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| Journal Name: | [**Asian Journal of Research in Computer Science**](https://journalajrcos.com/index.php/AJRCOS) |
| Manuscript Number: | **Ms\_AJRCOS\_133746** |
| Title of the Manuscript: | **Enhancing Automation QA Engineering with Advanced AI Techniques in Complex Distributed Systems** |
| Type of the Article |  |

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| PART 1: Comments | | |
|  | Reviewer’s comment **Artificial Intelligence (AI) generated or assisted review comments are strictly prohibited during peer review.** | Author’s Feedback *(Please correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)* |
| **Please write a few sentences regarding the importance of this manuscript for the scientific community. A minimum of 3-4 sentences may be required for this part.** | **This manuscript provides significant contributions to the field of software quality assurance by presenting a practical and empirically validated AI-driven framework for test prioritization in complex distributed systems. By integrating ensemble machine learning techniques into a real-world CI/CD pipeline, the author demonstrates substantial gains in defect detection, test execution time, and concurrency issue identification. The study addresses a critical gap in applying AI to optimize QA practices in microservices architectures an area increasingly relevant with the rise of cloud-native development. Its practical orientation, combined with robust evaluation metrics, makes it highly valuable for both academia and industry professionals.** |  |
| **Is the title of the article suitable?**  **(If not please suggest an alternative title)** | **Yes** |  |
| 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. | **The abstract is well-structured and covers the key aspects aim, methodology, results, and conclusion. It effectively conveys the significance of the work and its practical outcomes.**  **Suggestions:**  **- Consider briefly defining the core problem/challenge in the opening sentence.**  **- Include more specific details from the results, such as the ensemble model's F1-score or exact improvements in defect detection rates, for a more quantitative impact.** |  |
| Is the manuscript scientifically, correct? Please write here. | **- The manuscript is methodologically sound and employs modern ML techniques.**  **- Evaluation across multiple releases using real-world metrics (defect rate, test time, coverage) adds robustness.**  **- The inclusion of QA engineer feedback further strengthens its empirical validity.** |  |
| **Are the references sufficient and recent? If you have suggestions of additional references, please mention them in the review form.** | **The references are mostly sufficient and recent (2020–2024), covering both academic and applied perspectives.** |  |
| Is the language/English quality of the article suitable for scholarly communications? | **The manuscript is written in clear, professional English and is generally suitable for scholarly communication.** |  |
| Optional/General comments | **Minor Suggestions:**  **- Ensure consistent use of academic third-person narrative (“the study shows” instead of “I show”).**  **- Consider professional proofreading to correct a few grammatical inconsistencies and formatting issues (e.g., capitalization in section headers like "material and methods").** | **Thank you very much for your valuable feedback and positive evaluation of our manuscript. I appreciate your insightful comments and fully agree with the suggestions provided. Specifically, I have made the following adjustments:**   1. **Abstract Improvement:**     * **I've clarified the opening sentence of the abstract to succinctly define the core problem addressed by our study.**    * **Included more specific quantitative details from our results, such as the ensemble model’s F1-score (0.92) and exact improvements in defect detection rates (32%) for greater clarity of impact.** 2. **Narrative Consistency:**     * **The manuscript has been revised to maintain a consistent third-person academic narrative throughout (e.g., "the study demonstrates" instead of "I demonstrate").** 3. **Proofreading and Formatting:**     * **I have performed additional proofreading to correct minor grammatical inconsistencies and formatting issues, ensuring appropriate capitalization and consistency in section headings (e.g., "Material and Methods").**   **These revisions have been clearly highlighted in the updated manuscript.** |

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| **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?** | *(If yes, Kindly please write down the ethical issues here in details)* |  |