

## COVER LETTER

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Dear,

We wish to submit an original research article entitled “**Comparative Analysis of Classification Algorithm: Random Forest, SPAARC, and Multi-Layer Perceptron For Airlines Customer Satisfaction**” for consideration by SINERGI.

I/We confirm that this work is original and has not been published elsewhere, nor is it currently under consideration for publication elsewhere.

In this paper, We report on / show that:

Topic	:	Machine Learning for for airlines customer satisfaction
Brief Background	:	In the business activities, every company competes to provide the best service and features that able to create and increase customer satisfaction. One of the businesses that are determined by the quality of its service is the airline business. Every airline provide its best service so consumers are satisfied and loyal to use the services of an airline so that the company can continue to grow and be able to compete in the industry. Passengers prefer to rate airlines based on their level of satisfaction with in-flight services. So that increasing the quality of in-flight service becomes one of the success factors of an airline. Evaluating the quality of services can be done through checking customer satisfaction. Customer satisfaction is an essential metric as an indicator to measure consumer loyalty, intention to use services/products again, increase positive ratings, and reduce costs for new customer acquisitions
Research Problem	:	Companies can use customer satisfaction surveys to find out consumer ratings and evaluation related to the features and services provided. By having a database on customer satisfaction, companies can have valuable information to support the decision-making process. In addition, the use of databases helps the process of formulating marketing strategies to retain customers and acquire new customers. The existing database needs to be processed with good data analysis to produce valuable outputs or insights to keep the decision-making process and strategy formulation.

		Computational methods are starting to be used in business and decision-making processes to produce optimal results to increase customer satisfaction. One of them is by using machine learning. Machine learning and big data usage are able to conduct data analysis and the development of classification models that are used to predict data trends from the available data.
Overview of Method	:	This study chose to develop a classification using three models, there are Split Point and Attribute Reduced Classifier (SPAARC), Multilayer Perceptron (MLP), and Random Forest (RF). SPAARC is a new method, and not many studies have used this algorithm, so this study aims to test the SPAARC algorithm and compare it with other algorithms in a case. The advantage of SPAARC method is reducing the computational workload process from the decision tree with selecting attributes dynamically or using tree depth levels involved. Another algorithm used in this study is Random Forest, which give high accuracy based on previous studies. On the other hand, using the MLP algorithm is because this algorithm can classify large amounts of data with various features.
Significant finding	:	This paper contains a comparative analysis of several classification algorithms. Accuracy results from the data collection will be obtained, and this study can show which algorithm has a high and good level of accuracy according to the existing parameters.

We have no conflicts of interest to disclose.

Thank you for your consideration of this manuscript.

Sincerely,



Dr. Intan Nurma Yulita, M.T

## AUTHORSHIP STATEMENT

I/We wish to submit an original research article entitled “[*title of article*]” for consideration by SINERGI.

All persons who meet authorship criteria are listed as authors, and all authors certify that they have participated sufficiently in work to take public responsibility for the content, including participation in the concept, design, analysis, writing, or revision of the manuscript.

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## POTENTIAL REVIEWERS

Please submit 3 (three) potential reviewers (*that have not listed in SINERGI*) to speed up the review process that competent for the topic and has a good reputation in that area.

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