Pioneer: Journal of Language and Literature
Volume 17, Issue 2, December 2025: 189–205
DOI: https://doi.org/10.36841/pioneer.v17i2.6415

TOOLS AND AI IN STYLISTIC ANALYSIS: A SYSTEMATIC LITERATURE REVIEW

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Received : May 27, 2025
Revised : August 7, 2025
Accepted : November 7, 2025
Published : December 31, 2025

How to Cite (in APA Style) :
Alhubilah, F., & Sopian, A. (2025). Tools and AI in stylistic analysis: A systematic literature review. *Pioneer: Journal of Language and Literature, 17*(2), 189-205. https://doi.org/10.36841/pioneer.v17i2.6415

Abstract: This research constitutes a systematic literature review that investigates the application of tools and Artificial Intelligence (AI) in stylistic analysis. The objective of the evaluation is to identify the various types of tools and AI utilized in stylistics and to assess their respective advantages and disadvantages in facilitating language analysis. Since the selection of data sources is critical, the relevance of each article was carefully assessed to ensure analytical accuracy and applicability of the findings. Utilizing the Systematic Literature Review (SLR) methodology, nine pertinent articles published between 2015 and 2025 were examined according to specific inclusion criteria. The study's findings reveal that tools such as Voyant Tools, WordSmith, LIWC, and StyloMetrix are extensively employed to analyze linguistic and stylometric characteristics across different text types, including poetry, emails, and texts generated by AI. While AI has demonstrated its ability to improve efficiency, objectivity, and analytical depth, it continues encountering difficulties in capturing linguistic subtleties and cultural contexts. This study advocates for a collaborative approach between humans and AI to achieve more thorough and precise stylistic analyses in education, literature, and forensic linguistics.

Keywords: *artificial intelligence, SLR, stylistic analysis, stylometry, text analysis*

INTRODUCTION

The evolution of stylistic instruments and Artificial Intelligence (AI) has transformed the methodology of stylistic analysis. Tasks that were once performed manually can now be executed with greater efficiency and precision through the use of computational tools, facilitating the examination of extensive text collections. Advancements in artificial intelligence and machine learning have resulted in the

development of groundbreaking tools and techniques for uncovering linguistic patterns and insights that were once beyond reach (Patawari, 2019). In the context of stylistics, these techniques offer a more objective and scalable approach than traditional methods.

Stylistics, particularly its computational variant has increasingly gained prominence through data-driven methodologies. Computational stylistics, also known as stylometry, leverages statistical and algorithmic tools to analyze linguistic style across large textual corpora, enabling objective and reproducible insights into authorship, genre, and narrative features (Herrmann et al., 2021). Recent research showcases state-of-the-art methods, ranging from motif detection and machine learning to network analysis and NLP for analyzing poetic meter, style, and literary quality in multiple genres (Bories et al., 2022). Meanwhile, algorithmic modeling of thematic similarity, sometimes called computational thematics has proven effective in clustering texts by genre or thematic content, as demonstrated in large-scale novel corpora experiments (Sobchuk & Šeļa, 2024).

As the study of language style, stylistics benefits greatly from the integration of AI. With algorithms capable of automatically analyzing word frequency, sentence length, syntactic patterns, and emotional tone, AI opens new opportunities in linguistic and literary research (Rapi, 2025). However, AI also has limitations, particularly in understanding cultural context and capturing subtle emotional nuances (Hosni, 2024). This challenge is even more relevant in the analysis of texts from non-Western traditions or minority languages, where data representation is often uneven.

The theoretical framework of this study involves a computational stylistics approach to understand the distinctive features of individual writing. Techniques such as TF-IDF and Doc2Vec have demonstrated effectiveness in textual analysis, but limitations in capturing emotionality and cultural context remain a challenge (Liu et al., 2024). While numerous studies have examined the use of AI in stylistic analysis, their findings vary in terms of effectiveness, limitations, and domain-specific outcomes. A systematic review is therefore essential to synthesize existing knowledge, identify gaps, and provide a balanced understanding of AI's role in stylistics. This research aims to investigate the application of AI-driven tools for conducting a more comprehensive and representative stylistic analysis, particularly within the fields of education, literature, and forensic linguistics.

This research seeks to make a substantial contribution toward understanding the strengths and weaknesses of artificial intelligence in style analysis. Specifically, it examines how AI-driven linguistic models perform across different genres and cultural contexts, highlighting both their analytical precision and their limitations in interpreting creative expression. The study also aims to bridge the gap between computational efficiency and human interpretative depth, offering a balanced framework for integrating AI into stylistic inquiry. By providing empirical evidence and theoretical insights, this research aspires to advance the ongoing discourse on the role of AI in linguistic and literary studies.

The proposed hypothesis suggests that incorporating AI into stylistic analysis can significantly enhance efficiency and accuracy. Several studies support this view, demonstrating that AI-based tools, such as natural language processing algorithms and machine learning classifiers, can outperform traditional manual methods in speed and consistency (Yadav, 2024). However, other researchers argue that AI faces substantial limitations in capturing cultural nuances and creative subjectivity, which remain crucial in style interpretation (Li & Li, 2025). These studies emphasize that human expertise is indispensable for evaluating aesthetic qualities and context-sensitive interpretations that AI cannot fully replicate.

Consequently, many scholars advocate for a collaborative approach that combines AI's computational power with human judgment to mitigate algorithmic bias and maintain interpretative depth (Gomathi et al., 2025). While proponents of fully automated systems claim that ongoing advancements in deep learning will eventually close the gap (Chan & Wong, 2025), critics caution that over-reliance on AI could diminish the role of human creativity and critical thinking in stylistic analysis. This literature review, therefore, systematically examines both supporting and opposing perspectives, aiming to highlight not only technical benefits but also broader social, ethical, and professional implications of using AI and related tools in stylistic analysis.

REVIEW OF LITERATURE

Advances in computing tools have enabled large-scale text analysis, replacing manual processes that are often inefficient. (Wijayono & Putra, 2018). AI has given rise to new techniques for uncovering linguistic patterns with higher accuracy (Patawari,

2019). In the context of stylistic analysis, tools such as Stylo in the R programming language support author attribution and literary genre identification (Eder & Górski, 2022). Techniques such as TF-IDF and Doc2Vec can be used to classify poetry based on stylistic and thematic attributes, although limitations in capturing emotionality remain prominent (Liu et al., 2024).

The weakness of AI in capturing the emotional depth and personal nuances of authors, especially in creative texts such as poetry, has been highlighted by several researchers (Hosni, 2024). Other studies show that AI is capable of providing more objective sentiment analysis, but data bias and representational limitations remain major challenges (Salsabila et al., 2024). In the realm of EFL instruction, artificial intelligence can assist in enhancing writing abilities by offering tailored feedback (Söğüt, 2024).

Graph-based approaches such as Word2Vec have also proven effective in author attribution through deeper linguistic context analysis (Tripto & Ali, 2023). However, algorithmic bias and lack of cultural sensitivity remain barriers to AI application (Kairaitytė-Užupė et al., 2023; Okulska et al., 2023; Rujeedawa et al., 2025). In education, AI can support personalized learning, particularly in stylistic analysis (Huda & Suwahyu, 2024). Other studies highlight the potential for collaboration between humans and AI in creating new writing genres (Prabowo & Asmarani, 2025) and the ability of GPT-3 models to build innovative narrative structures (Kumar, 2025). This demonstrates that despite its limitations, the potential for collaboration between AI and humans remains promising in enhancing the quality and fairness of stylistic analysis.

METHOD

This research utilized a Systematic Literature Review (SLR) as its methodological framework. The SLR was chosen to guarantee a thorough, transparent, and reproducible synthesis of the existing literature concerning the application of AI and computational tools in stylistic analysis. The process consisted of four primary stages, following established procedures for systematic review design (Zawacki- Richter et al., 2019), and complied with the PRISMA (Preferred Reporting Items for Systematic Reviews and Meta-Analyses) guidelines to enhance transparency and replicability.

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Research Design

The qualitative and descriptive research design aimed to identify, evaluate, and synthesize relevant academic publications from 2015 to 2025 concerning stylistic tools and AI. The design followed the SLR model, including literature search, selection based on inclusion and exclusion criteria, quality assessment, and data synthesis (Zawacki-Richter et al., 2019).

Data Sources

The data source in this study was secondary data, drawn from academic articles and conference proceedings published in reputable journals indexed in Scopus, Google Scholar, and DOAJ. Search terms included "stylistic tool," "stylistic AI," "stylometry," "linguistic," and "machine learning." The search was conducted using the Publish or Perish application to retrieve recent and relevant publications (Tomczyk et al., 2024).

Data Collection Procedure

The SLR process was carried out chronologically in five stages. The first stage involved the *literature search strategy*, where relevant studies were identified using predefined keywords across major databases within the year range of 2015–2025. This step aimed to gather a comprehensive set of potentially relevant works through automated search tools (Tomczyk et al., 2024). In the second stage, *inclusion and exclusion criteria* were applied to refine the selection. The inclusion criteria covered articles published between 2015 and 2025, written in English or Indonesian, focusing on AI tools used in stylistic or linguistic analysis, clearly stating their methodology, and published in accredited journals or international conference proceedings. Conversely, exclusion criteria included opinion pieces, book reviews, non-empirical studies, works unrelated to stylistics, and duplicate publications. The selection process adhered to the PRISMA flow framework to minimize bias (Zawacki- Richter et al., 2019).

The third stage, *quality assessment*, examined each selected article based on the clarity of objectives, methodological rigor, transparency of results, and contribution to stylistic research. Studies that failed to meet the minimum quality standards were excluded (Zawacki- Richter et al., 2019). In the fourth stage, *data extraction and synthesis* were conducted using a structured form to capture essential characteristics such as research methods, tools employed, findings, and contextual information. The synthesis process was performed narratively and thematically, grouping AI tools by their primary

function, including lexical analysis, stylometric processing, visualization, and classification. Comparative evaluation of performance and limitations was also carried out (Okulska et al., 2023). Finally, the *tool categorization justification* stage classified the AI-based tools according to their dominant analytical function identified in the reviewed literature. These included lexical analysis tools (e.g., Voyant Tools, WordSmith) and stylometric tools (e.g., StyloMetrix, LIWC), ensuring conceptual clarity in the analytical framework of this review.

This classification follows the framework used in comparative studies on AI tools in linguistics and stylistics (Okulska et al., 2023). The framework provides a structured method for categorizing AI-based tools according to their analytical functions, ensuring consistency across studies. By adopting this approach, the present research aligns its analytical procedures with established conventions, allowing meaningful comparison with prior investigations. Furthermore, this consistency enhances the validity of tool categorization and facilitates a clearer interpretation of findings across stylistic research domains.

To enhance transparency, a detailed table of reviewed articles and a comparison matrix of tools are recommended to be included in the appendix or results section (Okulska et al., 2023). These supplementary materials allow readers to trace the analytical process and verify how each study was categorized and interpreted. Including such comprehensive documentation also strengthens the reproducibility and credibility of the systematic review. Moreover, the comparison matrix provides a visual summary of the performance, scope, and limitations of the AI tools, facilitating clearer understanding of their relative contributions to stylistic analysis (Okulska et al., 2023).

FINDINGS AND DISCUSSION

Findings

To improve readability, this study explicitly summarizes the alignment between the research objectives and the identified tools. This dedicated paragraph clarifies how the selection of tools supports the analysis of stylistic patterns, highlighting their respective features, advantages, limitations, and potential applications, both globally and within the Indonesian context.

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This research identified four main tools that are most widely used in stylistic analysis: Voyant Tools, WordSmith Tools, LIWC, and StyloMetrix. Each tool has different advantages and limitations, both in the international context and its potential to be applied in Indonesia, as shown in Table 1.

Table 1. Key Features and Limitations of Tools and AI in Stylistics

Tools	Key Features	Pros	Disadvantages	Application Study in Indonesia
Voyant Tools	Word frequency analysis, collocation, correlation, word cloud, word tree	easy to use, free, visually appealing results, supports multiple languages	Requires internet, limited offline analysis	Assisting English learning in Karawang, analyzing stylistic patterns in text
WordSmith Tools	Concordance, word frequency, word context analysis	Provides context for words in the text, helps learn vocabulary	Not free, requires initial user understanding	Used to learn difficult word distinctions in the context of language teaching
LIWC	Quantitative linguistic analysis, emotion dimension, authenticity	Identify stylistic patterns and emotions, measurable results	Need structured data for maximum results	It has started to be used for suicide note analysis
StyloMetrix	Identification of writing patterns, forensic analysis of style	Detect the authenticity of the text through the pattern of writing style	Requires comparison of written data, does not yet support Indonesian/Arabic languages	Analyze the authenticity of Mahira's letter to support criminal investigations, great potential for local research
Praat	Acoustic phonetic analysis, sound spectrum visualization	Analyze pronunciation errors acoustically	Requires high-quality recorded data	Used to analyze phonetic errors in Arabic language learning
TAALES	Advanced lexical analysis at the word level	Provides information on the complexity and uniqueness of language styles	Requires an initial understanding of linguistics	Used for lexical pattern analysis in stylistic research
TextRazor	Entity analysis, disambiguation, topic extraction	Enables in-depth analysis with high precision	Paid for full features, requires API	Not yet available in Indonesia
ChatGPT	Analysis and production of stylized texts (paragraphs, mood,	Able to produce texts with typical stylistic patterns (imperative,	Using jargon without definition, use of	None Related to Stylistics

	tense, voice, lexical density, etc.)	declarative, etc.), easy to read	"they" as an ideological form	
RapidMiner + KNN	Authorship attribution analysis using stylometric features (n-grams, rare words)	Accurate for short texts (up to 90% accuracy), effective even with limited data, easy to use	Not suitable for small-dimensional features; results are affected by feature and text size	Not yet available

Source: Adapted from various studies (AlAfnan & MohdZuki, 2023; Andini et al., 2023; Febrina et al., 2023; Howedi et al., 2020; Jose & Simritha, 2024; Lahay et al., 2024; Nafisah et al., 2022; Syafar & Febrina, 2019; Wachyudi, 2022)

Critical Synthesis and Systematic Comparison

The critical synthesis of the reviewed studies shows that each AI-based tool used in stylistic analysis contributes differently depending on its focus, function, and linguistic adaptability. These tools represent diverse analytical orientations, some emphasize lexical trends and quantitative precision, while others focus on interpretive or psychological dimensions of language use. However, no single platform has yet provided a holistic analytical framework capable of addressing both linguistic and aesthetic aspects of stylistic study, particularly in the context of Indonesian and Arabic, which have unique morphological and cultural complexities.

Voyant Tools is one of the most widely used open-source text analysis platforms. It is effective for preliminary exploration of large corpora and for visualizing lexical patterns using its interactive modules such as Cirrus and Trends (Kairaitytė-Užupė et al., 2023). The tool allows users to detect word frequency, collocation, and keyword distributions efficiently. Nevertheless, Voyant Tools performs less effectively when used to analyze morphologically rich languages like Indonesian and Arabic, because it primarily depends on surface-level tokenization without deep morphological tagging. As a result, it often misinterprets word variants and root forms that are crucial in these languages.

WordSmith Tools, on the other hand, remains a powerful instrument for lexical consistency and concordance analysis, widely applied in translation and comparative linguistics (de Castro, 2018). Its Concord and WordList features are useful for identifying stylistic markers and lexical cohesion across texts. However, the tool's adoption in Indonesian academic settings is still minimal, mainly due to licensing restrictions and limited built-in support for regional languages. It also lacks cloud-based integration, which makes real-time collaboration more difficult.

In the area of psychological and forensic stylistics, LIWC (Linguistic Inquiry and Word Count) demonstrates strong performance in identifying emotional, cognitive, and social processes in texts (Andini et al., 2023). This dictionary-based system provides clear quantitative indicators for affective and psychological dimensions such as tone, anxiety, and authenticity. However, LIWC's reliance on English-language categories and its relatively high cost limit its use among researchers focusing on non-English corpora. Its adaptation to Indonesian or Arabic cultural contexts remains a significant challenge.

StyloMetrix offers a promising development by introducing a multilingual and transparent stylometric framework (Okulska et al., 2023). It supports multiple input formats and has the potential to be localized for regional languages. When adapted for Indonesian or Arabic corpora, this tool could provide valuable insights for comparative stylistic research, allowing researchers to explore cultural nuances and language-specific stylistic features that are often overlooked in Western stylometric models.

In the field of phonological and acoustic analysis, Praat stands out for its accuracy in sound visualization and phoneme recognition. It is particularly effective in identifying pronunciation errors such as the articulation of 'ain and hamzah in Arabic (Nafisah et al., 2022). The tool's capability for waveform and spectrogram analysis makes it indispensable for phonetic studies. Yet, because it focuses exclusively on spoken data, Praat's contribution to textual stylistics remains limited.

TAALES (Tool for the Automatic Analysis of Lexical Sophistication) provides measurable indices of lexical richness and stylistic sophistication (Lahay et al., 2024). It is particularly relevant for academic writing and second language acquisition studies. By offering variables related to lexical frequency, range, and diversity, TAALES enables researchers to quantify stylistic maturity. However, like most statistical-based tools, it is highly dependent on English corpora, which makes its adaptation to local languages less straightforward.

An interesting hybrid approach emerges from combining LSTM (Long Short-Term Memory) models with TextRazor APIs (Jose & Simritha, 2024). This combination allows for sentiment analysis and entity detection with high accuracy, thus bridging computational linguistics and semantic interpretation. Nevertheless, such models remain weak in identifying micro-stylistic features such as irony, metaphor, or intertextuality, which still require human interpretative involvement.

ChatGPT, as a large language model, presents a unique case. It demonstrates high consistency in structural and stylistic coherence (AlAfnan & MohdZuki, 2023), making it suitable for genre emulation and stylistic imitation. However, despite its generative ability, ChatGPT's style remains probabilistic rather than creative. It lacks the emotional depth and lexical originality that characterize authentic human writing.

Finally, RapidMiner represents a comprehensive data mining environment that can integrate stance detection, evidence extraction, and linguistic analysis (Howedi et al., 2020). It performs well in factual stylistics and large-scale text processing but contributes less to aesthetic and interpretive aspects of literary style.

Taken together, this synthesis suggests that while each tool contributes uniquely to computational stylistics, none can stand alone as a complete analytical framework. Tools such as Voyant and WordSmith are strong in lexical analysis, LIWC and StyloMetrix emphasize cognitive and comparative dimensions, and Praat and TAALES serve specialized roles in phonological and lexical sophistication. Emerging models such as LSTM-TextRazor and ChatGPT demonstrate future potential for hybrid analysis but still depend on proper linguistic and cultural adaptation. Therefore, future research should move toward developing integrated, multilingual, and context-sensitive models that combine computational precision with human interpretive insight, a direction that this study aims to advance.

Tools and AI in the Indonesian Context

Recent studies have begun to explore the implementation of AI in the field of language and literary studies in Indonesia. It has been shown that AI is gradually being integrated into the teaching and learning of literary criticism in Indonesian language education programs, especially to accelerate the analysis of themes and structures of literary works (Ahmadi, 2025). The integration of AI-based analytical tools allows students to identify stylistic features and narrative patterns more efficiently, reducing manual workload and increasing engagement with interpretive tasks. This reflects a broader global trend in which computational stylistics supports pedagogical innovation and improves the depth of literary analysis.

The use of LIWC has also been tested in the analysis of student suicide notes in Surabaya to identify emotional expression and the author's authenticity. (Andini et al., 2023). The study successfully identified psychological indicators of distress and self-

reflection, demonstrating that linguistic markers can represent emotional conditions with a high degree of reliability. This finding highlights the potential of AI-driven stylistic analysis not only for literary and linguistic research but also for psychological profiling and educational assessment. However, the practical implementation of such tools in the Indonesian academic environment remains limited.

Several challenges have been documented in implementing AI-based tools for literary and linguistic research. The main obstacles in Indonesia include limited language resources, a lack of lecturer training, and restricted access to digital infrastructure (Ahmadi, 2025). These issues hinder the development of computational stylistics and reduce the effectiveness of AI adoption in classroom and research contexts. Many educators are still unfamiliar with corpus-based tools, and institutional support for digital infrastructure remains insufficient, creating a gap between theoretical potential and practical application.

Nevertheless, the potential for developing open-source tools such as StyloMetrix for Indonesian and Arabic remains significant. Such development could transform the research landscape if supported by cross-disciplinary collaboration and continuous corpus development. The establishment of a localized linguistic infrastructure would enable more accurate, culturally relevant stylistic analysis. Therefore, investment in local corpora and training programs for educators is essential to support sustainable AI integration in Indonesian higher education and to ensure that the benefits of computational stylistics are accessible to all researchers.

Discussion

To support the conclusion, this section provides examples from the reviewed articles to illustrate how AI-based tools have been applied across different contexts. In addition, greater attention is paid to the details of the results, as each tool or case study represents a slightly different context. Such detail is essential for explaining the nuances of the discussion and for offering more accurate suggestions. The findings of this research suggest that utilizing AI-driven tools for stylistic analysis can reveal linguistic patterns that are frequently overlooked by traditional methods (Kairaitytė-Užupė et al., 2023). This approach enhances text analysis by integrating data visualization, lexical examination, and automated thematic categorization.

For example, LIWC detected a higher frequency of anxiety-related words in Indonesian student suicide notes compared to manually coded data (Andini et al., 2023), while WordSmith Tools identified that one translator used formal synonyms significantly more often than another in Indonesian literary translations (de Castro, 2018). Combining TextRazor with lexical analysis classified multilingual social media posts by tone and topic with high accuracy (Jose & Simritha, 2024), and integrating LIWC with TextRazor revealed emotional, thematic, and rhetorical features in online debate transcripts more efficiently than manual coding (Howedi et al., 2020).

Stylometric techniques achieved over 90% accuracy in attributing Polish historical novels to their respective authors (Okulska et al., 2023), and computational methods successfully traced intertextual relationships and rhetorical devices in classical literature (Battles, 2019). These findings support that AI-based tools can surpass traditional methods in identifying stylistic structures across academic, legal, and literary genres (Andini et al., 2023).

Nonetheless, limitations persist. AI struggles to interpret irony, metaphors, and complex cultural nuances (Okulska et al., 2023; Hamidi et al., 2021). LIWC underrepresented metaphorical expressions in texts by non-native English speakers, reducing interpretive depth (Okulska et al., 2023). Limited infrastructure also hindered the use of large-scale tools like RapidMiner and TAALES in Indonesian classrooms (Ahmadi, 2025), while algorithmic biases affected consistency in stylistic assessments (Algaraady & Mahyoob, 2025; Omar & Salih, 2024).

Therefore, collaboration between AI technologies and human researchers remains crucial to ensure that stylistic analysis results are contextualized and interpreted meaningfully (Okulska et al., 2023). In summary, these findings support AI as a valuable resource for enhancing stylistic analysis, but human expertise remains irreplaceable in interpreting meaning. AI should serve as a complementary tool that combines technological precision with human interpretive sensitivity (Okulska et al., 2023).

Human and AI Collaboration

The collaboration between humans and AI has become an essential factor in ensuring the validity and meaningfulness of stylistic analysis results (Okulska et al., 2023). While AI tools can process large amounts of linguistic data efficiently, human interpretation remains crucial to contextualize the results, identify stylistic nuances, and

prevent algorithmic misinterpretation. The balance between computational efficiency and human judgment ensures that stylistic analysis maintains both accuracy and cultural relevance.

In the field of language and literature learning, AI technologies are increasingly used to provide automatic feedback on writing quality, stylistic variation, and lexical choice (Ahmadi, 2025). However, the role of teachers and lecturers remains indispensable. Educators are responsible for guiding students toward critical understanding, ethical use of technology, and interpretive sensitivity that machines cannot replicate. Hence, effective integration of AI in education must emphasize collaboration rather than replacement, ensuring that pedagogical objectives align with ethical and human-centered principles.

CONCLUSION AND SUGGESTIONS

Conclusion

The integration of tools and AI in stylistic analysis promises to revolutionize the field by offering objectivity, efficiency, and the ability to handle large datasets that were previously impossible to tackle manually. However, it is important to realize that these technologies are not replacements for human expertise, but rather tools that amplify the capabilities of researchers and analysts. Computational stylistics opens the door for in-depth exploration of language style, author identification, and understanding the evolution of language over time. Nonetheless, there are several challenges such as potential biases in algorithms, limitations in capturing subtle nuances of language, and the need for validation by human linguists.

To maximize the potential of tools and AI, it is important to develop models that are transparent and interpretable, and ensure that the training data used is representative and of high quality. Education and training also play an important role in equipping researchers and analysts with the necessary skills to use these technologies effectively and responsibly.

Suggestions

According to the results of this research, multiple suggestions can be made for advancing stylistic studies through the use of artificial intelligence. Firstly, considering the constraints of AI tools in grasping cultural contexts and local subtleties within texts,

upcoming researchers should incorporate a qualitative methodology rooted in local contexts into their analyses to enhance the findings derived from automated analysis. This is important so that interpretations of language style are not limited to statistical patterns alone, but also consider the underlying social and cultural factors. Second, this study has not explored in depth how bias in AI training data can affect the results of stylistic analysis, especially in under-resourced languages. Therefore, further research could focus on evaluating the bias of AI models when applied to texts from specific social or geographical contexts. Third, this study only focuses on written text data from specific genres and does not cover spoken genres, multimodal texts, or classical literary texts. This opens up opportunities for further research to apply similar approaches in other genres, thereby expanding our understanding of style in various forms of communication. Finally, in the context of developing stylistic analysis tools, the development of AI-based tools that can accommodate linguistic and stylistic diversity in multilingual contexts should be prioritized so that the use of this technology can be more inclusive and adaptive to the needs of users in various regions.

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