

REVIEWER'S REPORT

Manuscript No.: IJAR-59425

Title: Python-Based Intelligent Test Automation for Enhancing Reliability of Enterprise Digital Platforms in Saudi Arabia.

Recommendation:

Accept as it is
 Accept after minor revision.....
 Accept after major revision
 Do not accept (*Reasons below*)

Rating	Excel.	Good	Fair	Poor
Originality		✓		
Techn. Quality		✓		
Clarity	✓			
Significance		✓		

Reviewer Id: JPR-297

Reviewer's Comment for Publication.

The manuscript addresses a relevant and timely topic concerning the application of Python-based intelligent test automation to improve the reliability of enterprise digital platforms in Saudi Arabia. The paper presents a structured critical review of 30 peer-reviewed studies published between 2020 and 2025, covering test prioritization, automated test generation, defect prediction, API testing, flaky-test detection, and DevOps quality practices. Its major strength is the proposed Python-centered architecture, which integrates deterministic test execution, intelligent decision-making, reliability metrics, and governed quality gates. The discussion of data quality, explainability, security, and organizational maturity adds practical value.

However, some improvements are recommended before publication. The review methodology should provide greater detail about the databases searched, search strings, screening procedures, and source-selection process to improve transparency and reproducibility. The proposed architecture and four-stage maturity pathway should be presented through clear, complete, and legible figures. The authors should also strengthen the discussion of empirical evidence demonstrating the effectiveness of the proposed approach and distinguish established findings from recommendations derived from the review. Furthermore, the reference list should be checked for bibliographic accuracy, DOI validity, and consistent formatting.

Overall, the manuscript is well organized, technically relevant, and potentially valuable to software engineers, researchers, and enterprise quality-assurance teams. The proposed framework offers a useful foundation for integrating intelligent automation into reliable software delivery. The manuscript is recommended for publication after minor revisions.