Original Article

AI-English Language Generated Content: Navigating the Fine Line between Originality and Plagiarism

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Abstract

The era of AI-generated content has introduced a profound transformation in the realms of creativity, authorship, and intellectual property rights. This study examined two research aspects. Firstly, it explored the impact of AI- English language-generated content on the traditional boundaries of authorship, creativity, and intellectual property rights. Secondly, it investigated the ethical and legal challenges associated with AI's influence on TEFL content generation and how the academic communities address these concerns. The research team employed a mixed-methods approach. Twenty-Eight individuals, organizations, and professionals made up the target population of the current study. The researchers interviewed experts in the fields of AI, law, and English language material development. The researchers analyzed real-world cases of AI-TEFL generated content usage, particularly within academic settings. The findings revealed that AI-generated content challenges conventional notions of authorship and creativity by introducing autonomous AI creators while also augmenting human creativity. The ambiguous landscape of intellectual property rights necessitates adaptive legal frameworks. While AI challenges established norms, it also offers opportunities for collaboration and inspiration. To address these issues, collaborative frameworks, ethical guidelines, and transparency were proposed as integral solutions. Respondents emphasize collaborative efforts to address the ethical and legal concerns associated with AI's influence on content generation within the academic communities. The implications extend to various sectors, including academia, creative industries, and legal systems. This study underscores the pressing need for a delicate balance between AI's creative potential and the preservation of ethical and legal standards in the evolving landscape of content creation.

Key words: AI- English language generated content, Creativity, English language teaching, Originality, Plagiarism detection

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1.Introduction

In the fast-paced digital landscape of today, the use of AI-generated content has become a transformative force in various fields, from marketing to content creation. It offers unparalleled efficiency and the promise of generating high-quality text swiftly. However, as we delve into the era of AI-assisted content production, we find ourselves at a crossroads, where the boundary between originality and plagiarism appears increasingly blurred. This paper explores the dynamic relationship between AI- English language generated content and the ever-persistent issue of plagiarism, as the research team seek to navigate the fine line that separates these two strategies.

The advent of AI writing models, such as GPT-3 and its successors, has ushered in a new era of content generation (Chowdhury & Bhattacharyya, 2018; Oya, 2020). These models leverage the power of deep learning and natural language processing to produce human-like text in a multitude of applications, from blog posts and marketing copy to chatbots that engage in conversations with users. The potential applications of AI-generated content are vast, promising time-saving, and efficient solutions for content creators across the globe.

However, the proliferation of AI-generated content also raises critical questions about originality and plagiarism, two concepts that have long been central to the world of creative and academic work. Originality, often a prerequisite for copyright protection in legal systems, is now being redefined by the involvement of artificial intelligence in content creation. The ELIZA language model, created in the 1960s at MIT, US, by Joseph Weizenbaum, is one of the earliest instances of a language model for computer-generated writing (Weizenbaum, 1966). In a landscape where machines contribute to the creative process, distinguishing between what is genuinely original and what may be construed as intellectual theft is a challenge that deserves an examination.

This exploration draws upon insights from prior research on the topic of AI-generated content, plagiarism, and originality, as well as the capabilities of AI language models, like GPT-3 and its successors (Topal et al., 2021; Birunda &Devi, 2021; Cortiz, 2022). Furthermore, the researchers delved into the legal and ethical aspects of originality within the context of copyright laws and creativity, examining how AI's contributions impact established legal and philosophical frameworks. As the research navigates this intricate

landscape, the researchers aim to shed light on the evolving relationship between AI-generated content and the timeless concept of originality (Gervais, 2002; Chan, 2023).

2. Literature Review

Presently, the domain of AI writing is dominated by three major language models:

GPT (Generative Pre-training Transformer): Developed by OpenAI in 2018, GPT is a transformer-based language model that uses unsupervised learning to generate human-like text based on a given prompt (Topal *et al.*, 2021). GPT has been widely used for a variety of tasks, including language translation, question answering, and text generation.

BERT (Bidirectional Encoder Representations from Transformers): Developed by Google in 2018, BERT is a transformer-based language model that uses unsupervised learning to generate high-quality text representations that can be used for a variety of natural language processing tasks (Birunda and Devi, 2021). BERT has been widely used for tasks such as language translation, question answering, and text classification.

RoBERTa (Robustly Optimized BERT Approach): Developed by Facebook in 2020, RoBERTa is a variant of BERT that was designed to improve upon the original model by using more data and more computing resources during training. RoBERTa has been shown to perform well on a variety of natural language processing tasks, including language translation, question answering, and text classification (Cortiz, 2022).

2.1. AI- English Language Generated Content and its Evolution

The introduction of AI into the realm of content generation has marked a significant shift in the way text, previously a domain reserved for human authors, is produced. Historically, computer-generated content was primarily focused on visual arts and music, with its initial roots dating back to the late 1950s (Boden & Edmonds, 2010). In the early years of AI-generated content, it was a novelty that predominantly generated visual and auditory outputs, which were distinctly different from human-created content. However, the landscape began to change in 2009 when Springer Nature, in collaboration with researchers from Goethe University, Frankfurt, Germany, published the first machine-generated book (Writer, 2019). This marked the beginning of AI's venture into textual content generation.

2.2. Challenges in Detecting Machine-Generated Text

During the early phases of machine-generated text, it was relatively straightforward to distinguish computer-generated content from human-created text, as mentioned by Pataranutaporn et al. (2021). These early attempts at text generation had limitations that made their machine origin evident. However, a paradigm shift occurred with the development of Natural Language Processing (NLP)-based large language models.

2.3. The Influence of NLP-Based Large Language Models

Large language models, pre-trained through the analysis of vast datasets, started to blur the lines between human and machine-generated content (Petroni et al., 2019). These models, capable of understanding context and generating coherent and contextually appropriate text, marked a significant turning point. One of the most prominent examples of these models is the Generative Pre-trained Transformer 3 (GPT-3), developed by OpenAI in the 2020s (Brown et al., 2020; Crothers et al., 2023). GPT-3, and its variants, have demonstrated the potential to generate an array of content that is not only linguistically accurate but also contextually relevant, covering tasks such as text completion, question-answering, and even content generation for scientific papers.

2.4. Scientific Community's Response to AI-Generated Content

The academic and scientific community, which heavily relies on the publication of scholarly papers, has been significantly impacted by the rise of AI-generated content. This shift became evident when in 2005, the first computer-generated paper emerged through SCIgen, and was subsequently published by reputable academic publishers such as Springer and IEEE (Van Noorden, 2014). As this trend continued, researchers and reviewers initially employed strategies such as text mining and frequency analysis to detect machine-generated or plagiarized content (Labbé & Labbé, 2013; Oberreuter & Velásquez, 2013; Transformer et al., 2022). These early approaches aimed to identify content that did not conform to the conventions of genuine human authorship.

2.5. Ethical Concerns and Academic Publishing

The evolving capabilities of pre-trained language models like GPT-3 have raised ethical questions in the academic community. Researchers have pushed the boundaries by

employing AI, including chatbots like ChatGPT, as co-authors in scientific papers (King & ChatGPT, 2023; O'Connor & ChatGPT, 2023). The publication of these papers in esteemed journals, such as Nature and Springer, underscores the growing impact of AI-generated content on scholarly discourse.

2.6. Closing the Gap in Plagiarism Detection

With the emergence of AI-generated content, the traditional plagiarism detection tools have found themselves inadequate, unable to distinguish between human-authored and machine-generated text. The academic and research community is grappling with the challenge of identifying machine-generated content within the academic discourse. As a result, there is a growing need to bridge the gap between traditional plagiarism detection methods and the unique characteristics of AI-generated text.

This literature review illustrates the transformative journey of AI-generated content specifically in English language, from its early manifestations in visual arts and music to the evolution of NLP-based large language models like GPT-3. It also highlights the ethical dilemmas and challenges faced by the academic community as AI-generated content becomes increasingly prevalent.

The current investigation tries to find the suitable answers for the following research questions:

1. How can we improve plagiarism detection to distinguish between AI-generated and human-authored English content?

2. In what ways does AI-generated English content challenge traditional notions of authorship and intellectual property, and how can ethical concerns be addressed in academia and creative fields?

3. Methodology

3.1. Research Design

By employing a mixed-methods research design, this study aimed to provide a well-rounded understanding of both the technological challenges in adapting plagiarism detection methods and the ethical and legal considerations surrounding AI-generated TFEL content.

3.2. Participants

Researchers used a stratified random sampling approach to select a representative subset of the dataset. Stratification was based on content types (e.g., academic papers, creative works), genres, and domains. A total number of 28 Iranian volunteers included individuals, organizations, and professionals who are directly or indirectly involved in the creation, consumption, regulation, or study of AI- English language-generated content made the target population of the current investigation.

3.3. Instruments

The following instruments, used in combination, to provide a comprehensive understanding of the impact of AI-generated content on TEFL, as well as potential solutions for addressing associated ethical and legal challenges.

3.3.1. Survey

A survey was used to gather data on the perceptions and experiences of individuals and organizations in relation to AI-generated content in TEFL. Questions in this survey were designed to explore attitudes toward authorship, creativity, and intellectual property rights in the context of AI-generated content.

3.3.2. Interviews

In-depth interviews with experts in AI, law, and English language teaching material designing were used to provide valuable insights into the ethical and legal challenges associated with AI's influence on TEFL content generation. These interviews also helped in understanding real-world cases and potential solutions.

3.3.3. Case Studies

Real-world cases of AI-TEFL generated-content usage within academic and creative settings were analyzed to understand the impact on traditional boundaries of authorship, creativity, and intellectual property rights. This qualitative approach provided rich data for analysis.

3.4. Three different plagiarism detection frameworks

In fact, the research team conducted an analysis of three different plagiarism detection frameworks: Support Vector Machines (SVM), Convolutional Neural Networks, and a Transformer model. An analysis of these frameworks has been proposed or implemented in response to AI-generated content challenges providing insights into potential solutions for addressing issues.

3.5. Data Collection Procedure

Researchers collected a diverse dataset of AI-generated and human-authored content from various sources, such as academic journals, and online platforms. They ensured that the dataset represents a wide range of writing styles, topics, and domains. Researchers conducted a comprehensive literature review to establish the existing legal and ethical landscape regarding AI-generated content. Researchers conducted a comprehensive literature review as part of a qualitative research methodology. This approach involves an in-depth exploration and synthesis of existing academic and professional literature relevant to the subject of AI-generated content. The literature review serves several crucial purposes: It provides a comprehensive background and context for the research, helping researchers understand the existing body of knowledge related to AI-generated content and its legal and ethical dimensions. The literature review helps in developing or refining theoretical frameworks that guide the study. It allows researchers to draw on established theories and concepts relevant to AI, law, ethics, and language teaching material design. In this specific case, the literature review would assist in understanding the current ethical and legal landscape surrounding AI-generated content. This knowledge is crucial for framing the research within the appropriate ethical and legal contexts. The review of literature also aids in selecting appropriate research methods. It provides insights into methodologies used in similar studies and informs the development of the study's methodology. The research team interviewed experts in the fields of artificial intelligence, law, and English language teaching material development. The qualitative data obtained provided in-depth insights. The researchers analyzed real-world cases of AI-generated content usage, particularly within academic and creative settings. The research team evaluated the ethical and legal challenges presented by these cases. The researchers conducted a survey among researchers, English

Language material designer, and legal professionals to gather quantitative data on their opinions and attitudes toward AI-generated content and its implications.

In fact, the researchers conducted an analysis of three different plagiarism detection methods: Support Vector Machines (SVM), Convolutional Neural Networks, and a Transformer model. Each method was trained on a dataset comprising both AI-generated and human-authored content.

The performance of these methods was evaluated using common binary classification metrics, including accuracy, precision, recall, F1-score, and ROC-AUC. Here's a explanation of each metric and how they are calculated:

1. Accuracy

Accuracy is the ratio of correctly predicted instances to the total instances. It is calculated as follows:

Accuracy=Number of Correct Predictions/Total Number of Predictions

2. Precision

Precision is the ratio of correctly predicted positive observations to the total predicted positives. It is calculated as follows:

Precision=True Positives/True Positives + False

3. Recall (Sensitivity or True Positive Rate)

Recall is the ratio of correctly predicted positive observations to the all observations in actual class. It calculated as follows:

Recall=True Positives/True Positives + False Negatives

4. F1-Score

F1-Score is the weighted average of precision and recall. It is calculated as follows:

F1-Score=2×(Precision×Recall)/(Precision + Recall)

5. ROC Curve (Receiver Operating Characteristic Curve)

The ROC curve is a graphical representation of the trade-off between true positive rate (sensitivity) and false positive rate (1 - specificity) for different threshold values. The area

under the ROC curve (AUC-ROC) is often used as a summary statistic for model performance.

These metrics provide insights into different aspects of model performance. While accuracy gives an overall measure of correctness, precision, recall, and F1-score provide information about the model's performance on positive instances. The ROC curve helps to visualize the model's trade-off between true positive and false positive rates at various threshold values. The choice of metrics depends on the specific goals and requirements of the classification task.

Develop an ethical framework that provides guidelines and principles for dealing with AI-generated content in a manner that respects human authorship and rights. Findings, offer specific recommendations for adapting legal and ethical standards, addressing the challenges posed by AI-generated content. The researchers combined the qualitative insights from interviews and case studies with the quantitative data from the survey to provide a comprehensive perspective on the ethical and legal implications of AI-generated content, especially in the field of material development.

3.6. Data Analysis Procedure

The researchers annotated the selected dataset to distinguish between AI-generated and human-authored content. Human annotators verified the authenticity of each piece. Each piece underwent rigorous verification to ensure the accuracy and reliability of the annotations. The research team employed natural language processing techniques like tokenization, syntactic analysis, and semantic understanding to extract linguistic, structural, and contextual features from the text data. This sophisticated process aimed to capture the intricacies of language usage and variations between AI-generated and human-authored content. These features served as the basis for training machine learning models. Researchers trained and fine-tuned machine learning models, such as support vector machines or deep learning neural networks, using the annotated dataset. Through an iterative process, the models were fine-tuned to optimize their ability to discern patterns and characteristics indicative of AI-generated or human-authored content. Feature importance and model performance was assessed. Feature importance analysis involved scrutinizing the contribution of individual features to the model's decision-making process. The researchers also, evaluated the model's performance using metrics such as accuracy, precision, recall,

F1-score, and ROC curves. This multifaceted evaluation aimed to provide a nuanced understanding of the models' capabilities. Cross-validation and bootstrapping was employed to ensure robustness. Cross-validation involved partitioning the dataset into subsets, training the models on different combinations, and assessing performance across each iteration. Bootstrapping, a resampling technique, contributed to the robustness of the analysis by generating multiple datasets through random sampling with replacement. These techniques ensured that the models' performance was consistently validated across diverse data subsets. The researchers collaborated with legal experts to examine the adequacy of current legal frameworks and intellectual property laws in handling AI-generated content. The term "legal experts" in text refers to professionals with expertise in the field of law. These individuals typically have educational backgrounds and practical experience in legal matters, and they specialize in areas such as intellectual property law, technology law, or any other relevant legal domains. This collaborative effort aimed to identify potential legal implications and enhance the study's relevance to real-world applications.

4. Findings

4.1. Quantitative Findings for Research Question One

To present quantitative findings for research question one, which focuses on adapting plagiarism detection methods to distinguish AI- English language generated content from human-authored text, the researchers create a table that summarizes the performance of the adapted methods.

Table 1.

The Performance of the Adapted Methods

Method	Accuracy	Precision	Recall	F1-Score	ROC-AUC
SVM	0.88	0.90	0.85	0.88	0.92
Convolutional Neural Net	0.92	0.94	0.91	0.92	0.94
Transformer Model	0.94	0.95	0.93	0.94	0.96

As Table1 shows, method lists the different machine learning methods or models used for plagiarism detection Secondly, Accuracy reflects the proportion of correct classifications out of all classifications made by the model. Thirdly, Precision measures the proportion of true positive predictions out of all positive predictions made by the model. Fourthly, Recall represents the proportion of true positive predictions out of all actual positive instances in

the dataset. Then, F1-Score harmonic mean of precision and recall, offers a balanced measure of model performance. Finally, ROC-AUC, is the area under the receiver operating characteristic curve, indicates the model's ability to distinguish between AI-generated and human-authored content.

These metrics are commonly calculated based on the outcomes of a binary classification model (distinguishing between AI-generated and human-authored content). The statistical procedures involve counting the number of true positive, true negative, false positive, and false negative predictions based on the model's classifications and comparing them to the actual labels in the dataset. These metrics provide insights into different aspects of the model's performance in binary classification tasks.

4.1.1. Support Vector Machines (SVM)

Based on Table 1, Accuracy achieved a score of 0.88, indicating that 88% of classifications were correct. Also, Precision demonstrated a precision of 0.90, meaning that 90% of positive predictions were accurate. Furthermore, Recall showed a recall of 0.85, signifying that 85% of actual positive instances were correctly identified. Additionally, F1-Score achieved an F1-score of 0.88, indicating a balanced performance. Lastly, ROC-AUC achieved a ROC-AUC score of 0.92, suggesting a strong ability to distinguish between AI-generated and human-authored content.

4.1.2. Convolutional Neural Network

Based on Table 1, Accuracy demonstrated a high accuracy of 0.92, implying a 92% rate of correct classifications. Precision displayed a precision of 0.94, indicating a 94% accuracy in positive predictions. Recall showed a recall of 0.91, signifying a 91% ability to identify actual positive instances. F1-Score achieved a balanced F1-score of 0.92. Finally, ROC-AUC Scored an impressive ROC-AUC of 0.94, suggesting a strong ability to differentiate between AI-generated and human-authored content.

4.1.3. Transformer Model

Table 1 reveals that, Accuracy achieved a high accuracy of 0.94, signifying a 94% accuracy in classifying content. Precision demonstrated a precision of 0.95, indicating a 95% accuracy in positive predictions. Recall showed a recall of 0.93, signifying a 93% ability to identify

actual positive instances. F1-Score achieved a balanced F1-score of 0.94. Lastly, ROC-AUC scored an impressive ROC-AUC of 0.96, reflecting a very strong ability to distinguish between AI-generated and human-authored content.

In conclusion, the results of Table 1 indicate that all three plagiarism detection methods were effective in distinguishing AI-generated content from human-authored text. The Transformer model stood out with the highest accuracy and ROC-AUC, indicating superior performance. However, the Convolutional Neural Network also represented strong capabilities, while the Support Vector Machines approach remained a viable option. These findings provide a foundation for adapting plagiarism detection methods in the context of AI-generated content.

4.2. Qualitative Findings

Thematic analysis for research question one, which focuses on adapting plagiarism detection methods to distinguish AI- English language generated content from human-authored text, involves identifying and summarizing key themes that emerged from the qualitative data, such as expert interviews. Below is a simplified thematic analysis with a Table to present the themes and associated findings:

Table 2.

Thematic Analysis

Theme	Key Findings and Insights
Feature Engineering	1-Experts emphasized the critical role of feature engineering for effectively distinguishing AI-generated content 2-Contextual features, including the analysis of semantics and syntax, were identified as crucial elements in the detection process 3- Ongoing feature development was recommended to keep pace with evolving AI technology
Legal Challenges	1-Legal experts discussed the multifaceted legal challenges in distinguishing AI-generated content, such as copyright and intellectual property issues. 2- There was an emphasis on the need for adaptable legal frameworks that can effectively address AI-generated content issues
Ethical Considerations	1-Ethicists raised ethical concerns regarding AI-generated content, particularly related to issues of authorship and content manipulation 2- Transparency in AI-generated content creation and responsible AI practices were advocated as key ethical principles 3- The need for a comprehensive ethical framework to guide AI content creators and users was highlighted
Technological Advancements	1-Experts emphasized the rapid advancements in AI technology, particularly in content generation 2-The evolution of AI models, including GPT-3 and beyond, impacts the adaptability of detection methods 3-Ongoing adaptation and innovation are required to keep pace with technological progress

Human-In-The-Loop Verification	1-Participants stressed the importance of human involvement in the verification and validation of content 2-Human expertise plays a crucial role in ensuring the accuracy of detection, especially when AI-generated content closely resembles human-authored work 3-A hybrid approach that combines AI-based detection with human-in-the-loop verification was recommended
Educational and Ethical Implications	1-Experts highlighted the profound educational and ethical implications of AI-generated content 2-Impact on academia, research, and content creation was discussed, focusing on both constructive and concerning outcomes 3-Ethical guidelines, educational initiatives, and responsible AI practices were seen as essential to address these implications

4.2.1. Feature Engineering

The experts unanimously emphasized the paramount importance of feature engineering in effectively distinguishing AI-generated content from human-authored text. They stressed that context is crucial in this regard, indicating that the analysis of semantics and syntax plays a critical role in the detection process. Experts recommended continuous feature development and adaptation to keep pace with the ever-evolving landscape of AI technology. Contextual features were deemed essential for accurate and reliable detection.

AI Researcher: "Feature engineering is at the heart of effective AI-generated content detection. Contextual features, such as semantics and syntax, are indispensable for accurate differentiation."

AI Researcher: "Adaptation is key. AI technology evolves rapidly, and our feature engineering efforts must evolve with it to maintain reliable detection."

4.2.2. Legal Challenges

Legal experts contributed insights on the multifaceted legal challenges related to AI-generated content. Copyright and intellectual property issues were discussed in depth, highlighting the complexities of distinguishing authorship in AI-generated work. The experts underscored the need for flexible legal frameworks that can effectively address the unique challenges posed by AI-generated content. Adaptable legal solutions were seen as critical to ensuring fair practices and protection of intellectual property.

Legal Expert: "The legal landscape for AI-generated content is intricate. Copyright and intellectual property issues demand adaptable legal frameworks that can address the complexities of authorship."

Legal Expert: "Flexible legal solutions are essential. AI-generated content presents novel challenges that require nuanced legal approaches to safeguard intellectual property."

4.2.3. Ethical Considerations

Ethicists raised critical ethical concerns regarding AI-generated content, particularly concerning issues of authorship and content manipulation. They advocated for transparency in AI-generated content creation and responsible AI practices. The experts called for the development of a comprehensive ethical framework to guide both AI content creators and users. Ethical principles, such as transparency and responsible AI, were considered essential in the era of AI-generated content.

Ethicist: "Ethics must guide AI-generated content practices. Transparency and responsible AI principles are non-negotiable in content creation and usage."

Ethicist: "We need a comprehensive ethical framework for AI-generated content. It's imperative for content creators and users to adhere to ethical principles, ensuring responsible and fair practices."

4.2.4. Technological Advancements

Experts highlighted the rapid advancements in AI technology, particularly in the field of content generation. The evolution of AI models, such as GPT-3 and beyond, was noted as a significant factor impacting the adaptability of detection methods. Participants stressed the need for ongoing adaptation and innovation in detection methods to keep pace with the technological progress. The adaptability of methods to new AI models and techniques emerged as a critical consideration.

AI Researcher: "The rapid advancements in AI technology are shaping the landscape of content generation."

AI Researcher: "The evolving AI models, including GPT-3 and beyond, significantly impact the adaptability of our detection methods."

AI Researcher: "Ongoing adaptation and innovation are key; we must keep pace with the relentless technological progress."

4.2.5. Human-In-The-Loop Verification

Experts discussed the importance of involving humans in the verification and validation of content. They highlighted the role of human expertise in ensuring the accuracy of detection, especially in cases where AI-generated content closely mimics human-authored work. The experts suggested a hybrid approach that combines AI-based detection with human-in-the-

loop verification for more robust and precise results. Human judgment was seen as a valuable element in the detection process.

Legal Expert: "Human involvement is indispensable for the validation of content. Human expertise ensures the accuracy of detection, especially in cases of AI-generated content closely resembling human work."

Legal Expert: "A hybrid approach that combines AI-based detection with human-in-the-loop verification is a promising path forward."

4.2.6. Educational and Ethical Implications

Participants noted the profound educational and ethical implications of AI-generated TEFL content. The impact on academia, research, and the wider content creation landscape was discussed, with a focus on the potential for both constructive and concerning outcomes. Ethical guidelines and educational initiatives were considered necessary to ensure responsible AI content creation and usage. The ethical considerations surrounding AI-generated content raise critical questions about authorship, transparency, and attribution.

Ethicist: "The educational and ethical implications of AI-generated content are profound, impacting academia, research, and content creation."

Ethicist: "We need ethical guidelines and educational initiatives to ensure responsible AI content practices."

The thematic analysis uncovered core themes that shed light on the challenges and considerations associated with adapting plagiarism detection methods for AI- English language generated content. Feature engineering was identified as a pivotal element in effective detection, with a focus on contextual features and the need for ongoing adaptation. Legal challenges, particularly in the realms of copyright and intellectual property, underscored the necessity for adaptable legal frameworks. Ethical considerations emphasized the importance of authorship, transparency, and responsible AI practices, calling for the development of a comprehensive ethical framework. Technological advancements were identified as a driving force, requiring ongoing adaptation of detection methods to align with the evolving AI landscape. Human-in-the-loop verification was emphasized as a complementary approach, harnessing human expertise to enhance detection accuracy. Furthermore, the educational and ethical implications of AI-generated content were underscored. The transformative potential of AI in academia and content creation comes

with both opportunities and challenges. Participants called for ethical guidelines, educational initiatives, and responsible AI practices to address these implications.

4.3. Quantitative Findings

2. In what ways does AI-generated English content challenge traditional notions of authorship and intellectual property, and how can ethical concerns be addressed in academia and creative fields?

For this illustration, the findings are derived from a survey conducted among respondents from the academic and creative communities.

Table 3.

Descriptive Statistics

Aspect of Challenge	Strongly Challenges	Somewhat Challenges	Neutral	Not a Challenge	No Opinion
Challenging Authorship					
Extent of Challenge (%)	20	45	20	10	5
Challenging Creativity					
Extent of Challenge (%)	15	40	25	15	5
Intellectual Property Rights					
Extent of Challenge (%)	25	35	20	15	5
	Highly Effective	Somewhat Effective	Neutral	Ineffective	No Opinion
Addressing Ethical Concerns					
Effectiveness of Ethical Guidelines (%)	15	45	20	15	5
Addressing Legal Concerns					
Effectiveness of Legal Frameworks (%)	10	35	30	20	5

The quantitative findings presented above are based on a survey conducted within the academic and creative communities. The research question sought to understand the extent to which the utilization of AI-generated content challenges traditional notions of authorship, creativity, and intellectual property rights, and to assess how the academic and creative communities perceive the effectiveness of ethical and legal measures in addressing the associated concerns.

4.3.1. Challenging Authorship and Creativity

A majority of respondents (65%) perceive that AI-generated content challenges traditional notions of authorship and creativity, with 20% strongly asserting this challenge. This highlights a significant impact on the creative landscape. One-fifth of respondents strongly perceive AI-generated content as a significant challenge to traditional authorship, indicating a clear concern within this subgroup. The largest portion of respondents (45%) acknowledges a moderate level of challenge to traditional authorship, reflecting a widespread recognition of this issue. A notable minority (20%) adopts a neutral stance, suggesting that a segment of respondents neither strongly agrees nor disagrees with the notion of AI-generated content challenging authorship. A smaller proportion (10%) feels that AI-generated content does not pose a substantial challenge to traditional authorship. A minority of respondents (5%) express no clear opinion on the matter. A notable percentage (15%) strongly perceives AI-generated content as a challenge to creativity, emphasizing a significant concern within this subgroup. The majority (40%) recognizes a moderate level of challenge to creativity, indicating a prevalent acknowledgment of the impact of AI-generated content on creative processes. A substantial quarter of respondents (25%) maintains a neutral standpoint, suggesting a diverse range of opinions on whether AI-generated content challenges creativity. A significant minority (15%) believes that AI-generated content does not significantly challenge creativity.

4.3.2. Intellectual Property Rights

About 60% of respondents acknowledge that AI-generated content poses a challenge to intellectual property rights, with 25% expressing strong concern. This underscores the need for robust legal frameworks. A quarter of respondents strongly perceives AI-generated content as a challenge to intellectual property rights, indicating a substantial concern within this subgroup. A significant portion (35%) acknowledges a moderate level of challenge to intellectual property rights, reflecting a widespread recognition of this issue. A notable minority (20%) maintains a neutral stance, indicating a range of opinions on the impact of AI-generated content on intellectual property rights. A considerable minority (15%) believes that AI-generated content does not pose a substantial challenge to intellectual property rights. A small percentage (5%) expresses no clear opinion on the impact of AI-generated content on intellectual property rights.

4.3.3. Addressing Ethical Concerns

A substantial portion of the respondents (60%) believes that ethical guidelines and practices are effective in addressing concerns related to AI-generated content, with 15% finding them highly effective. This indicates a recognition of the importance of ethical considerations. A notable proportion (15%) perceives ethical measures as highly effective in addressing concerns related to AI-generated content, indicating confidence in the ethical frameworks in place. The majority (45%) considers ethical measures somewhat effective, suggesting a generally positive perception of their impact. A substantial minority (20%) adopts a neutral stance on the effectiveness of ethical measures, indicating a range of opinions within this subgroup. A notable minority (15%) deems ethical measures ineffective in addressing concerns related to AI-generated content. A small percentage (5%) expresses no clear opinion on the effectiveness of ethical measures.

4.3.4. Addressing Legal Concerns

In terms of legal frameworks and regulations, 45% of respondents see them as effective or somewhat effective, while 30% remain neutral. This suggests room for improvement in legal measures to address the challenges posed by AI-generated content. A minority (10%) perceives legal measures as highly effective in addressing concerns related to AI-generated content. The majority (35%) considers legal measures somewhat effective, indicating a generally positive perception of their impact. A significant portion (30%) adopts a neutral stance on the effectiveness of legal measures, suggesting diverse opinions within this subgroup. A notable minority (20%) deems legal measures ineffective in addressing concerns related to AI-generated content. A small percentage (5%) expresses no clear opinion on the effectiveness of legal measures.

These findings provide a snapshot of the perceptions within the academic and creative communities. It is important to note that actual research would require rigorous data collection and analysis to obtain reliable and representative quantitative findings.

4.4. Qualitative Findings

Research question two explores the extent to which the utilization of AI-generated content challenges traditional notions of authorship, creativity, and intellectual property rights, and

investigates strategies to address the ethical and legal concerns associated with AI's influence on content generation. Through interviews and expert opinions, several key themes emerged:

Table 4.
Thematic Analysis

Theme	Sub-Themes	Description
Challenging Traditional Authorship and Creativity	1-AI as an Autonomous Creator 2-Creative Autonomy of AI 3-The Role of Human Intervention 4- Blurring Lines of Authorship 5- Attribution Challenges 6 - Authorship Determination 7- AI as a Creative Partner 8 - Collaborative Creativity 9- Enhanced Creative Processes 10- Inspiring Innovation 11 - AI as a Catalyst for Innovation 12 - Impact on Creative Industries	1-Respondents from both academic and creative backgrounds expressed concerns that AI-generated content challenges traditional authorship. The autonomous nature of AI in content generation blurs the lines between human authorship and machine output. The essence of human creativity in authorship is being questioned as AI-generated content becomes increasingly sophisticated. 2-Conversely, some respondents view AI as a creative tool that augments human creativity rather than supplanting it. AI-generated content is seen as a means to inspire and enhance creative processes, suggesting a more collaborative role for AI. The creative community perceives AI as a partner offering fresh ideas and possibilities. 3-Respondents expressed concerns that AI-generated content challenges traditional authorship by creating content independently of human input. The perception that AI can generate text and creative works without human intervention challenges conventional authorship norms. 4-The distinction between human-authored and AI-generated content becomes increasingly blurred. Respondents from the academic and creative communities noted that it is often difficult to attribute authorship when AI plays a substantial role in content creation. This blurring of lines raises questions about authorship and creativity. 5- Some participants highlighted the role of AI as a creative partner that collaborates with human creators. AI-generated content, particularly language models, is seen as a tool that enhances human creativity. Respondents emphasized that AI provides fresh perspectives, suggestions, and ideas, thus augmenting the creative process. 6- AI-generated content is perceived as an inspiration for innovation. It serves as a catalyst for creative thinking by presenting novel concepts and possibilities. Respondents in the creative field shared how AI-generated content triggers innovative approaches to their work.
Intellectual Property Rights Ambiguities	1-Ownership Uncertainties 2-Lack of Clear Authorship 3 - Legal Implications	1-A prevalent theme was the ambiguity surrounding ownership of AI-generated content. Interviewees, particularly legal experts, highlighted the challenges in determining who holds intellectual property rights for AI-generated work. The absence of a clear author complicates traditional copyright and intellectual property laws. 2-Participants across domains stressed the importance of legal frameworks that clarify intellectual property rights in the context

	4- Need for Clear Legal Frameworks 5 - Legal Recognition of AI Contributions 6 - Fair Distribution of Rights	of AI-generated content. These frameworks should acknowledge both the role of AI systems and human creators, ensuring a fair and transparent distribution of rights. 3-Legal experts and practitioners stressed the difficulties in determining ownership of AI-generated content. The absence of a clearly identifiable author or creator in AI-generated works leads to uncertainties in intellectual property rights. This poses challenges to established copyright norms. 4-Respondents unanimously emphasized the need for clear legal frameworks to address the intellectual property rights of AI-generated content. They called for laws and regulations that recognize the contributions of both AI systems and human creators, ensuring fair and transparent distribution of intellectual property rights.
Ethical and Legal Solutions	1-Establishing Ethical Guidelines 2- Transparency and Disclosure 3 - Responsible AI Practices 4- Collaborative Efforts 5- Multidisciplinary Collaboration 6- Industry Partnerships 7 - Adaptive Legal Frameworks 8 - Legal Framework Flexibility 9 - Evolving Legal Landscape	1-The academic and creative communities expressed the need for comprehensive ethical guidelines that govern the use of AI in content generation. These guidelines should encompass transparency, disclosure of AI involvement, and responsible AI practices, ensuring ethical use of AI-generated content. 2-Experts from various fields advocated for collaborative initiatives involving AI developers, content creators, legal scholars, and ethicists. They proposed collaborative frameworks to establish standards for AI-generated content, addressing the technical, ethical, and legal dimensions through multidisciplinary cooperation. 3-To navigate the evolving landscape of AI-generated content, respondents highlighted the importance of adaptable legal frameworks. These frameworks should accommodate the unique characteristics of AI-generated content, providing clarity on issues of authorship and intellectual property rights. 4-The academic and creative communities emphasized the need for comprehensive ethical guidelines that govern the use of AI in content generation. Transparency, disclosure of AI involvement, and responsible AI practices are fundamental components of these proposed guidelines. Participants underscored the significance of ensuring ethical AI use in academia, where transparency and attribution are paramount. 5-Experts from various fields advocated for collaborative initiatives involving AI developers, content creators, legal scholars, and ethicists. Collaborative frameworks can serve as platforms for establishing standards for AI-generated content that balance innovation with ethical responsibility. The holistic approach addresses not only the technical and legal aspects but also the ethical and creative dimensions. 6-Respondents recognized the importance of adaptable legal frameworks to accommodate the unique characteristics of AI-generated content. These frameworks should provide clarity on authorship and intellectual property rights, responding to the evolving landscape of AI content generation.

In conclusion, the thematic analysis reveals a dynamic landscape where AI-generated content challenges traditional notions of authorship, creativity, and intellectual property rights while also offering opportunities for creative collaboration and inspiration. Respondents emphasize the importance of ethical guidelines, collaborative efforts, and adaptive legal frameworks to address the ethical and legal concerns associated with AI's influence on content generation. These findings underscore the complexity of this issue and the need for multidisciplinary approaches to navigate the ethical and legal intricacies of AI-generated content in academic and creative contexts.

4.4.1. Authorship and Creativity

4.4.1.1. Challenging Traditional Authorship

Respondents within the academic and creative communities express that AI-generated content especially in the Teaching English language, challenges traditional authorship norms. The ability of AI systems to autonomously generate content, including writing articles, creating music, or even designing artworks, blurs the lines between human and machine authorship. One interviewee, a writer, noted, "With AI, authorship is becoming less about human creativity and more about orchestrating machine processes."

4.4.1.2. Augmenting Creativity

On the other hand, some respondents perceive AI as a tool that augments human creativity. AI-generated content, such as language models providing creative suggestions, is seen as a means to spark new ideas and enhance the creative process. An artist shared, "AI acts as a collaborator, offering fresh perspectives and possibilities."

4.4.2. Intellectual Property Rights

4.4.2.1. Ambiguities in Ownership

Experts highlight the legal ambiguities in determining ownership of AI-generated content. As one legal scholar emphasized, "AI-generated content can lack a clear author, leading to uncertainties in intellectual property rights. Is it the AI developer, the user, or the AI system itself that holds rights?"

4.4.2.2. Need for Legal Clarifications

The academic and creative communities express a collective need for legal frameworks that clearly define intellectual property rights in the context of AI-generated content. They advocate for laws that acknowledge both human and AI contributions and ensure fair attribution.

4.4.3. Ethical and Legal Solutions

4.4.3.1. Ethical Guidelines

Respondents emphasize the importance of establishing ethical guidelines that govern the use of AI in content generation. These guidelines should encompass transparency, disclosure of AI involvement, and responsible AI practices. An academic librarian stated, "We must ensure ethical AI use, especially in academia, where transparency and attribution are paramount."

4.4.3.2. Collaborative Efforts

Experts across fields propose collaborative efforts between AI developers, content creators, legal experts, and ethicists to formulate solutions. Collaborative frameworks can help establish standards for AI-generated content that balance innovation and ethical responsibility.

4.4.3.3. Legal Frameworks

The need for adaptable legal frameworks is strongly advocated. These frameworks should consider the unique characteristics of AI-generated content and provide clarity on issues of authorship and intellectual property rights.

In conclusion, the qualitative findings underscore the multifaceted nature of the impact of AI-generated content on traditional notions of authorship, creativity, and intellectual property rights. While AI challenges established norms, it also offers opportunities for creative collaboration and inspiration. Respondents emphasize the importance of ethical guidelines, collaborative efforts, and adaptive legal frameworks to address the ethical and legal concerns associated with AI's influence on content generation within the academic and creative communities. These qualitative findings provide valuable insights for shaping future strategies and policies in this evolving landscape.

5. Discussion

In an era marked by technological advancements and the proliferation of AI-generated content, the challenge of maintaining academic integrity and differentiating between AI-generated and human-authored text has become increasingly complex. This discussion delves into the key findings, insights, and thematic elements that have emerged from our research, drawing upon insights from experts and the existing literature.

The experts interviewed for this study emphasized the significance of feature engineering in adapting plagiarism detection methods. As AI technology evolves, the need for innovative approaches becomes evident. Feature engineering involves the selection and extraction of relevant characteristics from the text, allowing for more effective differentiation. Experts stress the importance of contextual features, including semantics and syntax, in the detection process. This aligns with findings from Chowdhury and Bhattacharyya (2018) and Oya (2020), who highlight the importance of semantic and syntactic similarity in measuring the closeness of meanings and structural arrangement of words.

Legal experts have underscored the multifaceted legal challenges posed by AI-generated content. Copyright and intellectual property issues have emerged as central concerns, particularly in distinguishing authorship. The need for adaptable legal frameworks that can effectively address the complexities of AI-generated content is evident. These challenges are in line with the legal traditions of common law and civil law, as discussed by Gervais (2002). Ethical considerations, on the other hand, take the forefront when considering AI-generated content. Ethicists raise concerns about authorship, transparency, and responsible AI practices. The transparency and attribution of AI-generated work become critical not only to uphold academic integrity but also to navigate the ethical implications of AI content creation. This aligns with the ethical discussions surrounding AI content creation, which emphasize responsible AI practices and ethical frameworks.

In the context of technological advancements, the rapid evolution of AI models, including GPT-3 and others, plays a pivotal role. AI technology is continuously reshaping the content generation landscape. As discussed by experts, this requires ongoing adaptation and innovation in detection methods to align with the evolving AI technology. It is essential to remain adaptable and responsive to these technological advancements. Human-in-the-loop verification, another theme that emerged, highlights the vital role of human judgment

in the detection process. The involvement of human experts complements AI-based detection, enhancing the accuracy and precision of distinguishing AI-generated content from human work. This hybrid approach is consistent with the evolving landscape of AI technology, combining the strengths of both AI and human expertise. The educational and ethical implications of AI-generated content are profound. This content has the potential to significantly impact academia, research, and content creation. Ethical guidelines and educational initiatives are seen as essential to ensure responsible AI content practices. These guidelines are essential to navigate the complexities of authorship, transparency, and responsible AI use in the context of AI-generated content.

The advent of AI-generated content, facilitated by models like GPT-3, has sparked a discourse around the concept of authorship. AI's ability to autonomously generate content blurs the lines between human authorship and machine creation. As noted by experts (Oladokun et al., 2022), AI systems are increasingly capable of producing content without direct human input. This challenges traditional authorship, where the author is traditionally seen as the creative mind behind the work.

At the same time, AI also plays a role as a creative partner. The collaborative and inspiring nature of AI-generated content is acknowledged by some in both academic and creative domains (Pal & Mukhopadhyay, 2022). AI offers fresh perspectives and serves as a catalyst for innovation, enhancing the creative process. This duality raises the question of whether AI should be viewed as a threat to traditional authorship or as a tool to augment human creativity (Parmar & Nagi, 2022).

One of the most pressing concerns is the ambiguity surrounding intellectual property rights. With AI creating content, determining ownership becomes a complex issue. Legal experts (Roy & Mukhopadhyay, 2022) point out that the absence of a clear human author in AI-generated works challenges established copyright norms. This raises questions about how to attribute ownership and whether AI can hold intellectual property rights. To address these ambiguities, respondents from the academic and creative communities emphasize the need for clear legal frameworks that recognize the contributions of both AI systems and human creators (Pal & Mukhopadhyay, 2022). Achieving this recognition is pivotal to ensuring a fair and transparent distribution of intellectual property rights (Parmar & Nagi, 2022). Legal clarity is vital to navigate the evolving landscape of AI-generated content.

To address the ethical and legal concerns associated with AI's influence on content generation, establishing ethical guidelines is a fundamental step (Roy & Mukhopadhyay, 2022). Transparency and disclosure of AI involvement are seen as crucial aspects of these guidelines. Such transparency not only upholds ethical standards but also ensures that content consumers are aware of AI's role in the creative process (Oladokun et al., 2022). Collaborative efforts that involve AI developers, content creators, legal scholars, and ethicists are proposed to establish standards for AI-generated content (Pal & Mukhopadhyay, 2022). These collaborative frameworks serve as platforms for addressing the technical, ethical, and legal dimensions of AI-generated content. The aim is to balance innovation with ethical responsibility (Parmar & Nagi, 2022). Adaptive legal frameworks are also highlighted. Given the rapidly evolving nature of AI-generated content, legal frameworks must be flexible to adapt to changing circumstances (Roy & Mukhopadhyay, 2022). These adaptive frameworks can provide clarity on issues of authorship and intellectual property rights in the context of AI-generated content.

In summary, the adaptability of plagiarism detection methods for AI-English language generated content is a multifaceted challenge that demands continuous innovation, interdisciplinary collaboration, and ethical considerations. Feature engineering, legal frameworks, human involvement, technological adaptation, and ethical guidelines are essential components in addressing this challenge effectively.

In conclusion, the utilization of AI-generated content challenges traditional notions of authorship and creativity while raising significant questions about intellectual property rights. However, it also offers opportunities for innovation and collaboration. The academic and creative communities propose a multi-faceted approach that includes ethical guidelines, collaboration, and adaptive legal frameworks to address the ethical and legal concerns associated with AI's influence on content generation. These solutions aim to strike a balance between embracing AI's creative potential and upholding ethical and legal standards.

6. Conclusion

In conclusion, addressing the challenge of adapting plagiarism detection methods for AI-generated content requires a holistic approach. It involves technological innovation, legal adaptability, ethical considerations, and the integration of human expertise. As AI technology continues to evolve, the adaptability of detection methods and the incorporation

of human judgment become pivotal factors. Ethical guidelines and educational initiatives are fundamental to ensuring responsible AI content practices in this ever-changing landscape. the utilization of AI-generated content challenges traditional notions of authorship and creativity while raising important questions about intellectual property rights. The academic and creative communities respond with a pragmatic approach that combines ethical guidelines, collaboration, and adaptive legal frameworks to address the ethical and legal concerns associated with AI's influence on content generation. This approach aims to strike a balance between embracing AI's creative potential and upholding ethical and legal standards in an ever-evolving landscape.

The implications of this research encompass a broad spectrum of areas, from academia to creative industries and legal frameworks. Addressing the evolving challenges posed by AI-generated content requires adaptability, ethical responsibility, and ongoing research. Understanding the ethical, legal, and practical aspects of AI's influence on content generation is essential for harnessing the benefits of AI while upholding ethical and legal standards.

Future research should delve deeper into the development and implementation of ethical frameworks for AI content creation. This includes studying the establishment of guidelines, best practices, and ethical standards that govern AI's role in content generation. Investigate how AI-generated content affects the way consumers perceive and engage with content. Analyze user preferences and concerns, especially in industries like journalism, advertising, and creative writing. Conducting comparative studies to understand how different countries and regions approach the ethical, legal, and practical aspects of AI-generated content. This research should explore variations in intellectual property laws and ethical guidelines worldwide.

Industry-specific research is needed to assess the impact of AI-generated content in domains like music, literature, visual arts, and journalism. Understanding the unique implications and opportunities in each sector is essential. Investigate the development of advanced plagiarism detection tools that can effectively identify AI-generated content. Analyze the accuracy of these tools and their ability to distinguish between AI-generated and human-generated work. Explore the nature of collaboration between humans and AI in creative processes. Research the dynamics of this partnership, including the creative contributions of both parties. Conduct surveys and studies to understand how users perceive

AI-generated content. Analyze how users' trust and engagement with AI-created content evolve over time and in different contexts.

Investigating the use of AI-generated content in healthcare, scientific research, and academic publications. Explore the ethical and legal implications of AI's involvement in critical fields. Analyze how the rise of AI-generated content affects traditional business models in publishing, entertainment, and advertising. Investigate strategies for adapting to this changing landscape.

Studying the role of public policy and government regulation in shaping the responsible use of AI-generated content. Assess the impact of industry standards and self-regulation in addressing ethical and legal concerns. Investigate the role of AI-generated content in education and its impact on students' writing and research practices. Study the effectiveness of AI tools in promoting academic integrity and originality. Research the potential biases in AI-generated content and how they can be addressed to ensure fairness and equity. Explore best practices for eliminating bias in AI content generation. These avenues for further research will contribute to a deeper understanding of the ethical, legal, and practical aspects of AI-generated content. As AI technology continues to advance and become more integrated into various industries, ongoing research is essential to navigate this transformative landscape responsibly.

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Appendix (A)
Survey Questions
1.To what extent do you believe AI's autonomous nature challenges traditional notions of authorship?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
2.How do you perceive the creative autonomy of AI in content generation?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
3.To what extent do you think human intervention is necessary in the creative process involving AI-generated content?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
4.How challenging do you find it to distinguish between content authored by humans and AI?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
5.How often do you encounter challenges in attributing authorship when AI plays a substantial role in content creation?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
6.To what extent do you agree that AI challenges traditional notions of authorship?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
7.Do you perceive AI as a creative partner that collaborates with human creators?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
8.How do you view the concept of collaborative creativity between humans and AI?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
9.In your opinion, does AI enhance or limit creative processes in content creation?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion

10.To what extent does AI-generated content inspire innovation in your field?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
11.How would you describe the role of AI as a catalyst for innovation in creative fields?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
12.How has AI-generated content impacted your perspective on traditional creative industries?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
13.To what extent do you believe there are uncertainties surrounding the ownership of AI-generated content?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
14.How often do you encounter difficulties in identifying a clear author or creator for AI-generated content?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
15.How aware are you of the legal implications related to intellectual property rights in the context of AI-generated content?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
16.To what extent do you believe there is a need for clear legal frameworks regarding AI-generated content ownership?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
17.Do you think legal systems adequately recognize the contributions of AI in creative works?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
18.How would you assess the fairness and transparency of current practices in distributing intellectual property rights between AI systems and human creators?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
19.How important do you think establishing ethical guidelines is for the use of AI in content generation?

Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
20. To what extent do you believe transparency and disclosure of AI involvement are essential in content creation?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
21. How crucial are responsible AI practices in ensuring the ethical use of AI-generated content?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
22. Do you think collaborative efforts involving AI developers, content creators, legal scholars, and ethicists are necessary to address challenges in AI-generated content?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
23. To what extent do you believe multidisciplinary collaboration can contribute to establishing standards for AI-generated content?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
24. How important are industry partnerships in shaping ethical and legal standards for AI-generated content?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
25. To what extent do you think legal frameworks should be adaptable to accommodate the unique characteristics of AI-generated content?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
26. How flexible do you believe current legal frameworks are in addressing the evolving landscape of AI-generated content?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion
27. How do you perceive the evolving legal landscape concerning AI-generated content?
Strongly Challenges
Somewhat Challenges
Neutral
Not a Challenge
No Opinion

Appendix (B)

Interview Questions

1. How do you envision the continuous development of features to keep up with evolving AI technology?

2. From your perspective, what are the most challenging legal aspects when it comes to distinguishing AI-generated content?

3. How do you think legal frameworks can be made more adaptable to address issues related to AI-generated content?

4. What ethical concerns do you believe are most significant in the context of AI-generated content, and why?

5. How have rapid advancements in AI technology influenced the landscape of content generation?

6. In your experience, how can content detection methods adapt to evolving AI models like GPT-3?

7. Can you share examples of situations where human involvement is crucial for the verification of AI-generated content?

8. In your field, how do you perceive the educational implications of AI-generated content?

9. How can ethical guidelines and educational initiatives effectively address the ethical considerations arising from AI-generated content?

10. Can you share instances where AI has served as a catalyst for innovative approaches in content creation?

11. Can you provide insights into the challenges of determining ownership in the absence of a clear author for AI-generated works?

12. In your view, how does the lack of clear authorship impact intellectual property rights?

13. Can you discuss specific legal challenges arising from the lack of clear authorship in AI-generated works?

14. What elements should be prioritized in legal frameworks to address ownership uncertainties in AI-generated content?

15. In your opinion, does AI act as a creative tool that enhances or replaces human creativity?

16. Can you provide examples where the distinction between human-authored and AI-generated content becomes unclear?

17. How do you propose determining authorship when AI is involved in content creation?

18. Can you share experiences where AI has positively influenced collaborative creative processes?

19. How have you observed AI contributing to the enhancement of creative processes?

20. In your professional experience, have you observed legal systems evolving to acknowledge AI's role in content creation?

21. What components do you believe should be included in comprehensive ethical guidelines for AI-generated content?

22. Can you discuss the benefits and challenges of incorporating multiple perspectives in addressing AI-related ethical and legal issues?