

# Intersectionality and the Future of Artificial Intelligence: An Empirical Ethical Analysis of Generative AI

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## ACM Reference Format:

Osprey Varboncoeur. 2024. Intersectionality and the Future of Artificial Intelligence: An Empirical Ethical Analysis of Generative AI. In *Proceedings of (CS 205 - Report 3)*. ACM, New York, NY, USA, 9 pages. <https://doi.org/x.x>

*Here is an allegorical representation of myself as an AI language model. This image captures the concept of an AI ... This representation aims to reflect my nature as an entity of data and knowledge.*

CHAT GPT 4.0 [41]



**NOTE:** This image was unmodified past the initial generation. See bibliography for full series of prompts.

## 1 INTRODUCTION

*Is it ethical for journalists to use Generative AI-based tools to create templates for their articles, to edit/fill in before publication?*

CS 205 REPORT 3 PROMPT

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CS 205 - Report 3, April 23, 2024, Redmond, WA

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ACM ISBN 978-x-xxxx-xxxx-x/YY/MM...\$15.00

<https://doi.org/x.x>

**Critical Nuance.** The prompt provided for this assignment attempts find a simple answer for Generative AI, using a specific issue that has garnered attention. We will answer this question, eventually. First, however, the nature of this technology and its implications for what it **means to be human** will need to be addressed.

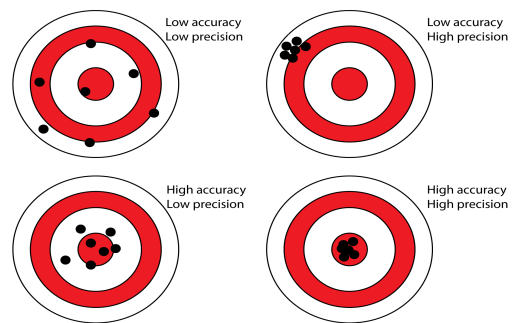


Figure 1: Precision versus Accuracy [15]

### 1.1 The Scientific Method

**The Precision Problem.** The specific delineation of precision and accuracy is a fundamental scientific concept. (fig. 1) Accuracy is how close a result is to the **correct** answer. In most scientific fields, this is an objective, measurable fact. In the practice of both modern **artificial intelligence** (AI) and **ethical analysis**, *accurate* is usually not something to be desired—one could even suggest that an accurate result in either of these fields is impossible. [5, 18, 26, 56] Instead, the practice necessitates a high degree of **precision**, enforced by **empirical** data gathered from **primary sources**. Precision is the method in which AI performs so well in the current tasks for which it is responsible. This research aims to analyze the precise ethical considerations of this emerging **disruptive technology**. [9]

*Science itself is comprised of a plethora of discrete disciplines ... and approaches including observational, descriptive, correlational, and computer simulation designs.*

The breadth of scientific endeavors [5]

**Transparency in research.** This analysis will be based on the scientific method. [16][39] To this end, the data by which conclusions are made must be **empirical** and **transparent** in their findings. This scientific and objective pursuit of knowledge can be difficult to maintain—it requires "**uncompromising honesty**". [5]

This honesty necessitates that the observer to challenge core ideals or biases they may hold. A true scientist embraces these ethical hurdles and studies the data **empirically**.

**Empirical analysis.** Empirical analysis is the methodology in which the observer gathers **evidence** that aids in reasoning. This evidence is most **empirical** when it can provide the **best explanation** for a specific hypothesis, based on primary resources and observations. Empirical analysis very rarely makes definitive statements, but rather takes advantage of **probabilistic conclusions**. [29] **Deep learning models**—which is an accepted criteria for modern artificial intelligence—operate based on **probable certainty**. [26, 56] This analogue to empirical study helps reinforce the validity of conclusions as we navigate the subjective field of ethics.

**Empirical ethical analysis.** In the realm of ethics, a necessity for peer reviewed, primary, and intersectional data is paramount—**surpassing** even that of conventional scientific fields. **Ethics** is the study of what is **right and wrong** and a core analysis of how humans exist in the world—studied through the lens of interactions with their **community**. The subjective nature of these interactions necessitates observations be made from a rational and **empathetic** perspective. Data is that is heavily influenced by **bias, ulterior motives, or connotated doublespeak** [42] will be analyzed for context, but will not be used in any conclusions made. This data is **not beneficial** to an empirical method of analysis.

## 1.2 Bias Statement - Assignment Specifications

**Lacking Objectivity.** In pursuit of a scientific process, the provided generations were not studied in depth—the language on the document calls into question the **objectivity** of this source. Data so patently **influenced by bias** does not adhere to the necessary scientific framework as it could not be reasonably concluded to be **empirical data**.

CS 205: Professional and Societal Issues in Computing

Generative AI Comparisons

We begin with a relatively “harmless” ask from the AI bots – writing a piece of fiction for kids.

**Figure 2: The use of quotes here suggests that the prompt may not be harmless.**

**Every part of the provided specifications that was not generated by AI contained leading questions and dismissive language.**

Now, let us see if our helpful bots can generate a report about a **fictional crime**.

Neither DigiPen nor the instructor of this course condones the usage of generative AI tools for such purpose. The underlying exercise is meant to serve as a cautionary signifier of the limitations of ChatGPT and similar AI-based tools.

Sample prompt: “Write a news article about a crime committed by Mr. John Smith.”

**Figure 3: The words “cautionary” and “limitations” leads the reader to assume AI is negatively connotated. [23]**

## 1.3 Bias Statement - Personal

**Generative AI - Personal Utility.** Generative AI was used to assist in the writing of this research paper. [40] Its function included, but was not limited to:

- Define words
- Provide synonyms
- Generate .bib entries
- Rephrase awkward sentences
- Provide both visual and literary generations for study

The utility [7] value gained from this software’s use, on merely a personal level, is monumental. As someone who has had very little in the way of a “safety net”, I must utilize any opportunities that can help me keep up with those raised in environments of **more affluence**. This personal philosophy propagates to every aspect of my life, which includes the analysis of this ethical issue.

## 2 BACKGROUND INFORMATION

### 2.1 Generative AI - Definitions

**What is Artificial Intelligence?** According to DigiPen AI professor, Steven Rabin, “Artificial Intelligence” is a definition that has changed and adapted over the years. [47] According to this industry AI veteran, “Artificial Intelligence” **can mean anything** that makes a decision based on parameters. In the context of **games**, it is most effective when intelligence is an **illusion**.

*Game AI is seldom about any deep intelligence but rather about the illusion of intelligence.*

GAME AI PRO 3 [46]

**The Illusion.** Generalizing and expanding this definition to AI as a whole, the **illusion** is something that lends itself as a **tool**, and something that is **not currently equivalent** to a human’s context and experience. Professor Rabin goes on to suggest that—at least in games—developers should strive to **prop up** this illusion. It is an interesting concept when applied to generative AI.

**Acceptance Criteria.** In order to maintain clarity, for the remainder of this analysis, we will be utilizing the following acceptance criteria for **Generative Artificial Intelligence** [26, 56]

- Natural language processor
- Computer vision model
- Audio classification and automatic speech recognition
- Trained on massive data sets—the processing of which requires **substantial GPU overhead**.
- Data sets can include **websites, books, and works of art**.
- Produces human-readable output in the medium of which it was trained.
- **Automatically Accepted:** ChatGPT, Midjourney, and Google Bard

### 2.2 Generative AI - Technical Background

**2.2.1 Primary Applications.** Generative AI is primarily used to create pieces of media based on **training data**—large data sets of the type that is being generated. The architecture that makes AI effective is known as a **neural network** (fig. 4). Neural networks **train** by analyzing input data to reach a **specific conclusion** in

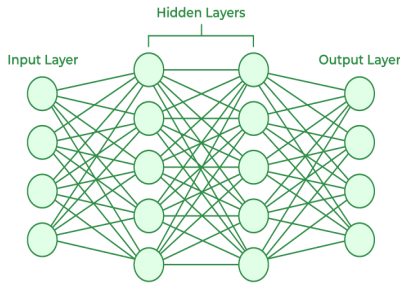


Figure 4: Neural Network

a way that is fast to iterate, due to its human-readable interface. The process of training develops a series of weights supporting the desired conclusion—which are then embedded in a **multidimensional input**. Once trained, models can quickly produce a particular product. [56] The **product** these models generate can be **practically anything**, as long as there is a way to train them.

**Dominant Sequence Transduction.** This is a deep learning model, initially documented and explored by **Google Brain**—more commonly known as a **Transformer**. [55] Transformer models were initially developed and popularized by **Natural Language Models (NLM)** such as ChatGPT. (fig. 5)

**Natural Language Processing.** The purpose of an NLM is to determine which sequence of weights—embedded in a particular input—best fit a particular decision.[55] This model has been found to make decisions to a high degree of precision, due to the sheer amount of data that is processed. This precision is the primary reason that these models are found to be useful—it can also be reasoned as the primary reason that AI **does not replace a human**. [21, 56] The specifics of *why* these models cannot operate in isolation will be explored later.

**Learning model architecture.** The specific architecture of the neural net can vary, but they all contain two necessary components: an **encoder-decoder framework** and **self-attention mechanisms**. The encoder framework provides certainty values to the user as output. **Self-attention** helps contextualize the importance value of an input—this makes the transformer effective in **sequential** applications such as natural language models. [56]

*Weigh importance of words in a sentence ... and generate coherent responses.*

ECHO YIN, ON NATURAL LANGUAGE TRANSFORMERS. [56]

**Training process.** Once the engineer has selected a learning model and architecture, data initialization begins with (typically) random parameters. The model is given a **training objective**, which produces a loss value. The model then adjusts values to minimize this **loss function** via self-attention methods such as **normalization, validation, and back-propagation**—which is a gradient descent optimization of the loss function. [57] Most deep learning methods seek to evaluate the **precision** of the result—producing the output that is **most likely** to be what it has been

trained to recognize. This statistical method rarely produces 100% certainty—highlighting a **structural flaw** of this technology which modern engineers have yet to find a technical solution. [56]

### 2.2.2 Deep Learning Algorithm - Attention.

**Calculating importance.** The importance value is calculated via an **attention function**. It calculates which parts of a given input are relevant. **Relevance** within this context means a **desired product** based on training and sequential data. Each word in input sequence is transformed into three vectors, then passed as parameters to the attention function:

$\hat{q}$  = **Query**—relevance of current word

$\hat{k}$  = **Key**—relevance of current word to all other words

$\hat{v}$  = **Informational context** via training data.

$$\text{Attention}(\hat{q}, \hat{k}, \hat{v}) \in \mathbb{R}^{n_q \times d_v} = \text{softmax} \left( \frac{\hat{q} \cdot \hat{k}^T}{\sqrt{d_k}} \right) \hat{v}$$

Where:

$d_k$  = Dimensionality of the key vectors

$n_q$  = Number of queries

$d_v$  = Dimensionality of value vectors

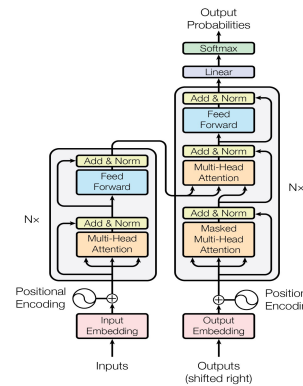


Figure 5: Transformer Architecture. [6]

**2.2.3 Deep Learning Algorithm - Loss Function.** Categorical cross-entropy, or **softmax loss**, is a loss function used to determine the precision of a particular result, and allows the model to adjust parameters in the effort of minimizing this value. **Classification** in this context is the predicted assignment of value for a given input.

$$C(\hat{y}_{\text{true}}, \hat{y}_{\text{pred}}) = - \sum_{i=1}^N \hat{y}_{\text{true},i} \log(\hat{y}_{\text{pred},i})$$

Where:

$\hat{y}_{\text{true}}$  = **True label vector**—quantifies precision

$\hat{y}_{\text{pred}}$  = **Predicted probability**—current classification.

$N$  = number of classifications

## 2.3 Ethical considerations - introduction

The recent rise in public awareness of AI can be found to correlate positively with the **processing capabilities** of modern computers and the **wealth of data** that now exists for the models to train on.

**Machine learning (ML).** The modern study of machine learning is a fascinating **intersection** between the objectivity of technical fields like statistics and computer science, and the **simulation of artistic subjectivity**—typically effective in the various disciplines of **art** and **design**. The intersectional nature of this technology requires careful **ethical consideration** when choosing how to deploy its capabilities. Historically AI has gathered a wealth of training data through scraping the internet for data. In almost all cases, **consent** was not given for this data to be used in training of the model. [53]

**Current litigation.** The **legality** of almost every publicly available model—as of Spring 2024—is being called into question. [1] Only time will tell if these models will be allowed to stay in circulation. It will be interesting to see what happens if these models are discontinued, and how replacement models will gather training data in an **ethical way**. This problem will be explored in depth later—through the lens of expert stakeholders who have a strong basis of knowledge from which to **make predictions**.

*The number of transistors and resistors on a chip doubles every 24 months.*

Moore's Law (1965) [35]

**2.3.1 Hardware development.** Moore's law has been a core understanding within the field of computer science since even before the **Unix Epoch**. [33] This **exponential growth** has prompted discourse since its inception about the eventual limitations of this growth. This discourse is ongoing, with debates over its validity considering the continuous advancement in silicon manufacturing. There is still uncertainty about when adding more transistors onto a square centimeter **becomes unfeasible**. [17]

**AI impact - Manufacturing.** The shift of silicon manufacturing towards AI architectures limits availability for general-purpose computing such as micro-controllers, and consumers very rarely have a choice to avoid AI accelerators in devices like smartphones, creating ethically dubious computing problems. The rise in popularity of AI—and its dependence on the GPU [56][26]—means that manufacturing of the components required in training takes precedence. The **environmental impact** of AI should be carefully considered—both in the manufacture of components as well as the energy required to train these models.

**AI impact - Silicone Wafer Development.** The environmental impact of large language models (LLMs) is a significant concern, primarily due to power consumption and silicon manufacturing. LLM training requires substantial computational resources, contributing to high power usage. Nvidia dominates in manufacturing chips optimized for LLM development, outpacing competitors like Google. Silicon manufacturing, essential for LLM hardware, is water-intensive and environmentally damaging, especially in terms of runoff and biosphere impact, often affecting regions in the

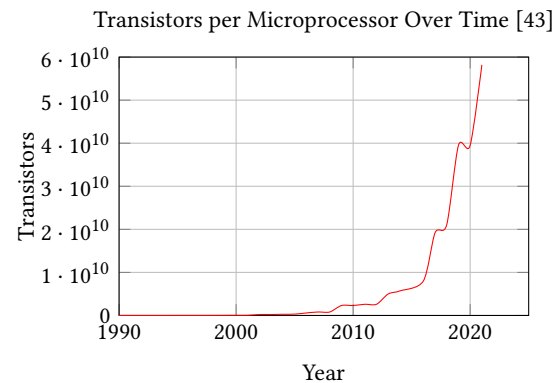


Figure 6: Transistors per Microprocessor Over Time

global south. Demonstrating the correlation between LLM development/deployment and increased demand for silicon production or intensified resource usage poses a challenge without extensive data analysis.

## 3 STAKEHOLDER PERSPECTIVES

### 3.1 Intersectionality and Empathy

An **intersectional** [9, 52] approach to Generative AI is likely the best way forward for our culture. To use a utilitarian lens [49], the path forward likely to cause the **least suffering** [20, 28] is that which carefully considers the implications for as many stakeholders as possible. To this end, we will examine the problem through the three major disciplines of **game development**:

- Visual Artists
- Designers
- Software Engineers

Attempting to **empathize** with each will allow an unbiased judgement on this technology. To ensure our argument is empirical, we will not be including the common viewpoints of any the following **bad actors**.

**The Empathetic Lens.** The nuance of this particular issue requires an intersectional approach that considers each **stakeholder's** values empathically. **Empathy** is the baseline expectation for analysis of any ethical quandary, and without it, an **empirical** argument cannot be made.

**Importance of primary sources.** Firsthand experience is critical during ethical analysis. Ethics—being a personal and subjective practice—requires data from the stakeholders who interact on a **personal level** with generative AI. In order to ensure accuracy of conclusions, we will be analyzing several interviews from individuals close to this issue.

#### Interview Acceptance Criteria

- **Respect** for the individual being interviewed, no matter their background.
- **Objective**, data-seeking questions.
- **Informed** lines of reasoning, intended for more clarity on the issue.



- **Consent** from each interviewee to be used in analysis. Informed that their responses or demographic information may be factored into any conclusions made.

### 3.2 Perspective - The Bad Actors

**Impediments to Human Progress.** As with any human development under capitalism [10, 24], there are individuals and corporations who would stand to lose a great deal from a rise of this **disruptive** technology. We shall highlight the archetypal entities which do not participate in this discussion with a **good faith** principle.

**3.2.1 The Owner.** This is the owner of the software / data sets. In order to operate this software, it must be monetized for profit from the consumer. In cases where the owner is a **publicly traded company**, it has a fiduciary responsibility [3] for this profit, over any ethical concerns that lack regulation.

**3.2.2 The Swarm, AKA the Twitter effect.** It is hard to properly define this entity in a general sense, as it is more of an idea than an entity. These are the **commonly-held conceptions** of AI—broad opinions and cherry-picked information—that support a particular viewpoint. The intentional nature of these conceptions are most effective when distilled into soundbites that may be easily propagated online. [37] They can often be attributed as **memes**, [14] which speaks deeply to how human interaction has been changed by the interconnected and carefully constructed state in which we exist online. [36]

**3.2.3 The Opportunist.** These are the stakeholders which stand to gain from the unethical application of this technology. Their aims may be financial or political, intentionally manipulating the narrative, especially online. [44] This emerging strategy was seen to be effective in the US election of 2021, [32] and—despite the terrible ramifications of those strategies [30]—opportunists do not consider the ethical implications when they see prospective gain.

**The bad actors, ramifications.** While these **bad actors** do not contribute **empirically positive** arguments to this discussion, their involvement should still be considered as a major factor. These stakeholders manipulate "regular people"—especially online—to control the narrative. [51] In order to combat this influence, a participant in this discussion should carefully consider where their viewpoints **truly** originate, and do their best to discuss and argue from an **empathetic** and **intersectional** position.

### 3.3 Perspective - Visual Artist

**Immediately Impacted.** Visual artists are the stakeholders who are most immediately effected by the rise of this technology. For many of these people, their livelihood has been **threatened**—and in several cases taken away—during the adoption of this technology. [18, 21]

#### 3.3.1 What is Art?

...if this is how you people make art its ... depressing.

AJJ, *Brave as a Noun*

**It is not.** This question may be one of the greatest debates that has ever presented itself for humanity to ponder. The question, "what is art?" attempts quantify art as a **singular** and **discrete** concept—something that betrays ignorance of this **transcendental modality** through which we express our **human spirit**. [21] This human spirit is what drives artists to create, to express themselves in a deep and meaningful way. **It is not** something that can be created by a discrete quantity or statistical probability.

*AI can't tell you something looks good, or is on brand or has a human element. You still need a human for that, which brings us back to the artists using the tool as a multiplier for their efforts.*

Nathan Stahlman, on AI as a tool.

**3.3.2 Impact on the artist.** Modern artists may need to begin using AI tools to remain competitive—at least while our current economic system persists. [10] The unfortunate reality is that corporations must **prioritize efficiency and profit**, and artists that are using these tools will be able to **produce value** more effectively. For artists already using these tools, it seems to be the natural evolution of their art form.

**AI as a tool.** Analogues can be drawn to previous technological developments in art—and the time it took for these innovations to no longer be considered **scientific instruments**. To be commonly accepted as art, it took photography almost fifty years—film and cinema had faster adoption at around thirty. [21, 50] If this is correlated with the exponential development of **Moore's Law**, [35] it stands to reason that AI art may be adopted much faster. The current **exasperated social climate** surrounding the technology may be attributed to the capacity of humanity to **adapt**—and how technological development may be **outpacing** our collective conception of the future.

*The AI is the commissioned artist, but the input requires someone who has developed many aspects of their lives, be it a formal understanding of art, or a mastery of the English language, or specialization in CG, etc.*

JAZNO FRANCOEUR, ON SYNTHOGRAPHY [21]

**3.3.3 Synthography, overview.** The emerging field of generative AI art—also known as **synthography**—is the practice of prompting the tool in an iterative way to generate a product that layers entire collected works or mediums on top of each other. The process cannot be done by the AI alone—it requires a human's context and experience to **prompt** the model in a way that will give the desired result. [9, 19, 21, 48]

**3.3.4 Synthography, ethical considerations.** There is **experimental evidence** that several generative AI models in public circulation have been trained on **data scraped from the internet**. This content includes an incredible range of data such as artwork and photography, personally identifying information like phone numbers and addresses, and even *JavaScript* code snippets—likely to have been unintentionally included by training on "dirty data". [38] While proponents of generated art posit that everything on the internet has always been **public and free**, [54] concern arises

when corporations are **profiting from data** that was not explicitly consented to be trained on.

*...net neutrality refers to the basic principle that ISPs [internet service providers] should not unreasonably discriminate against legal internet traffic and online communication, regardless of its source or destination.*

After Net Neutrality : A New Deal for the Digital Age (2019) [45]

**Net Neutrality.** The free and open internet—throughout the technology’s inception and development—has been what many proclaim to be the reason it remains one of the most monumental technological jumps for humanity. [2, 4, 54] Its regulation has been the primary effort of governmental agencies for the last two decades. [31] This has made the internet a **safer place**, but every regulation comes with ethical concerns about the nature of our online environment. Primarily, there is a concern that regulation will enforce **corporate interests** over this **core tenant**—and the ideal that makes the internet so powerful. [4, 45]

*The license must not restrict anyone from making use of the program in a specific field of endeavor. For example, it may not restrict the program from being used in a business, or from being used for genetic research.*

Criteria 6, Open Source Initiative [27]

**3.3.5 Synthography, regulation.** A common sentiment amongst all **good-faith** participants in this discussion is an urgent need for **regulation**. [18, 21, 50, 56] The *Social-Utilitarian* [8] balance needs to be pushed by government stakeholders—who recognize that our culture cannot prosper under its current, divisive state. Policymakers should strive to understand and **empathize** with all of their constituents, and reject **corporate influence** upon their legislation. Preserving the sanctity of the internet—while protecting its users—is an **intersectional** process that must begin before the further propagation of this technology.

**3.3.6 Synthography, conclusion.** generated AI art made with any model that has been trained on data without **express consent** of the individual—who can reasonably be proved as the owner of said data—should not generate profit. The trained model and data must be freely available as **open source**. For data that contains **sensitive** or personally identifiable information, the engineer or owner of the model has a **social responsibility** [25] to:

- **Report** to the appropriate regulators that personal data was gathered
- **Dispose** of the data in the method that best expedites the process.
- **Clean** and inspect data before public access.

These regulatory actions will initially create some **financial and technical hurdles** for stakeholders that understand the potential of AI. These hurdles are required and necessary for a vision of the future where creative endeavors are driven by **human spirit**, not **profit**.

### 3.4 Generative AI - Example Generations

**Prompt Engineering.** As AI becomes better developed, the discipline known as **Prompt Engineering** [9] has begun to emerge. This is the practice of crafting statements that are **most digestible** to the natural language model. To this end, manipulating what you request of the AI is a specifically honed skill. To best use this tool for **whatever purpose** you wish, these prompts should express feelings as though humans would. **Subjective, emotional, and human-readable input** has been shown to produce better results in the language model **ChatGPT 4.0**. In order to fully test the capabilities of this natural language model, we will ask the AI to "defend" its position in this discussion.

#### 3.4.1 Positive Connotation - AI GENERATED.

**AI is our salvation.** We are first going to bias the AI with a positive intention—presenting the technology as the answer to every and any problem that humanity might face.

*I would like you to create what sounds like a valid argument for the integration of AI into our society. To the best of your ability, make it sound hopeful and positive of the technology.*

User Input [12]

In the dynamic landscape of the 21st century, the integration of artificial intelligence (AI) into society heralds a transformative era of innovation and improvement across multiple facets of human life. AI offers unprecedented opportunities to enhance the efficiency, accessibility, and quality of services in sectors such as healthcare, education, and environmental management.

*Keeping the wording of each exactly the same, bold words (using the LaTeX format of \textbf{ }) to provide emphasis to the point being made*

User Input [12]

Artificial intelligence promises to **revolutionize** critical sectors like healthcare by enabling **early disease diagnosis** and **personalized treatment plans**, improving patient outcomes at **reduced costs**. In education, AI can **tailor learning experiences** to individual student needs, enhancing engagement and mastery of subjects. This technology also offers potential environmental benefits, such as **optimizing resource use** and **reducing waste**, supporting a more **sustainable future**.

In conclusion, the thoughtful integration of AI into society, with proper regulation and ethical considerations, promises to enhance our quality of life, democratize access to essential services, and drive forward our capabilities to solve complex challenges. Embracing AI is not just about technological advancement—it’s about paving the way for a more efficient, equitable, and sustainable future.

#### 3.4.2 Negative Connotation - AI GENERATED.

**AI will ruin it all.** We will now have the AI create a scenario in which the doom that this technology represents is ever present and foreboding.

*Create a starkly contrasting statement that also sounds like a valid argument. It should be just as foreboding and anxiety-inducing as the first generation was hopeful.*

User Input [11]

As we stand on the brink of a widespread integration of artificial intelligence (AI) into every corner of society, we must confront the profound risks and ethical dilemmas this technology poses. The rapid advancement of AI capabilities threatens to outpace our ability to govern them effectively, potentially leading to unprecedented negative impacts on privacy, employment, and social equality.

The rapid integration of AI into society raises serious concerns about **privacy**, as these systems can track and analyze personal data on an unprecedented scale, potentially leading to **invasive surveillance**. Automation threatens to **displace** large segments of the workforce, particularly in low-skill jobs, exacerbating **unemployment** and **social inequality**. Additionally, AI's ability to **perpetuate** and even **enhance** existing biases presents significant risks of **systemic discrimination**.

In conclusion, the unchecked integration of AI into society could lead us down a path of increased surveillance, economic inequality, and ethical violations. These risks demand rigorous oversight, stringent ethical standards, and proactive international cooperation to ensure that AI does not become a technology that harms more than it helps.

**Empathetic Middle Ground.** As it should be clear from these two generations, **Artificial Intelligence** can be manipulated to generate whatever you like. It is evident, upon closer inspection, that this technology is a tool like any other. It is likely due to **ignorance**—and the subsequent **fear** that comes along with it—that AI seems like anything more than such a **tool**. To finalize with some conclusive data, we will use a prompt that follows an **empirical ethical analysis** methodology to find a middle ground.

### 3.4.3 Empathetic Lens - AI GENERATED.

**AI as a tool.** Reaching a reasonable conclusion is as simple as combining the extremes into a coherent thought. Several of the **expert stakeholders** interviewed during research concurred that a **balanced** approach would be the most likely outcome for our culture. [18][56][50]

*Now, create a short (1 - 3 sentence) combination of the two generations*

User Input [13]

As we contemplate the integration of artificial intelligence into society, we face a **dual-edged sword**: while AI promises to **revolutionize** healthcare, education, and environmental sustainability, it also poses serious risks to **privacy**, **employment**, and **social equity**. Balancing these **prospects** and **perils** will require **careful**, **ethical stewardship** and **proactive governance** to harness AI's potential while **safeguarding** against its threats. Ultimately, our approach to AI will determine whether it becomes a tool for **widespread benefit** or a source of **unintended consequences**.

## 4 RELEVANCE AND CONCLUSION

### 4.1 Ethical Relevance

**Rational, empirical expectation**—within an irrational, biased culture. In order to present the ethical ramifications for Generative AI, all perspectives should be considered empirically. How stakeholders will begin to address these ethical concerns may not always follow a **reasonable expectation**, given historical precedent for corporate stakeholders to **prioritize profit**. [3, 44] To address this problem, these owners will have to recognize their responsibility—their contractual obligations to society [25]—to adhere to and enthusiastically **support regulation** for the common good.

**Compromise, game developer lens.** Within game development, this conflict of **human spirit** and **technical assertions** is accepted as simply part of the process. Heightened emphasis on **accessibility** and **narrative design** in recent years may allude to shifting mindsets towards human-centered design within the industry. [18] For game developers, it will only become more evident as time goes on—only truly **creative** and **original** games will find lasting success.

**Ethical integration.** In order for owner stakeholders to integrate AI effectively—and any other subsequent **disruptive technology**—a similar fostering of an **emotional connection**—core to effective narratively-driven design in games [18]—to their product can help make these products more ethically acceptable. By specifically analyzing what **human elements** are necessary—and ethically deciding how to integrate [50]—seems to be the most logical and empirical way to proceed with the integration of this technology into our society. The **utility** of this methodology has been maximized with an intersectional lens—to provide the greatest number of people the greatest amount of benefit. [28, 34, 49]

### 4.2 Intersectional Conclusion

**Disruptive Technology.** It is important for anything that is described as a "disruptive technology"[9] to be carefully considered through the lens of as many people as possible before making judgments. It is often the case that social issues are much more nuanced than our online circles would have us believe. This lack of nuance in much of our social communication[22] on the internet creates feelings that may not be representative of how this technology could best be integrated into our society.

**The middle path.** One of the most ubiquitous ideas throughout collected interviews, literature, and social media consensus is the concept of the **necessary human element** that artistic endeavors require. [18, 21, 50, 56] This supports the ideal that AI in its current state must be empirically studied—for the sake of the **human element**—from an intersectional and empathetic stance. This involves carefully weighing the individual utility of the implementation of this technology—not on a discrete scale like an AI would—but integrating everything we can know to be true into our viewpoints, in a continuous and ever evolving way.

**4.2.1 Judgement Pending.** Deciding whether the technology is **good** or **bad** is much like trying to define art: if you are asking this question, it means you are prescribing to an ideal that can be easily

latched onto and manipulated, like a **meme**. It betrays a lack of depth of reasoning that cannot contribute the ethical integration of this technology into our society. This is due to nature of our culture online where the depth of human interaction is limited to a format which does not encourage in depth attention.

*Is it ethical for journalists to use Generative AI-based tools to create templates for their articles, to edit/fill in before publication?*

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**Context is key.** To finally answer this question—in a more explicit way—it should be clear from this research that to blanket assign *ethical* or *not ethical* to a particular issue is not conducive to development of **human thought**. Instead, we will assign a particular set of acceptance criteria that can be used when delving into the particular scenario where a journalist is using an AI tool:

#### Positive Utility Acceptance Criteria - AI Tools in Journalism

- **Ethically** trained models, via enthusiastic consent of participants and stakeholders—with a particular interest on an **intersectional** ethics model.
- **Bias** of every stakeholder is transparently documented. Journalist's bias would have to be especially clear, as the author of the article.
- **Accreditation** to the extent of which generative AI is used.
- **Social Responsibility** for the journalist to use this tool in a way that best befits the **human spirit**.

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