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#3064 Summary

SUMMARY
REVIEW
EDITING

Submission

Authors Title Original file Supp. files Submitter Date submitted Section Editor Author comments	Aditi Hermawan, Willy Wijaya, Benny Daniawan Optimizing Artificial Neural Network for Customer Churn: Advanced Data Balancing and Feature Selection 3064-3064-1-SM-DOC 2024-09-02 None ADD A SUPPLEMENTARY FILE Mr. Willy Wijaya September 2, 2024 - 03:53 PM Regular Aide Alanda Dear Editor, I am pleased to submit our manuscript titled "Optimizing Artificial Neural Network for Customer Churn: Advanced Data Balancing and Feature Selection" for consideration in your esteemed journal. This study explores the integration of attention mechanisms in text mining classification, aiming to enhance the accuracy and interpretability of text classification models. Our research addresses the growing need for advanced methodologies in the field of natural language processing and contributes significant insights into the practical applications of attention mechanisms. We believe this paper will be of great interest to the journal's readership due to its novel approach and the potential for widespread applicability across various text mining tasks. The manuscript has been thoroughly reviewed by all authors, and we confirm that it has not been published or submitted for publication elsewhere. We appreciate your consideration of our work and look forward to your feedback. Sincerely, Willy Wijaya Buddhi Dharma University
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	We appreciate your consideration of our work and look forward to your feedback.
Sincerely,	
Willy Wijaya	
Buddhi Dharma University	

Status

Status	In Editing
Initiated	2025-02-05
Last modified	2025-02-05

Submission Metadata

[EDIT METADATA](#)

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Title and Abstract

Title	Optimizing Artificial Neural Network for Customer Churn: Advanced Data Balancing and Feature Selection
Abstract	Customers are essential assets in the dynamic business world and competitive market. However, they can quickly move to other services, usually called customer churn. One of the main reasons for churn is customer dissatisfaction with the services provided. For many companies, especially in the telecommunications sector, customer churn is a big problem because it directly impacts company revenue. One of the most profitable strategic plans is to retain customers to continue subscribing because this strategy is relatively cheap compared to getting new customers, which costs 6 to 10 times more. Therefore, many researchers have created models to perform classification to predict which customers will churn. This research aims to optimize the model to get better results. So, this research uses Artificial Neural Networks as algorithm models, ROS and SMOTE as data balancing techniques, and several other algorithms, namely XGBoost, Lasso Regression, and mRMR, for feature selection. The model accuracy results were entirely satisfactory because they increased by 0.38% from the previous research model.

Indexing

Keywords Customer Churn; Classification; ANN; SMOTE; ROS; XGBoost; LassoRegression; mRMR



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#3064 Review

SUMMARY REVIEW EDITING

Submission

Authors: Aditya Hermawan, Willy Wijaya, Benny Daniawan

Title: Optimizing Artificial Neural Network for Customer Churn: Advanced Data Balancing and Feature Selection

Section: Regular

Editor: Aide Alande

Peer Review

Round 1

Review Version	3064-7865-1-RV.DOC	2024-09-02
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Editor Version	None	—
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Round 2

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Initiated	2024-11-17	—
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Author Version	3064-8436-2-ED.DOC	2024-12-13

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Editor Version: None

Author Version: 3064-8436-3-ED.DOC 2024-12-13

Round 3

Review Version	3064-7865-3-RV.DOC	2024-12-15
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Round 4

Review Version	3064-7865-4-RV.DOC	2025-01-14
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Editor Version	None	—
Author Version	3064-8436-4-ED.DOC	2025-01-31

Round 5

Review Version	3064-7865-5-RV.DOC	2025-01-31
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Editor Decision

Decision: Accept Submission 2025-02-05

Notify Editor: Editor/Author Email Record 2025-02-05

Editor Version: None

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- » SCOPUS (ACCEPTED)
 - » Submission Received: **March 3, 2020**
 - » Submission Accepted: **July 30, 2020**
 - » SCOPUS CiteScore Tracker 2020
- » WoS / Web of Science
 - » Latest submission: September 16, 2018
 - » Web of Science Citation Analysis
- » IET INSPEC
 - » Added to review: **May 29, 2020**
- » EI COMPENDEX
 - » Submission: **February 10, 2021**

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Indexing

Keywords
LanguageCustomer Churn; Classification; ANN; SMOTE; ROS; XGBoost; LassoRegression; mRMR;
en

Supporting Agencies

Agencies
Buddhi Dharma University, Department of Informatics Engineering

References

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#3064 Review

SUMMARY

REVIEW

EDITING

Submission

AuthorsAditya Hermawan, Willy Wijaya, Benny Daniawan

TitleOptimizing Artificial Neural Network for Customer Churn: Advanced Data Balancing and Feature Selection

SectionRegular

EditorAlde Alanda

Peer Review

Round 1

Review Version3064-7865-1-RV.DOC 2024-09-02

Initiated—

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Uploaded fileNone

Editor VersionNone

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Round 2

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Round 4

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Round 5

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Editor Decision

DecisionAccept Submission 2025-02-05

Notify EditorEditor/Author Email Record 2025-02-05

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SCOPUS (ACCEPTED)

> Submission Received: March 3, 2020

> Submission Accepted: July 30, 2020

> SCOPUS CiteScore Tracker 2020

WoS / Web of Science

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> Web of Science Citation Analysis

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> Added to review: May 29, 2020

EI COMPENDEX

> Submission: February 10, 2021

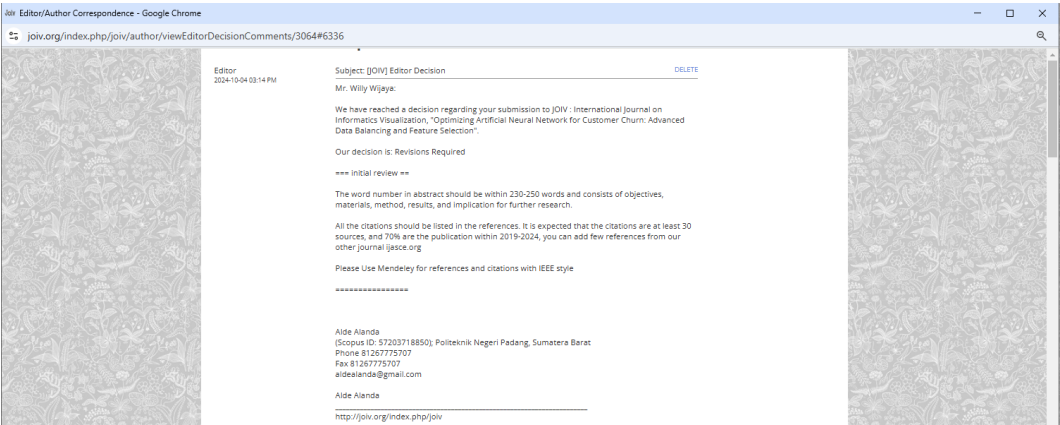
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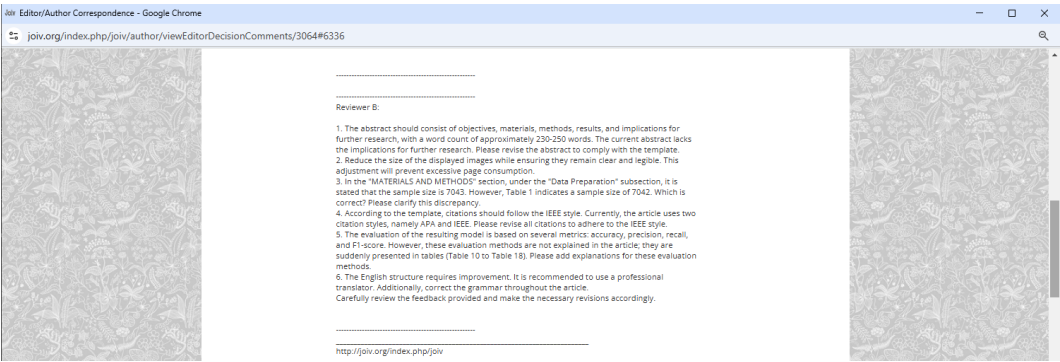
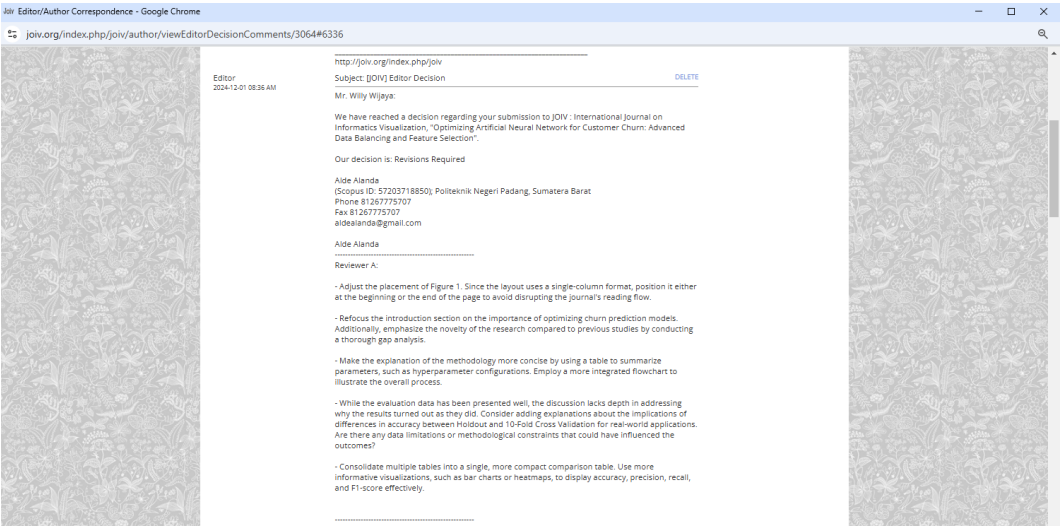
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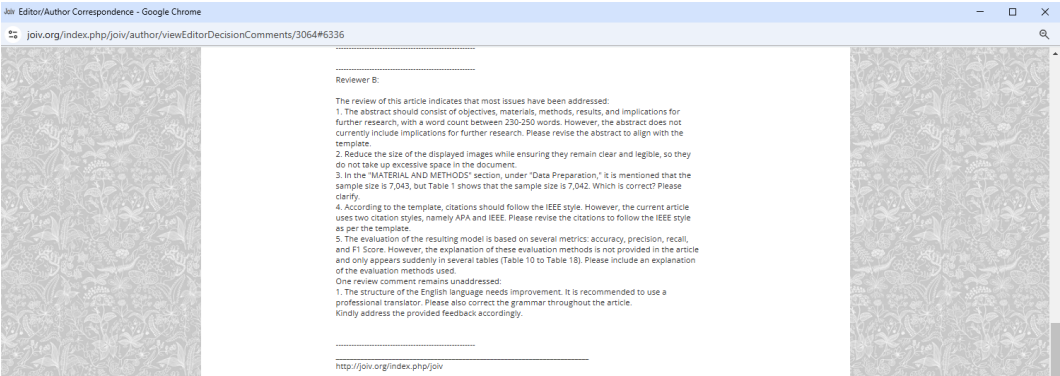
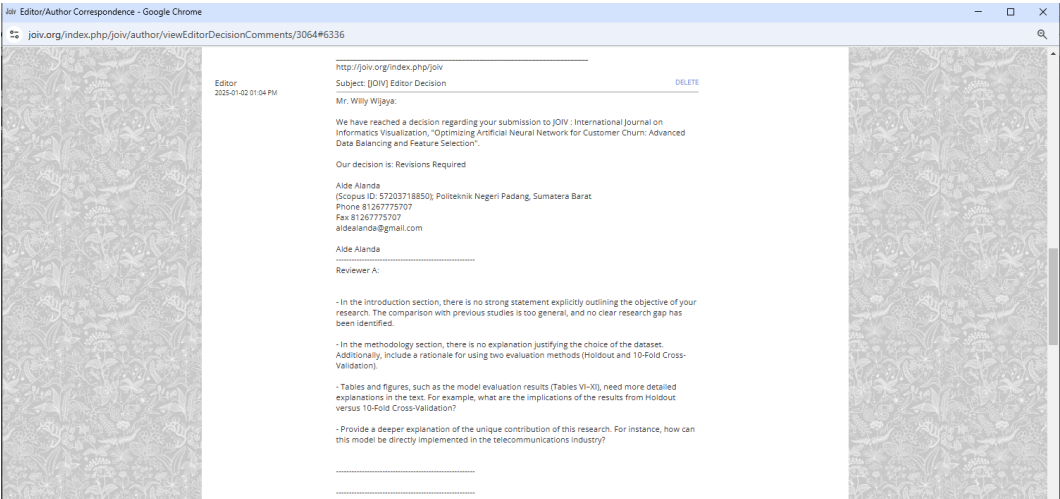
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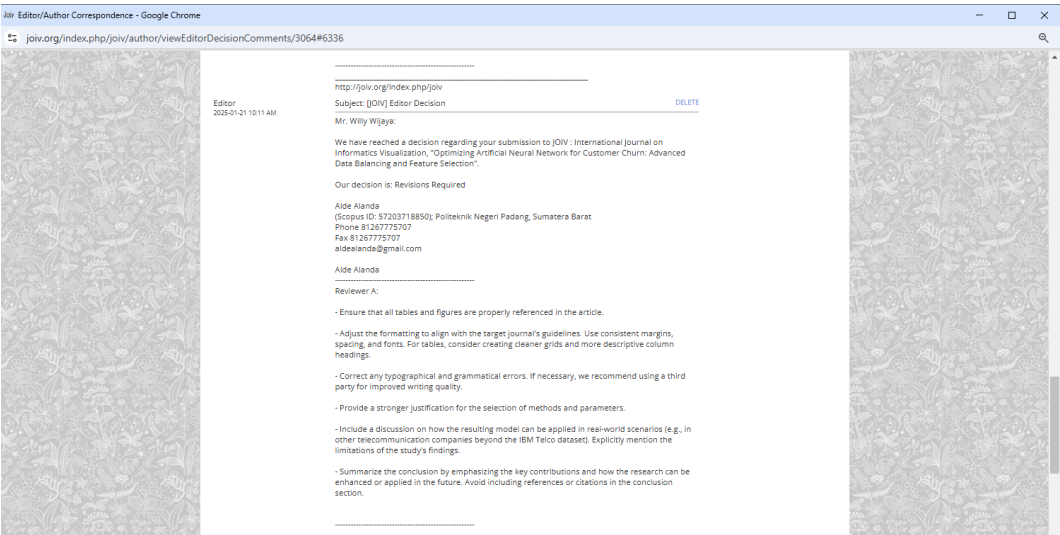
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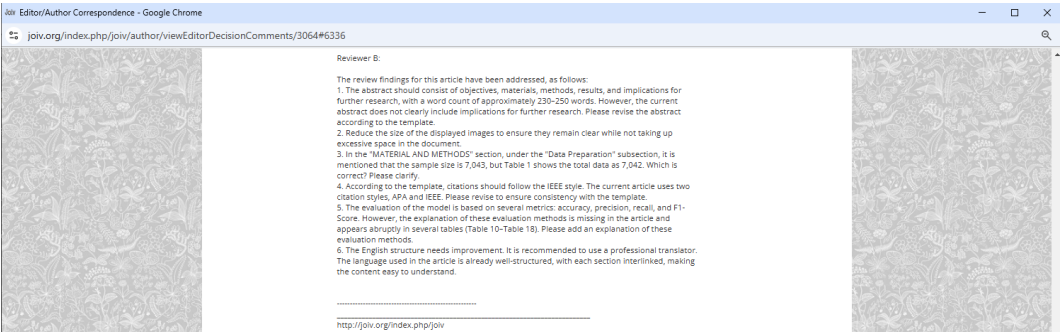


Round 3

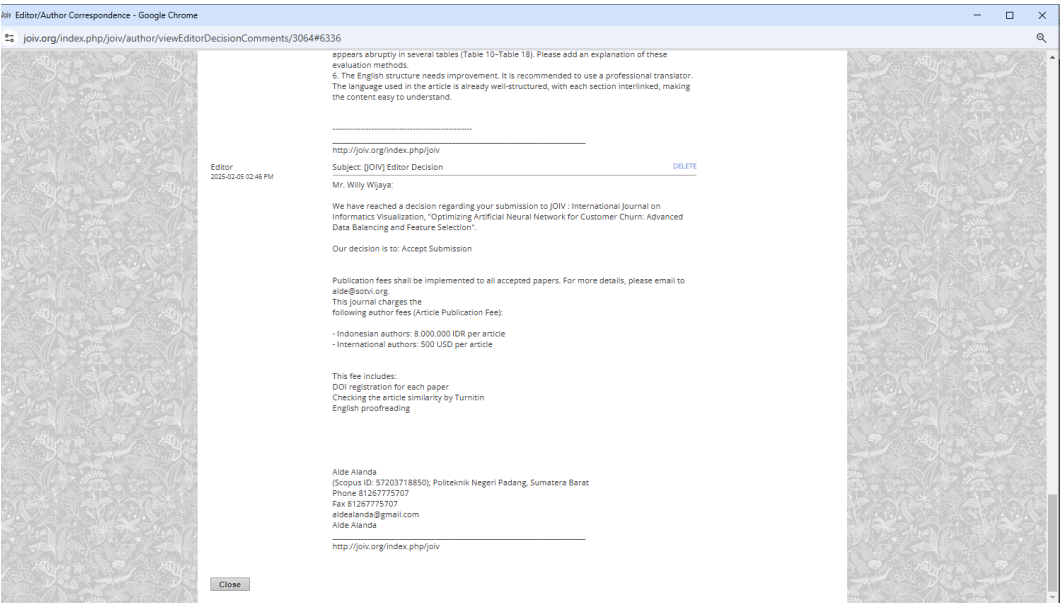


Round 4





Round 5 (Accepted)



Editor/Author Correspondence

14 PM Editor Decision

a: d a decision regarding your submission to JOIV : International Journal on alization, "Optimizing Artificial Neural Network for Customer Churn: Balancing and Feature Selection".

Revisions Required

W ==

er in abstract should be within 230-250 words and consists of objectives, and, results, and implication for further research.

should be listed in the references. It is expected that the citations are at , and 70% are the publication within 2019-2024, you can add few our other journal ijasce.org

deley for references and citations with IEEE style

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36 AM Editor Decision

'a:

d a decision regarding your submission to JOIV : International Journal on alization, "Optimizing Artificial Neural Network for Customer Churn: Balancing and Feature Selection".

Revisions Required

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placement of Figure 1. Since the layout uses a single-column format, position beginning or the end of the page to avoid disrupting the journal's reading

introduction section on the importance of optimizing churn prediction. Additionally, emphasize the novelty of the research compared to previous studies through a thorough gap analysis.

streamline the methodology more concise by using a table to summarize various hyperparameter configurations. Employ a more integrated flowchart to illustrate the overall process.

While the evaluation data has been presented well, the discussion lacks depth in explaining why the results turned out as they did. Consider adding explanations about the differences in accuracy between Holdout and 10-Fold Cross Validation results and their practical applications. Are there any data limitations or methodological constraints that influenced the outcomes?

Consolidate multiple tables into a single, more compact comparison table. Use more descriptive visualizations, such as bar charts or heatmaps, to display accuracy, precision, and recall more effectively.

The abstract should consist of objectives, materials, methods, results, and implications, with a word count of approximately 230-250 words. The current abstract lacks depth in discussing the implications for further research. Please revise the abstract to comply with the journal's requirements.

Review the size of the displayed images while ensuring they remain clear and legible. Excessive image sizes will prevent excessive page consumption.

In the "MATERIALS AND METHODS" section, under the "Data Preparation" subsection, it is stated that the sample size is 7043. However, Table 1 indicates a sample size of 7042. Which is correct? Please clarify this discrepancy.

Ensure that all citations in the article follow the IEEE style as specified in the journal template. Currently, the article uses a mix of APA and IEEE styles. Please revise all citations to adhere to the IEEE style.

The evaluation of the resulting model is based on several metrics: accuracy, precision, recall, and F1 score. However, these evaluation methods are not explained in the article; they are only presented in tables (Table 10 to Table 18). Please add explanations for each metric and the methods used for their calculation.

structure requires improvement. It is recommended to use a professional editor to professionally correct the grammar throughout the article. Please consider the feedback provided and make the necessary revisions accordingly.

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04 PM Editor Decision

Dear Author:

I have made a decision regarding your submission to JOIV : International Journal on Information Technology, "Optimizing Artificial Neural Network for Customer Churn: Feature Selection, Balancing and Feature Selection".

Revisions Required

Yusuf H. (03718850); Politeknik Negeri Padang, Sumatera Barat
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In the Introduction section, there is no strong statement explicitly outlining the objective of the study. The comparison with previous studies is too general, and no clear research gap has been identified.

In the Methodology section, there is no explanation justifying the choice of the dataset. Please include a rationale for using two evaluation methods (Holdout and 10-Fold Cross-Validation).

The Results section, such as the model evaluation results (Tables VI–XI), need more detailed discussions in the text. For example, what are the implications of the results of Holdout versus 10-Fold Cross-Validation?

The Conclusion section needs a better explanation of the unique contribution of this research. For instance,

model be directly implemented in the telecommunications industry?

This article indicates that most issues have been addressed: should consist of objectives, materials, methods, results, and implications rich, with a word count between 230-250 words. However, the abstract only include implications for further research. Please revise the abstract to template.

size of the displayed images while ensuring they remain clear and legible, take up excessive space in the document.

IN TRIAL AND METHODS" section, under "Data Preparation," it is the sample size is 7,043, but Table 1 shows that the sample size is 7,042. t? Please clarify.

the template, citations should follow the IEEE style. However, the current citation styles, namely APA and IEEE. Please revise the citations to style as per the template.

tion of the resulting model is based on several metrics: accuracy, precision, core. However, the explanation of these evaluation methods is not article and only appears suddenly in several tables (Table 10 to Table 18). n explanation of the evaluation methods used.

ment remains unaddressed:

of the English language needs improvement. It is recommended to use a translator. Please also correct the grammar throughout the article.

the provided feedback accordingly.

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11 AM Editor Decision

ra:

and a decision regarding your submission to JOIV : International Journal on realization, "Optimizing Artificial Neural Network for Customer Churn: Balancing and Feature Selection".

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tables and figures are properly referenced in the article.

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pographical and grammatical errors. If necessary, we recommend using a
nproved writing quality.

nger justification for the selection of methods and parameters.

ission on how the resulting model can be applied in real-world scenarios
lecommunication companies beyond the IBM Telco dataset). Explicitly
itations of the study's findings.

re conclusion by emphasizing the key contributions and how the research
l or applied in the future. Avoid including references or citations in the
on.

ings for this article have been addressed, as follows:
should consist of objectives, materials, methods, results, and implications
rch, with a word count of approximately 230–250 words. However, the
does not clearly include implications for further research. Please revise
ording to the template.
ze of the displayed images to ensure they remain clear while not taking
ace in the document.

EXPERIMENTAL AND METHODS" section, under the "Data Preparation" mentioned that the sample size is 7,043, but Table 1 shows the total data is correct? Please clarify.

the template, citations should follow the IEEE style. The current article uses multiple styles, APA and IEEE. Please revise to ensure consistency with the

performance of the model is based on several metrics: accuracy, precision, recall, however, the explanation of these evaluation methods is missing in the manuscript and appears abruptly in several tables (Table 10–Table 18). Please add an explanation of these evaluation methods.

The manuscript structure needs improvement. It is recommended to use a professional

The layout used in the article is already well-structured, with each section interlinked, making it easy to understand.

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14:46 PM Editor Decision

Dear

I have made a decision regarding your submission to JOIV : International Journal on Information Technology and Information Systems, "Optimizing Artificial Neural Network for Customer Churn: Balancing and Feature Selection".

Decision: Accept Submission

The following conditions shall be implemented to all accepted papers. For more details, please visit [http://www.ijotvi.org](#).

1. Payment of the Article Publication Fee:

For authors: 8.000.000 IDR per article

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[JOIV] Submission Acknowledgement

From

Rahmat Hidayat

To

Mr. Willy Wijaya

Date

2024-09-02 22:53

Summary

Headers

Mr. Willy Wijaya:

Thank you for submitting the manuscript, "Optimizing Artificial Neural Network for Customer Churn: Advanced Data Balancing and Feature Selection" to JOIV : International Journal on Informatics Visualization. With the online journal management system that we are using, you will be able to track its progress through the editorial process by logging in to the journal web site:

Manuscript URL: <http://joiv.org/index.php/joiv/author/submission/3064>
Username: willy_05

If you have any questions, please contact me. Thank you for considering this journal as a venue for your work.

starting 2024, to improve the journal quality, publication fees shall be implemented to all accepted papers. For more details, please email to alde@sotvi.org. This journal charges the following author fees (Article Publication Fee):

- Indonesian authors: 8.000.000 IDR per article

- International authors: 500 USD per article

This fee includes:
DOI registration for each paper
Checking the article similarity by Turnitin
English proofreading

For hardcopy, the fee (excluding postage and handling cost) is 500.000 IDR per issue.

If the manuscript is accepted for publication, you will be asked to pay an Article Publication Fee to cover publications costs.

Best regards,

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[JOIV] Editor Decision



From [Alde Alanda](#)

To [Mr. Willy Wijaya](#)

Date 2024-10-04 22:14

 [Summary](#)

 [Headers](#)

Mr. Willy Wijaya:

We have reached a decision regarding your submission to JOIV : International Journal on Informatics Visualization, "Optimizing Artificial Neural Network for Customer Churn: Advanced Data Balancing and Feature Selection".

Our decision is: Revisions Required

=== initial review ==

The word number in abstract should be within 230-250 words and consists of objectives, materials, method, results, and implication for further research.

All the citations should be listed in the references. It is expected that the citations are at least 30 sources, and 70% are the publication within 2019-2024, you can add few references from our other journal ijasce.org

Please Use Mendeley for references and citations with IEEE style

=====

Alde Alanda
(Scopus ID: 57203718850); Politeknik Negeri Padang, Sumatera Barat
Phone 81267775707
Fax 81267775707
aldealanda@gmail.com

Alde Alanda

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[JOIV] Editor Decision

From

Alde Alanda

To

Mr. Willy Wijaya

Date

2024-12-01 15:36

Summary

Headers

Mr. Willy Wijaya:

We have reached a decision regarding your submission to JOIV : International Journal on Informatics Visualization, "Optimizing Artificial Neural Network for Customer Churn: Advanced Data Balancing and Feature Selection".

Our decision is: Revisions Required

Alde Alanda

(Scopus ID: 57203718850); Politeknik Negeri Padang, Sumatera Barat

Phone 81267775707

Fax 81267775707

aldealanda@gmail.com

Alde Alanda

Reviewer A:

- Adjust the placement of Figure 1. Since the layout uses a single-column format, position it either at the beginning or the end of the page to avoid disrupting the journal's reading flow.

- Refocus the introduction section on the importance of optimizing churn prediction models. Additionally, emphasize the novelty of the research compared to previous studies by conducting a thorough gap analysis.

- Make the explanation of the methodology more concise by using a table to summarize parameters, such as hyperparameter configurations. Employ a more integrated flowchart to illustrate the overall process.

- While the evaluation data has been presented well, the discussion lacks depth in addressing why the results turned out as they did. Consider adding explanations about the implications of differences in accuracy between Holdout and 10-Fold Cross Validation for real-world applications. Are there any data limitations or methodological constraints that could have influenced the outcomes?

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- While the evaluation data has been presented well, the discussion lacks depth in addressing why the results turned out as they did. Consider adding explanations about the implications of differences in accuracy between Holdout and 10-Fold Cross Validation for real-world applications. Are there any data limitations or methodological constraints that could have influenced the outcomes?

- Consolidate multiple tables into a single, more compact comparison table. Use more informative visualizations, such as bar charts or heatmaps, to display accuracy, precision, recall, and F1-score effectively.

Reviewer B:

1. The abstract should consist of objectives, materials, methods, results, and implications for further research, with a word count of approximately 230-250 words. The current abstract lacks the implications for further research. Please revise the abstract to comply with the template.
 2. Reduce the size of the displayed images while ensuring they remain clear and legible. This adjustment will prevent excessive page consumption.
 3. In the "MATERIALS AND METHODS" section, under the "Data Preparation" subsection, it is stated that the sample size is 7043. However, Table 1 indicates a sample size of 7042. Which is correct? Please clarify this discrepancy.
 4. According to the template, citations should follow the IEEE style. Currently, the article uses two citation styles, namely APA and IEEE. Please revise all citations to adhere to the IEEE style.
 5. The evaluation of the resulting model is based on several metrics: accuracy, precision, recall, and F1-score. However, these evaluation methods are not explained in the article; they are suddenly presented in tables (Table 10 to Table 18). Please add explanations for these evaluation methods.
 6. The English structure requires improvement. It is recommended to use a professional translator. Additionally, correct the grammar throughout the article.
- Carefully review the feedback provided and make the necessary revisions accordingly.

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[JOIV] Editor Decision

From Alde Alanda
To Mr. Willy Wijaya
Date 2025-01-02 20:03
Summary Headers

Mr. Willy Wijaya:

We have reached a decision regarding your submission to JOIV : International Journal on Informatics Visualization, "Optimizing Artificial Neural Network for Customer Churn: Advanced Data Balancing and Feature Selection".

Our decision is: Revisions Required

Alde Alanda
(Scopus ID: 57203718850); Politeknik Negeri Padang, Sumatera Barat
Phone 81267775707
Fax 81267775707
aldealanda@gmail.com

Alde Alanda

Reviewer A:

- In the introduction section, there is no strong statement explicitly outlining the objective of your research. The comparison with previous studies is too general, and no clear research gap has been identified.
- In the methodology section, there is no explanation justifying the choice of the dataset. Additionally, include a rationale for using two evaluation methods (Holdout and 10-Fold Cross-Validation).
- Tables and figures, such as the model evaluation results (Tables VI-XI), need more detailed explanations in the text. For example, what are the implications of the results from Holdout versus 10-Fold Cross-Validation?
- Provide a deeper explanation of the unique contribution of this research. For instance, how can this model be directly implemented in the telecommunications industry?

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of the dataset. Additionally, include a rationale for using two evaluation methods (Holdout and 10-Fold Cross-Validation).

- Tables and figures, such as the model evaluation results (Tables VI-XI), need more detailed explanations in the text. For example, what are the implications of the results from Holdout versus 10-Fold Cross-Validation?

- Provide a deeper explanation of the unique contribution of this research. For instance, how can this model be directly implemented in the telecommunications industry?

Reviewer B:

The review of this article indicates that most issues have been addressed:

1. The abstract should consist of objectives, materials, methods, results, and implications for further research, with a word count between 230-250 words. However, the abstract does not currently include implications for further research. Please revise the abstract to align with the template.
2. Reduce the size of the displayed images while ensuring they remain clear and legible, so they do not take up excessive space in the document.
3. In the "MATERIAL AND METHODS" section, under "Data Preparation," it is mentioned that the sample size is 7,043, but Table 1 shows that the sample size is 7,042. Which is correct? Please clarify.
4. According to the template, citations should follow the IEEE style. However, the current article uses two citation styles, namely APA and IEEE. Please revise the citations to follow the IEEE style as per the template.
5. The evaluation of the resulting model is based on several metrics: accuracy, precision, recall, and F1 Score. However, the explanation of these evaluation methods is not provided in the article and only appears suddenly in several tables (Table 10 to Table 18). Please include an explanation of the evaluation methods used.

One review comment remains unaddressed:

1. The structure of the English language needs improvement. It is recommended to use a professional translator. Please also correct the grammar throughout the article.

Kindly address the provided feedback accordingly.

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[JOIV] Editor Decision



From [Alde Alanda](#)
 To [Mr. Willy Wijaya](#)
 Date 2025-01-21 17:11
[Summary](#) [Headers](#)

Mr. Willy Wijaya:

We have reached a decision regarding your submission to JOIV : International Journal on Informatics Visualization, "Optimizing Artificial Neural Network for Customer Churn: Advanced Data Balancing and Feature Selection".

Our decision is: Revisions Required

Alde Alanda
 (Scopus ID: 57203718850); Politeknik Negeri Padang, Sumatera Barat
 Phone 81267775707
 Fax 81267775707
aldealanda@gmail.com

Alde Alanda

Reviewer A:

- Ensure that all tables and figures are properly referenced in the article.
- Adjust the formatting to align with the target journal's guidelines. Use consistent margins, spacing, and fonts. For tables, consider creating cleaner grids and more descriptive column headings.
- Correct any typographical and grammatical errors. If necessary, we recommend using a third party for improved writing quality.
- Provide a stronger justification for the selection of methods and parameters.
- Include a discussion on how the resulting model can be applied in real-world scenarios (e.g., in other telecommunication companies beyond the IBM Telco dataset). Explicitly mention the limitations of the study's findings.

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parameters.

- Include a discussion on how the resulting model can be applied in real-world scenarios (e.g., in other telecommunication companies beyond the IBM Telco dataset). Explicitly mention the limitations of the study's findings.

- Summarize the conclusion by emphasizing the key contributions and how the research can be enhanced or applied in the future. Avoid including references or citations in the conclusion section.

Reviewer B:

The review findings for this article have been addressed, as follows:

1. The abstract should consist of objectives, materials, methods, results, and implications for further research, with a word count of approximately 230-250 words. However, the current abstract does not clearly include implications for further research. Please revise the abstract according to the template.
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- The language used in the article is already well-structured, with each section interlinked, making the content easy to understand.

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[JOIV] Editor Decision



From Alde Alanda
To Mr. Willy Wijaya
Date Wed 21:46
 Summary  Headers

Mr. Willy Wijaya:

We have reached a decision regarding your submission to JOIV : International Journal on Informatics Visualization, "Optimizing Artificial Neural Network for Customer Churn: Advanced Data Balancing and Feature Selection".

Our decision is to: Accept Submission

Publication fees shall be implemented to all accepted papers. For more details, please email to alde@sotvi.org.
This journal charges the following author fees (Article Publication Fee):

- Indonesian authors: 8.000.000 IDR per article
- International authors: 500 USD per article

This fee includes:
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Checking the article similarity by Turnitin
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