

REVIEWER'S REPORT

Manuscript No.: JNCS -078

Title: AUTOMATED SOFTWARE TESTING USING ARTIFICIAL INTELLIGENCE: TECHNIQUES AND FUTURE PERSPECTIVES.

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-213

Reviewer's Comment for Publication.

The manuscript provides a relevant and well-structured narrative review of the application of artificial intelligence in automated software testing, covering machine learning, deep learning, natural language processing, reinforcement learning, and large language models, along with their applications in test generation, defect prediction, regression testing, and test maintenance. The discussion of key challenges, including data quality, test-oracle reliability, explainability, computational cost, security, and reproducibility, adds practical value to the paper. However, the review methodology should be strengthened by clearly specifying the literature-search databases, search terms, publication period, inclusion/exclusion criteria, and study-selection procedure, as the manuscript itself acknowledges that these elements would be required for a more systematic review. The authors should also expand the critical comparison of the reviewed AI techniques and improve the consistency of citations and references. Overall, the manuscript is informative and potentially suitable for publication after minor revision.