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HASIL PENILAIAN SEJAWAT SEBIDANG ATAU PEER REVIEW
KARYA ILMIAH : JURNAL ILMIAH

Judul Jurnal Ilmiah (Artikel) : Optimization of backpropagation using Nguyen-Widrow and stimulus-sampling for breast cancer classification and feature selection

Jumlah Penulis : Tiga (Adi Wibowo, D. Setianto, Panji.Wisnu Wirawan)

Status Pengusul : penulis ke 1 (Satu) /Koresponding

Identitas Jurnal Ilmiah : a. Nama Jurnal : Journal of Engineering Science and Technology (JESTEC)

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g. Terindeks : Scopus dan Word of Science (WoS)

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Data-data hasil yang diperoleh dalam penelitian baik dengan didukung metodologi yang tepat dengan jumlah referensi kurang dari 5 tahun sejumlah 28.

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Reviewer 1



Prof. Dr. Kuswanto Adi, S.Si., M.T.,
NIP : 197203171998021001
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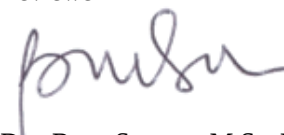
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2. **Ruang lingkup dan kedalaman pembahasan:**
Paper ini membicarakan tentang metode SLS otomatis menggunakan encoder-decoder ringan , untuk meningkatkan SLS, dilakukan dengan mengubah decoder dengan lapisan ConvLSTM berarah ganda dari BCDU-Net dan blok terpisah dari arsitektur separable-UNet. Augmentasi acak digunakan untuk meningkatkan keberagaman gambar dalam set data pelatihan untuk menghindari overfitting

3. **Kecukupan dan kemutakhiran data/informasi dan metodologi:**
Dalam studi tersebut, telah diperoleh sekumpulan informasi yang didukung oleh metodologi yang tepat dan didukung oleh referensi yang terbaru, yaitu kurang dari 5 tahun yang lalu, dengan total sebanyak 28.

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Paper ini dipublikasikan di sebuah jurnal berkualitas Q3 Engineering dengan SJR 0,24 serta H-Index 30 diterbitkan oleh Taylor's University. Paper tersebut memiliki semua unsur yang diperlukan dengan sangat baik.

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Reviewer 2



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NIP. 196311051988031001.
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Optimization of backpropagation using nguyen-widrow and stimulus-sampling for breast cancer classification and feature selection

[Wibowo, Adi^a](#) ; [Setianto, Dwi^a](#); [Panji Wisnu W.^a](#); [Jatmiko, Wisnu^b](#)
[Save all to author list](#)^a Department of Informatics, Diponegoro University Tembalang Campus, Jl. Prof. Soedarto SH Tembalang, Semarang, Central Java, Indonesia^b Faculty of Computer Science, Universitas Indonesia, Indonesia, Kampus UI Depok, Depok, West Java, 16424, Indonesia
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Abstract[Author keywords](#)[Sustainable Development Goals 2022](#)[SciVal Topics](#)[Metrics](#)[Funding details](#)**Abstract**

Breast cancer is one of the leading causes of death in the world for women. Early detection and diagnosis can be done to reduce the cancer death rate. MicroRNA is known as a biomarker for breast cancer and with the help of artificial neural network technology, made it possible to perform a classification process for early detection. Backpropagation neural network has good performance in classification, however, still has a drawback related to its long training time. This research is conducted to classify breast cancer (whether a cell is cancer or normal and whether it is before or after metastatic stage) based on microRNA profiles using backpropagation with Nguyen-Widrow and Stimulus-Sampling algorithm optimization. In this paper, three breast cancer datasets are used to compare the classification performances. Furthermore, some alternatives microRNA features set are obtained using feature selection methods and compare the accuracy values. The results show that the combination of

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enhancement based machine
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Akkar, H.A.R. , Hadi, W.A.H. , Al-
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Wibowo, A. , Wiryawan, P.W. ,
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Breast cancer classification using
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Breast Cancer Classification
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Aslam, M.A. , Cui, D.
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Nguyen-Widrow and Stimulus-Sampling algorithm produces the best backpropagation performance based on the accuracy, sensitivity, specificity, and AUC value as well as reducing the running time. The combination of Nguyen-Widrow and Stimulus-Sampling algorithm proved to be able to increase the performance of the method. Nguyen-Widrow algorithm provides weights value initialization that is not too small or too large so that the convergence process can be enhanced. Meanwhile, the use of Stimulus-Sampling improves the performance of backpropagation by strengthening the output unit, which give the smallest error value. © School of Engineering, Taylor's University.

Author keywords

Artificial neural network; Breast cancer; MicroRNA; Nguyen-widrow; Stimulus-sampling

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👤 Wibowo, A.; Department of Informatics, Diponegoro University Tembalang Campus,
Jl. Prof. Soedarto SH Tembalang, Semarang, Central Java, Indonesia;
email:bowo.adi@live.undip.ac.id
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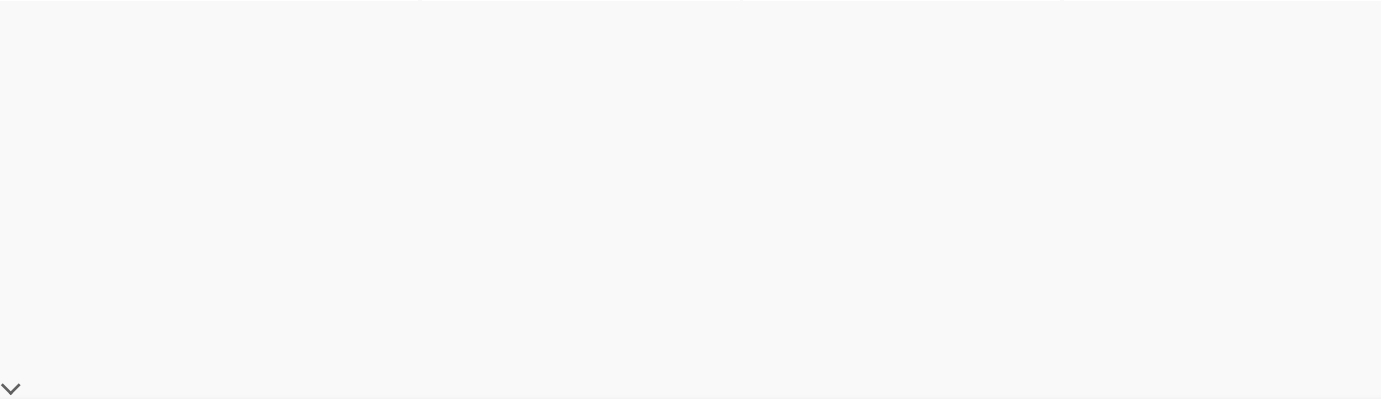
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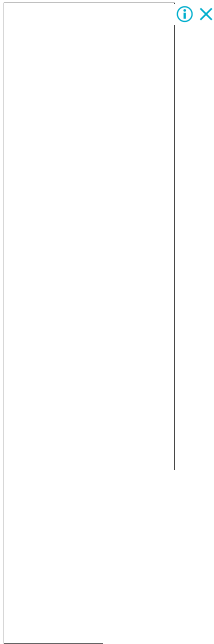
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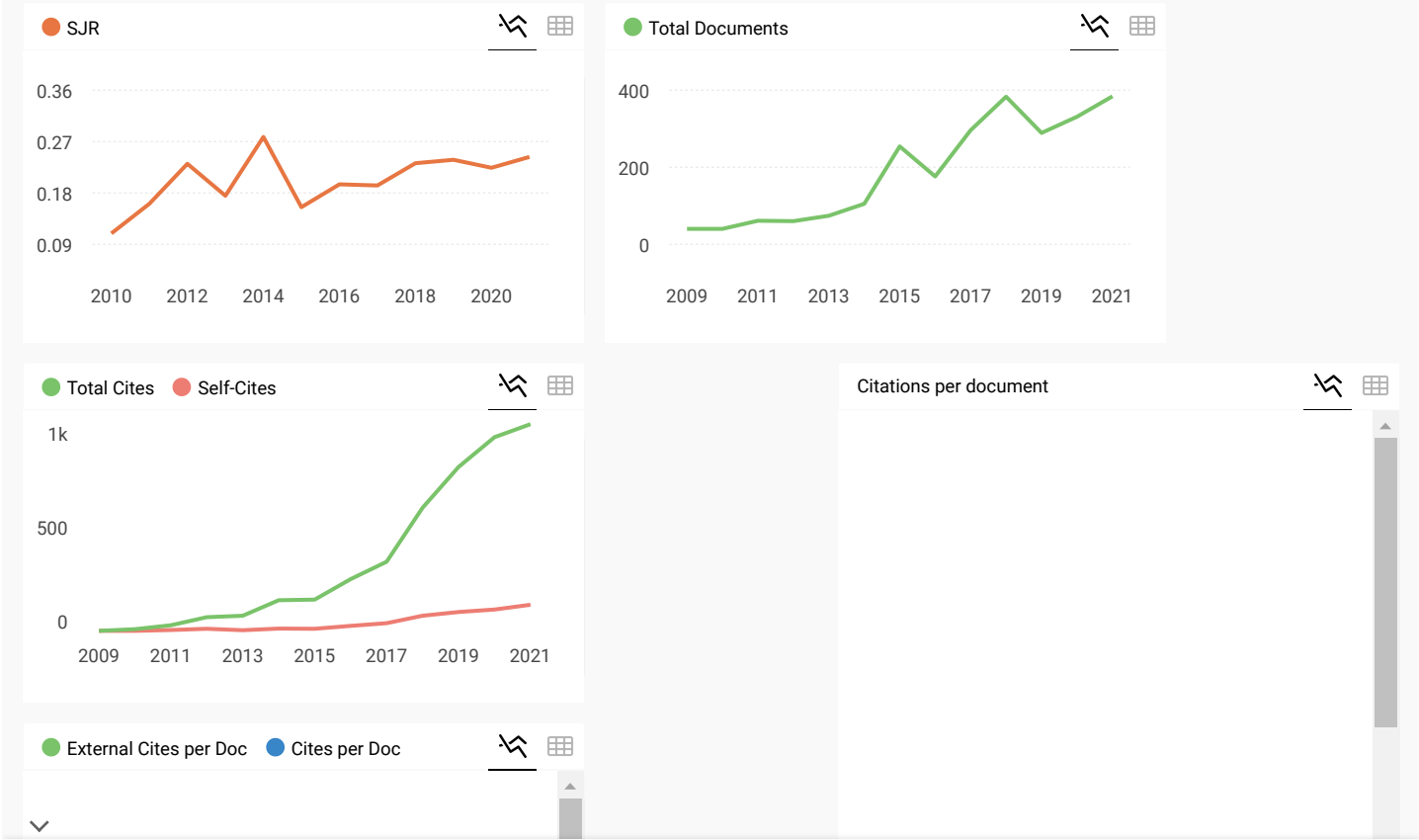
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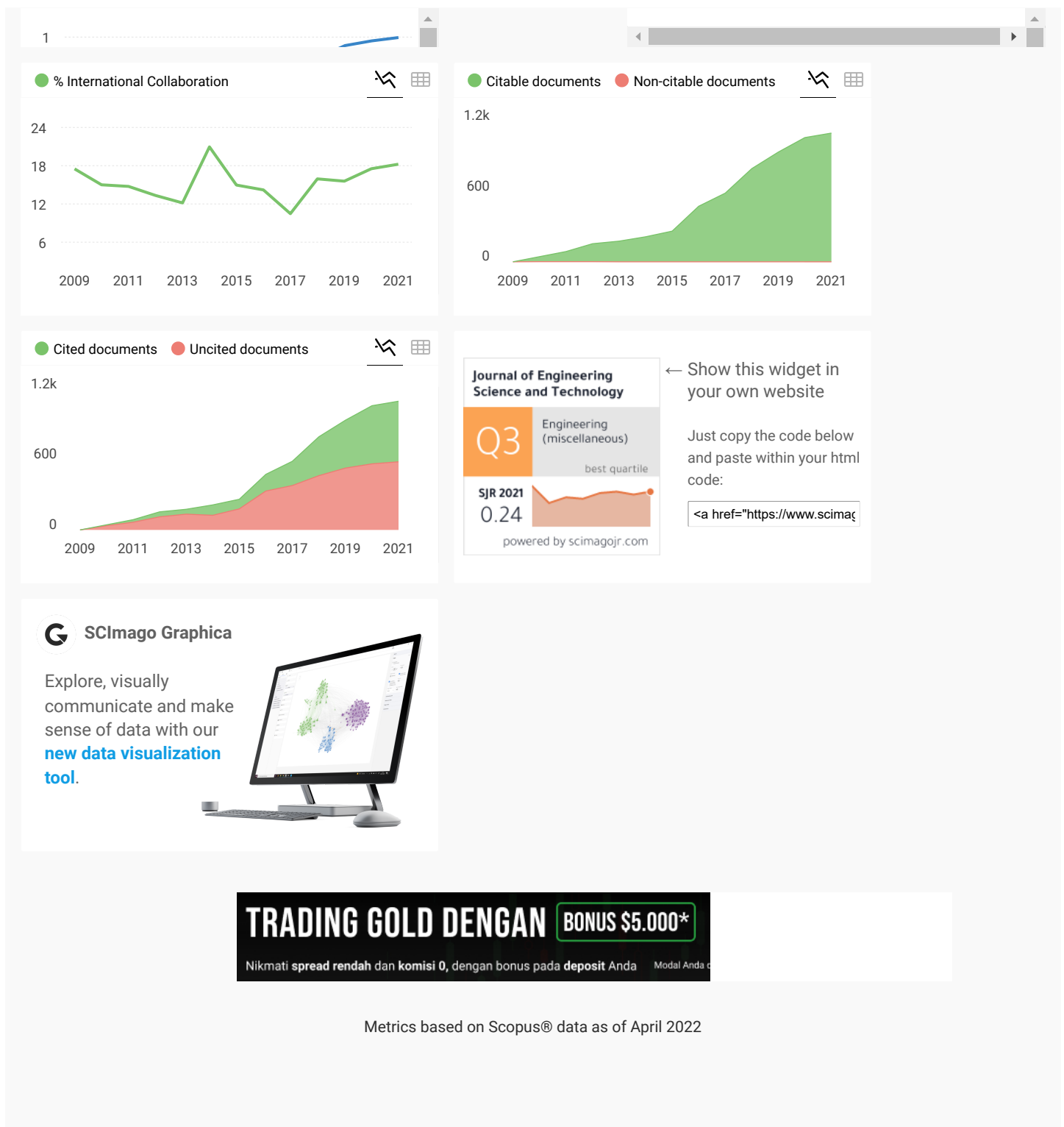
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asmaa 7 months ago

Dear sir,how to send an email to the journal to inquire about some publishing requirements, because there is no clear and explicit email to the journal only through executive editor i was unable to create a new email for the journal

if you can help , contact the journal through you

 reply**Melanie Ortiz** 7 months ago

SCImago Team

Dear Asmaa,
Thank you for contacting us. Unfortunately, SCImago cannot help you with your request.
SJR is committed to help decision-making through scientometric indicators.
Best Regards, SCImago Team

**M.Sivasankara Rao** 2 years ago

present how much time it will take to get acceptance and publication in this journal.

 reply**Melanie Ortiz** 2 years ago

SCImago Team

Dear M.Sivasankara,
Thank you for contacting us.
Unfortunately, we cannot help you with your request.
Best Regards, SCImago Team

**Ponum Almas** 2 years ago

hello ,
is this impact factor journal ? what is the publication fee for an aticle ? is there any discout for developing countries ?

 reply**Melanie Ortiz** 2 years ago

SCImago Team

Dear Ponum, thank you very much for your comment. SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR (Check it on our website). We suggest you consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. For further information about this journal, please visit the journal's website or contact directly with the editorial staff.
Best Regards, SCImago Team

**daus** 2 years ago

▼

**Melanie Ortiz** 2 years ago

SCImago Team

Dear Daus, thanks for your participation! Best Regards, SCImago Team

**kartik** 3 years ago

Hi,

Can i know what is the current Quartile ranking for this journal for the year 2020? tq

← reply

**Melanie Ortiz** 3 years ago

SCImago Team

Dear Kartik,

Thank you for contacting us. You can consult that information just above. The SJR for 2019 was released on 11 June 2020.

Best Regards, SCImago Team

**Raghad Hameed Ahmed** 3 years ago

good greeting

What is the time required to obtain a research acceptance letter.

← reply

**Melanie Ortiz** 3 years ago

SCImago Team

Dear Raghad,

thank you for contacting us.

Unfortunately, we cannot help you with your request, we suggest you visit the journal's homepage or contact the journal's editorial staff , so they could inform you more deeply.

Best Regards, SCImago Team

**deepthi** 3 years ago

Hi,

Is it okey to cite an unpublished work can in the manuscript?

← reply



you more deeply. Best Regards, SCImago Team



M.K. 3 years ago

Dear Melanie

I have submitted a paper for this journal about 6 months ago, and I did not receive the decision yet. The problem is the website of this journal does show any contact details except the email of the Executive Editor, who did not respond to my emails since May 2020. Do you know any other contact details for this journal please?

Best regards

M.K.

← reply



Melanie Ortiz 3 years ago

SCImago Team

Dear M.K.,

Thank you for contacting us. Unfortunately, it seems that there is no other email contact shown in their website.

Best Regards, SCImago Team



Dr. Vijaya Shetty S 3 years ago

ANY PUBLICATION/PROCESSING CHARGES FOR ACCEPTED PAPERS?

← reply



K. Bhatti 3 years ago

It's 300USD per article.



Melanie Ortiz 3 years ago

SCImago Team

Dear Dr. Vijaya,

thank you for contacting us.

Unfortunately, we cannot help you with your request, we suggest you visit the journal's homepage or contact the journal's editorial staff, so they could inform you more deeply.

Best Regards, SCImago Team



Why there is no response to our emails? Someone should tell them that other OA journals respond very fast. It is really a negative point about their performance. Pay attention to your costumers.

← reply

N

Nibras Khalid 3 years ago

Hello,

I submitted a manuscript for publication more than a week ago, but I haven't received a confirmation email of delivery. Is there a way to know if all the required documents have been received??

← reply



Melanie Ortiz 3 years ago

SCImago Team

Dear Nibras,

thank you for contacting us.

Unfortunately, we cannot help you with your request, we suggest you contact the journal's editorial staff, so they could inform you more deeply.

Best Regards, SCImago Team

P

Phyu Phyu Thin 3 years ago

Dear Sir,

I would like to know that I can submit the paper concerned with hydrogeology or not in Journal of Engineering Science and Technology.

Thanks

← reply

S

sukanto wiryono 3 years ago

Dear Melanie Ortiz

Please inform me, is this JESTEC indexed by Q2 Scopus?

Thanks you



Melanie Ortiz 3 years ago

SCImago Team

Dear Sukanto, thank you very much for your comment, unfortunately we cannot help



available just above.

Best Regards, SCImago Team



Melanie Ortiz 3 years ago

SCImago Team

Dear Phyu,
thank you for contacting us.
We are sorry to tell you that SCImago Journal & Country Rank is not a journal. SJR is a portal with scientometric indicators of journals indexed in Elsevier/Scopus.
Unfortunately, we cannot help you with your request, we suggest you to visit the journal's homepage (See submission/author guidelines) or contact the journal's editorial staff , so they could inform you more deeply.
Best Regards, SCImago Team



B G Shivaleelavathi 3 years ago

Sir/Madam,
i want to submit review paper. what is procedure.

← reply



Melanie Ortiz 3 years ago

SCImago Team

Dear Shivaleelavathi,
thank you very much for your comment, we suggest you to look for author's instructions/submission guidelines in the journal's website. Best Regards, SCImago Team



Frans 3 years ago

I want to know, what is journal not a notification after submitting?
Thank you

← reply



kareem 3 years ago

Dear Scopus people
I want to if this journal consdiered as an ISI journal and what is its impact factor.
Thanks

← reply



Dear Kareem, SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR. Check our web to locate the journal. We suggest you to consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. Best Regards, SCImago Team



Nacer 3 years ago

Dear Abdulkareem

Please inform me if the publication is free or not?

Best regards

← reply



abdulkareem 3 years ago

no, it is not free, USD300/aper



Nacer 3 years ago

Dear all

Could you please tell me what is the impact factor of this journal.

Best regards

← reply



Melanie Ortiz 3 years ago

SCImago Team

Dear Nacer, SCImago Journal and Country Rank uses Scopus data, our impact indicator is the SJR. Check our web to locate the journal. We suggest you to consult the Journal Citation Report for other indicators (like Impact Factor) with a Web of Science data source. Best Regards, SCImago Team



supreetha B.S 3 years ago

I have published my research work in JESTEC. It is a quality journal with systematic review process. I received review comments from 5 reviewers and I answered all the comments and finally after 2 round review process my paper was accepted. Thanks to Dr. Abdulkareem Sh Mahdi Al-obaidi

← reply



Thank you



Sudhakiran Gunda 3 years ago

Could you please tell me the duration for this entire process.
I would like to know the time taken for publication.

Thankyou



Melanie Ortiz 3 years ago

SCImago Team

Dear Supreetha, thanks for your participation! Best Regards, SCImago Team



Khaled 3 years ago

Hello there!

I have a little question about the publication process timeline, Can i know please how long will take between sending an article and (journal answer by acceptance/rejection) and finally the paper's online availability ????

Thanks in advance

← reply



Khaled 3 years ago

Thanks alot for your valuable response

Are there any publication fees or not ???????



Ali 3 years ago

Dear khaled

The timeline for publishing in this journal about 2-3 months for final acceptance and may be 9 months for online publication
with my regards



Melanie Ortiz 3 years ago

SCImago Team

Dear Ali, thanks for your participation! Best Regards, SCImago Team



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You can see the updated journal's information just above.

Best Regards, SCImago Team

A

ASWANT KUMAR SHARMA 3 years ago

I have published a paper with JESTEC in a proper time line. It is good if JESTEC provide DOI for article published with them

 reply

M

Malathi Kunnudaiyan 3 years ago

Have paid any fees for the publication sir?

**Melanie Ortiz** 3 years ago

SCImago Team

Dear user, thanks for your participation! Best Regards, SCImago Team

R

rati saluja 4 years ago

The journal that provides best services, never a single follow up query left unanswered. I had written several research papers in numerous journals, but I feel pride the way "Journal of Engineering Science and Technology" works, they reviewed every mm of my manuscript. Their editing team is soul of the body. Mr. Obaidi shares every detail regarding the review process as well as time duration, that made the process easy. Publishing in a reputed journal takes time, So eagerly waiting for the same.

Thanks a million to Dr. Abdulkareem Sh. Mahdi Al-Obaidi for sharing a wonderful platform to enhance one's knowledge and research.

Hats off

A happy author

 reply

M

Melva Silitonga 4 years ago

This journal template has been used for the 2019 Kyoto APLSBE template that I have participated in, I am interested in the content of this journal and wish for publication in this journal





Wajde Alyhya 4 years ago

Hi

I sent a manuscript for publication in this journal and I received two months later seven reviewers' comments. I answered all their comments, however, I have not received an acceptance or rejection letter till now. I sent more than one emails regarding the status of my manuscript without an answer. I do not know what to do after nearly more than 6 months of waiting.

← reply



Abdulkareem Sh. Mahdi Al-Obaidi 4 years ago

Dear Wajde

We thank you for the comment.

As you mentioned your experience with JESTEC, i wonder why you did not mention that your paper is accepted and will be published soon.

It is good to give negative feedback for improvment, we thank you but it is also fair to tell positive feedback, right?

Best regards

Executive Editor of JESTEC



Emmanuel 5 years ago

@ Elena:I humbly suggest that the web link of all journals should be published alongside their name.This will eliminate the faking of journals in your data base.

← reply



Wajde Alyhya 5 years ago

Dear All

Could you please tell me how long it takes to be accepted and published online.

Thanks

← reply



Dr. mohammed alwazzan 4 years ago

3 to 4 month



Elena Corera 5 years ago

SCImago Team

Dear Wadje, in the link below you will find the information corresponding to the author's



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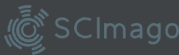
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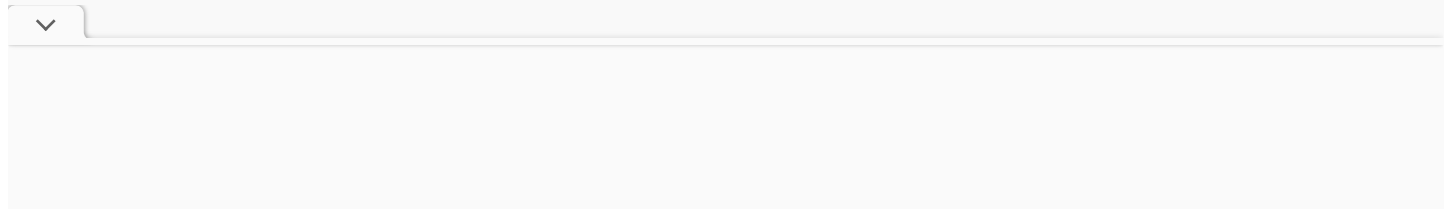
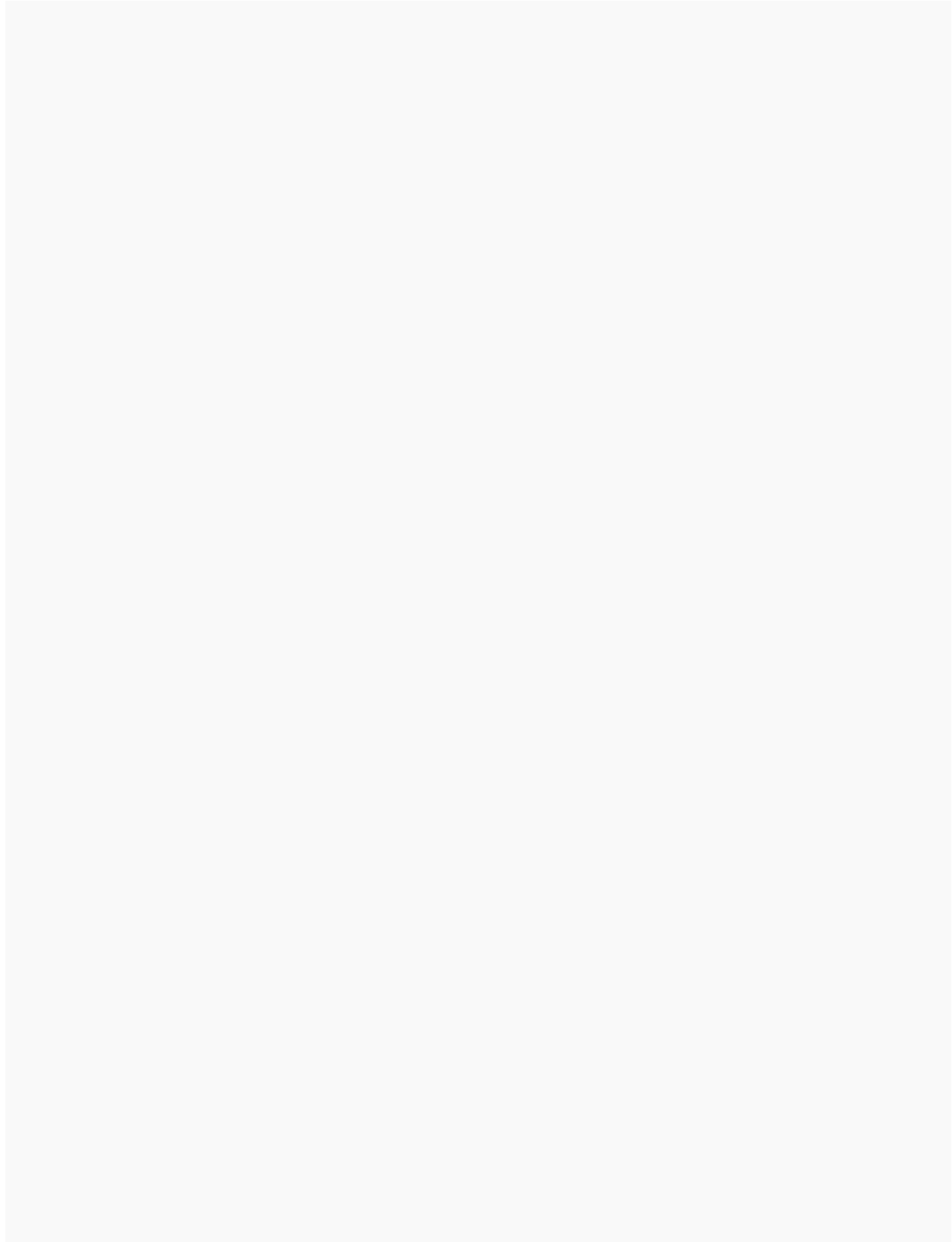


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To: abdukkareem.mahdi@taylor.s.edu.my

Mon, Dec 10, 2018 at 10:58 PM

Dear Executive Editor of JESTEC

We wish to submit a new manuscript entitled "Optimization of Backpropagation using Nguyen-Widrow And Stimulus-Sampling for Breast Cancer Classification and Feature Selection" for consideration by the Journal of Engineering Science and Technology.

We attach several required documents include the Turnitin plagiarism check.

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Thank you for your consideration of this manuscript.

Sincerely
Adi Wibowo
Dept. Informatics - Diponegoro University
Semarang - Indonesia

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To: adi wibowo <bowo.adi@live.undip.ac.id>

Tue, Dec 11, 2018 at 5:44 AM

Dear Author

Thank you for your email
We will check the submission and send you an email with some details within two weeks from the date of your email.

Best regards

Associate Professor Dr. Abdukkareem Sh. Mahdi Al-Obaidi, CEng MIMechE

Executive Editor, Journal of Engineering Science & Technology
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Sent: Monday, December 10, 2018 11:59 PM
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Subject: Submit a Manuscript- JESTEC

Dear Executive Editor of JESTEC

We wish to submit a new manuscript entitled "Optimization of Backpropagation using Nguyen-Widrow And Stimulus-Sampling for Breast Cancer Classification and Feature Selection" for consideration by the Journal of Engineering Science and Technology.

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Dear Author

I am glad to advise that your paper has been accepted for publication without modification. The reviewers have no more comments and they are satisfied with the revised paper.

By this the review process is completed and we kindly ask you to [check the format](#) of the paper according to the [instructions for authors and JESTEC template](#) (attached).

Special attention to be paid for list of symbols used and the references. Please follow strictly the instructions for citation of the references (attached are instructions) and also explain each symbol you used and its SI units. Also refer to this link: <http://jestec.taylor.edu.my/instructions.html>

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Kindly note that you have only four weeks to submit the above.

Thank you and best regards

Assoc. Prof. Dr. Abdulkareem Sh. Mahdi Al-Obaidi, CEng MIMechE

Executive Editor, Journal of Engineering Science & Technology

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Sincerely

Adi Wibowo

Dept. Informatics - Diponegoro University

Semarang - Indonesia

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Jestec <Jestec@taylor.edu.my>

Sun, May 5, 2019 at 9:43 PM

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Dear Author

I am glad to advise that your paper has been accepted for publication without modification. The reviewers have no more comments and they are satisfied with the revised paper.

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Mon, May 13, 2019 at 2:45 PM

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Sincerely

Adi Wibowo

Dept. Informatics - Diponegoro University

Semarang - Indonesia

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OUTLINING HOW THE ISSUES ARE ADDRESSED

Title of paper: OPTIMIZATION OF BACKPROPAGATION USING NGUYEN-WIDROW AND STIMULUS-SAMPLING FOR BREAST CANCER CLASSIFICATION AND FEATURE SELECTION

1. Address all the concerns/recommendations of the reviewers.
2. All amendments made are to be highlighted in red color in the revised paper.

Reviewer # 1

Final Recommendation Please tick	Accepted without modification ☐	Accepted with minor corrections ☐	Accepted with major modification ☐	Rejected ☐
Comments	Addressed (Y/N)	Reply/Action taken		
This paper presents and refers to “backpropagation” as a type or structure of a neural network. This is incorrect as backpropagation is not a neural network structure, but instead a method to train neural networks. Specifically, backpropagation is used to calculate the gradient of the errors with respect to the weights which is then used in a gradient descent algorithm for neural network training. From the paper, it appears that the neural network structure used is a multilayer perceptron which is a type of a feedforward neural network.	Y	Thank you for the corrections. The definition of Backpropagation had been revised, the following sentences had been added, in page 4, “Backpropagation is the most famous method to train artificial neural network because it has a simple mathematical analysis and good representation capabilities [14].” “With multilayer perceptron as the neural network structure, the three main activities of Backpropagation are...” in page 7, “The first scenario was done using the standard Backpropagation method with feedforward network architecture as shown in Fig. 1.”		
This paper presents results using different datasets, first Dataset A and B, and then other datasets. It is unclear what is being compared between these datasets. It seems that the accuracy of the NN when using these datasets as a testing set is what is being compared, since this paper constantly refers to them as “testing results”. However, this would be an unfair comparison, as the NN were either trained using Dataset A or B, which would naturally result in Dataset A or B producing the best testing results (which is reported in this paper). A better comparison would be to train the NN using an independent dataset and then test them using the various dataset for comparison. In addition, the size of the datasets also appears to be	Y	Our focus study was on breast cancer data. In this study, we used 3 data sets; the WBCD dataset was used as a comparison with previous studies for the stimulus-sampling methods. In this study revealed that the optimization increases the performances of backpropagation using the same dataset on previous studies. Whereas, The A and The B datasets are datasets that use microRNA biomarkers to classify breast cancer. The differences between the two datasets is the		

rather small, (200 for Dataset A and 48 for Dataset B) which would result in a large performance variance.		target class. The A dataset was used to classify normal cell and breast cancer cell classes, while the B dataset contains classes of breast cancer before the phase of metastasis and class of breast cancer after the metastasis phase. The following sentences had been added in the introduction. In page 3. “The WBDC dataset is used for comparison with previous studies for Stimulus-Sampling algorithm, the TCGA datasets (A) and the selected breast cancer datasets (B) are datasets that use microRNA biomarkers to classify breast cancer. The A dataset is used to classify normal cell and breast cancer cell classes, while the B dataset contains classes of breast cancer before the phase of metastasis and class of breast cancer after the metastasis phase In this paper, every test result accuracy was generated from training with the same dataset. An independent dataset for testing both the A dataset and the B dataset could not be apply due to have difference classes target. Datasets of breast cancer using microRNA as a biomarker are quite challenging in obtaining large numbers of sample, specifically for the metastasis phases classification. We did k-folding in the experiment process, and we got a performance variant that is not much different. Therefore it can be concluded, that the use of small datasets still produces stable accuracy.
• The paper also compares different feature selection methods (or different features), but it is unclear on which dataset these results are tested on. If the	Y	This comment is related to the previous comments, where indeed both dataset (A and B) using

testing sets are different, how could one conclude that one set of features are better than the other. Most of these confusion arises from the authors mixed usage of the terms “datasets” and “features”. It is important to differentiate between the two.		microRNA as a feature, but the purposes of the classification are different. Then the set of features also reach separately. The best accuracy is employed to deduce the best feature set for each dataset. For dataset A the results of the comparison of accuracy can be seen in table 7, and for the B dataset, the results can be seen in table 8. We also added a discussion for the table on pages 14-15. In page 14. “Then the feature sets were classified using BP-NW-SS and the results are shown in Table 7. This testing results used the same dataset (Dataset A), but with different features depended on the feature selection method used.” In page 15. “These feature sets were classified using BP-NW-SS and the results are shown in Table 8. This testing results used the same dataset (Dataset B), but with different features depended on the feature selection method used.” Thank you for the correction. We have revised the use of ‘dataset’ term to ‘feature’ in page 11 and 12. “Then these feature sets were classified using BP-NW-SS and the results are shown in Table 6. This testing results used the same dataset (Dataset A), but with different features depended on the feature selection method used.”
• Section 1, first sentence. The numbers quoted should be presented with context. I.e. where and when where these cases recorded?	Y	We have added where and when the cases were recorded. “Breast cancer is the second most common cause of death because of cancer among women [1] with 2,088,849 cases in the world in 2018, and 626,679 of them were declared dead [2].”
• Tables 1, 2 3 and 4. Are these the “testing results” or “training results”? The authors also appears to use these terms and “experimental results”	Y	The accuracy values presented in Tables 1,2,3, and 4 were obtained from testing process, then we named

interchangeably throughout the paper. It is important to differentiate between them as they bear different meanings.		it “testing results”. We have replaced the term “experimental results” to “testing results”. “The testing results of the second scenario are shown in Table 3 and Table 4.”
In Tables 3 and 4, how are the “accuracy”, “sensitivity” and “specificity” calculated, and what do each of them measure? Also, the performance increase appears marginal at best. Since the training time and accuracy of the basic NN is highly depending on the randomness of the initial weights, it would be fairer to repeat the training process a few times and record an average.	Y	We have added 2.6 Evaluation Methods section to explain how he “accuracy”, “sensitivity” and “specificity” are calculated and what each of them measures. Yes, each of testing process was repeated 10 times, so the values in the tables are the average. We added the following sentence in page 10, “Each testing in this paper was carried out 10 times, the values in the tables are the average values.”

(Please add more rows if needed)

Reviewer # 2

Final Recommendation Please tick	Accepted without modification ☐	Accepted with minor corrections ☐	Accepted with major modification ☐	Rejected ☐
Comments	Addressed (Y/N)	Reply/Action taken		
Feature selection and Classification are not a new topic, so the authors should include more closely related work in the introduction instead of giving readers an incomplete picture of related work. For instance, the authors should describe in more details about the three other methods they used in comparison. A detailed description of how their approach is different from existing ones would be helpful.	Y	Some details have been added to the introduction. “..., the features were selected using Weka’s Wrapper Subset Eval Attribute Evaluator and then were classified using Multi-Layer Perceptron and Naïve Bayes [9].” “..., proved by Madhavan, et al [10] by reviewing the application of MicroRNA as a biomarker.” “A study applied the deep belief network to classify breast cancer based on WBCD and produced an accuracy of 99.68%, the construction used backpropagation with Liebenberg Marquardt learning function [16]. Other studies had also utilized microRNA for the classification of ovarian cancer, breast cancer, and lung cancer using the Backpropagation algorithm with the		

		highest accuracy obtained was 83.33% without adding any optimization function [17].” However, a more detail about three feature selection methods was written in Materials and Methods section, “2.5. Feature Selection”
• The proposed method does not seem to be specially tailored for biomedical data. If it is, this should be clarified. Otherwise, why only biomedical data sets were used for evaluation?	Y	The proposed method is not specially for biomedical data, but the focus of the study is for breast cancer data classification, then only breast cancer datasets were used for evaluation.
• Overall, the proposed approach appears to outperform other selected techniques in the three relevant characteristics: feature prediction, execution time and accuracy. Similarly, Tables 1-7 present a lot of favorable evidence about the superiority of the new approach but it also needs to be verified statistically in order for this work to have a major impact. However, the summarizing of the results in Figures 2-7 is only descriptive and therefore it needs to be supported statistically.	Y	A one-way ANOVA with post-hoc Tukey test was conducted and proved the statistically significant difference. The following sentences had been added in page 12, “A one-way ANOVA technique with post-hoc Tukey and Wilcoxon signed-ranked test were chosen to compare the performance of BP-NW-SS with the standard BP statistically. The test showed the statistically significant difference based on the running time, Tukey HSD p-value = 0.0010053 (p-value < 0.05) and based on the accuracy, Tukey HSD p-value = 0.002066 (p-value < 0.05). The Wilcoxon signed-rank test also indicated significant difference that BP-NW-SS method produced better performance than standard BP algorithm with Asymp. Sig. (2-tailed) value was 0.005 (p-value < 0.05) based on running time and 0.026 (p-value < 0.05) based on accuracy values.”
• It is main requirement to propose the architecture for the proposed algorithm for the elaborate understanding.	Y	The architecture of the proposed method is visualized by Figure 1 in page 8.
• It is particularly important to highlight the differences between the developed method with existing method, which had similar fitness function in maximizing the classification accuracy but also minimizing the computation time.		The differences between the developed method with existing method were added in page 13, “Another previous study that applied an optimization to multilayer perceptron was conducted in 2018 by Aljarah, et al [44], the optimizer was called Whale Optimization Algorithm (WOA) where some search agents were initialized. Each search agent represents a candidate of multilayer perceptron network, then the network with the smallest MSE was

		chosen. This optimization was proved to be able to maintain the accuracy value with average of 97.31% and speed up the convergence [44]. Differ from WOA, in this study, ...” “The results were in accordance with the results of study by Gorunescu and Belciug [26] where BP-SS could outperform BP with 95.3% accuracy, they were the first who proposed Stimulus-Sampling approach in their study. They didn’t use other optimization algorithm to shorten the running time resulted in no different running time between the proposed method and 3-MLP.”
• The fitness function for the optimization is not described anywhere in the paper.	Y	In page 6, we added the following sentence, “The evaluation methods used to test this experiment were accuracy, sensitivity, specificity, and the execution time. These values were also used as the fitness functions along with MSE value.”
• The hardware and software environment in which the running times were obtained need to be mentioned.	Y	The following sentence has been added in page 6, “This study was done on a system running Windows 10 OS powered with Intel Core i7 processor with 4 GB RAM.”
• More discussion regarding the different medical datasets with different dimensions could then be drawn.	Y	The following sentence has been added in page 14, “Generally, dataset with less features takes shorter of running time. But, fewer or more features do not guarantee high accuracy since there might be some features with missing values, no related to the disease, or insignificant correlation. So, datasets containing features with strong correlation and significant role to the disease identification are more reliable. Lan, et al [50] stated that only microRNA features with aberrant expression that are closely associated with the pathogenesis and progression of human malignancies. Some features are specific to the cancer cells [51]. This indicated that the feature selection that involving the medical aspect and proved to be associated with certain disease could produce a better feature set.”
• The description provided under the result section should be strengthened by focusing the points in what	Y	The following sentences had been added in page 12 to point out the way the proposed method is superior

way the proposed method is superior to other existing methods by comparisons to improve the quality of the research.		to other existing methods, “Nguyen-Widrow algorithm provided weights value initialization that was not too small or too large so that the convergence process could be enhanced. Meanwhile, the use of Stimulus-Sampling improved the performance of Backpropagation by strengthening the output unit which gave the smallest error value. Consequently, the error value kept decreasing in each epoch. Gorunescu and Belciug [26] were the first who proposed Stimulus-Sampling approach in their study. They didn’t use other optimization algorithm to shorten the running time resulted in no different running time between the proposed method and 3-MLP.”
In page 1, under Abstract, • Abstract should be written in clear way. Better to rewrite the abstract. For the pleasant reading, the author should avoid writing in past tense. It is mandatory for the author to rewrite the abstract in efficient way by means of addressing the highlight of the proposed method in what way it aids in breast cancer prediction?	Y	The Abstract has been rewritten and not in past tense.
• Author proposed three individual task, firstly, Nguyen-Widrow -Stimulus-Sampling -ANN algorithm , as second task- feature selection is done to extract the microRNA features. Instead of two separate task, feature selection is suggested to apply as preprocessing task for the classification algorithm (Nguyen-Widrow -Stimulus-Sampling -ANN algorithm)	Y	This paper focuses on proving the hypothesis that optimization using Nguyen-Widrow And Stimulus-Sampling can enhance the performance of backpropagation. In this paper, a similar dataset with previous study of stimulus-sampling optimization [26] was used. Because the previous study has not applied feature selection on preprocessing step, hence in this study, the data set will also not undergo those steps. The purpose of the feature selection in this study is obtaining a feature set of microRNA biomarkers. Since the feature set of biomarkers that have a high accuracy of classification is very essential to identify for biomarkers researchers for further research in the cancer classification. The selected feature was based on paper by Iorio, et al [8]. (page 3, Data Collection section).The following sentence had been added in page 4,

		“In addition, some feature selection methods were used to obtained some new features set and compared them with previous datasets.”
In page 2, • The work under the Reference [16] has utmost obtained 99.27% .In what way the proposed algorithm differs from the ref.[16]?	Y	The Reference [16] used different methods combination, i.e. backpropagation, deep belief network, and Liebenberg Marquardt learning function. Another difference is Reference [16] used only Wisconsin Breast Cancer Diagnostic (WBCD) as the dataset. The following sentence has been added in page 2, “A study applied the deep belief network to classify breast cancer based on WBCD and produced an accuracy of 99.68%, the construction used backpropagation with Liebenberg Marquardt learning function.”
In page 3, The lines “Though, the combines these optimization algorithms is interesting for the optimization due to both the Nguyen-Widrow and Stimulus-Sampling algorithm were implemented inside the standard algorithm.” • These sentences are not clear , the author need to rewrite these sentences in clear way.	Y	We have rewritten the unclear sentence into this sentence, “The combination of these optimization algorithms was interesting since both Nguyen-Widrow and Stimulus-Sampling algorithm were implemented inside the standard Backpropagation algorithm.”
• Author specified a standard algorithm for the proposed method in page 3. But the algorithm is missing throughout the paper.	Y	The proposed algorithm has been written in page 7
• Since author focused the proposed method as an optimization algorithm to have the faster training process through weight modification as an objective to improve the accuracy. It is better to provide the fitness function based on this.	Y	Based on the running time, a post-hoc Tukey test was conducted and proved the significant difference. The following sentences had been added in page 12, “A one-way ANOVA technique with post-hoc Tukey was done to compare the performance of BP-NW-SS with the standard BP statistically. The test showed the statistically significant difference based on the running time, Tukey HSD p-value = 0.0010053 (p-value < 0.05).”

• In what way the author chooses the Correlation matrix, SVM-RFE and Univariate feature selection method as suitable method for the feature selection?	Y	The following sentences had been added in page 13, “Using SVM-RFE and Univariate Selection methods, some datasets with different feature combination was obtained. We also used an operator from RapidMiner, the correlation matrix, to obtain the best features set. These three methods were chosen because SVM-RFE, Univariate Selection, and Correlation had successfully used in gene selection, even univariate selection could outperformed the multivariate approach [37,38,44].”
In page 3, under the section 2.1, • In result, the comparison of the Third dataset i.e., Breast Cancer Wisconsin (WDBC) Data Set has not considered elsewhere under the result and discussion. The author should ensure that the comparison of Dataset A and Dataset B with the third dataset.	Y	In page 12, the following sentences had been added, “Then in Table 6, the accuracy values were compared to Dataset A, but not Dataset B, since the predicted classes of WBCD dataset and Dataset A were the same. It can be seen that Dataset A could produce better performances than WBCD dataset.”
In page 4, • The structure of the algorithm should be organized as steps. It is must to rewrite the algorithm as a sequence of the steps. Author should write the standard algorithm by embedding the equations (13) to (16).	Y	The proposed algorithm has been written in page 7, including equation (13) to (16)
In page 5, • The reference based on Correlation matrix feature selection is missing.	Y	The reference for correlation matrix had been added in page 5, “Some studies [40-41] used RapidMiner to conduct feature selection because it contains modules for features selection methods and machine learning, these studies used one of the simplest, i.e. correlation matrix. Correlation matrix used statistical technique to calculate how strong the pairs of attributes were related [42].”
• Under the result, it is must to evaluate the data set with applying feature selection and without applying feature selection. Then only the impact of the feature selection could be revealed for the breast cancer dataset.	Y	The evaluation was presented in page 13, “Based on Table 6, feature set obtained from features correlation (RapidMiner tool) produced the highest accuracy value, 98.50%. This value still couldn’t outperform the accuracy when using Dataset A (96.46%)” “However, 98.50% was a high

		number too and the dataset could become an alternative. Compared to Dataset A, both of them have six features, even two of them are the same (i.e., hsa-mir-21 and hsa-mir-10b) and the other four are different (i.e., hsa-mir-200a, hsa-mir-7705, hsa-mir-141, and hsa-mir-139). ...”
In page 11, Under the experimental results, Author should include the error values observed under each epoch. The working procedure for the feature selection algorithm is important to understand the selection process.	Y	The error values (MSE) had been added in Table 3, Table 4, and Table 5. And the following sentence had been added under Table 7 as the procedure of feature selection. “For each selection feature method, the experiment was executed 10 times to produce 10 features. Then, features that showed up in all 10 experiments were selected as the most significant features, the results are as in Table 7 column Features.”
In page 12, under Table 6, The features selected by the feature selection algorithm are evaluated by which classifiers to give the accuracy of 98.50%, 71.50 % and 98.33 %.	Y	The features selected by the feature selection algorithm are evaluated by BP-NW-SS classifier. “Then these feature sets were classified using BP-NW-SS and the results are shown in Table 6.”

(Please add more rows if needed)

Reviewer # 3				
Final Recommendation Please tick	Accepted without modification ☐	Accepted with minor corrections ☐	Accepted with major modification ☐	Rejected ☐
Comments	Addressed (Y/N)		Reply/Action taken	
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Reviewer # 4				
Final Recommendation	Accepted without modification	Accepted with minor corrections	Accepted with major modification	Rejected

Please tick

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Comments	Addressed (Y/N)	Reply/Action taken
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Reviewer # 5

Final

Recommendation

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Accepted without
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Accepted with minor
corrections

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Comments	Addressed (Y/N)	Reply/Action taken
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Reviewer # 6

Final

Recommendation

Please tick

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modification

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Accepted with minor
corrections

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Accepted with major
modification

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Rejected

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Comments	Addressed (Y/N)	Reply/Action taken
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Reviewer # 7

Final

Recommendation

Please tick

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modification

☐

Accepted with minor
corrections

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Accepted with major
modification

☐

Rejected

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Comments	Addressed (Y/N)	Reply/Action taken
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Reviewer # 8

Final Recommendation Please tick	Accepted without modification ☐	Accepted with minor corrections ☐	Accepted with major modification ☐	Rejected ☐
Comments	Addressed (Y/N)	Reply/Action taken		
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Reviewer # 9

Final Recommendation Please tick	Accepted without modification ☐	Accepted with minor corrections ☐	Accepted with major modification ☐	Rejected ☐
Comments	Addressed (Y/N)	Reply/Action taken		
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Reviewer # 10

Final Recommendation Please tick	Accepted without modification ☐	Accepted with minor corrections ☐	Accepted with major modification ☐	Rejected ☐
Comments	Addressed (Y/N)	Reply/Action taken		
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