

REVIEWER'S REPORT

Manuscript No.: IJAR-59015

Title: Toward Digital Governance in Higher Education: Designing an Analytical Decision-Making Framework for the Selection of Master's and Doctoral Students in Guinea

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's ID: JPR-098

Detailed Reviewer's Report

Decision: Accept after Major Revision

Major Revisions

1. Strengthen the methodological details.

The methodology describes a mixed-methods approach, questionnaires, interviews, institutional records, and machine-learning models, but does not provide sufficient details about the sample size, participant selection, questionnaire design, interview procedure, data sources, and study period. These details should be clearly reported to ensure reproducibility.

2. Provide actual experimental results and quantitative evidence.

The manuscript claims that the proposed framework improves transparency, processing time, accuracy, and decision quality, but numerical evidence is largely absent. The authors should report quantitative results, such as model accuracy, precision, recall, F1-score, processing-time reduction, error rates, and applicant satisfaction before and after implementation.

3. Clarify the machine-learning framework and model configuration.

Logistic regression, decision trees, and random forests are mentioned, but the manuscript does not explain the input features, target variable, training/testing strategy, hyperparameters, class distribution, or model-

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selection procedure. A detailed description and comparative evaluation of the models are required.

4. Define and justify the proposed scoring model mathematically.

The scoring model is described conceptually, including weighted criteria and predictive factors, but no mathematical formulation or explanation of how the weights are determined is provided. The authors should present the scoring equation, weighting methodology, normalization procedure, and ranking mechanism.

5. Address fairness, bias, privacy, and ethical concerns more rigorously.

Since the framework is intended to support high-stakes admission decisions, the manuscript should explain how socioeconomic, academic, demographic, and other potentially sensitive attributes are handled. Bias detection, fairness assessment, data privacy, informed consent, and human oversight should be explicitly incorporated into the framework.

6. Strengthen validation of the proposed framework.

The paper states that the framework is validated through simulations, accuracy tests, cross-validation, and qualitative evaluation, but the actual validation results and experimental design are not sufficiently presented. The authors should provide baseline comparisons and demonstrate that the proposed framework performs better than existing admission-selection approaches.

Minor Revisions

7. Improve the literature review and reference quality.

The literature review is mainly descriptive and should include a more critical comparison of existing educational decision-support, business-intelligence, and machine-learning approaches. The reference list also contains duplicate entries, including repeated works by Zhang, Aguado-García et al., and Isaifan.

8. Improve the system architecture presentation.

The proposed architecture is described in text, but a clear, detailed architectural diagram showing data sources, data warehouse, ETL/preprocessing, machine-learning models, scoring engine, dashboards, and decision-making layer would significantly improve the manuscript.

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9. Correct terminology, language, and formatting inconsistencies.

The manuscript contains several language and formatting problems, including unexplained terms such as “SID,” mixed French and English expressions such as “pondérations” and “système,” and awkward or incomplete sentences. These issues should be carefully corrected throughout the manuscript.

10. Improve the consistency between the manuscript sections and claims.

The paper labels Section 5 as “Expected Results,” yet subsequently states that “the results of this research show” improvements and presents findings. The authors should clearly distinguish between **expected results, actual experimental findings, and proposed outcomes**, and align the Abstract, Results, Discussion, and Conclusion accordingly.