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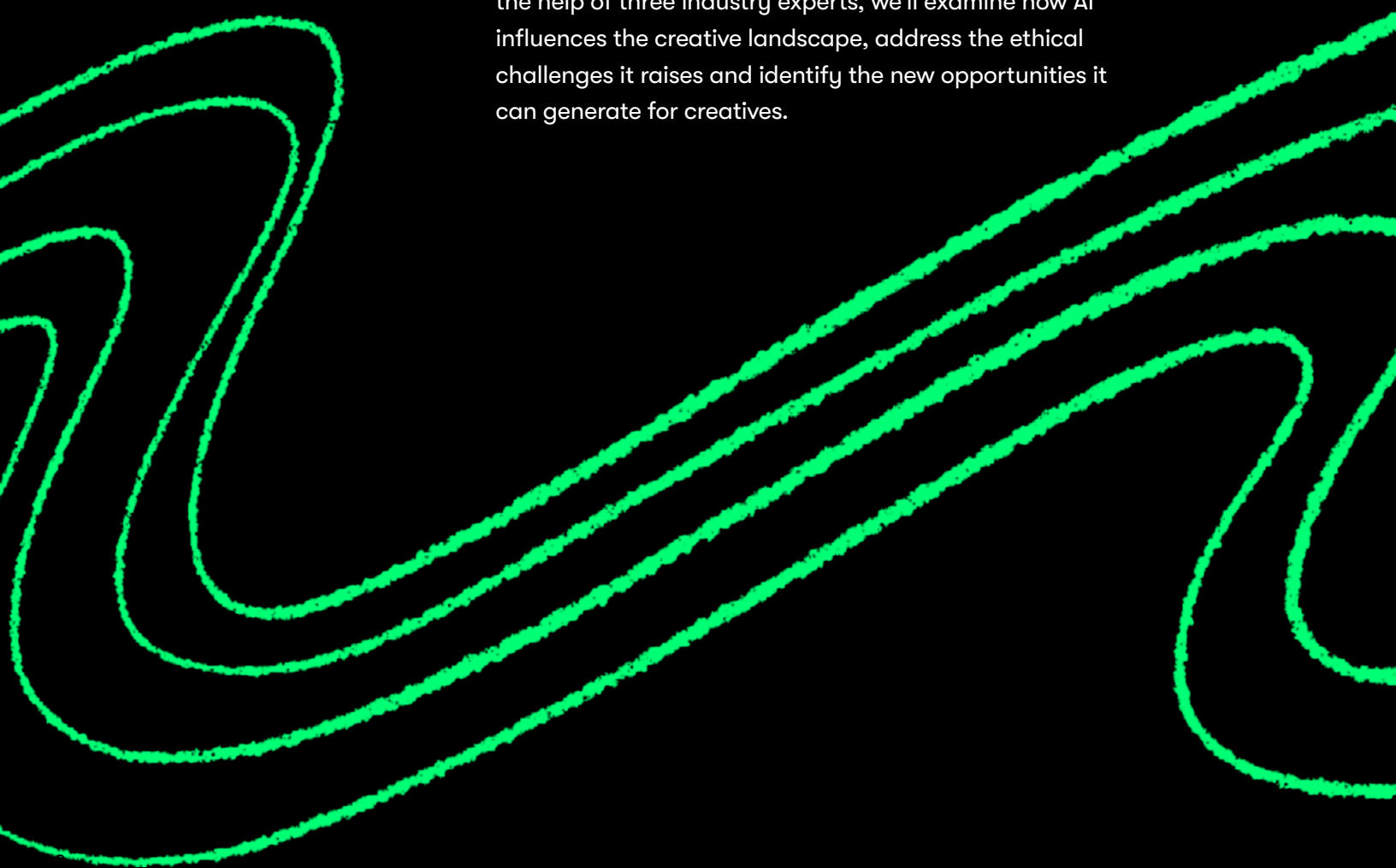
# Creativity in the Age of AI: Insights, Ethics & Opportunities



# With the meteoric rise of Artificial intelligence (AI),

the creative industries are experiencing a profound transformation. From automating repetitive tasks to assisting in the creative process, AI is reshaping how artists, writers, designers and creatives of all kinds approach their craft.

In this report, Skillshare and Mozilla are joining forces to explore the intersection of AI and creativity. With the help of three industry experts, we'll examine how AI influences the creative landscape, address the ethical challenges it raises and identify the new opportunities it can generate for creatives.



# Introducing Our Experts

To understand how AI and the creative sector are coming together, we talked to three experts who are on the cutting edge of AI in the creative industry:



## Angela Lungati

A technologist, community builder and advocate for open-source software, Angela champions the use of technology as a tool for amplifying marginalized voices. Angela has been recognized by Mozilla as a Rise25 award recipient in the Change Agent category, which focuses on cultivating inclusive AI. She's a member of the World Economic Forum's Global Future Council on the Future of Data Equity, and co-founded the non-profit organization AkiraChix.



## Natalia Domagala

Natalia is an AI ethics advocate focusing on transparency and accountability. As the Head of Data and AI Ethics Policy at the UK Cabinet Office, she led the development of one of the first national standards for algorithmic transparency in the world and launched the first national-level public sector Data Ethicist role in the UK. In 2023, she was recognized by Mozilla as one of the world's 25 visionaries who are making the internet and the world a better place.



## Manuel Sainsily

A digital artist, futurist and Advocate at Unity, Manuel is a strong advocate for ethics, inclusion and diversity in both AI and art. From speaking at worldwide tech conferences to being celebrated by Mozilla as a Rise25 honoree to producing events with Meta, NVIDIA and OpenAI, Manuel amplifies the conversation around emerging technologies and culture preservation through powerful keynotes and curated events.

# Insights: The State of AI in the Creative Industry

**Over the past several years, AI has quickly made waves in the creative sector. As more creatives explore its possibilities, its adoption has begun to change how a growing number of artists, designers, and creators approach their work.**

**This integration has sparked a new era of collaboration between human creativity and machine-generated assistance. Like any other major change, it's chock-full of advantages and challenges alike.**

## **Generative AI & LLMs Remain the Game Changers**

“The most significant trend in AI’s application within creative industries today,” says Natalia, “is undoubtedly the emergence of generative AI. It transforms the process of creation across multiple fields, including visual arts, music, writing, design and film, with its ability to generate outputs within seconds based on written or verbal prompts.”

**“There are many advantages to using generative AI in creative production,”** she added. “It can speed up and scale up the process, assist with project planning or ideation and generate high-quality content.”

These advantages have already made a significant impact in the creative industry by opening up powerful new tools and capabilities to artists.

As Angela explains, “in many ways, AI can (and is) make knowledge and creativity more accessible.” And “while it brings up various ethical concerns, it’s been interesting to see how different social causes have been leveraging AI to create awareness and how they go viral and global in short time spans”—think AI-generated protest posters that can be used to quickly spread an important message. However, the rapid spread of content through AI also comes with the risk of misinformation, where false or misleading information can proliferate just as quickly as positive messages. This dual potential highlights the need for careful consideration and ethical use of these technologies.

Recent developments in Kenya provide a perfect example of **AI’s ability to impact civic education**, too. There, Angela says, “several AI-powered tools have been created to help local communities interact with and understand the implications of proposed

laws, such as the controversial Finance Bill 2024, which sparked nationwide protests in June 2024.”

Those AI-powered tools included Corrupt Politicians GPT, a chatbot that revealed Kenyan politicians’ corruption cases, and Finance Bill GPT, which explained the bill’s complex provisions in more easily comprehensible terms.

Echoing Angela’s insights, Manuel believes that “the most impactful AI technologies in creative industries are Large Language Models and generative AI models like **ChatGPT** (LLM) and **OpenAI Sora** (GenAI text-to-video model).”

Why? “These tools democratize creativity by making high-level creative outputs accessible to non-experts,” he explains, and they have **“the potential to level the playing field,** providing marginalized communities with tools to express themselves in ways that may not have been possible before, fostering creativity, inclusivity and accessibility in new and unprecedented ways.”

Recent data about OpenAI usership underscores this potential. As of August 2024, ChatGPT boasts over 100 million weekly active users. And while OpenAI Sora is currently limited to select partners, its broader public release later in 2024 could further expand AI’s reach and impact among creatives.

In fact, Manuel and co-director Will Selviz created their first short film, Protopica, with OpenAI’s Sora model. In it, Manuel says, “we bring unique experiences to life by masterfully blending digital prowess with cultural awareness.” The result is a visually stunning film that explores the idea of a cosmic realm in which souls intentionally seek out the perfect earthly vessel to dwell in.

“The life we inhabit is no accident,” Protopica’s narrator says, “but a carefully curated journey that our own eternal essence crafted for us.”

## **AI-Driven Creativity and Social Change**

While there are still many uncertainties surrounding AI, some creatives and technologists are seizing the opportunity to harness it for social good.

Take, for example, Angela’s work for the Global Future Council on Data Equity. “Data equity is the backbone of fairness in what we build,” she explains, “and what comes out of the things we build.” As such, “it’s important to proactively consider it when collecting, interpreting and using data for creative outputs.”

**AI is also reshaping storytelling, especially in underrepresented cultures.** For instance, Manuel “created a CustomGPT trained on Guadeloupean Creole in order to help preserve my culture digitally, and presented it live on stage” during his TED Talk.

For context, Guadeloupean Creole is a language that’s spoken by approximately 600,000 people worldwide—that’s fewer people than currently live in the U.S. city of Detroit, Michigan.

Manuel asks that we “now imagine the same being done to preserve other languages that are at risk in various worldwide communities.” He went on to explain that **“every two weeks, a language dies, and I believe AI can help stop the bleeding.”**

# Manuel reminds us that from his “experiences with various AI tools,” he’s “observed an increasing trend of creatives using AI to automate tedious parts of their processes”

## The Demand for AI Transparency & Awareness is Growing

As AI tools become more widespread in creative fields, questions about **transparency** and the ethical use of AI data are increasingly important.

The way Natalia sees it, “**increasing transparency is critical in any use of AI**, including in the creative fields. In this case, greater transparency in how generative AI tools work would enable users, creators and their audiences to understand how AI models generate content, what datasets they are trained on and how they make decisions.”

As a result, “this could raise awareness and mitigate potential privacy or rights infringements, for instance, if models were trained on artists’ and creatives’ work without their knowledge or consent.”

One example of a refreshingly transparent AI project is Unsupervised, an exhibition at the Museum of Modern Art (MoMA). There, the Turkish-American visual artist Refik Anadol trained a machine-learning model to interpret and iterate on over 200 years of artworks displayed at MoMA, all while incorporating site-specific input such as light, movement and even weather.

The outcome is an immersive exhibition that MoMA’s guests can enjoy without wondering if it was created via unethical means.

## Some Creatives Are Turning to AI for Automation

While there are questions and challenges that AI poses, many creatives want to caution that AI is not necessarily the anti-artist technology that is out to steal the work of innocent humans.

Manuel reminds us that from his “experiences with various AI tools,” he’s “observed **an increasing trend of creatives using AI to automate tedious parts of their processes**” such as “ideation, and even generating initial concepts.”

“Moreover, I’ve seen more artists collaborating with technologists to create projects that integrate data with storytelling, using AI as both a narrative and a technical tool.”

In that light, Sainsily sees AI as less of an existential threat and more of a supportive collaborator.

But for more artists to view AI the same way, AI engineers need to be more transparent about the materials they use to train AI models and ensure they do not use anyone else’s content without permission.

# Ethics: Navigating the Moral Maze of AI in Creativity

**As AI becomes more embedded in creative processes, it also raises serious ethical questions. From inclusivity to transparency, creatives must carefully navigate the challenges of using AI responsibly.**

## **Addressing the Question of Ownership**

The ethical use of AI relies heavily on consent. As Natalia explains, **“the biggest ethical challenge facing AI in creative fields is navigating the issues of ownership.”** That’s because copyright and intellectual property laws “were not developed for the realm of generative AI.”

And since generative AI systems are trained on data such as images or text, and creatives often publish their work online, “their content might be used for training AI models even without their awareness or consent.”

“In 2023,” for example, **“the news broke on a dataset called ‘Books3’** of more than 191,000 books that were used without permission to train generative AI systems by the major tech companies.” That dataset included books written by authors like Margaret Atwood, Stephen King, Zadie Smith and thousands upon thousands more.

Worryingly, “the authors were not informed about it and thus were not able to provide or withdraw their consent, and many described such use of their work as a theft of their skills, time, and creativity.” Incidents such as these reveal **“an urgent need to regulate what content can and cannot be used to train AI models** in a manner that protects creatives from their work being used for that purpose without their explicit permission and acknowledgment.”

## **Ensuring Inclusivity and Preventing Bias**

To build systems that are fair and inclusive, especially in diverse and globalized creative industries, creatives need to think about whether the AI tools they’re using are **inclusive** and **unbiased**.

In Angela’s words, **“it all goes back to representation.”** To start, “we need to consider who is designing these AI tools and whether they understand the context and audience they are building for.” Additionally, we must contemplate whether “the underlying

training data is inclusive and representative of different cultures, geographies and perspectives.”

“It’s also important to acknowledge the risk of bias,” Angela says, “and proactively put measures in place to detect and mitigate these risks.”

In the same vein, Manuel says that “ethics must be at the forefront when designing AI for the creative industries, with inclusivity and bias prevention being the top priorities.” That’s because **“AI models, if not carefully constructed, can unintentionally propagate existing societal biases.”**

This isn’t a new phenomenon, either—in 2018, Amazon abandoned an AI-powered recruiting algorithm it was developing because it had been unintentionally taught to favor male candidates over female ones. And back in 2015, Carnegie Mellon University found that Google Ads’ algorithm was displaying ads for high-paying jobs far more often to men than it was to women.

That’s not because AI tools independently come to the conclusion that men are better job candidates than women. Rather, it’s because machine learning models are trained on existing data, which means that the past biases of humans can become the current biases of AI algorithms.

So, how can we avoid such scenarios? Manuel stresses the importance of “constant vigilance during development, including diverse datasets and cross-disciplinary collaboration to mitigate harmful outcomes.” Ultimately, “artists need to know that the tools they are using are ethical and representative, and AI developers must work with creatives to ensure that marginalized groups are not excluded or misrepresented.”

“AI models, if not carefully constructed, can unintentionally propagate existing societal biases.”

### Algorithmic Transparency and Accountability

Transparency in AI development and deployment is essential for ensuring ethical integrity, especially in the case of creative outputs.

As Natalia explains, “standards for algorithmic transparency provide a coherent way to communicate clearly how various AI models work. The goal is to collect and compare that information and make it widely accessible so anyone using AI or being subject to any AI-assisted decisions can understand the specifics of the model and its broader implications.”

And while there is currently “no universal global standard for algorithmic transparency, the existing ones overlap in their focus areas.” For instance, the 2023 UK algorithmic transparency standard that Natalia worked on “offers an overview of the model and a basic description written in a simple, non-specialist language.” It then “goes into more depth, covering aspects such as the ownership and accountability for the model’s development and deployment, and description and rationale for using AI in this context, including scope and justification.”



There is still “**little transparency on how generative AI tools work**, how they were developed and what datasets they were trained on.”

One rare exception is the AI image generator Tess, which trains its models using art provided with the artist’s full and legal consent. Currently, such examples are few and far between.

Another aspect of transparency that’s crucial to the future of generative AI is “**proactively informing and labeling where and if AI is being used** to enhance or create content.”

What would that look like for creatives? According to Natalia, “labels informing that an image was developed using generative AI, or that a blog was written with text-generating tools.” Such labels “would raise public awareness of how and where AI is being used, and help educate more people about its possibilities as well as the potential risks.”



# Opportunities: The Future of Creativity with AI

**While AI presents ethical challenges, it can offer the chance for creatives to push boundaries and achieve their goals.**

## **Harnessing AI for Social Impact**

Given both the possibilities and uncertainties AI presents, creatives aiming to shape AI's future have the opportunity to guide it towards a more beneficial role in society.

According to Angela, creatives may do this by contributing to the creation and development of AI technology. "Creatives should not only be considered as consumers or beneficiaries of AI tools. They can play a significant role in shaping how AI tools are built and designed."

"In the same way that we advocate [for] collaboration with local communities to incorporate local contexts," she says, **"creatives should work closely with technologists to transform the delivery of AI solutions** to these communities and amplify stories in powerful, creative ways."

An example of this collaborative effort between creatives and technologists is Te Hiku Media in New Zealand, an iwi radio station and media organization led by five

Māori tribes. They have partnered with technologists to develop natural language processing (NLP) tools for the Māori language, aiming to preserve and revitalize it for future generations.

By working closely with Māori language experts and the community, they are creating AI models that understand and process te reo Māori, ensuring the technology respects the cultural context and linguistic nuances unique to the Māori people.

Manuel is also excited about the ways in which creatives can use AI to propel important causes. "The most exciting opportunities lie in the intersection of AI and social/environmental causes," he says.

"For example," he explains, "AI can be used in the creation of immersive experiences that raise awareness about climate change or social justice." And "through XR and AI-generated art, creatives can simulate real-world challenges, making the abstract tangible."

For instance, “AI-powered storytelling can visualize the impact of rising sea levels on vulnerable communities, or the effects of polluted water, creating empathy and driving change.”

One notable example of this is by Refik Anadol. His piece, [Artificial Realities: Coral](#), uses an AI model trained on 100 million coral images to generate visuals that are then transformed into realistic depictions using a fine-tuned Stable Diffusion model. The project aims to create 3D-printed sculptures that mimic natural coral formations, potentially serving as artificial reefs to support marine life and restore ocean ecosystems.

While debates continue about [the environmental impact of AI](#), work like this illustrates how art can merge with technology to deliver creative solutions.

### **Raising Public Awareness**

In addition to using AI-powered tools, Natalia believes that “artists and creatives can serve as trusted intermediaries and role models when raising awareness and encouraging people to use AI responsibly.” That could mean “**using their platform to demonstrate how to use AI-powered tools ethically**, or exposing some of the potentially harmful uses of AI and showing [their audience] how to prevent that from happening.”

Along those lines, “**creatives can also act as mediators and translators** between the often convoluted policy language and the general public.” After all, the world of digital policy is “full of often impenetrable jargon, and although the issues it covers apply to large numbers of people and are significant, the language and the lack of proactive communication from policymakers make it

difficult for people to get interested in how those policies affect them.”

“Therefore,” Natalia says, “creatives can translate those specialist issues into widely understandable content, using accessible and engaging methods and mediums, such as art, film, performance or public speaking.”

“**Creatives can also act as mediators and translators between the often convoluted policy language and the general public.**”

“There are many examples of artists doing that successfully in Mozilla’s community of [Rise25](#) honorees,” she adds, “for example, Julia Janssen, who seeks to make our digital society’s challenges tangible through art, or Dries Depoorter, whose work highlights digital modern concerns.”

### **Building Ethical and Transparent Creative Practices**

As more and more creatives integrate AI tools into their work, establishing ethical and transparent practices will be essential for maintaining trust and integrity in the industry.



## “Natalia urges creatives to approach AI with curiosity and caution”

Angela wisely reminds us that **“technology is not inherently good or bad, it is how it is used, and its impact on the world that determines this.”** Instead, **“it is a means to an end. Let the end you seek guide the way you design, build and use AI tools.”**

Likewise, Manuel’s advice to creatives is to **“always stay true to their values and**

**mission.** AI is a powerful tool, but it’s just that—a tool. It should be used to amplify your voice, not dilute your message.” He also encourages creatives to **“be conscious of the ethical implications [of AI], understand the limitations and strive to use AI in ways that align with your social values.”** And **“above all, remain authentic, and don’t be afraid to challenge the ways AI is used.”**

Finally, Natalia urges creatives to **“approach AI with curiosity and caution.”** She also stresses that all creatives should **“avoid using AI to generate work that mimics or imitates the style of another creative.”** And, **“if you use generative AI for your creative work that you plan to publish or exhibit, be proactive in disclosing your use of those tools.”**

# Key Takeaways & Highlights

If you're a creative wanting to work with AI, deftly navigate its growing role in the creative field with these best practices:

**Remember that AI is a step towards democratizing creativity:**

AI tools can make creative processes more accessible to underrepresented communities and non-experts. As a creative yourself, you can help to spread the word about that powerful benefit.

**Use AI for social good:** AI can be a powerful tool for storytelling and advocacy, and can even empower marginalized voices and drive social change. If those are things you care about, try using AI for social good yourself. For instance, you could create a custom ChatGPT chatbot to spread awareness about an important issue, or use an ethics-focused AI image generator like Tess to create art that encourages change.

**Bridge the awareness gap:** Use your artistry to bridge the gap between AI and the public by striving to communicate its capabilities and applications in ways that are accessible, engaging and inspiring.

**Push for accountability:** Whether on a local, regional or national level, call on your elected officials to implement updated intellectual property laws and ethical standards that protect human creativity while embracing AI's potential.

**Collaborate with technologists:** Whenever possible, work to build lasting partnerships with technologists. Together, you'll be able to explore new possibilities and innovate responsibly.

**Demonstrate ethical practices:** Strive to advocate for transparency in AI-generated content, steer clear of copying others' work and always disclose when your work has been created with the help of AI tools.

By balancing groundbreaking innovation with unwavering ethics, you can enjoy AI's advantages while also maintaining originality, integrity, inclusivity and transparency in your work.

## **Acknowledgments**

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