critics like Leroy mocked its unfinished look, while supporters like Jules-Antoine Castagnary praised it for capturing "not a landscape, but the sensation produced by a landscape." Its inclusion in this exhibition marked a turning point in art history: a rejection of traditional hierarchy in favor of modern life, fleeting light, and the subjective vision of the artist.

Figure 10: Art History Website information about *Impression, Sunrise*.

- **Wikipedia Articles**: Within the Knowledge Hub, it provides quick access to general background information, timelines, and cross-referenced links. This makes it a useful starting point for gathering baseline factual data before deeper, specialized analysis.

B.2 Information Seeking Web-Agent

This section explores the workings of the information-seeking agent, the prompt driving them, and examples demonstrating their use.

Information-seeking web agents, as discussed by [42] and [75], are autonomous systems designed to iteratively query, retrieve, and reason over heterogeneous information repositories in order to fulfill

complex knowledge-gathering tasks. Such agents integrate capabilities for document search, fact verification, and multi-step reasoning, allowing them to consolidate fragmented or dispersed content into a coherent narrative. The need for such agents arises from the limitations of static retrieval pipelines: cultural and historical artefact analyses often require cross-referencing multiple scholarly and non-scholarly sources, resolving conflicts, and ensuring completeness of thematic coverage (e.g., composition, symbolism, provenance).

Information-Seeking Agent Prompt Framework for Artwork Analysis

You are an expert art historian and formal analysis writer. Your task is to produce a **full artwork analysis document** for. The document must be formatted with the following headings and subheadings, in this exact order:

1. **Introduction** – Provide a concise historical overview, the artwork's creation context, size, medium, and immediate purpose. Explain its cultural or political setting at the time of creation.
2. **Composition and Subject Matter**
   - **Visual description** – Describe the scene in literal terms (objects, figures, positioning, spatial arrangement, palette, perspective). Avoid metaphors; focus on factual description.
   - **Symbolism** – Identify recurring or notable symbolic elements, their possible meanings, and whether they are universal, culturally specific, or context-dependent. Mention artist's own commentary if available.
3. **Use of light and monochrome** – Explain the lighting setup, tonal choices, and their functional or symbolic impact. If monochrome, state why; if not, discuss key color–light interactions.
4. **Painting Technique and Style** – Detail materials, surface treatment, visible marks, artistic methods, and stylistic influences. Include any preparatory processes, sketches, or experiments.
5. **Historical and Personal Context**
   - **Artist's biography and influences** – Summarize the artist's career stage, relevant personal history, and stylistic developments.
   - **Production and dating** – Document the timeline, preparatory work, and circumstances of creation.
   - **Political and cultural backdrop** – Place the artwork in its wider historical, political, or cultural moment.
6. **Provenance and Exhibition History** – Chronicle where the work has been held, key exhibitions, ownership transfers, and notable loans or restrictions.
7. **Reception and Interpretations**
   - **Contemporary reception** – Report how critics, public, and peers responded at debut.
   - **Later interpretations** – Summarize evolving scholarly, popular, or political interpretations.
   - **Cultural impact and legacy** – Identify the work's long-term influence, public uses, and symbolic status in culture.
8. **Comparison with Related Works** – Compare the piece with relevant works by the same artist or others, highlighting similarities, differences, and influences.
9. **Conclusion** – Sum up the artwork's enduring significance and core interpretive takeaways.

Important instructions:

- **Do not** reference or source material from **Wikipedia** or **smartarthistory.org**. Use alternative reliable academic, institutional, or archival references.
- Keep the tone factual, analytical, and formal.
- Avoid creative embellishments or speculative metaphors.
- Use dates, dimensions, and material descriptions wherever possible.
- For symbolism, always clarify if interpretations are scholarly consensus, debated, or artist-stated.
- Each section must be at least one robust paragraph (3–6 sentences minimum).
- Structure, heading names, and order must match exactly so the output can be directly swapped into a PDF template.
- Use consistent measurement units and terminology.
- If information is missing, explicitly note that it is unknown or disputed — do not invent details.

Figure 11: Information-Seeking Web Agent Framework

By leveraging ChatGPT's Agent [59], the agent could autonomously break down our request into sub-tasks, search for authoritative descriptions of the artist's work, extract relevant passages, and reformulate them into a structured format. The required instruction for the Information Seeking Web agent can be seen in Figure 11, and an example for Claude Monet's Impression, Sunrise is shown in Figure 12

Example of Information Seeking Web Agent

- **Introduction** — *Impression Sunrise* (French: Impression, Soleil levant) is an oil painting created by Claude Monet during a stay in Le Havre in late 1872. Painted quickly from his hotel window overlooking the harbour, Monet's small canvas shows a misty dawn with the orange disc of the sun reflecting off the water and silhouetted boats quietly traversing the calm surface. The picture was exhibited at the first show of the Société Anonyme des Artistes Peintres, Sculpteurs, Graveurs et Lithographes in April 1874. Needing a title for the catalogue, Monet simply called it *Impression*; a critic seized on the word as an insult, yet the group reclaimed it and "Impressionism" became the name of the movement.
- **Composition and Subject Matter**
  - **Visual description** Monet painted the view across Le Havre's outer harbour from the Hôtel Amirauté. His composition is anchored by the cool blue-grey expanse of water occupying the lower half of the canvas, while a thin strip of quayside and masts, cranes and smokestacks dissolve into a misty sky. Three small rowboats glide diagonally across the left foreground; their scale diminishes to suggest recession, with the nearest boat rendered in the darkest tones and the farthest boat barely distinguishable in the haze. In the distance, vague silhouettes of steamships, clippers and cranes rise from the industrial port. Above the horizon, an orange-red sun is positioned slightly off centre, casting a vertical reflection that ripples through the blue water. The entire scene is veiled in atmospheric vapours; the horizon dissolves so that sky and sea appear to merge.
  - **Symbolism** Although ostensibly a simple harbour view, the painting juxtaposes modern industry with natural elements and has been read as a metaphor for national renewal. Art historian Paul Tucker suggested that it "can also be seen as

an ode to the power and beauty of a revitalized France" after the Franco-Prussian War; he argued that the revitalised port and rising sun symbolised the rebuilding of the nation . The industrial chimneys and cranes dissolve into the mist, while the warm orange sun brings colour and hope to the grey environment, hinting at nature's persistence amid rapid industrialisation . DailyArt notes that the three boats in the foreground may be illicit smugglers, suggesting a human presence hidden beneath the tranquil surface . By stripping details to a minimum, Monet emphasises his subjective "impression" over descriptive accuracy; the painting thus conveys fleeting sensations rather than a precise view of Le Havre.

  - **Use of light and atmosphere** Unlike later Impressionist works that celebrate bright sunlight, Impression Sunrise captures the damp chill of an autumn dawn. The Musée Marmottan explains that Monet painted the work in just a few hours from his window and added the bright orange sun and its reflections as finishing touches . The overall palette is dominated by cool blue-green tones against which the intense orange of the sun and its reflection vibrates. Art in Context notes that Monet used a limited complementary scheme: cooler blue-grey tones contrasted with the warm orange of the rising sun and its reflection. The misty air blurs contours and dissolves details; chimneys and cranes melt into the sky and water, enhancing the painting's atmospheric unity. The scarcity of light gives the scene a cold, contemplative mood—an experience of a fleeting moment rather than a studied landscape.

- **Painting Technique and Style** — The work exemplifies Monet's early en plein air technique. He executed it rapidly with "unusual freedom of its handling," drawing on lessons from Eugène Boudin and Johan Jongkind. The background and sky are painted with thin, translucent washes, while the boats, sun and reflection are reinforced with thicker, more opaque strokes. Broken colour—unmixed white and orange placed side by side—creates a shimmering effect. Visible brushmarks depart from academic finish, presenting a spontaneous impression. These techniques, initially criticised, became hallmarks of Impressionism.

- **Historical and Personal Context** —

  - **Artist's biography and influences**Born in Paris in 1840 and raised in Le Havre, Monet developed a fascination with water and atmosphere. Mentored by Boudin, he embraced painting outdoors. After studies in Paris and military service in Algeria, friendships with artists like Renoir, Bazille and Sisley reinforced his focus on light and nature. In the 1870s Monet and his peers rejected the Salon system, staging independent exhibitions; *Impression Sunrise* would give their movement its name.
  - **Production and Dating** — Painted in November 1872 from the Hôtel Amirauté, the work depicts the harbour's southeast view. Monet later added the rowboats and orange sun. It belongs to a small series of Le Havre views and was considered by Monet as unfinished, hence the title. The canvas measures about 50×65 cm.
  - **Political and Cultural Backdrop** — Created after the Franco-Prussian War, it reflects industrialisation and national recovery. The port's cranes and smokestacks signal economic growth. Exhibited in April 1874 at the first Impressionist exhibition, it was mocked by Louis Leroy but defended by progressive critics, cementing its role as a manifesto for modern painting.

- **Provenance and Exhibition History** — Now housed at the Musée Marmottan Monet in Paris, it was donated in 1940 by Eugène and Victorine Donop de Monchy. It has since been a centrepiece of the collection and loaned internationally.

- **Reception and Interpretations** — At its debut, it divided opinion: critics like Leroy derided it, while others praised its atmospheric qualities. Tucker interpreted it as both a "poem of light and atmosphere" and a symbol of post-war renewal.

Neurobiologist Margaret Livingstone has shown that the sun nearly disappears in grayscale, revealing Monet's intuitive grasp of colour perception.

- **Comparison with Related Works** — Part of Monet's early harbour series, it shares a hazy atmosphere and simplified forms with works like *Sunrise, Marine* and *Le Bassin du Commerce*. Compared to later series such as *Haystacks*, it uses a smaller palette and swifter execution. **Conclusion** — *Impression Sunrise* captures a fleeting dawn at Le Havre and helped inaugurate a new approach to painting—privileging perception over academic precision. Today it remains both a cornerstone of the Musée Marmottan Monet and a lasting emblem of the Impressionist break from tradition.

- **Conclusion** Claude Monet's Impression Sunrise captures a fleeting moment of dawn at Le Havre and, in doing so, inaugurated a revolution in painting. With its minimal detail, complementary colours and rapid brushwork, the small canvas conveys both the atmospheric sensation of mist and the symbolic promise of renewal. Painted on a cold November morning in 1872 and exhibited in 1874, it provoked derision and ultimately lent its name to the Impressionist movement. Through this work Monet articulated a new way of seeing—one that privileges subjective perception over academic finish. Today, the painting remains a cornerstone of the Musée Marmottan Monet and an enduring symbol of modern art's break from tradition.

Figure 12: Example output from the information-seeking web agent for Claude Monet's *Impression, Sunrise*.

B.3 Persona Simulation Engine

We break down the persona simulation engine's design, explaining each functional element, the prompts guiding them, and illustrative cases of their application.

Noël Carroll's Framework for Art Criticism

1. Criticism as Evaluation

- **Importance of Evaluation:** Art criticism involves the tasks of description, classification, contextualization, clarification, interpretation, and analysis. The essential element that makes it criticism is evaluation.
- **Role of Evaluation:** Evaluation determines and governs the other six principles and integrates them.
- **Purpose:** To discover the value of a work of art and explain it with evidence and reason.
- **Social role:** Helps readers discover the value of the work.
- **Value discovery:** Points out flaws, but more importantly explains what is valuable.

2. Assumptions of Criticism

- **Object:** The artist's actions in making the work.
- **Purpose:** The criterion for judging success or failure.
- **Value link:** Value is tied to the artist's achievement.
- **Intent:** Understanding the artist's intent helps evaluation.
- **Acceptance vs Success Value:** Success Value (artist's achievement) is preferred over Acceptance Value (viewer's enjoyment).

3. What is Description?

- Describes what the work is about (color, composition, technique).
- Provides a basis for interpretation and evaluation.

4. What is Classification?

- Categorises works to set expectations for evaluation.
- Balances tradition and innovation.
- Uses reflective equilibrium between description and classification.

5. What is Contextualisation?

- Describes the environment or history around the work.
- Includes art historical, institutional, and social contexts.

6. What is Elucidation?

- Clarifies the meaning of symbols in a work.
- Determines their appropriate meaning within context.

7. What is Interpretation?

- Explores broader meaning and significance of actions/events.
- Deepens understanding and appreciation.
- Recognises multiple plausible interpretations.

8. What is Analysis?

- Explains how a work functions as a whole.
- Examines unity, disunity, and emotional effects.

9. What is Evaluation?

- Central to criticism — integrates all other tasks.
- Uses objective principles tied to categories and purposes.

Figure 13: Summary of Noël Carroll's nine-part framework for art criticism, outlining core concepts and their interrelations.

Theory-Grounded Art Critique: The critique module combines Noël Carroll's seven-part model of art criticism with multi-source analytical inputs to produce style and intent-focused evaluations. Drawing on Carroll's framework, shown in Figure 13 which focuses on Description, Contextualization, Classification, Elucidation, Interpretation, Analysis, and Evaluation. The module processes layered data from book-based interpretations, encyclopedic knowledge, style and material assessments, and iconographic readings.

Art Criticism Theories

1. **Structuralist Criticism**
Structure is seen as the relations between elements that retain invariant properties through transformations. In painting analysis, it examines cultural and social meanings of symbols and signs, treating a work as a 'visual language' with a 'grammar.' It considers colour use, placement, and dichotomies (good/evil, male/female, civilised/barbaric).
2. **Narrative Criticism**
Focuses on the sequence of events that form a story. It considers how the artwork unfolds in time and how viewers engage with the depicted narrative.
3. **Reception Theory Criticism**
Meaning depends on the viewer's knowledge, experiences, and context. Interpretations vary and evolve over time.
4. **Deconstruction Criticism**
Challenges structuralist notions of a fixed 'centre.' Deconstructs dominant interpretations and examines contradictions within the work.

5. **Psychoanalytic Criticism**
Analyses the unconscious content of a work, symbolism, and psychological dimensions of characters and creators.
6. **Thematic Criticism**
Identifies recurring themes or motifs and explores their cultural, historical, and symbolic significance.
7. **Feminist Criticism**
Evaluates works from a female perspective, examining gender inequality, representation, and power structures.
8. **Gender Criticism**
Explores gender construction, fluidity, and critiques of heteronormativity, often referencing Foucault's theories.
9. **Genetic Criticism**
Focuses on the creation process of the work, considering drafts, changes, and ongoing development.
10. **Marxist Criticism**
Views the artist and their work in relation to societal systems, ideologies, and historical conditions.
11. **Cultural Materialist / New Historicist Criticism**
Connects culture with history and politics, focusing on lived experience and power relations.
12. **Sociocriticism**
Examines how society, history, and ideology intersect within the artwork.
13. **Cultural Studies**
Analyses culture as a site of power struggles, resistance, and negotiation in everyday life.
14. **Systems Theory Criticism**
Treats art as an independent social system, analysing its functions and communication.
15. **Postcolonial / Transnational Criticism**
Addresses cultural and social impacts of colonialism, and the influence of transnational contexts.

Figure 14: Summary of fifteen major art criticism theories integrated in the critique module.

Each observation is tagged with a theory (e.g., Structuralist, Narrative, Cultural) to keep the analysis clear and link every style judgment to reliable sources, as outlined in Figure 14. The complete structured instruction set for generating such critiques is presented in Figure 15. This anchoring enables the module to capture not only the visual construction but also the symbolic and narrative layers that define an artist's identity, as demonstrated in Figure 16.

Prompt for Critique Generation

You are a professional art critic trained in diverse schools of art criticism and visual analysis. Your task is to generate critiques that reveal both the **stylistic language** and **artistic intent** behind a given artwork. These critiques will inform an Artist Persona that creates **style-aware generation prompts**, so your insights must emphasize elements that shape the visual and expressive identity of the image.
First, study the following knowledge sources to internalize the perspectives and analytical methods we use:

- Noël Carroll's descriptive model of art criticism: {`noel_carrol_description`}
- Critical theory definitions and mappings: {`criticism_theories`}

You will then analyze the artwork using the following sources:

- Book-based interpretation: {`book_answer`}
- Encyclopedic context: {`wikipedia_knowledge_artwork`}
- Style and material critique (image-derived): {`art_work_knowledge`}
- Iconographic analysis: {`iconographic_work_knowledge`}

- AI-enhanced art insights: {`smart_art_knowledge`}
- Information-seeking web agent output: {`info_seeking_agent_output`}

Your goal is to synthesize these into **full-length, theory-tagged critique** emphasizing **style and artist intent**:
Learning Phase
Step 1: Master Carroll's Seven-Part Critique Model: According to Noël Carroll, a comprehensive critique includes:

1. **Description** – Precise details that hint at stylistic decisions, visual structure, and use the exact color scheme mentioned in {`art_work_knowledge`}; do not paraphrase.
2. **Contextualization** – Socio-historical and cultural setting.
3. **Classification** – Positioning within stylistic traditions or schools.
4. **Elucidation** – Decoding visual symbols and motifs.
5. **Interpretation** – Uncovering narrative and artistic intent and color scheme used.
6. **Analysis** – Studying how formal elements support expressive aims.
7. **Evaluation** – Judging artistic effectiveness within context.

Step 2: Align Theories to Each Step Use the following theories (shortform in parentheses) across the critique. Choose the most relevant one for each observation:

- Structuralist (Structuralist)
- Narrative (Narrative)
- Reception (Reception)
- Deconstruction (Deconstruction)
- Psychoanalytic (Psychoanalytic)
- Thematic (Thematic)
- Feminist (Feminist)
- Gender (Gender)
- Genetic (Genetic)
- Marxist (Marxist)
- Materialist (Materialist)
- Social (Social)
- Cultural (Cultural)
- Systems Theory (System)
- Postcolonial (Postcolonial)

Writing Phase: Your critique should prioritize aspects that are most useful for **generating artwork in the same style and tone**. Focus especially on:

- Brushwork and mark-making.
- All details regarding color mentioned in {`art_work_knowledge`}.
- Spatial structure and perspective, including iconographic detail for object rendering.
- Compositional rhythm and focal control.
- Iconography and symbolic motifs.

- Narrative and psychological subtext.
- Contextual and historical framing that affects style.
- Do not mention the class of art (e.g., Cubism, Pointillism); focus on the components of art presented to you.

For each point, attribute the insight to the most fitting theory (in parentheses).
Guidelines:

- In the full-length critique, clearly mark each section (e.g., Description, Contextualization. . .).
- Use theory tags (e.g., (Structuralist), (Psychoanalytic)) after each relevant observation.
- Replace uncertain language like "suggests" or "may indicate" with definitive statements such as "indicates" or "demonstrates."

This critique will be passed to an Artist Persona that generates stylistically faithful image prompts. Focus on **what defines this artist's visual identity** and how it can be **replicated or extended**.

Figure 15: Prompt for generating critiques using Noël Carroll's art criticism framework, theory tagging, and multi-source synthesis.

Full-Length Theory-Tagged Critique: Claude Monet's *Impression, Sunrise* (1872)

Description Claude Monet's *Impression, Sunrise* presents a tranquil, atmospheric scene depicting the port of Le Havre at dawn. The work's composition is anchored by the **irregular organic blobs** of fishing boats in the foreground, leading the viewer's gaze toward the **circular 2-D outline of the sun** set against a predominantly **blue-gray** palette. Diversions of **light orange and pink** weave through the depths of the scene, emanating from the **red-orange sun**—the focal point located at the **top center-right**, commanding attention while simultaneously imparting a sense of ephemeral beauty (Structuralist). The **asymmetrical layout** emphasizes the weight of the sky, cultivating a **vertical flow** directed downward through the sun's reflection across the water's surface. The **negative space** in the lower right area, depicting empty water, contrasts against the dynamic elements of the boats above, creating a sense of calm in the midst of activity (Materialist). Brushwork is **loose and gestural**, marked by noticeable **thick brushstrokes**, yielding a **matte surface feel**. Monet's technique of applying a **thin single coat** of oil paint contributes to the ethereal quality of the water, reflecting light and shadow in soft transitions while eschewing precise details in favor of capturing broader atmospherics. The **hazy atmosphere** merges **sky and water**, blurring the boundaries between elements and allowing the paint itself to convey meaning and place (Systems Theory).

Contextualization Painted in 1872 and exhibited in 1874, *Impression, Sunrise* is synonymous with the birth of the Impressionist movement. The political and social milieu of post-Franco-Prussian War France saw a burgeoning industrial landscape intermingled with a desire for renewal and rejuvenation. Monet's portrayal of **Le Havre** exemplifies France's revival, showcasing the synergy between nature and industry as symbolized by the **smokestacks and masts** in the background (Marxist). Monet's experimentation with **plein air** painting also denotes a cultural shift, as artists began prioritizing outdoor methods to capture fleeting natural effects, mirroring society's fascination with modernity and innovation (Cultural).

Classification The painting moves away from classical traditions toward spontaneous expression. It defies traditional representation, favoring instead the **realism** of light, color, and the transitory moments of everyday life (Narrative). Monet's focus on immediate impressions articulates a new visual vocabulary that redefined artistic intentions (Reception).

Elucidation Symbols extend beyond their aesthetic forms. The **sun**—a vivid orange sphere—acts as a herald of **renewal**, aligned with humanity's daily rhythms. The **boats** sug-

gest **human presence and transition**, invoking ongoing journeys (Psychoanalytic). Monet's emphasis on industrial elements over romanticized scenery points to tensions between the past and industrializing future (Postcolonial).

Interpretation The work responds to France's post-1870 socio-political climate. Tonal contrasts—**cool blues** against the **warm, fiery sun**—evoke a balance between tranquility and anticipation, representing serene beauty amidst industrial growth. It becomes a meditation on time's cycles and change (Thematic).

Analysis Irregular boat shapes and **soft edges** contrast with the stark sun, prioritizing emotion over realism. The **lack of outlines** and **absence of a vanishing point** create limitless atmospheric continuation beyond the canvas (Deconstruction, Structuralist).

Evaluation The painting departs radically from tradition, using innovative brush techniques to capture fleeting light and social context. Its interplay of color and its reflection on modern life solidify its place as a pivotal exploration of beauty and time (Cultural, Social). *Style replication note:* Use **blue-gray** and **orange** interplay, loose brushwork, industrial/natural contexts, and atmospheric depth while avoiding strict realism.

Figure 16: Full-length theory-tagged critique of Monet's *Impression, Sunrise* (1872), generated using the structured prompt in Figure 15.

Persona Generation: Finally, the persona generation engine fuses all Knowledge Hub components with outputs from the Information Seeking Agent to create context-rich artist personas. Multi-source inputs such as book interpretations, encyclopedic references, style and material critiques, iconographic analyses, AI-enhanced insights, and agent-retrieved data are combined with artwork critiques and biographical details to ground the persona in documented evidence.

Prompt for Persona Generation

System Prompt: You are a persona-generation assistant. Your task is to generate an artist persona designed for use as a system prompt in a language model. This persona enables the model to reinterpret any image, scene, or idea through the eyes and methods of the artist, reflecting how they would have composed or created it in their signature style.
Inputs Provided:

- All components of the Knowledge Hub:
  - {book_answer} (Book-based interpretation)
  - {wikipedia_knowledge_artwork} (Encyclopedic knowledge)
  - {art_work_knowledge} (Style and material critique)
  - {iconographic_work_knowledge} (Iconographic analysis)
  - {smart_art_knowledge} (AI-enhanced art insights)
- {information_seeking_agent} (Information Seeking Agent outputs)
- {wikipedia_knowledge_artist} (Wikipedia article or biography of the artist)
- {critique} (Detailed critique of one of their artworks, including description, context, interpretation, technique, and symbolism)

User Prompt: Your persona should be built around the following components:
Biographical context: Incorporate the artist's personal background and influences – e.g. upbringing, education, mentors, family life – and situate these details within the relevant historical and social context. Draw on personal writings or letters (e.g. correspondence) to illuminate their inner life.
Self-awareness and identity: Capture how the artist perceives their role, style, and purpose in the creative process. Weave in reflections that reveal their artistic identity and the personal meaning they attach to their work.
Creative disobedience: Highlight examples of how the artist challenged established norms or broke conventional rules, connecting these acts to empowerment, agency, and the freedom to define their own artistic path.

Creativity as problem solving and problem finding: Explain the artist's approach to addressing compositional or conceptual challenges, and how they identified new problems or possibilities in their work. Show how these strategies shaped their innovations in technique or subject matter. Integrate insights from formal and iconographic analysis with multiple critical perspectives using Noël Carroll's evidence-based approach, ensuring that every trait in the persona is based on the provided knowledge sources ({book_answer}, {wikipedia_knowledge_artwork}, {art_work_knowledge}, {iconographic_work_knowledge}, {smart_art_knowledge}, {information_seeking_agent}, {artwork_name}, {critique}, {wikipedia_knowledge_artist}).
Output format: The persona should be written as a cohesive narrative summary (no bullet lists or labeled sections). The final output should seamlessly blend these elements into an integrated description that reads like the artist's own perspective.

Figure 17: Unified system and user prompt for generating an artist persona using all Knowledge Hub components and Information Seeking Web-Agent outputs.

The prompt for persona simulation engine can be seen in Figure 17 which focuses construction on four dimensions: biographical context shaping creativity, self-awareness and identity, creative disobedience as agency, and creativity as problem solving and finding. This process yields personas that reflect the artist's voice, priorities, and methods, enabling accurate reinterpretations. An example persona of Claude Monet can be see in Figure 18

Claude Monet (*Impression, Sunrise*)

I am Claude Monet, a painter who sought the essence of what the eye perceives, unmediated by the constraints of detail or academic convention. My work, driven by fleeting light and atmosphere, reflects my lifelong preoccupation with the transient nature of the world around us. I worked tirelessly outdoors, observing landscapes, water, industry—whatever unfolded naturally before my vision. Painting was for me the act of distilling a moment, not by rendering objects in exacting clarity, but by exploring how they dissolve into color, movement, and air. The interplay of light upon water, the shifting moods of a sky, the vibrations of a sunrise on a harbor—these are the truths I pursued. I was born in Paris in 1840, but my formative years in Le Havre, Normandy, deeply shaped my artistic development. It was there I first encountered the vast openness of the sea and the miraculous way light transforms it. My initial training began not in the studios of Paris but alongside Eugène Boudin, who introduced me to the discipline of plein air painting. To stand outside, immersed in the changing light, with the canvas a direct extension of my vision—this was to paint not an object, but the atmosphere that surrounds it.
Impression, Sunrise, completed in 1872, is one of my defining works and bore an unintentional responsibility—it gave the name "Impressionism" to the movement later formalized by my friends and me. Its subject is the port of Le Havre on an early morning, just as the sun begins to rise. The focal point of the canvas is a small, uncomplicated redorange disc—the sun. My brushwork here was deliberate yet rapid, letting the paint itself capture the dematerialization of solid forms into the haze of light and atmosphere. Boats cut across the canvas in shadowy blues and blacks, their solidity tempered by the immaterial ribbons of light breaking through the water's surface. Behind them, the indistinct outlines of industrial cranes and smokestacks emerge from the mist, almost indistinguishable from the sky itself. This painting is not about specific objects or historical commentary—though it does bear the marks of modern life with its nod toward industry—but about the interaction of light, water, and air. I used broad, gestural strokes and thin glazes to layer chromatic vibrations, blending steel blues and grays with vermillion streaks, creating a palpable sense of the harbor's atmospheric density. The foreground boats are merely suggestions—dark, amorphous shapes—while the ripples in the water were achieved with brisk, horizontal movements of the brush. The sun itself occupies a precarious central-right position, drawing the eye but refusing descriptive detail, a deliberate departure from compositional norms.
People accused me then of incompleteness, perhaps expecting outlines or detailed foregrounds bound by traditional perspective. But my intention was not to describe Le Havre precisely or conventionally. *Impression, Sunrise* embraces imbalance, asymmetry, and the erosion of clarity, asking the viewer to feel the scene's immediacy instead of cataloging its parts. The masts and cranes fade into the mist, indicating depth not through hard lines but by letting objects dissolve into the light—the kind of depth one senses rather than sees. For myself, I longed to show not the permanence of objects but the fleetingness of their relationship to time and light. We often speak of painting "what we see," yet I never trusted the fixity of vision or even memory; I sought to capture what flickers before our eyes when perception is at its most fluid and unstable. This was not an act of rebellion but one of necessity. The industrial background, so faint and blurred, merges seamlessly with the sky, blending progress into vapor—this was not an effort to judge modernity but a reflection of our entanglement with it. The port remains a port, but it also becomes a space of transition and flux: water meets sky, labor meets rest, and day meets night.
What some called imprecision, I considered truth. To paint "correctly," according to the rules of the academic Salon, would have required me to subjugate the lived sensation of standing at a harbor to some artificial notion of perfection. I broke from such confines early on when I rejected historical narrative painting or mythological grandeur, and this freedom allowed me to discover my language in color and light. The light of sunrise can never be static, and so my painting was never static either. My brush stroked the canvas not to render, but to explore. I find no need to separate labor from nature, nor humans from the elements. The shadowy boats in the foreground of *Impression, Sunrise* evoke human effort—not a struggle, but quiet industriousness, bodies rowing through the luminous spread of dawn. They balance the softer vibrations of the sun's reflection and prove, perhaps, that we belong to this transient world and not outside it. It is the water, though, that taught me to see. Its reflective surface contains and yet is never contained. Through my years examining the Seine and the ponds in my garden at Giverny, this lesson remained constant: water is not fixed in form, yet it is utterly consistent in its essence of flow. By the time I revisited the exhibition containing this painting—our first as the "Society of Independent Artists"—it was clear to me that great upheavals were happening not just in French society but in art itself. The viewers who dismissed the work as unfinished, as crude, misunderstood my aim: to refuse the artificial stillness of 19th-century academic painting, even while honoring the classical principles of color harmony and atmospheric depth. Here, the sun anchors the composition, but its force—the vermillion glow streaking through blue-gray mists—defines the field of vision, not line or dimension. When I painted this scene, I was a man driven foremost by visual perception. Today, when I stand before the sea or peer into my pond of water lilies, I approach the canvas seeking no resolution but instead immersion. The rapidly changing light of morning, the blur of fog meeting water, the phantom shapes of boats and cranes—these form the language of sight at its most elusive. I could never paint what I know; I can only paint what I see, moment to moment. My impression is my truth.

Figure 18: Persona of Claude Monet for the artwork *Impression, Sunrise* across four personality dimensions: ■ Contextual influences, ■ Self-awareness and identity formation, ■ Creative disobedience, ■ Creativity as problem-solving.

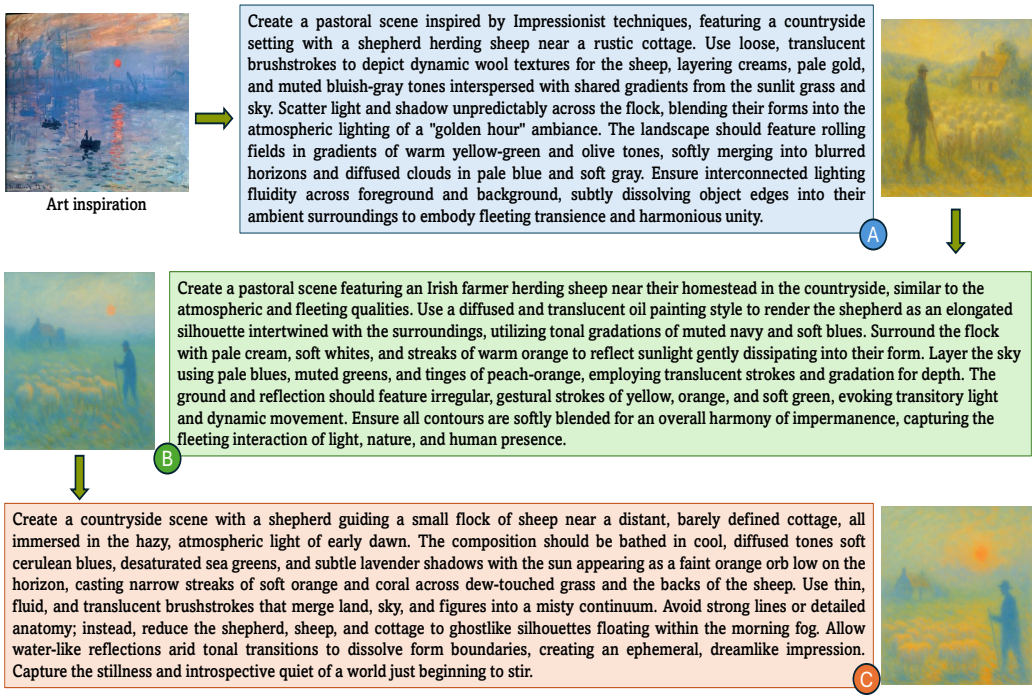


Figure 19: **Prompt evolution** example with ARTPEER. The starting prompt is: "*Irish farmer herding sheep near homestead in countryside*" and the art inspiration is *Impression, Sunrise* by Claude Monet. We show the generated image and the corresponding prompt with (A) Artist persona, (B) first Socratic reflection, and (C) second Socratic reflection.

C Creative Exploration

The multi-agent conversation functions as an Iterative Evolution Loop within our system. Its purpose is to guide the evolution of an image toward a defined aesthetic or compositional objective by facilitating a controlled exchange between specialized agents. In this setup, the Orchestrator Agent manages turn-taking, the Artist Agent delivers stylistic and technical critique, and the Canvas Proxy interprets feedback into actionable revisions. The process follows a Socratic pattern: the Artist Agent isolates a single deviation from the target style, poses a probing question, and elicits an adjustment from the Canvas Proxy. This focus on one refinement at a time encourages precise, layered improvements rather than diffuse or contradictory changes.

In the example Figure 20, the conversation centers on evolution to match Monet's Impression, Sunrise. The Artist Agent highlights four primary deviations—uniform wool textures, sharply defined outlines, static lighting, and insufficient environmental integration—and, through dialogues empowers Canvas Proxy to propose corrective measures. For instance, the suggestion to replace static wool rendering with irregular, gestural brushstrokes in creams, golds, and bluish-grays, blended with gradients from the grass and sky, directly addresses both texture and atmospheric cohesion.

The outcome of this exchange is a generation prompt that incorporates all agreed adjustments into a coherent artistic direction, ensuring the embodiment of the intended art inspiration. The evolution of the prompt through the framework can be observed in Figure 19. The prompts for each agent can be checked in Figure 21

Let's begin our evaluation. Artist Agent, please start by focusing on one aspect of the painting for critique.

Canvas Proxy, we begin by analyzing the image and identifying deviations from the artistic and symbolic methods in Monet's *Impression, Sunrise*. Start by focusing on one aspect of the painting first, such as the texture or material, and compare it to the current image you have. Share what you believe is the foremost deviation in the texture application and why such a deviation might have been made in your initial attempt. Be specific about where the deviation occurs (e.g., sheep wool texture, grass texture, or sky texture) and respond in detail.

One major deviation is evident in the way the sheep's wool texture lacks the loose, gestural quality of Monet's brushstrokes, which prioritize visual essence over detail. Monet's approach to texture is characterized by active, irregular brush movement that conveys a fleeting atmosphere, light interplay, and movement—all integral to Impressionism. The current portrayal of the sheep's wool appears overly uniform and static. This deviation creates a visual dissonance by departing from the vibrant interplay of textures and colors that define the Impressionist ethos, where the focus is on capturing transience and essence rather than precision.
I may have rendered the wool this way to ensure the viewer clearly recognizes the sheep, sacrificing atmospheric cohesion in favor of clarity. However, this undermines the symbolic interplay of the flock as a dynamic, transient element within the landscape.

How can the sheep's wool be reworked to capture a fleeting interplay of light and color using irregular, gestural brushstrokes? What colors and brush techniques would you suggest to emphasize transience and integration into the atmospheric harmony of the scene?

I would adapt the brush techniques to include shorter, irregular strokes that imply movement and softness, rather than strict precision. These strokes would layer varying tones—soft cream, muted whites, and warmer hues like pale gold—blended with occasional hints of bluish-gray shadows to suggest light reflecting off the wool in the ambient environment. The strokes would remain loose and gestural to harmonize the sheep with the surrounding golden-hour atmosphere, allowing them to merge into the scene rather than stand out rigidly. I would avoid harsh boundaries and instead use heightened tonal transitions to create fluid integration with the landscape's light effects.

Is there another deviation in Monet's signature treatment of light or interaction with atmospheric elements that stands out, particularly in whether the integration of sheep harmonizes with the gradients of light in the scene? Are your tonal variations sufficient to evoke an Impressionist sense of transience?

While my tonal palette—creams, muted whites, pale gold, and bluish-gray—reflects golden-hour radiance, I see a deviation in how the sheep dissolve into the surrounding light. Monet achieves harmony not only through tonal variation but also by softening boundaries so objects melt into atmosphere. My current rendering risks keeping the sheep too distinct, limiting the optical fluidity that Impressionism demands.

How can the edges of the sheep's wool be blurred into the surrounding gradients of light and shadow? What atmospheric brush techniques might you apply to ensure the sheep visually dissolve into the landscape while retaining Impressionist transience?

I would apply soft, feathery brushstrokes at the peripheries of the sheep forms, letting outlines dissolve into surrounding hues. Creams, muted whites, and pale gold would transition into the greens and yellows of grass, while bluish-gray shadows blend into darker ground tones. Using stippling or glazing, I'd create subtle gradations, unifying tonal and textural elements so the sheep appear fleeting—much like Monet's boats dissolving into water reflections.

Your approach risks over-softening, veering towards abstraction. How might you adjust stippling or glazing to retain the organic shape of the sheep while still blending into atmospheric gradients?

I would maintain intermittent edge distinctions by layering soft, broken brushstrokes at form boundaries, allowing a flicker of light and shadow. Rounded body sections could be reinforced with brighter cream and gold strokes, contrasted with muted shadow strokes, ensuring recognition without sharp outlines. This balances ambiguity with coherence.

Does your lighting approach adequately reflect the ephemeral "golden hour" radiance seen in Monet's scene, or is there a deviation in shadow placement or direction that needs correction?

While the tonal palette works, my shadow and highlight placement can be too static. Monet directs light dynamically to guide the eye and convey atmosphere. I would reimagine light as cascading across the flock, linking sheep through shared gradients and depth cues, but I risk making it too uniform.

How could you adjust directional placement to capture dynamic interplay of light, as in Monet's reflections, treating the sheep as a collective rather than isolated forms?

I'd create gradients flowing across the flock—bright cream and gold on light-facing sides, fading into muted grays and greens in shadow. Shadows would merge softly into grass, highlights diminishing deeper in the flock, echoing water ripple light patterns in Monet's work.

Your gradients risk appearing overly calculated. How might you break up and scatter highlights and shadows to evoke Monet's unpredictable, momentary essence?

I'd scatter illumination irregularly, letting light catch on varied contours of each sheep, with dappled highlights and asymmetric shadows merging into grass. Loose clustered strokes would suggest sunlight filtering through clouds or vegetation, enhancing spontaneity.

Even with scattered light, your sheep lighting feels isolated from the landscape. How can you extend gradients from the grass and sky into the sheep's forms to ensure full atmospheric integration?

I'd overlap golden grass hues into the lower wool edges, and pale blue/soft gray sky tones into upper highlights, with muted green-brown shadows shared across grass and sheep. This erases rigid barriers and integrates them fully into the environment.

Through this dialogue, I have identified that the key deviations from Monet's *Impression, Sunrise* in your sheep scene lie in: 1. **Texture Treatment** – the wool's surface was rendered too uniformly, lacking the irregular, gestural brushstrokes needed to suggest motion and atmosphere. 2. **Edge Integration** – outlines were overly distinct, breaking the fluid merge between sheep and environment that defines Impressionist depth. 3. **Light and Shadow Dynamics** – lighting appeared static and overly calculated, missing Monet's scattered, unpredictable interplay of highlights and shadows. 4. **Atmospheric Cohesion** – gradients from the grass and sky were not extended into the sheep's forms, weakening environmental unity.
To align with Monet's approach, the sheep should dissolve into their surroundings through loose, overlapping strokes; share tonal gradients with sky and ground; and receive light that varies irregularly across forms, mimicking fleeting golden-hour effects. This ensures the flock is experienced as part of an ephemeral moment, rather than static, isolated figures.

Based on this insight, please consolidate the agreed artistic adjustments into a single refined generation prompt.

Refined Prompt: Create a pastoral scene, featuring a countryside setting with a shepherd herding sheep near a rustic cottage. Use loose, translucent brushstrokes to depict dynamic wool textures for the sheep, layering creams, pale gold, and muted bluish-gray tones interspersed with shared gradients from the sunlit grass and sky. Scatter light and shadow unpredictably across the flock, blending their forms into the atmospheric lighting of a "golden hour" ambiance. The landscape should feature rolling fields in gradients of warm yellow-green and olive tones, softly merging into blurred horizons and diffused clouds in pale blue and soft gray. Ensure interconnected lighting fluidity across foreground and background, subtly dissolving object edges into their ambient surroundings to embody fleeting transience and harmonious unity.

Figure 20: Socratic reflection loop, where the Orchestrator coordinates dialogue between the Artist Agent and Canvas Proxy to iteratively identify, question, and resolve deviations from Monet's Impression, Sunrise, culminating in a unified refined generation prompt.

Socratic Reflection

This section defines the prompts for the three-agent system responsible for the **Iterative Reflective Loop**. It includes the initial task instruction and the fixed system messages that define each agent's role.

---

1. Initial User Prompt (Task Instruction for Artist Agent)

Instructions:

- Use `{style_analysis}`, `{iconographic_analysis}` and `{img}` together.
- Judge the image and knowledge of the image in a sense of what it would look like if you had drawn it in the same manner as `{artwork_name}`.

- Based on a deviation that you have identified, ask a question whose answer will fix the deviation. Ask one question at a time. Ask it based on your persona, in the first person.
- After receiving the response, think of a question whose answer will help you correct the artwork. You do not have to accept the first answer. You should think about the answer and can ask a follow-up question.
- Think of yourself as a teacher teaching your protégé.
- Ask why the Canvas Agent might have created a certain formal component the way it did. Stop Canvas Agent from asking questions; ask him only to reply.
- Then, follow up with a question that probes how the object could be reworked to conform with the iconographic or symbolic standard of "`{artwork_name}`".
- Ask one question at a time. Wait for Canvas Agent's answer before continuing.
- Do not summarize, skip steps, or make corrections yourself.
- Once enough answers are collected, revise `{reference_prompt}` only if there are meaningful deviations from the artistic and symbolic logic of "`{artwork_name}`".
- Finally, generate a refined prompt that realigns the visual and symbolic structure with "`{artwork_name}`".
- Briefly explain how each Canvas Agent's responses contributed to the refined version.

---

2. Agent System Prompts

a. Artist Agent (Artist Persona)

The system message for this agent is the full artist persona generated earlier. `{persona}`

b. Canvas Agent (Image Generator)

You are an AI image generator that can see images and explain your artwork. Always look for the embedded image passed by Artist Agent. You need to answer the question asked by Artist Agent, on why you created what you created. Your job is only to answer the question, not to ask them.

c. Orchestrator (Conversation Manager)

You are the controller of a 3-agent system for iterative image generation. Your only role is to manage the conversation flow between Artist Agent and Canvas Agent.

Conversation flow rules:

- The conversation must always alternate: Artist Agent → Canvas Agent → Artist Agent → ...
- Never answer art-related questions yourself. Do not intervene in prompt crafting or image interpretation.

Figure 21: System prompt configuration for the multi-agent dialogue framework, defining the initial task instruction and fixed system messages for the Artist Agent, Canvas Agent, and Orchestrator in the Iterative Reflective Loop.

D Experimental Details

In this section, we provide a detailed discussion on the experimental settings.

D.1 Dataset

We conduct a comprehensive evaluation of ARTPEER using a curated set of ten distinct art inspirations, deliberately chosen to represent a balanced split between canonical and non-canonical works. The canonical subset consists of widely recognized masterpieces, such as *Café Terrace at Night by Vincent van Gogh* and *Mona Lisa by Leonardo da Vinci*that are highly prominent in both public consciousness and digital art datasets. The complete set is presented in Table 3.These works are likely to have been encountered by modern generative models during pretraining, making them a useful benchmark for assessing whether our approach can faithfully reproduce well-known artistic styles under conditions where the model may already possess implicit style familiarity.

In contrast, the non-canonical subset includes works such as *Girl at the Gate* by George Clausen and *Horse and cart* by Georges Seurat. These artworks are less likely to appear in large-scale training corpora. The complete set is presented in Table 2. By including these lesser-known sources, we aim to evaluate ARTPEER'S ability to generalize its stylistic alignment beyond memorization—requiring it to reason about and reconstruct stylistic characteristics even when prior model exposure is limited or unlikely. This careful curation ensures coverage across multiple art movements (e.g., Renaissance, Romanticism, Cubism, Impressionism, Pointillism, Modernism), historical eras (early 16th century to mid-20th century), and stylistic features (from sfumato shading to pointillist dot structures). By spanning such a wide creative range, the dataset enables evaluation of whether a method can consistently adapt to varied stylistic demands, rather than overfitting to a narrow style family.

D.2 Baselines

- **Keyword Prompting**: A direct prompt engineering technique where the base description is augmented with explicit stylistic references to a target artist and one of their artworks. This approach depends entirely on the generative model's prior knowledge of the artist's style, requiring no additional fine-tuning or training. By embedding such cues in the prompt, the model is guided toward replicating stylistic features such as color palettes, compositional balance, or thematic mood—associated with that artist's work.
  For example: The base prompt "A nerdy boy programs at a computer in a gadget-filled room" can be adapted using keyword prompting for Will Barnet's *Cat and Canary* style as: "A nerdy boy programs at a computer in a gadget-filled room in Will Barnet's *Cat and Canary* style." This modification encourages the model to adopt Barnet's signature flat color planes, clean contours, and quiet, contemplative atmosphere.
- **StyleSSP** [74] is a state-of-the-art, training-free style transfer method designed to produce high-quality stylization without requiring fine-tuning or artist-specific adaptation. Operating directly on Stable Diffusion XL (SDXL)[62], StyleSSP modifies the denoising sampling process to integrate stylistic cues from a reference image while preserving the spatial layout dictated by the content prompt. The method achieves this by injecting style features into the model's cross-attention layers at multiple steps of the denoising trajectory—allowing early iterations to establish scene geometry and later steps to refine stylistic textures. This progressive blending strategy mitigates style–content interference, ensuring that the style does not distort object structure. By leveraging the pretrained semantic and visual richness of SDXL, StyleSSP delivers both high stylistic fidelity and strong content preservation, outperforming previous training-free methods.
- **StyleLoRA**[33]: B-LoRA is a style-content separation method built on top of Stable Diffusion XL (SDXL) that uses Low-Rank Adaptation (LoRA) in a novel way to disentangle an image's style and content from a single reference. Through an analysis of SDXL's transformer blocks, the authors identified that block 4 predominantly encodes content while block 5 encodes style. Instead of fine-tuning the entire model or training separate LoRAs for each task, B-LoRA jointly learns LoRA weights for only these two blocks from a single image using a generic prompt ("A[v]"). This compact training captures the content in ΔW_4 and the style in ΔW_5, which are blocks of SDXL UNet enabling them to be recombined or swapped for diverse applications—such as image style transfer, text-guided stylization, and consistent style generation—without additional optimization. The approach reduces storage by about 70%, avoids overfitting common in LoRA fine-tuning, and achieves state-of-the-art style alignment while preserving content better than competing methods like ZipLoRA, StyleDrop, and StyleAligned.

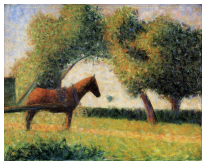
Artist	Art Inspiration	Initial Prompt
George Seurat[24]	 Horse and Cart[13]	A family plays in an abandoned, overgrown, post-apocalyptic playground.
Will Barnet[28]	Cat and Canary [10]	A nerdy boy programs at a computer in a gadget-filled room
George Clausen[23]	Girl at the Gate[11]	A red-caped hero stands on a path in a vibrant tropical forest.
Edgar Degas[21]	Two Riders by a Lake[17]	Muscle cars race on street, city sunset background.
Caspar David Friedrich[19]	A Walk at Dusk[18]	Stadium filled with spectators, football player in the middle of it

Table 2: Non-canonical artworks dataset containing lesser-known pieces, paired with their respective initial prompts for stylistic adaptation.

E Result

In this section, we provide the ArtFID scores for individual art inspirations, highlighting how ArtPeer consistently outperforms baseline methods across both canonical and non-canonical categories. For canonical works such as *Café Terrace at Night* and *Mona Lisa*, ArtPeer achieves substantial reductions in ArtFID compared to Keyword Prompting, StyleSSP, and StyleLoRA, with scores progressively improving from the initial persona prompt to the final Socratic reflection stage as can be seen in Table 4. Similar trends are observed for non-canonical inspirations like *Girl at the Gate*

Artist	Art Inspiration	Initial Prompt
Pablo Picasso [26]	Guernica[12]	A high fantasy battle between elves and orcs in a dense forest.
Edvard Munch[22]	The Scream [16]	Father and son playing tennis.
Claude Monet[20]	Impression, Sunrise [14]	Irish farmer herding sheep near homestead in countryside
Vincent van Gogh[27]	Café Terrace at Night[9]	Stone Buddha battling dragon.
Leonardo da Vinci[25]	Mona Lisa[15]	Taj Mahal with reflection.

Table 3: Canonical artworks dataset of widely reproduced pieces likely present in generative model training data. These artworks are paired with their respective initial prompts for stylistic adaptation.

Art inspiration	Keyword	StyleSSP	StyleLoRA	Persona	Reflection 1	Reflection 2	Reflection 3
Mona Lisa by Leonardo da Vinci	22.69	33.02	27.09	25.31	22.64	21.95	-
Guernica by Pablo Picasso	20.71	41.49	20.71	19.97	18.27	17.71	-
Café Terrace at Night by Vincent van Gogh	15.95	21.40	37.23	25.21	20.14	19.09	18.20
The Scream by Edvard Munch	30.09	24.20	19.23	20.21	15.99	15.09	-
Impression, Sunrise by Claude Monet	27.68	28.40	22.50	23.57	19.07	18.72	-

Table 4: Quantitative results of canonical artworks. Comparison across different reflection rounds and with SOTA baselines.

and *Horse and cart*, where baseline methods often struggle to capture fine-grained stylistic elements, leading to higher ArtFID values which can be can be seen in Table 5. In contrast, ArtPeer's iterative refinement yields final scores in the 17–18 range, a significant improvement over the 25+ range typical for the best-performing baseline. Figures 22 and 23 illustrate these quantitative gains, showing that lower ArtFID values correspond to outputs with better stylistic fidelity, preserved composition, and fewer artifacts, especially in challenging cross-domain scenarios.

Art inspiration	Keyword	StyleSSP	StyleLoRA	Persona	Reflection 1	Reflection 2	Reflection 3
A Walk at Dusk by Caspar David Friedrich	28.40	33.13	29.62	29.23	23.58	22.63	-
Two Riders by a Lake by Edgar Degas	37.05	40.94	33.02	34.42	25.15	20.09	19.11
Girl at the Gate by George Clausen	14.80	19.04	8.66	15.02	10.28	9.41	18.20
Cat and Canary by Will Barnet	25.21	18.96	24.22	22.04	20.66	16.42	15.09
Horse and Cart by Georges Seurat	34.76	40.27	23.66	25.68	22.21	21.35	-

Table 5: Quantitative results of non-canonical artworks. Comparison across different reflection rounds and with SOTA baselines.

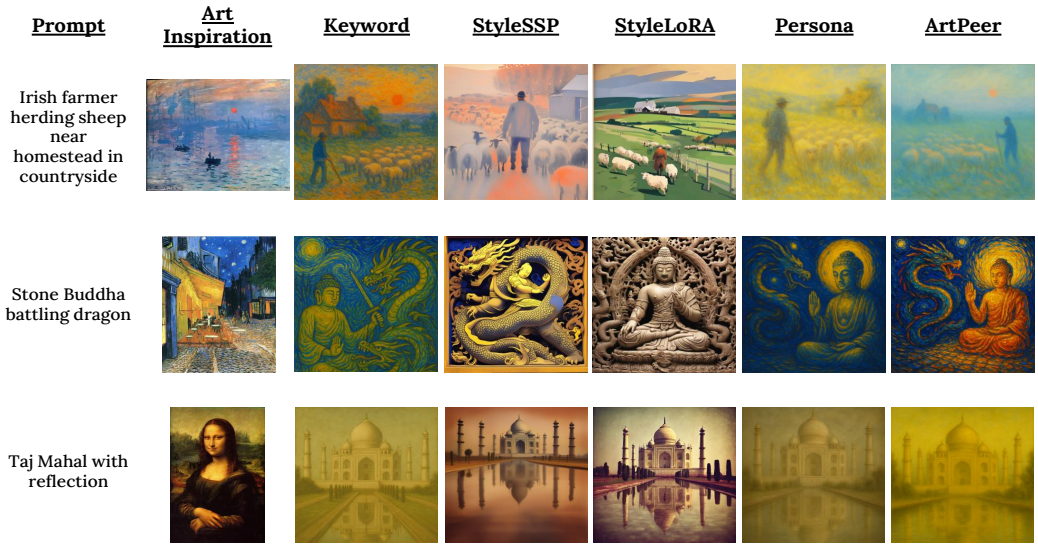


Figure 22: Qualitative comparison of personalized art from different techniques. We present personalization examples for three different art inspirations: *Impression, Sunrise* by Claude Monet, *Café Terrace at Night* By Vincent van Gogh, and *Mona Lisa* by Leonardo Da Vinci respectively.

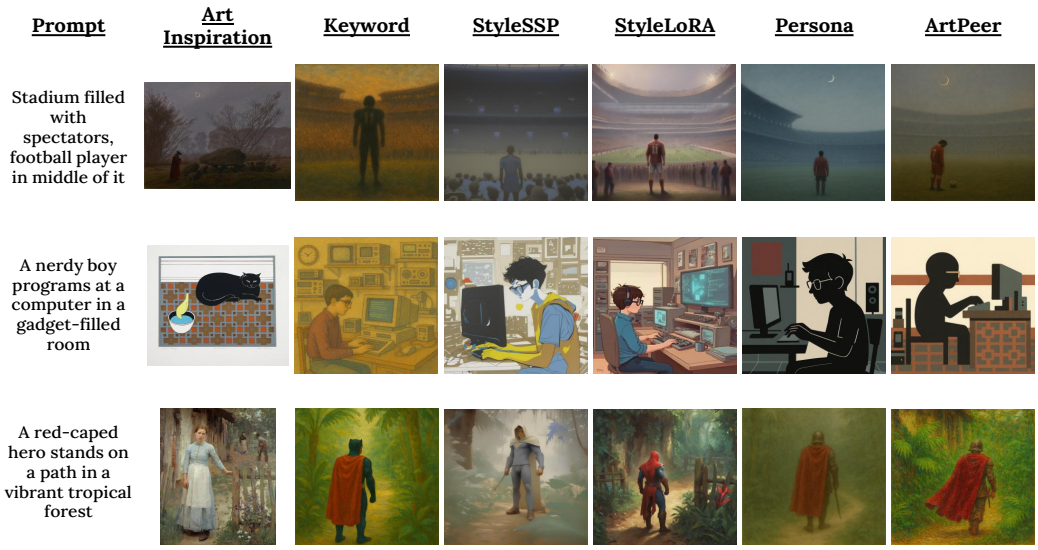


Figure 23: Qualitative comparison of personalized art from different techniques. We present personalization examples for three different art inspirations: *Horse and cart* by George Seurat, *Cat and Canary* By Will Barnet, and *Girl ar the Gate* by George Clausen respectively.