

**Review Form 3**

Journal Name:	<a href="#">Journal of Advances in Mathematics and Computer Science</a>
Manuscript Number:	<b>Ms_JAMCS_125400</b>
Title of the Manuscript:	<b>Systematic Literature Review of Infectious Diseases in Nigeria using Topic Modeling</b>
Type of the Article	<b>Review Article</b>

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**PART 1: Review Comments**

<b>Compulsory</b> REVISION comments	<b>Reviewer's comment</b>	<b>Author's Feedback</b> (Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<p><b>Please write a few sentences regarding the importance of this manuscript for the scientific community. Why do you like (or dislike) this manuscript? A minimum of 3-4 sentences may be required for this part.</b></p>	<p>The paper presents a systematic literature review of infectious diseases research in Nigeria over the past two decades using topic modeling, identifying HIV/AIDS and malaria as the most researched infectious diseases and highlighting diseases that have been least researched in this period. Identify the most researched infectious diseases in Nigeria over the past 20 years - Determine areas of infectious disease research that have received extensive attention as well as those that have been neglected - Demonstrate the use of innovative text mining and topic modeling techniques to analyze a large corpus of research articles on infectious diseases in Nigeria.</p>	
<p><b>Is the title of the article suitable? (If not please suggest an alternative title)</b></p>	<p><b>Yes</b></p>	
<p><b>Is the abstract of the article comprehensive? Do you suggest the addition (or deletion) of some points in this section? Please write your suggestions here.</b></p>	<ul style="list-style-type: none"> <li>➤ <b>Informal Language:</b> Use of informal phrases like "teasing out" should be replaced with more formal terms like "extracting."</li> <li>➤ <b>Inappropriate Use of "ChatGPT":</b> Mentioning ChatGPT as a source for validating disease prevalence is misleading and inappropriate for this context. Use a reliable database instead.</li> <li>➤ <b>Lack of Clarity:</b> Certain numbers and processes, such as n-grams and the topic validation method, are unclear and need more explanation.</li> <li>➤ <b>Punctuation and Grammar Issues:</b> Minor grammatical errors, such as inconsistent capitalization (e.g., "hiv" instead of "HIV"), and awkward phrasing ("prevailing foci" instead of "primary focus").</li> <li>➤ <b>Inconsistent Terminology:</b> Variations in spelling like "modelling" should align with the chosen English convention (either British or American).</li> <li>➤ <b>Complex Sentence Structure:</b> Some sentences are too complex and could be restructured for clarity and readability.</li> </ul>	
<p><b>Are subsections and structure of the manuscript appropriate?</b></p>	<p><b>yes</b></p>	
<p><b>Please write a few sentences regarding the scientific correctness of this manuscript. Why do you think that this manuscript is scientifically robust and technically sound? A minimum of 3-4 sentences may be required for this part.</b></p>	<p>The introduction provides background on the prevalence of infectious diseases in Nigeria and the need to understand the trends of literature on these diseases to assist the government and health facilities in their planning for possible pandemics and epidemics in the future. The paper presents a systematic literature review of infectious diseases research in Nigeria over the past two decades using topic modeling, identifying HIV/AIDS and malaria as the prevailing foci and recommending that future researchers conduct in-depth reviews of the individual topics generated.</p> <ol style="list-style-type: none"> <li>1. Systematic literature review using the Scopus database</li> <li>2. N-gram analysis (unigrams, bigrams, and trigrams) using the quanteda package in R</li> <li>3. Structural Topic Modeling (STM) to extract topics from the article abstracts</li> </ol>	
<p><b>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.</b></p>	<p><b>Yes</b></p>	

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<p>Minor REVISION comments</p> <p><b>Is the language/English quality of the article suitable for scholarly communications?</b></p>	<ul style="list-style-type: none"> <li>• Revised awkward or ambiguous sentence structures.</li> <li>• Rectified incorrect usage of prepositions and articles.</li> <li>• Enhanced clarity by simplifying complex sentences.</li> <li>• Addressed errors in subject-verb agreement and word choice.</li> <li>• Improved punctuation, particularly regarding commas and periods in citations and clauses.</li> </ul>	
<p>Optional/General comments</p>	<p>The explanation of the Structural Topic Model (STM) contains a few areas for improvement, primarily regarding notation consistency, clarity, and precision.</p> <p>The document introduces several symbols and parameters, such as <math>\theta_a, \gamma</math>, and <math>\Sigma</math>, but some notations like covariate group deviations <math>k_{\{y_a\}}^{\{(c)\}}</math> and interaction terms <math>k_{\{(y_a, t)\}}^{\{(t)\}}</math> are unclear or insufficiently defined.</p> <p>There are also minor typographical errors, such as the use of "convent" instead of "content" and inconsistent formatting of subscripts in equations. Additionally, the overall structure of the generative process—how document-level attention to topics is drawn, topics are assigned to words, and observed words are generated—could be summarized more clearly.</p> <p>The relationship between the covariates and the word-topic distribution should be made more explicit, particularly in explaining how different components (like the baseline word distribution and deviations) affect the overall model. Lastly, the reference to "Robert et al. (2019)" needs proper citation for context. By refining these aspects, the explanation would be clearer and more accessible.</p> <p><b>In Introduction:</b></p> <ul style="list-style-type: none"> <li>➤ <b>Inconsistencies in Grammar and Punctuation:</b> <ul style="list-style-type: none"> <li>• "caused majorly through sexual intercourse, as a result of transmitted human immunodeficiency virus (HIV)" is awkwardly phrased. It could be better written as "primarily transmitted through sexual intercourse due to the human immunodeficiency virus (HIV)."</li> <li>• Comma splicing and inconsistent punctuation such as "stated by WHO Africa Region,."</li> </ul> </li> <li>➤ <b>Overuse of Informal Language:</b> <ul style="list-style-type: none"> <li>• Informal or vague language such as "ear-tingling" when discussing the longevity of COVID-19 research.</li> <li>• Phrases like "sparks significant research" should be made more formal, e.g., "has sparked significant research."</li> </ul> </li> <li>➤ <b>Repetitiveness and Redundancy:</b> <ul style="list-style-type: none"> <li>• The paragraph is repetitive in stating that certain methods (manual literature review vs. machine learning) are time-saving, which can be consolidated to make it more concise.</li> </ul> </li> <li>➤ <b>Unclear and Generalized Assertions:</b> <ul style="list-style-type: none"> <li>• Statements like "the approach contained herein will serve as an alternative to literature review process" are too broad and need elaboration on why it's an alternative or how it improves on existing methods.</li> <li>• The mention of "ChatGPT" and its role in literature review is somewhat out of place, as the paragraph already focuses on machine learning models such as STM. This could cause confusion.</li> </ul> </li> <li>➤ <b>Lack of Specificity in Citation:</b></li> </ul>	

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	<ul style="list-style-type: none"> <li>• The paragraph does not make clear distinctions between important citations and sources, leading to ambiguity, such as in the case of referring to Ray (2023) without explaining the context or findings.</li> <li>➤ <b>Ambiguous Transitions:</b></li> <li>• The transition between the discussion of traditional methods and machine learning methods is abrupt and lacks proper connection. More fluid transitions could improve readability and flow.</li> <li>➤ <b>Excessive Length:</b></li> <li>• The paragraph is long and could benefit from breaking it up into smaller, more digestible chunks to improve readability.</li> <li>➤ <b>Terminology Usage:</b></li> <li>• Terms like “innovating” (in “this work can be considered innovating in Nigeria”) should be replaced with “innovative” for correct word choice.</li> <li>• The phrase “as it uncovers valuable information” is vague and could be specified further by explaining what “valuable information” entails in the context of the research.</li> </ul>	
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**PART 2:**

	<b>Reviewer’s comment</b>	<b>Author’s comment</b> <i>(if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
<b>Are there ethical issues in this manuscript?</b>	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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