Dear Dr. Deris Stiawan,

Congratulations!! Your paper is selected for publication in one of our Scopus indexed journals (see: http://citei.intconference.org/list-of-accepted-papers-and-registration/). However, after editorial team meeting and careful re-review, your paper ID #1570635877, entitled "Intrusion Detection with Deep Learning on IoT Heterogeneous Network" requires MAJOR REVISIONS before being scheduled for publication in one of Scopus indexed journals. We suggest for extension and improvement on results and analysis of your paper. You are asked to revise your paper seriously & carefully, and do re-submit your updated manuscript according to reviewers' comments, editors' comments, editorial office comments (http://citei.intconference.org/list-of-accepted-papers-and-registration/, see comments at "Revisions Required" column) and the guidelines for authors. The editors will re-check whether your updated paper already address the comments and guidelines, and fulfill for a Scopus indexed journal standard. Failing to do proper revisions may lead to delays for publication and/or re-evaluation of your paper. So, please take your attention for the requirements.

The reviews are below or can be found at https://edas.info/showPaper.php?m=1570635877, using your EDAS login name deris@unsri.ac.id.

Please submit your updated paper through EDAS system before Oct 25, 2020.

Thank you for your cooperation.

Best Regards,
Assoc. Prof. Tole Sutikno, Ph.D.
Editor-in-Chief, Indonesian Journal of Electrical Engineering and Computer Science
General Chair, 2020 1st Conference on Internet of Things and Embedded Intelligence

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COMMENTS FROM REVIEWERS:

======= Full paper review 1 =======

> *** Relevance and timeliness: Rate the importance and timeliness of the topic addressed in the paper within its area of research.
Good (4)

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======= Full paper review 1 =======

> *** Relevance and timeliness: Rate the importance and timeliness of the topic addressed in the paper within its area of research.
Good (4)

> *** Technical content and scientific rigour: Rate the technical content of the paper (e.g.: completeness of the
analysis or simulation study, thoroughness of the treatise, accuracy of the models, etc.), its soundness and scientific rigour.
Questionable work with severe flaws. (1)

> *** Novelty and originality: Rate the novelty and originality of the ideas or results presented in the paper.
It has been said many times before. (1)

> *** Quality of presentation: Rate the paper organization, the clearness of text and figures, the completeness and accuracy of references.
Unacceptable. (1)

> *** Strong aspects: Comments to the author: what are the strong aspects of the paper

The chosen topic is very hot in the research community however, the application of NN on IoT data is novelty here.

> *** Weak aspects: Comments to the author: what are the weak aspects of the paper?

Authors seem to have very confused understanding of the direction of the implementation strategy. There is not much explanation of their research methodology.

> *** Recommended changes: Recommended changes. Please indicate any changes that should be made to the paper if accepted.

Research methodology should be re-written and must be explained its innovation.

> *** Submission Policy: Does the paper list the same author(s), title and abstract (minor wording differences in the abstract are ok) in its PDF file and EDAS registration?

Yes

====== Full paper review 2 ======

> *** Relevance and timeliness: Rate the importance and timeliness of the topic addressed in the paper within its area of research.
Good (4)

> *** Technical content and scientific rigour: Rate the technical content of the paper (e.g.: completeness of the
analysis or simulation study, thoroughness of the treatise, accuracy of the models, etc.), its soundness and scientific rigour.
Valid work but limited contribution. (3)

> *** Novelty and originality: Rate the novelty and originality of the ideas or results presented in the paper.
Some interesting ideas and results on a subject well investigated. (3)

> *** Quality of presentation: Rate the paper organization, the clearness of text and figures, the completeness and accuracy of references.
Readable, but revision is needed in some parts. (3)

> *** Strong aspects: Comments to the author: what are the strong aspects of the paper

The authors propose a solution to an important problem in the area of intrusion detection of IoT heterogeneous networks.

> *** Weak aspects: Comments to the author: what are the weak aspects of the paper?

The presentation of the paper is poor. There are a lot of grammatical and spelling mistakes. The texts in the figures are not clearly identifiable. Section 3 (Research Method)
needs further improvement. For example, the data pre-processing method is not clear. What features are extracted from the packets and how?

> *** Recommended changes: Recommended changes. Please indicate any changes that should be made to the paper if accepted.

1. Revise the text of the paper substantially to correct all grammatical and spelling errors.
2. Improve the clarity of the figures.
3. Add more details to Section 3 (Research Method).

> *** Submission Policy: Does the paper list the same author(s), title and abstract (minor wording differences in the abstract are ok) in its PDF file and EDAS registration?

====== Full paper review 3 ======

> *** Relevance and timeliness: Rate the importance and timeliness of the topic addressed in the paper within its area of research.
Good (4)

> *** Technical content and scientific rigour: Rate the technical content of the paper (e.g.: completeness of the
analysis or simulation study, thoroughness of the treatise, accuracy of the models, etc.), its soundness and scientific rigour.
Valid work but limited contribution. (3)

> *** Novelty and originality: Rate the novelty and originality of the ideas or results presented in the paper.
Some interesting ideas and results on a subject well investigated. (3)

> *** Quality of presentation: Rate the paper organization, the clearness of text and figures, the completeness and accuracy of references.
Readable, but revision is needed in some parts. (3)

> *** Strong aspects: Comments to the author: what are the strong aspects of the paper

The subject is relevant and the document is well organized.

> *** Weak aspects: Comments to the author: what are the weak aspects of the paper?

The description of testing scenarios is not very clear.

> *** Recommended changes: Recommended changes. Please indicate any changes that should be made to the paper if accepted.

The English grammar and spelling are weak, so a revision of the English is needed. Also the formatting of the document needs some improvements.

> *** Submission Policy: Does the paper list the same author(s), title and abstract (minor wording differences in the abstract are ok) in its PDF file and EDAS registration?

Yes

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====== Full paper review 4 ======

> *** Relevance and timeliness: Rate the importance and timeliness of the topic addressed in the paper within its area of research.
Little (2)

> *** Technical content and scientific rigour: Rate the technical content of the paper (e.g.: completeness of the
analysis or simulation study, thoroughness of the treatise, accuracy of the models, etc.), its soundness and scientific rigour.
Marginal work and simple contribution. Some flaws. (2)

> *** Novelty and originality: Rate the novelty and originality of the ideas or results presented in the paper.
Some interesting ideas and results on a subject well investigated. (3)

> *** Quality of presentation: Rate the paper organization, the clearness of text and figures, the completeness and accuracy of references.
Unacceptable. (1)

> *** Strong aspects: Comments to the author: what are the strong aspects of the paper

The topic is interesting for computer engineers and scientists interested in intrusion prevention on heterogeneous networks.

> *** Weak aspects: Comments to the author: what are the weak aspects of the paper?

The paper is not well structured neither the results are convincing enough.

> *** Recommended changes: Recommended changes. Please indicate any changes that should be made to the paper if accepted.

The abstract does not mention what is the problem to address or the purpose of the research. Even though the introduction states that the authors apply deep learning for IoT intrusion detection on heterogeneous networks, it does not provide specific details on how it is carried out. Nevertheless, section 4 shows operation details that do not present relation to DBN, and the performance metrics do not show how they lead to the results, neither. Besides, it is recommendable that both figures and tables be clearer to direct on how they contribute to the literature as well as to include more state of the art for a better understanding. Finally, the authors must improve their work including additional

====== Full paper review 5 ======

> *** Relevance and timeliness: Rate the importance and timeliness of the topic addressed in the paper within its area of research.
Good (4)

> *** Technical content and scientific rigour: Rate the technical content of the paper (e.g.: completeness of the
analysis or simulation study, thoroughness of the treatise, accuracy of the models, etc.), its soundness and scientific rigour.
Questionable work with severe flaws. (1)

> *** Novelty and originality: Rate the novelty and originality of the ideas or results presented in the paper.
Some interesting ideas and results on a subject well investigated. (3)

> *** Quality of presentation: Rate the paper organization, the clearness of text and figures, the completeness and accuracy of references.
Substantial revision work is needed. (2)

> *** Strong aspects: Comments to the author: what are the strong aspects of the paper

Albeit the idea tacled here is good and interresting.

> *** Weak aspects: Comments to the author: what are the weak aspects of the paper?

The main weakness of this paper is in its structure and style of writing.

*The abstract not reflects the content of the paper, so authors should rewrite it carefully by providing some insights on the aim and the proposed method.
*The state of the art section is richer on existing approches related to the application of DL in intrusion detection security, but authors have not provided a clear critical
arguments to motivate their approch in this context. They should position them selve regarding this state of the art.
*I not appreciated the main section related to the presentation of the proposal (Section 3). Indeed, authors talk about DL algorithms, but they not explicit any of them with a
clear and complete presentation (flowchart for example). So, the proposal remains questionable.
*Also, the results are not well presented and commented to show what is the novolty of this work.
*I think there is a problem of writing style in this paper. For example, in --page 1 :
"...In [1] states that traditional machine learn..." should be "...In [1] authors state that traditional machine learn...".
The same for all other comparable sentences. Please rewrite and rephrase.

====== Full paper review 11 ======

> *** Relevance and timeliness: Rate the importance and timeliness of the topic addressed in the paper within its area of research.
Good (4)

> *** Technical content and scientific rigour: Rate the technical content of the paper (e.g.: completeness of the
analysis or simulation study, thoroughness of the treatise, accuracy of the models, etc.), its soundness and scientific rigour.
Valid work but limited contribution. (3)

> *** Novelty and originality: Rate the novelty and originality of the ideas or results presented in the paper.
Some interesting ideas and results on a subject well investigated. (3)

> *** Quality of presentation: Rate the paper organization, the clearness of text and figures, the completeness and accuracy of references.
Readable, but revision is needed in some parts. (3)

> *** Strong aspects: Comments to the author: what are the strong aspects of the paper

the project deals mainly with the problem of Intrusion Detection System in heterogeneous networks. It proposes a DNN-based technique to detect different intrusions.
Contribution is well sensed and articulated in the paper.

> *** Weak aspects: Comments to the author: what are the weak aspects of the paper?

literature review is not well discussed and doesn'tcover all current and available methods. results discussion is week.

> *** Recommended changes: Recommended changes. Please indicate any changes that should be made to the paper if accepted.

Please refer to the above to update the paper.

> *** Submission Policy: Does the paper list the same author(s), title and abstract (minor wording differences in the abstract are ok) in its PDF file and EDAS registration?

yes