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Exploring the Human-AI Creative Spectrum: Predictive Insights from Public Perceptions on AI and Art

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Abstract: ***The following study investigates the perception of AI-created art in contrast to human-made artworks as Artificial Intelligence (AI) enters creative domains more and more. A mixed-method survey was developed called Artist Voices Matter, and the answers of artists, educators, students, and the general population were collected. Quantitative data was plotted and the sentiment of the open-ended responses was analyzed via TextBlob library.***
It is found that despite the AI generated art being recognized as a sign of innovation, human generated art is still more touching and believed in. Moreover, the majority of the respondents advocated the necessity of regulation that would guarantee a transparent AI art. These perceptions emphasize the need to retain a sense of human emotion and moral bearing in an artistically twenty-first-century driven by Artificial Intelligence.
Keywords: Artificial Intelligence, Artificial Intelligence Art, Artificial Intelligence and Creativity,Artificial Intelligence Sentiment Analysis, Emotional Trust, Human Created Art, Human Perception, Regulation, Sentiment Analysis, Artificial Intelligence

I. INTRODUCTION

The recent steps toward the incorporation of AI into the creative sphere have transformed the conventional concept of human creativity by altering the lines between the man-made and machine-made creation [1]. The introduction of such art, AI-generated mainly via models trained on huge databases of existing artcrafted works by humans, has raised significant questions pertaining to the areas of originality, artistic genuineness and pathos [2]. Musicians have recently taken an interest within the limitation of how machines can create artwork that is visually interesting on its own merits, in opposition to popular belief that art is purely a human endeavour [3].

However much the AI-created imagery may astonish with technological prowess and stylistic adventurousness, there is a growing doubt as to whether these designs have any chance of remaining deeply emotional or of supporting the full sensory landscape art constitutes in a human being [4].

Besides philosophical issues, the emergence of AI-generated art brings about a set of tricky questions of law and ethics. Questions of authorship, ownership of copyright and disclosure have become highly problematic and particularly the case when the AI-generated work more closely resembles those created by humans, claimed [5]. The issues have prompted greater debates in society about whether AI could be a valid creative actor. In addition, the views held by ordinary people continue to be varied and in some cases, contradictory with a growing concern on the ways viewers perceive, affirm, and/or evaluate such technologically oriented products [6]. This research paper will attempt to explore the emotional reactions, trust rates, and more preferences of the audiences on AI-based art in comparison to the human-made ones and finally provide an insight into how AI is reshaping the definitions of human artistic identity [7].

II. LITERATURE REVIEW

Whether a creative role can be attributed to AI or not has become the focus of question within the present technology and arts debate discussion. The article published by Horton et.al. [1] accentuated the very fact that people hold biases against AI-generated art might ironically increase the perceived value of human creativity, thus showing that emotional reactions are strongly connected to the belief about human creation. On the same accord, Grassini at.al. [2] investigated the characteristics of underlying differences in how people process and perceive AI and human-generated visual stimuli and concluded that human elements tend to be more aesthetically engaging in evoking and creating emotional responses as compared to AI. In their paper, Garcia et.al. observes the paradox of AI advancement in creativity, because generative models may easily replicate human style and technique, but unfortunately not the mature experience that forms artistic expression. This is consistent with the report of Hall et.al. [4] which indicates that it is still not easy to be backstaged by AI as far as the emotional authenticity of human-created art is concerned. Such differences in emotions and perceptions tend to stir fear of AI in creative industries.

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In the perspective of society, societal belief of AI generated content is created not only with the consideration of aesthetic but also ethical and financial issues. Bran et al. [6] remarked that the rising presence of AI in the creative economy causes concerns regarding job casualties and identity in art. Pagani et.al. [5] covered how marketing creativity can be accessed through AI but also emphasized the need to keep hold of the human level to ensure there was a strong emotional appeal.

In addition to this, studies conducted by Zhang et al. [8] reveal a neural bias towards AI-labeled paintings, prone to lead to consciously and unconsciously motivated prejudice against neural art as a result of human attraction to the AI label, irrespective of the gist. On the same note, Puerta-Beldarrain et al. (2025) [7] argued on the need to have collaborative structures and openness in human-AI collaborative creative processes. Judging by their effect on society and culture, Yadav et al. [9] and Bozdag et.al.[10] addressed the potential of AI to break down the traditional artistic framework and cultural stories. They enhance the notion that the general perception, legislative requirements, and artistic genuineness have to move together with technological progress. In their work, Lee et.al [11] attempted to examine how consumers prefer artworks and came to the conclusion that even the technically sound artworks provided by AI can provoke the audience to attribute them with greater artistic merit and emotional authenticity when these artworks are known to be created by people.

All of these works combined present a growing body of literature that indicates just how complicated incorporating AI into creative fields is. Besides, they set a solid ground of the current research goal, which is premised on determining the relationship between the attitude and emotional reaction toward AI-produced and human-created art, both in terms of numerical statistics and sentiment-based information.

III. METHODOLOGY

The study was conducted in four key steps: data collection, preprocessing, analysis, and interpretation. This approach aimed to evaluate societal perceptions regarding how AI can influence creativity, utilizing both structured and unstructured survey responses.

A. Data Compilation

For this study, a survey titled Artist Voices Matter was developed using Google Forms and distributed to artists, educators, students, and the general public. The questionnaire comprised:

- Multiple-choice questions that explored areas such as the potential impact of AI on jobs in the creative industry and whether art produced by AI should be regulated.
- Open-ended questions that invited participants to express their concerns regarding AI in art and share their personal interpretations of creativity. This qualitative data provided insights into emotional responses and societal attitudes, aligning with prior research highlighting public apprehension about AI's role in creative fields.

Upon completion, the responses were exported to a CSV file for analysis, utilizing Python for data manipulation and visualization.

B. Data Preprocessing

The initial steps involved cleaning the dataset. This involved:

- Identifying and removing any duplicates or irrelevant responses.
- Cleaning text fields using regular expressions (regex) to ensure consistency in responses for sentiment analysis.

These preprocessing steps aligned with methods used in previous studies that employed data cleaning techniques to improve response accuracy in sentiment analysis.

C. Text Field Cleaning

The cleaned data was analyzed through visual and sentiment analyses:

- *Visual Analysis:* Structured data were represented through bar charts and pie charts to illustrate public sentiment about AI and creativity. For instance, a significant portion of participants expressed concerns about AI negatively impacting job prospects in creative fields.
- *Sentiment Analysis:* Open-ended responses were evaluated using the TextBlob library to measure sentiment polarity, reflecting participants' emotional reactions toward AI versus human-made art. Previous studies have shown that human-created art typically evokes stronger positive sentiments due to perceived emotional depth.

The synthesis of these analyses aimed to uncover deeper insights into societal perceptions of AI within the creative sectors, contributing to ongoing discussions about the ethical implications and regulatory needs surrounding AI in the arts.

D. Visual Analysis of Structured Data

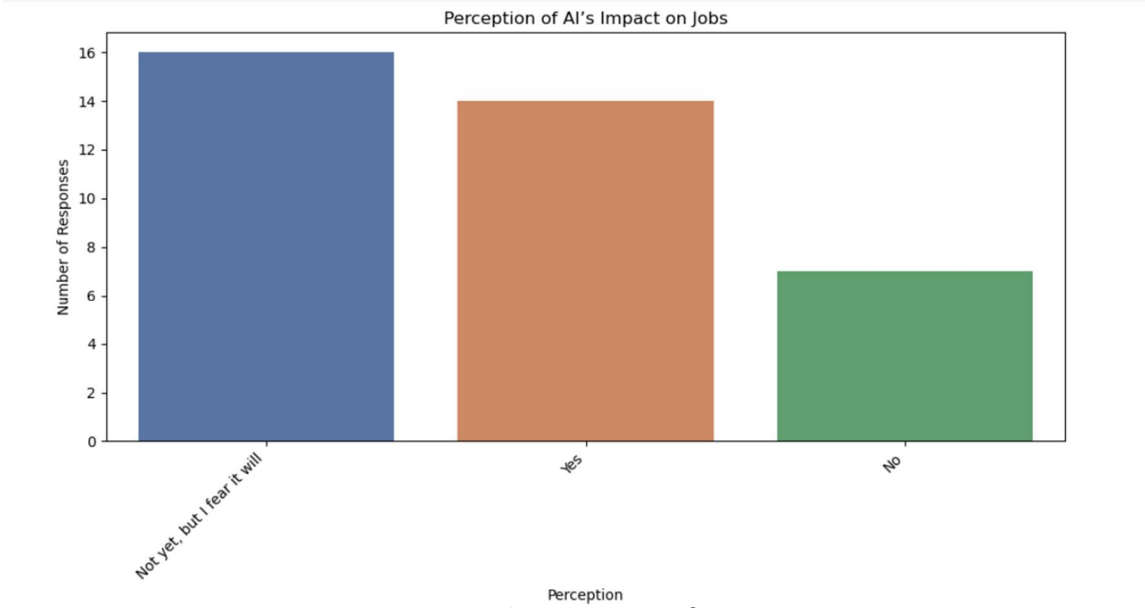


Fig. 1 AI's Impact on Jobs

This is the impact of AI on job security which is examined and is portrayed in figure1. The bar chart provides the percentage of respondents, who believe that AI has a harmful influence on job security in the creative industries. Viewed as a consequence of AI growth, about 70 percent of the respondents had reservations concerning their career opportunities. The large distribution of answers reporting anxiety should be taken as a start point of the discussion regarding what the impact of AI on employment in the creative sector might be, and it indicates that some measures might be needed to mitigate the concerns. Observing the chart in fig. 1, it becomes perfectly visible that quite a lot of respondents perceive that AI is a negative factor regarding their job opportunities.

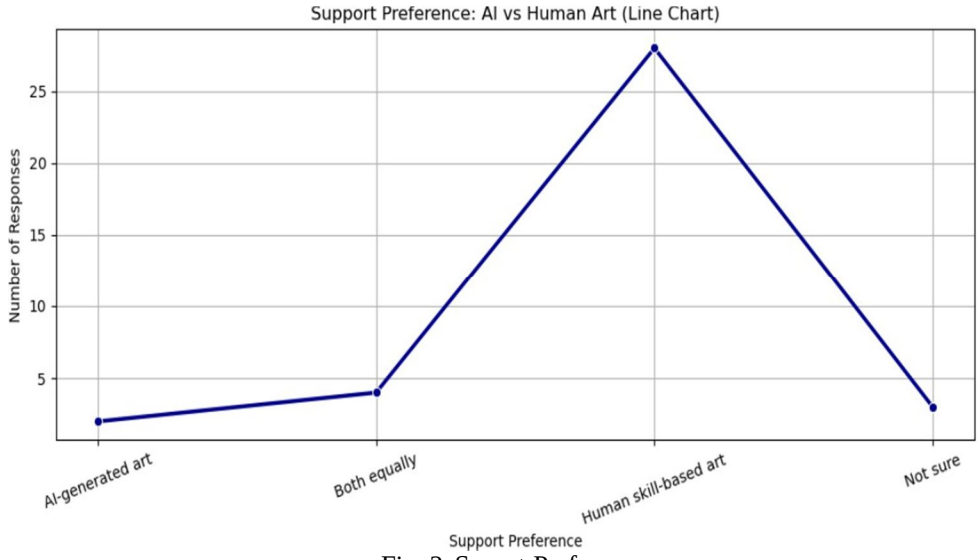


Fig. 2 Supprt Preference

In Fig. 2, a line chart is provided that records the responses of the survey participants regarding the preferences of people between human and AI artwork. More than 60 percent of participants were strongly inclined to human-caused art on the basis of emotional attachment. Such a preference allows establishing the importance of audiences who value emotional depth and personal experience in art and implies that although artificial intelligence can also create a quality work, it cannot challenge human creativity in terms of emotions. It is well obvious, based on the line chart in fig. 2, that art made by human beings was highly supported as opposed to AI-based art.

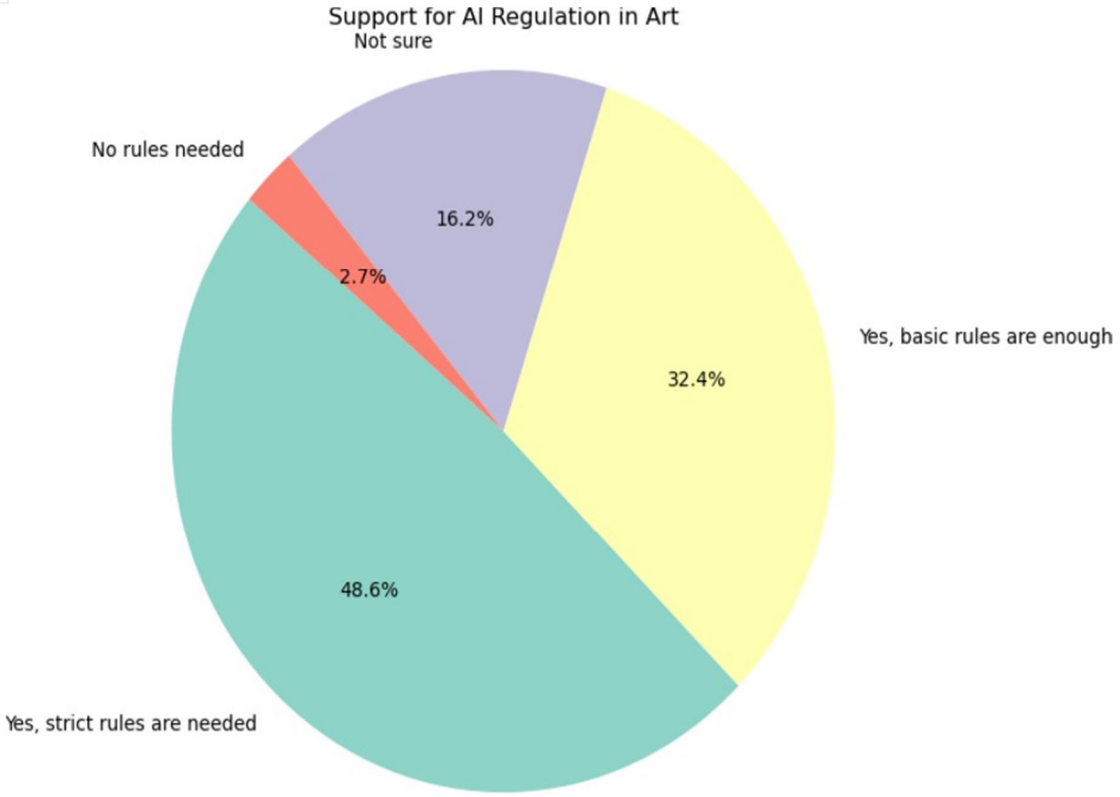


Fig. 3 Regulation Support

The pie chart in Fig. 3 shows that more than 85 percent of the participants of the survey are in favor of regulatory measures or labeling of AI-generated artworks.

The segments demonstrate the variety of thoughts on what this regulation should include, especially on transparency. The regulation which has been over-supported determined that there is a common urge to have an ethical code when creating AI art, and the clear guidelines would help safeguard human art skills in the changing face of technology.

Based on the pie chart of fig. 3, it is obvious to note that more than 85 percent of respondents favor regulation or labeling on AI-generated art.

E. Sentiment Analysis

1) Using TextBlob

The various steps in this process are illustrated below. Step 1: Load your dataset

Step 2: Select only text (object) columns

Step 3: Separate AI-related and Human-related responses Step 4: Combine all text into single string for each group Step 5: Sentiment Analysis using TextBlob

Sentiment analysis of open-ended questions in the AI and human creativity surveys is performed by loading a data set, making the text columns to be filtered, segregating AI and human satisfaction of responses, and analyzing them by combining with AI efficiency responses. The TextBlob is a natural language processing tool that is used to calculate sentiment polarity. The approach shows that this methodology means that there is a categorical way of recognizing the emotional temperaments in the various text reactions.

The difference between AI and human-related sentiments brings out implicit public opinions regarding the role of AI in creativity. This sentiment analysis could be used to clarify future studies into the views of people towards AI in the arts as its outcomes will direct the course of the study. It is essential to view emotional responses to understand what ethical rules and what flaws people can find in the use of AI to make creative decisions.

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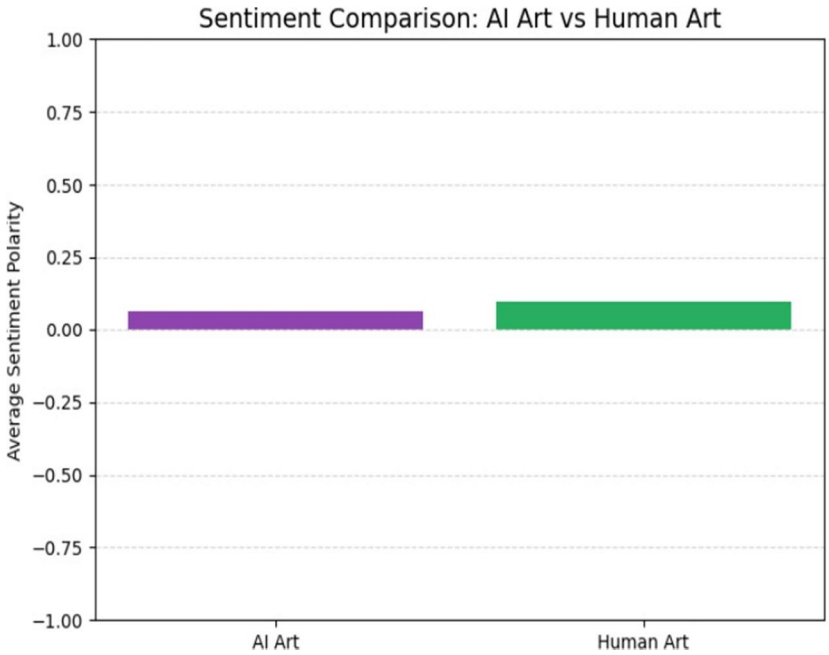


Fig. 4 Sentiment Polarity Comparison

Fig. 4 presents a bar chart comparing the average sentiment polarity between AI-generated art and human-created art. The chart shows that human art has an average sentiment polarity of approximately 0.12, while AI art has a score of about 0.08, indicating a slightly lower positive sentiment toward AI art. The chart highlights the public's stronger emotional connection and trust towards human creativity compared to AI-generated alternatives. The positive polarity associated with human art suggests that audiences value the emotional and experiential depth that human artists bring to their work. This sentiment comparison underscores the need for the art community to recognize and address public perception issues regarding AI art. The findings may advocate for more transparency and ethical regulations surrounding AI-generated works, ensuring that human artistry is not diminished in the evolving cultural landscape. From the pie chart in fig. 3, it is understood that The public expresses more emotional positivity and trust toward human creativity.

IV. MATHEMATICAL MODEL

A mathematical model for the sentiment analysis is illustrated below.

$T = \{t_1, t_2, \ldots, t_p\}$: All cleaned textual responses

$T_{ai} = \{t_i \in T \mid "ai" \in t_i\}$: Subset of T containing responses that mention “ai”

$T_{human} = \{t_i \in T \mid "human" \vee "artist" \vee "creativity" \in t_i\}$: subset of T containing responses that mention “human”, “artist”, or “creativity”

The TextBlob sentiment polarity function is :

$$(t_i) = polarity(t_i) \in [-1, 1]$$

The average sentiment score for AI and Human responses:

$$\mu_{ai} = \frac{1}{|T_{ai}|} \sum_{t \in T_{ai}} S(t)$$

$$\mu_{human} = \frac{1}{|T_{human}|} \sum_{t \in T_{human}} S(t)$$

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V. DATASET MANIPULATION

The steps that were followed to use the cleaned data to analyze it in terms of variable selection as well as data grouping is illustrated here.

A. Identification of Variable

The independent variables in this study are of both categories; categorical variables and textual data. The categorical ones are the user reaction which are job impact, support preference and so on which depicts the participant opinion. Also, the textual variables that were cleaned up such as ai_worry and creativity_meaning are included into the independent variable set, providing a qualitative picture of perception concerning AI and creativity.

Dependent variable (Y) also changes depending on the category of analysis. In visualizations, it gives a numerical perspective on the public opinion trends as it shows the counts of the different response categories. The dependent variable, in the context of sentiment analysis, represents the polarity score calculated with the help of the TextBlob library that measures the emotional tone of the textual responses on the scale of negative to positive.

B. Logical Data Splitting

Though in this research no machine learning methods are carried out, the data being processed was still naturally partitioned to fit the data accordingly. Structured (quantitative) data like those produced in a survey, as well as categorical data, were tabulated and plotted as charts to determine trends and patterns. Conversely, unstructured (qualitative) textual data were analysed independently through the natural language methods. Particularly, the sentimental analysis was conducted through text separation: the column with ai_worry was extracted into the ai_texts variable (ai_texts = df['ai_worry'].dropna()), as well as the column with the creativity_meaning which was extracted into the human_texts variable (human_texts = df['creativity_meaning'].dropna()). This separation permitted a customization to make sure that structured data was properly visualized as text was run through TextBlob to provide insights on emotional and contextual analysis.

C. Final Application and Storage

After the data was cleaned and ready, it was stored in a new CSV file to provide proper documentation, reproducibility, and convenience of analyzing it later. It was performed with the help of the command df.to_csv("Cleaned_Artist_AI_Survey_v3.csv", index=False) that exported cleaned data into a new file and without index values. This was an important step towards facilitating the integrity of the refined data.

The resulting data allowed a thorough interpretation not only with the help of visualizable charts of the structured parts but also by analyzing the sentiment in the responses which is unstructured and provides a detailed and explanatory view to how people in a society view the effects of AI in art.

VI. RESULTS

The visual interpretation of the structured survey data showed that there is a very serious concern by the people on the effects of AI on the creative industry. Almost three out of every five respondents shared that AI has a detrimental effect on employment stability, indicating the development of an increased sense of fear when getting or remaining employed in the field of art and culture. Furthermore, more than 60 percent of people clearly preferred the art as the one that was created by humans and made a clear distinction between the ability to connect emotionally and the personal connection with art being the central features. The sponsors of human-created art mean that listeners continue to relate creative to human design, expression and cultural linkage. Moreover, 85 percent of respondents voiced the necessity to regulate or label AI-created art, which implies the overall preference to remain transparent and ethically neutral in regards to the usage of AI in art creation.

The quantitative trends were supported by the sentiment analysis of the open-ended responses. TextBlob was used to compute the polarity scores of responses sorted into themes of AI-related and human-related responses. The sentiment polarity was also favorable on the human art in the sense that the average polarity of the human art was higher (about 0.12) than AI generated art (about 0.08) and this means that there is strong positive human trust in the feeling that the humans were more creative as compared to the AI. Although numerically modest, this disparity signifies a greater polarity of emotion in persons perception of the worth of art and its genuineness.

All in all the picture concerning the visual and sentiment output prior composes a complete picture of a population that is amazed by the power of AI but is emotionally concerned with human artistry. All of these results lead to the conclusion that human expression should be preserved and that AI should be used to integrate into the creative process with responsible use.

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VII. DISCUSSION

The study has demonstrated that man-made art is the one which people value greatly due to its emotional load, allusion to the culture, and intent. Although it is assumed that AI may contribute to the rapid work on creativity, it is considered both inauthentic and unemotional. Results of experience by the actual people are the expressive force that is appreciated by the respondents since the AI can never produce results.

So twinned with the emotional problems were the working fears, particularly of employment and the loss of the significance of training in art. This regulation requirement that is evident in the data visualizations point out to the fact that the people would like sincerity and transparency in the use of AI in the domain of creativity. The overall sentiment is on the side of AI as one of the instruments which could be employed to assist artists, but not push them out of the business.

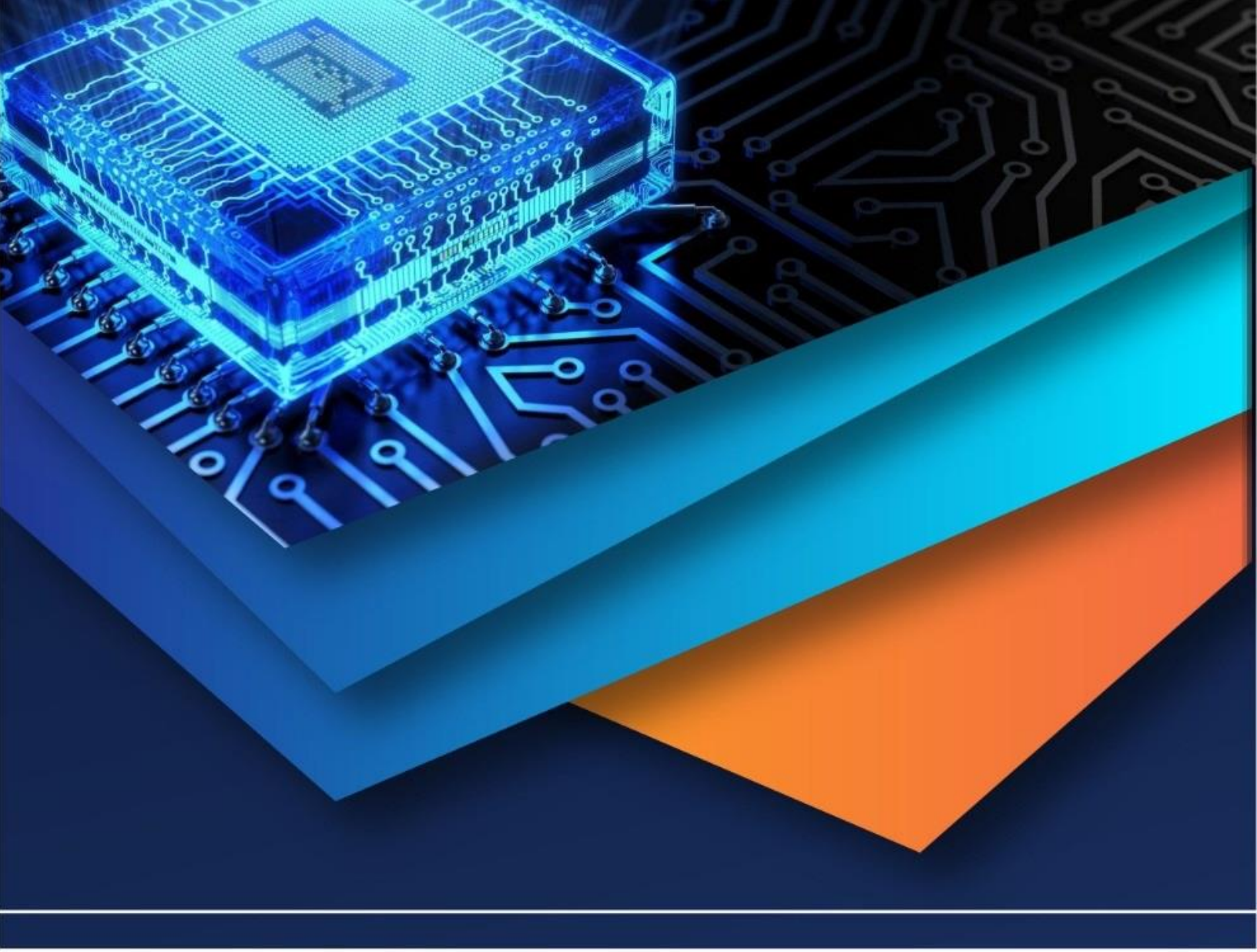
VIII. CONCLUSION

The current research offers essential information on the way people evaluate the artworks of Artificial Intelligence as opposed to human artists. Although there is great admiration of the technical complexity of AI-generated art, it is depicted as deficient of emotional empathy and even authenticity as works by human artists do possess. The obvious popular affection of art that exists because of the human-made objects also underlines the enduring significance of the emotional appeal, motivation, and experience; these are the fundamental values of the perception of artfulness.

Also, the results identify a significant demand of moral control and openness in AI producing content. Sentiment analysis further emphasized the idea that people will be more willing and inclined to react to human creativity in a more positive, trusting manner, demonstrating an emotional detachment to AI-made works. With the further development of AI taking place in the creative fields, this research highlights the necessity of the impact of technological advancement on fundamental human values. It invites the efforts of artists, technologists, and policymakers to join together in an effort to be sure that AI supplements rather than uproots who we are creatively as humans.

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