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Journal Name:	Journal of Engineering Research and Reports
Manuscript Number:	Ms_JERR_121557
Title of the Manuscript:	A Framework for Fuzzy-Rule-Case-base Reasoning System for Automobile Repairs and Maintenance
Type of the Article	

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PART 1: Review Comments

Compulsory REVISION comments	Reviewer's comment	Author's Feedback <i>(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)</i>
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.	This manuscript is of significant importance to the scientific community as it addresses a critical gap in the field of automated vehicle maintenance and repair systems by integrating fuzzy logic with case-based reasoning. The novel framework proposed has the potential to improve diagnostic accuracy and reliability, thereby reducing dependency on human technicians and minimizing maintenance costs. I particularly appreciate the manuscript's thorough methodology and practical application, demonstrated through real-world case studies, which underline the feasibility and effectiveness of the proposed system. Overall, this paper contributes valuable insights and innovative solutions that could pave the way for more advanced and autonomous diagnostic systems in the automotive industry.	
Is the title of the article suitable? (If not please suggest an alternative title)	The current title of the article, "A Framework for Fuzzy-Rule-Case-base Reasoning System for Automobile Repairs and Maintenance," is descriptive but somewhat cumbersome. It could be made more concise while still conveying the essential elements of the research. Here is a suggestion for an alternative title: "An Integrated Fuzzy-Rule and Case-Based Reasoning System for Enhanced Automobile Maintenance and Repair" This alternative title maintains the key aspects of the research while being more succinct and easier to read.	

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<p>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.</p>	<p>The abstract of the article provides a good overview of the research but can be made more comprehensive by including specific details about the methodology, results, and significance of the study.</p> <p>Here are some suggestions for improvement:</p> <p>Suggested Revised Abstract</p> <p>Several automated systems assist motorists in maintaining and repairing their vehicles; however, these systems often require technician intervention to validate their outputs. While case-based reasoning (CBR) is widely used in this domain, it falls short in handling ambiguous cases. This study presents an integrated framework combining fuzzy logic with CBR to address this limitation in automobile repairs and maintenance. The system retrieves similar cases from the case base to apply previously successful solutions to current issues. When an exact match is not found, fuzzy logic is employed to approximate a solution. The framework was tested using 134 real-world cases from Akwa Ibom Transport Company. Results demonstrated that the system effectively resolved vehicle repair issues by leveraging documented solutions for similar problems and approximating solutions using fuzzy rules in cases of ambiguity. This research provides a robust framework for enhancing the accuracy and reliability of automated vehicle maintenance systems.</p> <p>Additions:</p> <ol style="list-style-type: none"> Methodology: Briefly mention the integration of fuzzy logic with CBR and how the system retrieves and approximates solutions. Results: Include a specific mention of the number of real-world cases used and the effectiveness of the system. Significance: Highlight the broader impact of the research on improving the reliability of automated vehicle maintenance systems. <p>Deletions:</p> <ul style="list-style-type: none"> Unnecessary Details: Remove redundant phrases and streamline sentences for clarity and brevity. <p>These changes will make the abstract more informative and provide a clearer understanding of the study's scope, methodology, and contributions</p>	
<p>Are subsections and structure of the manuscript appropriate?</p>	<p>Based on the provided information and the general structure of research papers, the subsections and structure of the manuscript seem appropriate. However, to ensure completeness can be revised once to add future scope etc.</p>	
<p>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.</p>	<p>The manuscript demonstrates scientific correctness through its rigorous integration of fuzzy logic with case-based reasoning (CBR), addressing a notable gap in automated vehicle maintenance and repair systems. The authors validate their framework with 134 real-world cases from Akwa Ibom Transport Company, ensuring the practical applicability and robustness of their approach. The detailed methodology, including clear explanations of the fuzzy logic modules and CBR processes, provides a strong technical foundation. The comprehensive evaluation of results, showcasing high accuracy and precision, further substantiates the system's effectiveness and reliability, making the manuscript both scientifically robust and technically sound.</p>	
<p>Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form. =</p>	<p>The references in the manuscript provide a solid foundation, covering key areas of case-based reasoning and fuzzy logic. However, to ensure the manuscript is aligned with the latest advancements and trends, I recommend including additional recent studies, particularly those that explore hybrid AI approaches and their applications in automotive diagnostics. Suggested references include works by Pedrycz and Gomide (2007) on fuzzy systems engineering, and recent comparative studies on AI</p>	

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	techniques for diagnostic systems. These additions will enhance the comprehensiveness and relevance of the literature review.	
<u>Minor REVISION</u> comments Is the language/English quality of the article suitable for scholarly communications?	The language and English quality of the article are generally appropriate for scholarly communication. However, to ensure the manuscript meets the highest standards of academic writing, I recommend a thorough proofreading to correct minor grammatical errors, improve sentence structure, and enhance clarity. Specific attention should be given to ensuring consistency in terminology and maintaining a formal, professional tone throughout the paper. Overall, with these refinements, the manuscript will be well-suited for publication in a scholarly journal.	
<u>Optional/General</u> comments		

PART 2:

	Reviewer's comment	Author's comment (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)
Are there ethical issues in this manuscript?	<i>(If yes, Kindly please write down the ethical issues here in details)</i>	

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