## Co-Creation with Generative AI in Video Production

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#### **ABSTRACT**

This report explores the use of generative AI as a co-creative partner in developing an imaginative video campaign. This paper documents how a filmmaker leveraged a multimodal AI workflow to create a promotional video. The final result is a surreal, vibrant campaign video for OCAD University that pushes creative boundaries.

## **Keywords**

Generative AI; Human-AI Co-Creation; Multimodal AI; Text-to-Video: Video Production.

#### I. INTRODUCTION

Generative AI has rapidly emerged as a transformative force in creative industries, enabling new forms of collaboration between humans and machines. Recent advances in AI models for text, image, and video generation have sparked widespread interest in marketing and advertising. Brands and creators are experimenting with AI to streamline content creation and inject fresh creativity into campaigns and video productions.

At the same time, creating ad content entirely with AI is a bold endeavor fraught with uncertainties. Not all generative AI marketing efforts have been well-received. For example, in 2023 Toys"R"Us released what it touted as the first brand film made with OpenAI's text-to-video tool Sora, but the experiment received public backlash (Placido, 2024). Likewise, Coca-Cola's 2024 holiday ad, which animated with AI, sparked debate and mixed reactions from consumers, with some viewers deriding it as lacking the human touch (Katie Deighton and Megan Graham, 2024). These incidents underscore both the promise and the perils of AI-driven creativity.

In this context, I undertook a project to investigate generative AI co-creation in a commercial campaign setting. The project's aim was to create a promotional video for OCAD University that is "bold, slightly bizarre, and wildly imaginative," leveraging a suite of AI tools across modalities (text, image, audio, and video). This endeavor serves as a case study of human—AI collaboration in the end-to-end production of an advertisement. The central questions explored include: How can various generative AI tools be orchestrated in a creative workflow? What advantages and limitations arise from using AI as co-creator, compared to traditional production? How does the resulting creative output reflect the influence of AI on style and content? And In a collaborative context with AI, how can we prevent the work from losing its human touch?

### 2. RELATED WORK & CASE STUDIES

## 2.1 Pedigree: Leverage Al for Good

US-based dog food brand Pedigree addressed the global issue of dog homelessness through an innovative AI marketing campaign.

They launched "Adoptable," an AI-powered initiative that uses Stable Diffusion machine learning to create realistic, adaptable 3D models of individual shelter dogs. These models can be easily inserted into digital advertisements, allowing each dog to be featured in personalized, engaging content across social media and online platforms. This not only raised awareness but also helped connect potential adopters with real dogs in need, showcasing how AI can drive both meaningful social impact and brand engagement (LLLLITL, 2024).





Figure 1 US-based dog food brand Pedigree developed Adoptable, an AI-driven model using Stable Diffusion machine learning. Technology creates adaptable 3D models of individual shelter dogs, which can be seamlessly integrated into digital ad campaigns to promote their adoption (LLLLITL, 2024).

#### 2.2 Snickers: Al-Driven Personalization

Snickers launched a personalized marketing campaign featuring football coach José Mourinho, in collaboration with creative studios using ElevenLabs, Sync Labs, and OpenAI. This campaign leverages AI to generate customized video messages for users while emphasizing strict data privacy. By combining advanced voice synthesis, real-time editing, and language models, the campaign delivers engaging, tailored content without compromising user data security. This case highlights how brands can use AI tools responsibly to create interactive and memorable experiences, balancing innovation with ethical data practices (Champagne, 2024).



Figure 2 Snickers has collaborated with creative studios that use ElevenLabs, sync labs and OpenAI to launch a campaign that prioritises user data protection when generating personalised videos, featuring football coach José Mourinho (Champagne, 2024).

#### 2.3 KFC: Democratize Al tools

KFC Philippines launched an interactive campaign using Meta's AI sticker feature, allowing fans to generate their dream KFC meals through an AI-powered image tool. Users submitted imaginative and personalized food concepts, blending creativity with digital innovation. From thousands of entries, KFC selected 11 standout ideas and transformed them into real menu items for a limited time. This campaign showcased how brands can use generative AI not only to spark consumer engagement but also to co-create products with their audience, turning digital creativity into real-world offerings (Orange, 2024).



Figure 3 KFC Philippines launched a campaign using an AI-powered image generator for consumers using Meta's AI sticker feature (Orange, 2024).

# 2.4 Sweet Cheeks – Crafting a Brand Identity with AI

Singaporean gelato brand Sweet Cheeks partnered with creative agency Bravo to build a distinctive brand identity using AI tools. Embracing the brand's ethos of "boundless imagination," Bravo used generative AI to create surreal landscapes and Renaissance-inspired visuals that reflect the playful and artistic spirit of the brand. The result was a whimsical yet elegant aesthetic that set Sweet Cheeks apart in the crowded dessert market. This collaboration highlights how AI can serve as a creative partner,

expanding visual storytelling possibilities in branding (Thaxter, 2024).



Figure 4 Gelato brand Sweet Cheeks (Singapore) worked with creative agency Bravo to co-create its brand identity using AI tools (Cheeks, 2024).

## 2.5 Toys 'R' Us: OpenAl Sora Use Case

Toys"R"Us launched a groundbreaking video ad campaign created almost entirely using generative AI tools. This marks one of the first major brand efforts to fully embrace AI in storytelling and visual creation. Despite the technology's central role, around 20 creative professionals, including designers, art directors, and animators were involved to guide, refine, and polish the output. The campaign highlights how generative AI can streamline production and spark creativity, while still relying on human expertise for curation and emotional impact. It's a glimpse into the future of hybrid creative workflows .



Figure 5 Toys"R"Us has unveiled a video ad, marking one of the first major brand campaigns created almost entirely by generative AI (Us, 2024).

## 2.6 Coca-Cola: Al Holiday Campaign

In November 2024, Coca-Cola released a holiday ad titled "The Holiday Magic is Coming", marking the brand's first Christmas commercial created using generative AI. Inspired by the iconic 1995 "Holidays Are Coming" ad, the video features the classic red truck traveling through snowy landscapes, spreading holiday cheer. However, this time, the entire ad was generated by AI, blending nostalgia with modern technology.

The campaign quickly sparked controversy. Many viewers and professionals criticized the ad for lacking a human touch, describing it as "cold" and "emotionless." The visuals were also called out for technical flaws, such as distorted proportions and uncanny imagery, which undermined the warmth of the original.

Despite the backlash, Coca-Cola's marketing team defended the use of AI, emphasizing its potential to boost efficiency and creative diversity without drastically increasing production costs. The campaign became a focal point in the ongoing debate about the role of AI in creative industries.

This case highlights both the opportunities and limitations of generative AI in advertising, raising important questions about authenticity, emotional resonance, and the future of creative storytelling (Katie Deighton and Megan Graham, 2024).

The collaboration between human creativity and AI is often framed as human-AI co-creation. In this model, humans and AI systems work together, each contributing their unique strengths to achieve outcomes that neither could accomplish alone. In advertising, this could mean the human team provides strategic insight, brand values, and narrative direction, while AI contributes by rapidly generating visual ideas, variations, or even entire scenes. Studies have suggested that AI can produce a vast quantity of novel ideas or content, but the best results often emerge when a skilled human guides and curates these outputs.



Figure 6 Coca-Cola AI Co-Creation Campaign (Coca-Cola, 2024)

#### 3. CREATIVE PRODUCTION

### 3.1 Motivation and Goal

As a filmmaker and advertiser, I am inspired by the rapid advancements in generative AI and wanted to personally explore how these tools could revolutionize the creative process of making a campaign. OCAD University, a leading art and design institution known for its forward-thinking approach, provided an ideal context and client for this experiment. The goal was to create a promotional video for OCAD University that would be wildly imaginative, reflecting the school's spirit of creativity and pushing beyond the safe conventions of typical university ads. In essence, the project aimed to produce a piece of campaign that felt like a mini art-film: something visually striking and conceptually imaginative enough to capture attention, while still conveying OCAD's identity as a hub of creativity.

To achieve this, this project adopted a multimodal generative AI workflow, assembling a pipeline of various AI tools each specializing in different aspects of production. This approach was motivated by the recognition that no single AI tool can yet handle the entire complexity of filmmaking; instead, the strength lay in combining the best capabilities of multiple systems. By doing so, the project also mirrors a traditional film production team (writers, storyboard artists, cinematographers, editors, etc.), except here many of those roles are filled by AI systems under human direction.

The central concept for the video – developed through brainstorming with AI assistance – was to portray an OCAD student's creative journey in an exaggerated, dreamlike manner. The narrative would fluidly move through fantastical scenes representing artistic inspiration and creation, showcasing an "OCAD universe" where imagination transforms reality.

#### 3.2 Workflow

The production workflow was carefully structured into stages, each leveraging specific AI or software tools. Below is a step-by-step overview of how the campaign video was created using a multimodal AI co-creation pipeline:

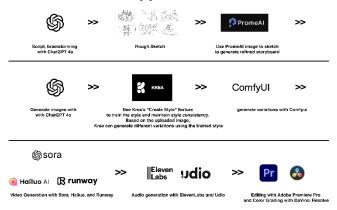


Figure 7 The AI tools and workflow

**Moodboard Development:** First, before entering the creative process, I must decide on the visual style of the film. When it comes to current AI-generated images, their weaknesses lie in incorrect physical logic and unnatural expressions and movements. However, these shortcomings also highlight a unique strength: the ability to generate creative ideas that stem from a "non-human perspective."

Additionally, considering that my intended client is OCAD, a wildly imaginative visual style might be particularly fitting. Therefore, I have decided to adopt a more surreal and exaggerated visual style—drawing inspiration from filmmakers like Shūji Terayama and David Lynch, as well as photographers known for their bold aesthetics, such as Nadia Lee Cohen and Alex Prager. I also reference the set designs of films like *Edward Scissorhands* (Burton, 1990) and *Toys* (Levinson, 1992).

The color palette will feature a slightly retro look, combining high saturation with pastel tones.



Figure 8 Considering that AI-generated images tend to reflect a more "non-human perspective," I chose to adopt a more exaggerated visual style for this project (Cohen, 2019)

Scriptwriting with ChatGPT-4o: Once I had settled on the visual concept, I began developing the script. For this part, I wanted to create the narrative by adapting excerpts from well-known essays or writings. With that in mind, I started a conversation with ChatGPT-4o and prompted it: "Can you help me brainstorm ideas for OCAD's promotional campaign? I'd like to adapt from an existing essay or article that emphasizes confidence or extraordinary thinking."

ChatGPT offered me three suggestions:

- 1. Ralph Waldo Emerson Self-Reliance (1841)
- 2. Audre Lorde The Transformation of Silence into Language and Action (1977)
- 3. bell hooks Teaching to Transgress (1994)

I eventually decided to go with the first option. Multiple prompt iterations were needed to refine the script's tone and structure The human creator ensured the script remained on-message for OCAD University, while the AI helped push the imaginative boundaries with unexpected ideas.

Next step, I asked the AI to help define the visual tone. Its response was:

"Surreal, collage-like editing. Hyper-saturated color. Live-action mixed with animation, glitch effects, and symbolic gestures. Think: A ballerina vacuuming the floor in a courtyard, and a schoolgirl playing a musical instrument by the river."

Inspired by that direction, I began imagining the visuals for each scene.

#### 1. Ralph Waldo Emerson - "Self-Reliance" (1841)

Why it works: It's iconic, radical, poetic. Emerson's call to trust oneself fits perfectly with an art school that encourages original thinking.

6 "To believe your own thought, to believe that what is true for you in your private heart is true for all men — that is genius."

#### Concept: "The Cult of the Self"

A surreal, hyper-stylized video set in a dream world where students wear mirrors as masks. The narrator (a glitchy AI or a whispering child?) reads fragments of Emerson's text as we see strange, powerful imagery of self-expression, struggle, and transformation.

Figure 9 In the early stages of the creative process, I had a conversation with ChatGPT-4o and adopted one of the ideas it suggested

#### Storyboarding with PromeAI:

Each scene may incorporate different thematic elements. Since AI-generated video transitions between each scene are still not quite where they need to be, I decided to approach each shot with a cut-to-cut editing style, aiming to maintain a consistent visual tone throughout. I started with a very rough draft of the storyboard. Considering that generating images at the later stage may require more refined visual references, I used PromeAI's "photo to sketch" feature to create more polished visuals for each frame.



Figure 10 The rough sketch of the storyboard

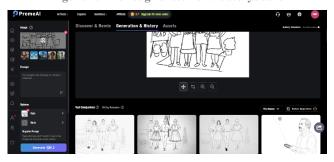


Figure 11 I uploaded the rough sketches to PromeAI to refine and enhance them for the storyboard



Figure 12 The final result of the storyboard generated by PromeAI

## Exploring Image Generation with ChatGPT-4o, ComfyUI, and Krea

Curious to explore the latest features of ChatGPT-40, I decided to conduct a playful experiment: could I turn a whimsical scene generated by PromeAI into a vivid textual prompt—and have ChatGPT recreate it as an image? I began with a surreal concept: "A woman dressed in a pink ballet tutu and pointe shoes vacuuming a Persian rug on a suburban lawn..." complete with a sunny backdrop and graceful pose. I paired this with a rough storyboard sketch and, after a few iterations and prompt tweaks, it quickly arrived at a satisfying result. Compared to earlier versions, ChatGPT-40 impressed me with its improved visual style - more polished, yet less artificial or overly glossy, and the image aligned well with both my sketch and action cues.



Figure 13 ChatGPT-40 generated image based on the prompt.

I took things further by testing whether it could dress characters in specific outfits or accessories. The results? Surprisingly accurate, even managing to render correct text within the image - a major leap from previous models.



Figure 14 Testing ChatGPT-40's ability to generate images with specific products

Building on this, I turned to Krea AI to maintain the style and generate alternative poses and scenes. In general, AI-generated videos often suffer from inconsistent styles and character mismatches. One way to address this issue is by using methods similar to Midjourney's sref code to maintain stylistic coherence. However, the recently introduced style training feature by Krea AI has significantly improved this aspect. Krea now allows users to upload 3–50 images to train a custom visual style. I uploaded several moodboard images to guide the aesthetic (though using images from films or artists for commercial purposes may still raise legal questions). Feeding it the ChatGPT-generated image, Krea offered four variations with different movements, costumes, and facial features. From these, I selected the one with the strongest sense of motion that is ideal for animation.



Figure 15 Use Krea's "Create Style" feature to train the style and maintain style consistency



Figure 16 Based on the uploaded image, Krea can generate different variations using the trained style

For comparison, I also ran an image-to-image test using ComfyUI through RunDiffusion. I set the denoise strength to 0.3 to preserve the original style, the output altered the dancer's age and tutu color based on my positive prompt. However, since my cloud storage is pretty limited, I couldn't access higher-quality models, resulting in

some distortion. To avoid potential inconsistencies in the final video, I chose to move forward with the cleaner and more coherent outputs from ChatGPT-40 and Krea. All in all, the experiment not only showcased the creative potential of these tools but also hinted at an exciting shift in how we blend storytelling, AI, and visual design.



Figure 17 Use ComfyUI's image-to-image feature to modify the character and clothing in the image



Figure 18 ComfyUI final image

#### Video Generation with Sora, Hailuo, and Runway:

While images provided static content, the campaign required moving visuals. Three AI video generation tools were explored for this purpose: Sora, Hailuo, and Runway.

Among the three platforms, Sora (for Plus members) can generate 10-second videos, Hailuo can generate 6-second videos, and Runway Gen-3 Alpha can also produce 10-second videos. Of these, Runway delivers the best results—especially with its latest version, Gen-4. However, it's also the most expensive. Even with a paid basic membership, I can only generate up to three videos. Hailuo ranks second in quality; its main drawback is the short video duration, which limits its ability to generate complex movements. Sora, on the other hand, often produces distortions or unexpected changes in characters or scenes, though it is the most affordable option.

For all three platforms, I used their image-to-video feature, and in addition to uploading an image, I also included prompts to guide the movement or camera angles. Generally, I test all three platforms simultaneously, as despite Sora's inconsistent quality, it occasionally produces surprisingly impressive results.

That said, I've noticed that the generated videos often show distorted or unnatural facial features and movements, especially with human subjects. This suggests that in the future, teams looking

to use AI tools for filmmaking will likely still need to possess professional VFX skills.

In fact, as demonstrated in the previously mentioned Coca-Cola advertisement case (Coca-Cola, 2024), even videos that appear to be fully AI-generated are far from simple "one-click" productions. Behind the scenes, a significant amount of post-production and visual effects work is involved. The success of this advertisement largely relied on a professional VFX team that meticulously refined and enhanced the AI-generated content, correcting unnatural movements, distorted visuals, and inaccurate facial expressions, to ultimately deliver a polished, commercially viable result (MetaPuppet, 2024).

This highlights an important trend: no matter how powerful AI tools become, the true creative control in visual production will remain in the hands of professionals with expertise in post-production. AI serves more as an "assistive generator" rather than a complete replacement for human creators. For visual creators, it is essential not only to learn how to effectively use AI tools, but also to strengthen skills in post-production editing, visual effects (VFX), compositing, and stylistic adjustments. Only by mastering both can they successfully transform AI-generated content into works that align with their artistic vision and narrative flow.



Figure 19 Sora-generated video



Figure 20 Runway-generated video

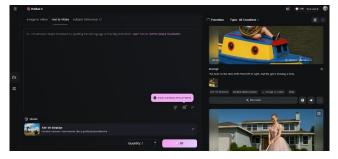


Figure 21 Hailou-generated video

Voiceover with ElevenLabs and Music with Udio:

For the audio, I used ElevenLabs to train the voice. First, I cloned the voice of a 1960s radio show host (Tube, 2014) and modified it using audio post-production techniques (pitch adjustment). Then, I used its text-to-speech feature to generate a natural-sounding voice-over.

Music also plays a critical role in setting the tone for any commercial. The desired mood was something inspiring and modern, with a touch of whimsy to match the "wildly imaginative" vibe. After trying a few prompts such as "Fantasy-inspired orchestral score infused with vibrant electronic elements and nostalgic 80s tones. Energetic yet dreamy, like the soundtrack to a futuristic fairy tale," a fitting background track was produced.



Figure 22 Music generation with Udio

## Editing with Adobe Premiere Pro and Color Grading with DaVinci Resolve:

With all pieces in hand, including AI-generated video clips, voiceover, and music, the project moved into post-production. Adobe Premiere Pro was used to assemble and fine-tune the campaign video. In this phase, I acted as the director and editor, selecting the best segments from the array of AI outputs and stitching them together on the timeline.

As a final polish, the compiled video was exported and imported into DaVinci Resolve for color grading. Because the visuals came from different AI systems, there were slight inconsistencies in color profiles, brightness, and contrast from clip to clip. Using DaVinci, the author applied color correction to unify the look of the video – for example, tuning all shots to have a vibrant, saturated palette that reinforces a playful, imaginative mood. A consistent contrast curve was applied so that the video felt cohesive rather than like a patchwork of sources.

Through this workflow, the project integrated ten different tools (AI and non-AI) into a pipeline that resembles a hybrid of film production and software development. Each stage involved an interplay of human and AI input: the human creator set objectives, provided prompts, and made selections; the AI tools produced creative options or content; and the human then assembled and refined the outputs. This co-creative loop repeated at multiple scales (from writing to editing), exemplifying how generative AI can be woven into the creative process from start to finish. The outcome of this complex process was the final campaign video, described next.

#### 3.3 Final Result

The end result of the project was a 1 minute promotional video for OCAD University that ethos envisioned at the start. The video plays as a rapid, dreamlike journey through the creative mind of an OCAD student, using striking AI-generated visuals to blur the line between reality and imagination.

Crucially, even though a casual viewer might not realize it, every visual in the video came from AI generation in some form, no traditional camera footage was used at all. This demonstrates the power of AI co-creation: the fact that a single creator, armed with AI tools, could produce a multi-scene campaign video that would normally require a full production crew, budget, and extended timeline.

#### 4. REFLECTIONS

Embarking on this project provided a firsthand look at the emergent practice of human-AI co-creation, and the experience was both exhilarating and educational. Over the course of developing the campaign, several key reflections emerged regarding the creative process, the role of AI, and how this new workflow compares to traditional methods.

#### 4.1 Al as a Creative Partner

One of the most striking aspects was how AI tools often acted like collaborators providing sparks of inspiration. For example, during scriptwriting, ChatGPT not only followed prompts but occasionally introduced narrative ideas I hadn't considered. Some of these happy accidents were incorporated, enriching the story. Similarly, in visual generation, tools like Midjourney or ChatGPT 4o sometimes produced surprising imagery that inspired tweaks to the concept. This felt like a dialogue or creative jam session with AI. Rather than a top-down directive process, there was a back-andforth, the human sets a direction, the AI responds with many options, and the human then responds by selecting or adjusting those options. This iterative loop is analogous to working with a very open-minded, tireless creative assistant who can generate dozens of variations at will. The creative process became more exploratory, one can venture down paths with the AI outputs and sometimes discover a better idea than the initial one. In contrast, traditional production tends to stick more rigidly to pre-planned storyboards due to cost and time. Here, the flexibility to pivot creatively mid-stream was much greater, since "reshooting" a scene was as simple as regenerating an image or clip with a new prompt.

Compared to Traditional Workflow: The overall structure of the project mirrored a classic production pipeline (ideation → preproduction  $\rightarrow$  production  $\rightarrow$  post-production). However, the nature of work at each stage felt different. In a traditional project, much time might be spent on logistical tasks: scouting locations, setting up shots, coordinating actors, etc. In this AI-mediated workflow, those logistics were replaced by prompt engineering and curation tasks. A significant portion of time was spent crafting effective prompts for AI and then curating or editing the results. This required a new skill set - part technical writing, part artistic direction - to translate a creative vision into instructions that AI can understand. For instance, describing an image in text to get the right output forced clarity of visual thinking ("what exactly do I want to see?") and also required learning each tool's syntax and quirks. There was also a need for patience and persistence: some scenes took dozens of prompt attempts across different tools to finally get a usable output. In a way, this is akin to doing many takes of a shot in film, but much faster and cheaper, the cost was time and mental energy rather than money and coordination.

**Quality and Control:** One of the most challenging aspects was managing quality and consistency. Unlike a human team where one can directly control artistic details, AI generation has a stochastic element. The outputs can be unpredictable, and fine control is limited. In this project, I found that achieving a coherent style

across the video required clever workarounds and a lot of post-processing integration. This highlighted a difference: AI provides breadth over depth. It was easy to generate many ideas (breadth), but harder to get each one perfect or consistent (depth). In reflection, this meant the human role leaned heavily toward curator and editor, piecing together the final output from imperfect parts. This differs from a traditional approach where footage is usually consistent once shot, and the director's role is more about selection and pacing than fixing fundamental consistencies. The extra color grading and editing effort in this project was essentially compensating for the fact that multiple AI "artists" with slightly different styles had worked on the content. It's akin to commissioning various artists for different scenes and then trying to harmonize them.

Speed and Efficiency: In terms of speed, the project was remarkably swift in some ways and slow in others. Initial ideation and prototyping of visuals happened extremely fast. Within a single day, one could have a rough script and a collection of diverse images depicting it, something that would take weeks if hiring concept artists or shooting test footage. This rapid prototyping ability was one of the biggest advantages of using AI. It allowed more time for experimentation and iteration on creative ideas before locking in the direction. On the flip side, some parts of the process became time-consuming due to the need for trial and error with AI. Generating the final high-quality assets took days of computing time and manual review because many generations failed or were mediocre. Editing all the fragments into a smooth video was also meticulous work. In total, the project timeline was on the order of a few weeks of dedicated work - which is still significantly less than a full traditional production for a 1-minute ad (often months) and with below 50 USD budget, but it wasn't instantaneous by any means. There is a misconception that AI can do everything at a push of a button; this project dispelled that – the human creator had to invest substantial time to guide the AI and refine the outputs.

Creative Empowerment and Learning: Overall, the process was empowering – it allowed a single person to execute a multi-faceted creative vision without needing an entire crew or expensive equipment. This democratization of creation is profound. In this creative process. I found it liberating to be able to "film the unfilmable" – scenarios that would be impossible or too expensive to stage physically were achievable through AI imagination. This opens a new avenue for creative storytelling where imagination isn't as constrained by practical reality. Additionally, the project was a learning journey in mastering new tools. Each AI system has its own learning curve and community best practices. I had to troubleshoot or find alternatives for each scene. But each hurdle overcame added to the toolkit of knowledge. By the end, there was a sense of having gained a new literacy in AI media production, a skillset that feels increasingly relevant in the modern creative landscape.

**Emotional and Ethical Reflections**: On a more personal note, working so extensively with AI also raised some introspective questions. There were moments of wondering: where does the "creativity" truly lie – is it in the algorithm churning out images, or in the human who guides and curates them? My conclusion was that it is a symbiosis: the AI's creativity is algorithmic and vast but aimless without human purpose, and the human creativity is enhanced and extended by the machine's ability to generate and surprise. The project reinforced the idea that AI is a "partner", not just and tool or a replacement for the artist. The final video, despite being made of AI pieces, carries the imprint of my personal taste

and decisions throughout. Another reflection was on the ethics and future of such AI usage. Seeing how convincingly an AI can mimic a voice or create imagery begs caution — misuse of these tools (deepfakes, misinformation) is possible. In this project, care was taken to use AI ethically. In professional contexts, being upfront might help alleviate some concerns audiences have about being "tricked" by AI content.

In conclusion, the project validated the exciting potential of generative AI in filmmaking and advertising. It also highlighted that the role of the creator doesn't diminish – if anything, it evolves to become more of a multidimensional orchestrator of creative AI "ensembles." The experience was a compelling demonstration that human imagination, when augmented with AI, can produce outcomes neither could achieve alone, aligning with the notion that human-AI co-creation can yield uniquely powerful results. However, it also underscored that this approach is not a magic shortcut but a new form of craftsmanship that requires skill, judgment, and a willingness to navigate unpredictability. These lessons feed directly into recognizing the limitations, opportunities, and challenges of generative co-creation, which I will discuss next.

## 4.2 Limitation, Opportunity, and Challenges

Creating a fully AI-generated campaign revealed key limitations, opportunities, and challenges that are essential to understand in the context of modern creative and commercial production.

#### Limitation

While generative AI showcases impressive capabilities, this project encountered several significant limitations that highlight the current boundaries of the technology. One major limitation lies in technical constraints. Many AI video generation tools, such as Sora, Hailuo, and Runway, are only capable of producing a few seconds of footage at a time and often at moderate resolutions. This required the final video to be meticulously assembled from numerous short clips, with additional time spent on upscaling and careful editing. Moreover, discrepancies in file formats (a MP4 file not a Raw or Log file) and color spaces (Rec.709 not a Raw or Log color space) across different tools added further complexity, necessitating conversions and color corrections to ensure visual consistency. These issues show that AI tools are not yet truly plug-and-play and still demand a good amount of technical expertise to achieve a polished outcome.

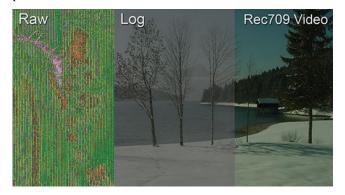


Figure 23 The differences between Rec. 709, Log, and RAW color spaces

Another limitation involves control and adjustability. Unlike traditional filmmaking, where directors or animators can make precise changes, AI-generated outputs lack direct editability. If an element, such as a distorted hand or off-timed motion, was rendered incorrectly, there was no way to fix it directly. Instead, one had to regenerate the output or use an additional tool for manual adjustments. This lack of internal control meant accepting certain imperfections or spending excessive time trying to coax better results through prompt engineering or post-processing. In this project, compromises had to be made, such as leaving a scene with a slightly warped background due to time constraints.

Maintaining consistency and continuity across a narrative sequence is also quite difficult. Because AI typically generates each image or clip independently, ensuring a character looks the same in every scene requires the reuse of reference images and manual touch-ups. In this scenario, the creator must possess professional skills in their field in order to make content adjustments. Since clients in commercial projects often request revisions (contracts typically grant clients at least one opportunity for changes), creators in the future cannot rely entirely on AI tools. Instead, they will need to develop comprehensive abilities to revise and refine their content.

Additionally, audience perception presented a more subjective limitation. Some viewers are sensitive to AI-generated content, perceiving it as less authentic or emotionally engaging. While the final video was visually compelling, it may lack the emotional resonance of a human-made piece, potentially creating a sense of detachment or "coldness." This highlights the risk of falling into the "uncanny valley of emotion," where the visuals are impressive, but the emotional depth feels underdeveloped. Lastly, legal and ethical issues remain unresolved. Questions about copyright ownership of AI-generated content and potential infringement on training data are still evolving. Although this project used legally sourced tools, the possibility of inadvertently generating outputs that resemble copyrighted styles or likenesses remains. There's also concern around using AI-generated faces or voices that may unintentionally resemble real individuals or brands. Until legal standards are clearly defined, fully AI-generated campaigns must proceed with caution to avoid potential intellectual property violations.

#### **Opportunity**

Despite the challenges, the project also highlighted a wide range of exciting opportunities that generative AI brings to the field of creative and commercial content production. Perhaps the most transformative is the democratization of creativity. With generative AI, high-quality visuals and storytelling can now be achieved without massive budgets or large production teams. This campaign, developed at OCAD, was essentially a below 50 USD budget production, something that would have been unthinkable for a minute-long campaign using traditional methods. AI opens the door for smaller creators, independent artists, nonprofits, and startups to produce compelling content that previously required substantial financial resources. This shift could lead to a broader range of perspectives and a more diverse creative landscape.

Another major opportunity lies in rapid prototyping and iterative development. AI tools significantly accelerate the production of visual concepts and storyboards. In a professional setting, this allows agencies to present clients with multiple creative directions in a matter of days instead of relying solely on written pitches or static mockups. Clients can react to these early AI-generated visuals, helping to shape the final product before committing to full-scale production. This more agile development process can enhance creative collaboration and reduce costly revisions later.

Furthermore, AI enables new creative aesthetics. The slightly surreal, hybrid animation style seen in this project exemplifies an emerging "AI art" visual language. These aesthetics - rich in detail, sometimes uncanny, and often blending realism with fantasy - offer fresh visual possibilities that were not feasible before. Forward-thinking brands might adopt these styles to signal innovation and stand out from competitors. In fact, fashion and entertainment companies are already experimenting with AI-generated imagery to generate buzz and capture attention.

Lastly, AI greatly enhances the brainstorming process. Agencies can use AI to quickly generate a wide range of slogans, visuals, or thematic concepts, jumpstarting the creative process and combating creative blocks. AI, in this way, becomes a muse that helps humans explore more imaginative directions.

#### Challenges

Integrating AI co-creation into mainstream creative workflows also presents a number of broader challenges that must be addressed moving forward. First and foremost is the development of new human skills. To make the most of generative AI tools, creators must become familiar with prompt engineering, model capabilities, and post-production techniques tailored to AI outputs. This represents a significant learning curve and a shift in creative mindset. Organizations may need to invest in training their teams or hire hybrid talent with both creative and technical skills. Bridging the divide between traditional creatives and technologists is a key challenge, and education will play a central role. Institutions like OCAD University could consider updating curricula to include training in AI co-creation techniques, ensuring that the next generation of creators is equipped for the future.

Another major challenge is preserving ethical integrity and authenticity. As brands seek efficiency through AI, they must avoid alienating audiences by losing the human touch. The most effective creative solutions may come from combining AI-generated content with real human elements, for instance, using AI to create environments or visual effects, while retaining real people for emotional authenticity. Finding this balance will require ongoing experimentation and audience testing. Moreover, brands risk reputational damage if they rely too heavily on AI at the expense of human artists or if their use of AI feels inauthentic. Transparency, ethical usage, and a clear intention to augment rather than replace human creativity should be guiding principles.

Quality control and reliability also remain concerns. AI tools can be unpredictable, what works well today might yield poor results tomorrow due to updates or subtle input changes. In commercial settings with strict deadlines, this unpredictability introduces risk. Teams must have backup plans in place and be prepared to refine prompts or even fine-tune custom models for reliability. However, this requires additional time, effort, and technical knowledge that may not always be available.

Workflow integration is another practical challenge. Traditional creative teams and agencies have established processes, and introducing AI into these workflows demands adjustments in roles, responsibilities, and collaboration methods. For example, art directors may need to spend part of their day working with AI tools, and creative pairs like copywriters and designers may need to cocreate alongside machine learning systems. Technical compatibility between AI tools and standard editing or compositing software is also an issue, as seen in this project where format

mismatches slowed down production. This calls for better software integrations and plugins to streamline the process.

Lastly, the pace of change in AI presents ongoing uncertainty. What's cutting-edge today might be obsolete within months. For example, although this project used the best models available in early 2025, new tools like Runway's Gen-4 have already promised significant improvements in character consistency and scene coherence. Creative teams must stay up to date, continuously learn new tools, and remain flexible in how they approach projects. In addition, changing regulations around AI use may impose new restrictions, requiring teams to remain legally and ethically agile. Ultimately, navigating this fast-moving field demands continuous adaptation and resilience.

#### 4.3 Future Plan

An exciting future direction is to apply the lessons from this project to different domains of creative production. While this was a promotional campaign, a similar approach could be tried for short film production, game cinematics, or interactive media. For instance, could one create a short narrative film using the same toolset? Or design an immersive experience (like a VR scene) using AI-generated assets? The core is the same – using AI multimodally to create content – but the format and constraints differ. By pushing into other domains, the techniques can be generalized and refined. I am also considering a short animated film as the next personal project, where AI would generate characters and scenes, building on what was learned here but adding the complexity of dialogue and longer narrative. Each new application will uncover new challenges and drive further innovation in the workflow.

In addition, I also plan to explore ComfyUI in greater depth. Although this test did not achieve the results I was hoping for (most likely due to limited storage which restricted my choice of models) I still believe that the comprehensive control it offers creators is a crucial factor for making AI commercially viable. Therefore, I plan to further study ComfyUI's underlying principles and technologies in the future.

#### 5. AI TOOLS DECLARATION

In preparing and authoring this paper, the following generative AI tools were used to assist with various aspects of writing, information structuring, research, and citations:

**ChatGPT-40 (OpenAI):** Used extensively for generating initial drafts, structuring sections, refining language, and synthesizing the user-provided project details into cohesive written content. ChatGPT-40 provided iterative enhancements of text for clarity, coherence, and readability.

Prompt: Please correct the grammar and improve the clarity and cohesion of the following paragraph.

**Perplexity.ai:** Used as a research tool for quickly finding related scholarly sources, academic references, industry reports, and examples from recent AI developments. Perplexity helped in identifying relevant examples of generative AI commercial campaigns and confirming industry trends and case studies.

Example Query: Recent examples of commercial advertising campaigns using generative AI.

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