

SLAAI-ICAI-2023



SLAAI - ICAI-2023 Review for #1570947575: Predicting Undergraduates Dropouts Using Classification Techniques

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Last saved [Sep 30, 2023 20:32 Asia/Colombo](#)**Paper title** *Predicting Undergraduates Dropouts Using Classification Techniques***Conference and track** **2023 7th SLAAI International Conference on Artificial Intelligence (SLAAI-ICAI) - 7th SLAAI-International Conference on Artificial Intelligence-2023****Abstract**

Undergraduate dropout is one of the biggest concerns in higher education institutes. Student retention has gained more attention from university administrators, especially those in private-sector higher education institutes as the competition is quite high in the private sector. This research's main objective is to predict undergraduate dropouts in the Information Technology Degree Program of a non-state higher education institution in Sri Lanka. Logistic Regression, Random Forest, Naïve Bayes, Artificial Neural Network (ANN), Decision Tree, and Support Vector Machine (SVM) classification techniques were used for the prediction. According to the results, SVM has the best F1 score which is 90%, ANN, Decision Tree, and Logistic regression got 88%, and Random Forest and Naïve Bayes have an 87% of F1 score. It has also been identified that dropouts are high in those who have done Advanced Level in Art Stream and under Other Category. Therefore before students get register from those categories if faculty can give them an aptitude test and select the relevant candidates, will be helpful to reduce the dropouts. Data mining techniques can improve the quality of education in non-state higher education institutes as this helps to identify the hidden patterns of educationally linked data.

This review cannot be declined.

You can [delegate the review](#).The review is due by **Oct 1, 2023 09:29 Asia/Colombo**.**Paper Relevance:** Relevance of the paper to the conference☐ Excellent ☐ Good ☒ Fair ☐ Poor ☐ Very Poor**Paper Title:** Title of the paper is informative and representative of its content☐ Excellent ☒ Good ☐ Fair ☐ Poor ☐ Vary Poor**Objectives:** Clarity of objectives of the research on the paper.☐ Excellent ☐ Good ☒ Fair ☐ Poor ☐ Very Poor**Literature Review Comprehensiveness:** Comprehensiveness of literature review/background study.☐ Excellent ☒ Good ☐ Fair ☐ Poor ☐ Very Poor

Methodology: Appropriateness of the methodology.

☐ Excellent ☐ Good ☒ Fair ☐ Poor ☐ Very Poor

Technical Comprehensiveness: Technical comprehensiveness of the methodology of research

☐ Excellent ☐ Good ☐ Fair ☒ Poor ☐ Very Poor

Presentation: Paper formatting and use of referencing (required in IEEE format)

☐ Excellent ☒ Good ☐ Fair ☐ Poor ☐ Very Poor

Analysis: Comprehensiveness of analysis of results

☐ Excellent ☐ Good ☒ Fair ☐ Poor ☐ Very Poor

Discussion: Comprehensiveness of the discussion

☐ Excellent ☐ Good ☐ Fair ☒ Poor ☐ Very Poor

Novelty: Novelty of the research work and contribution

☐ Excellent ☐ Good ☐ Average ☒ Low ☐ None

Technical and Scientific Merits: Author's technical and scientific merits

☐ Excellent ☐ Good ☐ Fair ☒ Poor ☐ Very Poor

Reviewer's Confidence: Reviewer's confidence

☒ Excellent ☐ Good ☐ Fair ☐ Poor ☐ Very Poor

Evaluation: Overall Evaluation:

☐ Strong Accept ☐ Accept ☐ Weak Accept ☒ Boardline Paper ☐ Weak reject ☐ Reject
☐ Strong Reject

Evaluation Justification: * Please provide a detailed review, including a justification for your scores. Both the score and the review text are required.

This paper aims to predict the number of student dropouts at a non-state higher education institute in Sri Lanka. However, there are certain areas within the paper that require clarification. With substantial revisions, changes, and further explanations, this paper has the potential to become more impactful.

Comments to Authors: Reviewer's comment to Authors:

Thank you for submitting "Predicting Undergraduate Dropouts Using Classification Techniques" to SLAAI-ICAI-2023. This paper aims to predict the number of student dropouts at a non-state higher education institute in Sri Lanka. However, there are certain areas within the paper that require clarification. With substantial revisions, changes, and further explanations, this paper has the potential to become more impactful.

1. On Page 2, in Section III, the authors mentioned, "There were several students who were absent from the final examination, maybe due to medical reasons, or perhaps they had already dropped out before the first end-semester examination; those instances have been renamed to zero." It's not very clear to me why the authors decided to rename these instances to zero.
2. Figure 3: It would be clearer if we replace the numbers 0 and 1 on the x-axis with their actual values.
3. Table 1: The paper categorizes Student Performance (GPA) values into 3 groups. Could you please explain the criteria for this categorization and clarify the possible range of values for this variable? Typically, GPA values range from zero to 4. Additionally, for English language marks, does the university provide credit values instead of numerical grades?
4. In Table 1, can you explain what `Count_npass >=0` represents?
5. On Page 5, the sentence "The accuracy range models are between 87% to 90% according to TABLE III" appears unclear.

Comments to Editors: Confidential remarks for the program committee

This paper aims to predict the number of student dropouts at a non-state higher education institute in Sri Lanka. However, there are certain areas within the paper that require clarification. With substantial revisions, changes, and further explanations, this paper has the potential to become more impactful.

☒ Email me a copy of the review

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