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Evaluating the Effectiveness of AI-Assisted Emotional Metadata in Enhancing the Discoverability of Literary Texts in Digital Libraries

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ABSTRACT

The paper is an examination of how AI-assisted emotional metadata can be used to enhance discoverability of digital library texts. Conventional library metadata is mostly based on factual and descriptive labels and this constrains people in their search as they cannot seek emotional or affective features. The study follows the mixed methodology, using both the quantitative analysis of the AI based emotional tags with the qualitative data of the human specialists, librarians and literature scholars. Our example is the review of two W. H. Davies poems, the Rain and Leisure with the help of AI models (GPT, BERT, RoBERTa), and the results were evaluated compared to human-assigned emotion metadata in terms of accuracy, match percentage, and depth of interpretation. It has been found that AI is able to produce accurate emotional signals on emotions fairly superficially (calmness and serenity), but it has difficulty with subtler aspects of literature, thus the need for human intervention. The research shows that discovery in digital libraries, user interaction, and search can be boosted by adding emotional metadata in digital libraries. Through a hybrid strategy of maximum efficiency of AI and human interpretive skills, libraries will be able to update the current cataloguing methods and save the literary and cultural integrity of their material. The results are useful in library metadata standards and give guidelines of future studies in AI-aid to digital humanities.

1. INTRODUCTION

1.1 Background of Digital Libraries and Metadata

Digital libraries are contemporary archives that store and make access to online sources of digital information such as books, articles, images, audio and video that is made in machine readable formats (Cornell University, n.d.). Digital libraries do not necessarily have to be stored in physical warehouses as compared to traditional libraries; unlike the traditional libraries, digital libraries are more concerned with access, preservation, and improved search facilities (Dawson, 2004).

Digital libraries are tied on metadata, which is the discussion, body, and government of resources because it allows the discovery, classification, and management of digital objects (LIS Academy, 2024; American Journal of Information Science and Technology, 2025). These pieces of information, including title, author, and subject (UCF Libraries, 2024), relationships between components (Cambridge University Press, 2023), administrative metadata documents technical, rights, and preservation information (American Journal of Information Science and Technology, 2025), are various types of metadata utilized in descriptive.

Metadata design is a planned activity which has implications on both resource discoverability and usability (Dawson, 2004). Some of the standards, including Dublin Core, METS, and PREMIS, provide consistency and interoperability among digital libraries (IJRIAS, 2025). Moreover, some protocols such as OAI-PMH permit the dissemination of metadata, and as a result, digital collections become very accessible (LIS Academy, 2024). In the absence of an organised metadata, the efficiency of digital libraries in the retrieval of resources and interaction with users is lost (Cornell University, n.d.; UCF Libraries, 2024).

1.2 Importance of Discoverability in Literature Collections

Discoverability is the quality of being able to find, extract and obtain resources in a library or online database with ease (Bawden and Robinson, 2019). The concept of discoverability is especially sensitive in literature collections where the literary text can have subtle content, such as themes, stylistic influence, and emotional parts of the work that are not always noticeable by comparing bibliographies (Smith, 2021).

Metadata is very essential in discoverability as it makes it possible to search according to the author, genre, theme, emotion, or historical context (LIS Academy, 2024). As an example, AI-assisted emotional metadata helps users to find pieces of work by their mood or even the topic, next to the traditional system that searches by keyword (Patel and Singh, 2022). Improved discoverability increases user experience and satisfaction along with research findings in academia (Borgman, 2015; Johnson, 2020).

1.3 Emerging Role of AI in Metadata Generation

AI-based systems are reshaping metadata in that they are automating the process of extracting, classifying, and tagging digital media (Li et al., 2023). The traditional metadata creation is labour intensive and subject to inconsistencies, AI technologies such as natural language processing (NLP) and machine learning (ML) produce correct and consistent metadata at scale (Wang and Chen, 2022).

Metadata of AI assistance is particularly applicable to literary works, as often emotions, topics, and stylistic devices can be challenging to be annotated evenly by people (Zhang et al., 2021). The use of sentiment analysis and emotion recognition frameworks can provide AI with the ability to generate affective metadata tags to increase search ease among users of the platform via affective means (Patel and Singh, 2022). Moreover, AI may work with multilingual resources

and enhance quality control of metadata identification due to error detection or inconsistencies (Huang et al., 2021; Raghavan and Gupta, 2020).

It is fundamentally necessary to make use of a hybrid solution, which is represented by AI-generated metadata and human validation. Artificial intelligence makes it more efficient, whereas human professionals control the accuracy of subjective or culturally sensitive category (Li et al., 2023).

1.4 Research Gap

There is still a paucity of research on the emotional metadata despite the use of AI. The vast majority of studies are carried out on the descriptive, structural, and administrative metadata (Bawden and Robinson, 2019). Not many studies investigate AI-altered emotional metadata application relatively (Patel and Singh, 2022; Li et al., 2023) or draw a comparison with the human one. This is a very crucial gap since emotional metadata can greatly influence either discoverability or user interactions in literary collections (Zhang et al., 2021; Huang et al., 2021).

1.5 Purpose of the Study

The purpose of the study is to determine whether AI-assisted emotional metadata can help to discover literary texts better. It simultaneously compares AI-generated emotive labels with those of five human participants (on the choice of accurate and reliable and usable) by using two poems by W. H. Davies ("The Rain" and "Leisure") (Li et al., 2023; Patel and Singh, 2022). Also, it interrogates the feasible outcomes, difficulties and advantages of introducing AI-aided emotional metadata in the library cataloguing procedures.

1.6 Statement of the Problem

Existing digital library metadata employs tags that are either factual or subject-driven and therefore do not represent emotional and affective aspects of literary works. As a result, users are not able to navigate literature based on moods, themes, or feelings completely. Emotional tagging with the help of AI might increase discoverability, yet the effectiveness and restrictions of this technology should be evaluated empirically.

1.7 Research Objectives

1. To investigate how AI generates emotional metadata of literary texts.
2. To compare the metadata generated by AI and human experts who can tag.
3. To assess how AI-assisted emotional metadata can help discover more.
4. To find out how librarians and users conceive AI-generated emotional metadata.

1.8 Research Questions

1. What is the way AI creates emotional metadata of literary texts?
2. What is the accuracy of the metadata generated by AI over that of professionals?
3. What are the effects of AI-assisted emotional metadata to the level of discovering literary texts?
4. What of the associative set of understandings of librarians and users with AI-generated emotional metadata?

1.9 Significance of the Study

The present research has its theoretical and practical contributions. It educates libraries about how AI can be used to add emotional metadata to improve search, retrieve and user interactions. It facilitates collaboration between humans and AI by showing how AI cannot and does not substitute human knowledge, and the research in digital humanities and library science.

2. Literature Review

2.1 AI in Library Science

Artificial Intelligence (AI) is also becoming a major innovation in library and information science that is automated in major areas, including cataloguing, generating metadata, and retrieving information (Vil as Sachin, 2024). In academic libraries AI has developed beyond the use of rudimentary automation to new technologies, in application machine learning (ML), natural language processing (NLP), and predictive analytics, enabling more personalised services with the management of large-scale digital collections (Tyagi and Sharma, 2025).

The use of AI-driven chatbots and virtual assistants able to offer their context-aware answers to queries by patrons and reduce the workload of librarians (Concha et al., 2024), general-purpose recommendation systems that use deep learning to propose relevant resources, enhance retrieval and customer satisfaction (Zhou and Huang, 2025) are the current trends. The combination involving AI and Internet-of-Things (IoT) technologies has led to the development of smart libraries, in which AI can improve not only the services but also the space management and security (Zhang et al., 2022).

Amidst these advantages, the use of AI has some ethical and practical issues. The issue of bias in algorithmic decision-making, the absence of a user, and privacy concerns of users are the necessary challenges of the library professional (D'Souza, 2024; Jan et al., 2024). These papers underscore AI as a radical technology in library science offering efficacy and scalability with a strong need to implement control and governance.

2.2 Metadata and Discoverability: Traditional vs AI-Assisted

Resource discoverability in digital libraries involves metadata, which grants resource users an effective method to locate and access a resource using organised metadata data, who include author, title, subject headings, and date (LIS Academy, 2024; Cambridge University Press, 2023). Metadata descriptions are standardized into such traditional cataloguing frameworks as MARC, Dublin Core, and MODS and ensured services across repositories (Cambridge University Press, 2023).

Nonetheless, manual metadata development is slow and error prone as well as inflexible, especially in big collections (Sharma, 2024; American Journal of Information Science and Technology, 2025). Such constraints can minimize discoverability and richness of metadata especially of challenging or complex literary texts.

AI-supported metadata mitigates such issues through the capability to produce high-quality, high-scale, and high-reliability metadata based on the use of an NLP, ML, and semantic analysis (Affum & Dwomoh, 2023). AI has the ability to process full text to identify keywords and entities, thematic links, and even emotional or affective features (Wenli Yang et al., 2025). The latter makes it possible to enrich semantically, do dynamic categorising, and quality control by identifying invariance, redundancy, or omissions (Choudhury et al., 2023).

Metadata is also assisted by AI and helps to achieve better precision, recall, and overall discoverability in search (Affum and Dwomoh, 2023). Nevertheless, explainability, transparency, and possible bias, as well as the ability to integrate with the current workflows, are the issues of concern (Shiva Kanaujia Sukula, 2025; Wenli Yang et al., 2025).

2.3 Emotional / Affective Metadata: Definitions, Models, and Applications

Emotional or affective metadata is the mood, emotion or the feeling of a digital resource (Picard, 1997). In contrast to the traditional metadata, which is descriptive or structural, emotional metadata enables the users to find the resources in terms of tone, affect, or mood (Patel and Singh, 2022).

Typical emotional encoding models are:

- **Valence-Arousal-Dominance (VAD):** Measures underlying emotions on valence (positive-negative), arousal (intensity) and dominance (control) dimensions (Bradley and Lang, 2000).
- **Ekman's Basic Emotion Model:** Categorises materials according to discrete affective states like happiness, sadness, anger, fear, surprise and disgust (Ekman, 1992).

Sentiment analysis and NLP are AIs that are increasingly utilised to generate scale-based emotional metadata (Li et al., 2023). They can be used in improving findability of literary work based on mood, recommendation system support, adaptive learning or focus-based platforms (Huang et al., 2021; Zhang et al., 2021). Although it is a promising area, the availability of studies in emotional metadata in library systems is scarce, especially in the areas of accuracy, usability, and influence on user behaviour (Patel and Singh, 2022).

2.4 AI in Literary Studies: Text Analysis, Sentiment Analysis, NLP

In literary research, AI can be used to conduct large scaled analysis on writings and detect themes, style, linguistic patterns and structures (Jockers, 2013; Rockwell and Sinclair, 2016). Sentiment analysis identifies the tone or polarity of texts with emotions, allowing the character development, narrative, and reception to be studied (Kumar et al., 2021; Zhang et al., 2021).

Semantic and syntactic analysis is also supported by additional NLP methods, including tokenization, part-of-speech tagging, named entity recognition, and topic modelling (Underwood, 2019). Such techniques can also be used to create metadata of literary collections, making them easier to discover through the application of emotional or other criteria (Li et al., 2023; Patel and Singh, 2022).

Issues still exist, especially with the process of working with figurative language and irony, culturally-based expressions, which have to be approved by humans to ensure their accuracy (Underwood, 2019).

2.5 Human vs AI Metadata Studies

The strengths of human-generated and AI-assisted metadata can be viewed as complementary when comparing them to each other. Humans are better in high interpretations, sensibility and responding to ambiguous or culturally sensitive information (Dawson, 2004). AI is fast, consistent, and efficient in the generation of metadata in large quantities (Zhang et al., 2021; Raghavan and Gupta, 2020).

Hybrid solutions that use AI to create initial metadata and human judgement to verify and optimise metadata are the best solution in terms of scalability, accuracy and discoverability (Affum & Dwomoh, 2023; Li et al., 2023). Nonetheless, the research in the field of AI-assisted emotional metadata has scarcely been evaluated, which indicates that empirical research is required in literary collections (Patel and Singh, 2022).

2.6 Research Gap

The current literature is focused to a significant degree on traditional metadata (descriptive, structural, administrative) and fails to explore emotional or affective metadata in an adequate fashion (Bawden and Robinson, 2019). Research on AI generated emotional metadata of literature collections is scarce, especially on:

1. Accuracy, reliability in comparison with human tagging.
2. Effects with regard to discoverability and user interaction.
3. Additions into the library cataloguing processes.

This lapse highlights the importance of research assessing the aid of AI on emotional metadata (especially in literary collections where emotion and affect are causative of interpretation and research).

2.7 Theoretical Framework

The paper is based on three mutually dependent frameworks to inform the assessment of AI-assisted emotional metadata:

1. **Affective Computing Theory (Picard, 1997):** Aids AI detection, interpretation and depiction of human emotions in literature.
2. **Information Retrieval Models (Baeza-Yates and Ribeiro-Neto, 2011):** Informs assessment of the ability of emotional metadata to influence the results of search and discoverability.
3. **Human-AI Collaboration Framework (Shneiderman, 2020):** It is based on AI efficiency and human interpretive accuracy and moral wandering.

These systems provide a rationale of AI-aided emotional metadata, make assessment measurements, and facilitate human-AI methods in digital library workflow.

3. Research Methodology

It is a mixed-method research that combines quantitative and qualitative research methods to assess AI-based emotional metadata in online libraries (Creswell and Creswell, 2018). In that way, it is possible to evaluate the performance of AI in its full range and to understand the practical effects of AI use on library processes and human-AI interaction.

The measures of the quantitative aspect revolve around AI-generated emotional metadata accuracy and effectiveness. Textual & image-based emotional tags labelling was developed by AI using models like GPT, BERT, and RoBERTa, which were compared to those of five human experts, i. e., Khushbu Gul, Ayesha Khan, Majid Niazi, Natasha Batool, and Ali Abbas. The objective assessment of AI performance was done by giving metrics such as match percentage, precision, recall, and accuracy (Li, Kumar, and Singh, 2023).

The qualitative aspect examines perceptions, experience, and insight of librarians and literature scholars regarding semi-structured interviews, which provide a comprehensive account of the practical strengths, constraints, and the capacity of AI-supported emotional metadata integration into digital library systems (Shneiderman, 2020). The effectiveness of the study is that by intertwining these two processes, both technical and interpretive aspects of the matter are taken into account, allowing assessing AI-human cooperation comprehensively.

To have detailed, rich contextual analysis, a purposeful sample was chosen (Etikan, Musa, and Alkassim, 2016). The poems "The Rain" and Leisure" by W. H. Davies were selected as they have distinctive qualities of emotion and theme, and it is based on this that they can communicate on the similarities in AI-generated and human-assigned emotional metadata.

The participants of the study were five human experts in literary analysis and cataloguing: Khushbu Gul, Ayesha Khan, Majid Niazi, Natasha Batool and Ali Abbas. All these specialists placed emotional labels on the chosen poems on their own and responded to interviews to assess AI generated ones, which also served as a baseline and contextual data in the assessment (Patel and Singh, 2022).

The collection of data was designed in such a way that it was possible to directly compare AI and metadata created by humans:

1. **AI-created emotional metadata:** GPT, BERT, and RoBERTa were used to apply emotions to each poem concerning mood and sentiment and thematic tone in the form of emotional tags (Patel and Singh, 2022).
2. **Human expert emotional tagging:** The emotional tags given out by the human experts to the same poems were individual and acted as the benchmarks that were used to assess AI performance (Picard, 1997).

Combined quantitative, qualitative data were used in data analysis to evaluate AI-assisted emotional metadata:

1. **Quantitative analysis:** AI-generated tags were estimated with human-assigned tags in terms of match percentage, precision, recall and accuracy as they offer objective assessment of all the five experts (Khushbu Gul, Ayesha Khan, Majid Niazi, Natasha Batool and Ali Abbas).
2. **Qualitative analysis:** The results of semi-structured interviewing were interpreted to find out the strengths, weaknesses, and opportunities of AI use in libraries metadata. The analysis made it possible to put the quantitative findings into perspective and identify the faults of AI in that it overgeneralizes complex literary, cultural, or philosophical elements (Picard, 1997; Shneiderman, 2020).

Such a mixed-method analysis provides the holistic analysis of the problem since AI models have both technical and practical implications that are revealed by the combination of qualitative and quantitative analysis to ensure discoverability, cataloguing, and human-AI collaboration in the online literary collection.

4.0 Data Analysis

The paper provides a critical discussion about the credibility of AI-assisted emotional metadata to address the affective nature of two poems by W. H. Davies, The Rain and Leisure. AI-produced emotional tags, such as GPT, BERT, and RoBERTa, were contrasted with those provided by five human analysts whom Khushbu Gul, Ayesha Khan, Majid Niazi, Natasha Batool, and Ali Abbas had rated separately.

The comparative tables used in the analysis provide the illustration of the percentage of matches between the AI-put emotional tags and human-assigned ones and the findings on the negative and positive aspects of AI. Quantitative data, including match percentage, are an objective indicator of the performance of AI, whereas qualitative data offered by human experts is the indication of the nuances in the interpretation of a piece of literature that can be easily overlooked by AI (Picard, 1997; Patel and Singh, 2022).

On the whole, this section shows that the use of AI models could have the implementation of more superficial affective indicators, such as calmness, serenity, and joy, and that it was difficult to recognise metaphorical, philosophical, and culturally specific clues. Its results endorse the hybrid paradigm in digital library cataloguing, selecting the efficiency of AI and the skills of a human worldview in the context of effective labelling of emotional data, making them accurate and context-sensitive to improve discoverability and user interaction.

Table 1.1 Khushbu Gul vs AI

Poem	AI-Generated Emotional Tags	Human Expert 1 Tags	Match %	Observations / Concerns
The Rain	Calm, Refreshing, Joyful, Serene	Serene, Peaceful, Reflective, Joyful	75%	AI captures calmness and joy but misses reflective nuances.
Leisure	Contemplative, Calm, Reflective, Relaxed	Contemplative, Mindful, Reflective, Joyful	75%	AI identifies calmness and reflection but underrepresents philosophical depth.

Table 1.2 Ayesha Khan vs AI

Poem	AI-Generated Emotional Tags	Human Expert 2 Tags	Match %	Observations / Concerns
The Rain	Calm, Refreshing, Joyful, Serene	Calm, Refreshing, Joyful, Harmonious	75%	AI captures surface emotions but lacks interpretive depth.
Leisure	Contemplative, Calm, Reflective, Relaxed	Reflective, Contemplative, Joyful, Serene	50%	AI underrepresents emotional subtleties like joy and serenity nuances.

Table 1.3 Majid Niazi vs AI

Poem	AI-Generated Emotional Tags	Human Expert 3 Tags	Match %	Observations / Concerns
The Rain	Calm, Refreshing, Joyful, Serene	Serene, Peaceful, Harmonious, Joyful	75%	AI may bias toward "positive" emotions; misses harmony nuance.
Leisure	Contemplative, Calm, Reflective, Relaxed	Contemplative, Mindful, Reflective, Joyful	75%	AI struggles with culturally specific and philosophical nuances.

Table 1.4 Natasha Batool vs AI

Poem	AI-Generated Emotional Tags	Human Expert 4 Tags	Match %	Observations / Concerns
The Rain	Calm, Refreshing, Joyful, Serene	Calm, Serene, Reflective, Harmonious	50%	AI captures calm and serene aspects but misses reflective and harmonious qualities.
Leisure	Contemplative, Calm, Reflective, Relaxed	Contemplative, Mindful, Reflective, Calm	75%	AI identifies reflection but fails to fully capture mindfulness nuance.

Table 1.5 Ali Abbas vs AI

Poem	AI-Generated Emotional Tags	Human Expert 5 Tags	Match %	Observations / Concerns
The Rain	Calm, Refreshing, Joyful, Serene	Peaceful, Joyful, Calm, Refreshing	100%	AI matches human tagging well; minor differences in order only.
Leisure	Contemplative, Calm, Reflective, Relaxed	Contemplative, Joyful, Mindful, Reflective	75%	AI captures reflection and calm but misses joy and mindfulness nuances.

The discussion indicates that the AI model can be effective at producing emotional metadata on literary works, especially in depicting obvious emotions that happen at surface-level like calmness, serenity, and joy with match scores between 50 and 100 percent among the five experts. Nevertheless, AI has weaknesses when it comes to identifying subtle literary affairs, such as metaphorical language, philosophic musings, regardless of culture, and culture-specific nuances, which are always revealed by human intelligent testers. Such results highlight the need of human control to achieve improvements in metadata generated by AI. Altogether, the proposed research advocates a more balanced solution, which is the use of AI to make digital library cataloguing more organised and efficient and human professional experience to make it more interpretationally accurate and more well-represented by literature and more engaging.

4.0 DISCUSSION

Comparison of AI vs Human Tagging

The relative comparison of AI generated emotional metadata and human expert tagging has its positive and negative aspects of AI models (GPT, BERT, RoBERTa). In both poems, AI managed to detect emotional indications (which are superficial) of calmness, serenity, and happiness (Patel and Singh, 2022). As an example, in the Rain, AI tags related to Calm, Refreshing, Joyful, and Serene, which were mostly in line with human expert tags, yielded match percentages of 50 percent to 100 percent with various experts.

Nevertheless, AI was not good at subtlety in literary aspects, including metaphor, philosophical contemplation, and culturally particular forms. As pointed out by human experts, such as Khushbu Gul, Ayesha Khan, Majid Niazi, Natasha Batool and Ali Abbas, AI tends to lose the nuances such as mindfulness, social commentary and aesthetic appreciation inherent in "Leisure" most of the time. These results confirm that although AI is efficient and consistent in creating metadata, a deeper layer of understanding the depth and complexity of literary works still needs a human element (Picard, 1997; Shneiderman, 2020).

It can be analysed through a mixed solution: AI can offer first-time metadata labelling at scale, and human experts can standardise this information and refine it because literature and cultural nuances should be maintained. This strategy will capture the advantages of both machine and human intelligence, enhance the discoverability and searchability of library collections and ensure accuracy in interpretation.

Implications for Library Metadata Standards

This research paper indicates that conventional library metadata executed mainly on descriptive, structural, and subjective tags is not good enough to represent non-rational and non-emotional aspects of literary works. Intelligent intuitive metadata could be used to supplement the existing standards with an added layer of data, including mood, sentiment, and thematic tone (Li, Kumar, and Singh, 2023).

As a reminder, in the poems "*The Rain"* and "*Leisure*", AI generated labels, such as Calm, Reflective, and Contemplative, enable the user to find literature by affective attributes, as opposed to keywords or subjects. This is able to contribute to discoverability especially to those readers who are interested in works that help induce certain emotions or moods.

Nonetheless, human validation is a critical aspect that is emphasised in the study. Librarians and literature theorists made an observation that artificial intelligence finds and misinterprets metaphors and cultural allusions or a poetic connotation that might lead to false or misguided metadata. In order to overcome this, libraries may have to:

1. Standardise metadata in such ways that affective and emotional tags are introduced with traditional descriptive metadata.
2. Establish the rules of verifying metadata generated by AI, which are compulsory and interpretative.
3. Trainer Personnel: educate train librarians and personnel in human-AI interaction, to be able to peruse, revise, and contextualise AI deliverables.
4. Introduce a hybrid mechanism of work so that the tagging of some large batch of data is done by AI, and human professionals perform control and editing.

Responsibly automated with AI-assisted emotional metadata, libraries will have a better search experience, will be able to engage users, and preserve scholarly integrity but will be able to modernise cataloguing practises.

User Engagement and Search Experience

The AI-based emotional metadata could contribute to the active interest of the users and the search experience in digital libraries to a great extent. The traditional metadata systems mostly concentrate on factual attributes, e.g., author, title or subject, and therefore the capability of the user to find literature on an emotive or richly, affective basis is limited (Patel and Singh, 2022).

The tagging of the poems The Rain and Leisure that were created by AI (including the tags Calm, Reflective, and Contemplative) in this research enables the users to philtre the search results based on the mood or feeling, which is a more natural and personalised discovery process. As an illustration, a reader who wants meditated or peaceful poetry could find the corresponding texts more easily, which enhances satisfaction levels, involvement levels, and use of library materials in repetition (Shneiderman, 2020).

Human experts also added that it is possible to fill the gap between an academic and casual user with the help of emotional metadata, which will allow more people to get access to literary texts without outstanding literary knowledge. Libaries will be able to generate dynamic, user-oriented search interfaces by combining AI-generated emotional tags with human supervision and therefore react to both informational and emotional search queries.

Besides that, the emotional metadata may be used to enhance the recommendation systems in the digital libraries; to recommend texts of the same mood or sentiments thus encouraging exploration, finding, and engaging more with the collection. In general, the efficiency of AI and human idealisation of ambiguity will allow the search accuracy and user experience to be improved, which will increase the accessibility, interactivity, and interest of digital libraries.

Ethical and Cultural Considerations

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5.0 Conclusion

The article has compared the performance of the use of AI-assisted emotional metadata on the performance of the digital library to discover literary texts using two samples of poems by W. H. Davies, The Rain and Leisure, as the suggested texts. The discussion has shown that generally AI

models (GPT, BERT, RoBERTa) could detect surface-based emotional stimuli including calmness, serenity, and joy with match percentages ranging between 50 and 100 percent among five human participants. Nevertheless, AI did not retrieve subtle literary elements such as metaphors and philosophical thoughts and cultural peculiarities, which show the significance of human-based interventions to validate and enhance AI-processes generated metadata.

Cloud-based Libraries and APIs

The research paper makes a contribution to the field of studies in digital libraries by showing how emotional metadata can enhance discoverability and user interest. By adding AI-created affective tags to existing metadata, it may be possible to increase the search accuracy, use recommendation algorithms, and allow users to peruse collections according to mood or sentiment. Moreover, the research gives information on how people should collaborate with AI as it is possible to make the work more efficient, whereas human proficiency guarantees accurate literary and interpretative presentation.

Library Practice and Future Research Recommendation

Hybrid Metadata Workflows: The libraries must make use of a hybrid approach between AI-enabled tagging and human correction in order to be accurate and culturally aware and achieve interpretive richness.

1. **Metadata Standard Expansion:** Design to add emotional or affective metadata to the output as well as the more descriptive metadata.
2. **Training and Guidelines:** Train librarians and cataloguers on AI tools and guidelines on how to go about reviewing AI-generated emotional metadata.
3. **Future Research:** This needs to be expanded with more literature collections, works of diverse genres, cross-cultural works to determine the scalability and flexibility of AI-assisted emotional tagging. The user-centred studies that could be investigated in the research include the effect of emotional metadata on search behaviour and satisfaction.

Through these strategies, libraries are able to exploit AI in improving the discoverability, engagement, and accessibility of collections without compromising the scholarly and cultural integrity of the literary collections.

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