[TELKOMNIKA] Decision for paper 'Neural Network Technique with Deep Structure for Improving Author Homonym and Synonym Classification'

1 message

telkomnika@uad.ac.id <telkomnika=uad.ac.id@edas.info>   Sun, Aug 23, 2020 at 7:23 PM
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Dear Mr. Firdaus Firdaus,

After careful review, your paper #1570658468 "Neural Network Technique with Deep Structure for Improving Author Homonym and Synonym Classification" for TELKOMNIKA Telecommunication Computing Electronics and Control requires MAJOR REVISIONS. You are asked to submit a revised full manuscript, according to the comment from reviewers. The Technical Program Committee (TPC) will check whether the revision already address the reviewers' comments. Failing to do proper revision may lead to the rejection of your paper.

For your information, TELKOMNIKA ISSN: 1693-6930, e-ISSN: 2302-9293 (http://journal.uad.ac.id/index.php/TELKOMNIKA) is open to submission from scholars and experts in the wide areas of electrical, electronics, instrumentation, control, robotics, telecommunication, computer engineering, computer science, information system, information technology and informatics from the global world. The aim of this journal is to publish high-quality articles dedicated to all aspects of the latest outstanding developments in the field of electrical engineering. Its scope encompasses the applications of Telecommunication and Information Technology, Applied Computing and Computer, Instrumentation and Control, Electrical (Power), and Electronics Engineering. It was first published in 2003. Beginning with issue 1 of volume 16 (2018), TELKOMNIKA will be published as a bimonthly journal (6 issues/year). The journal registered in the CrossRef system with Digital Object Identifier (DOI) prefix 10.12928. The Journal has been indexed by SCOPUS, Google Scholar, Scholar Metrics etc; accredited 'A' Grade by DGHE (Ministry of Research, Technology and Higher Education, Republic of Indonesia); registered BASE - Bielefeld Academic Search Engine and CORE KMi, etc. The Journal also have a license agreement with ProQuest LLC and EBSCO Publishing.

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Best Regards,
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Below is the reviews on your papers:
======= Review 1 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors

offer new findings? Do they give proper explanation and detailed analysis?
Borderline Accept (5)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Weak Accept (7)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

The paper is in borderline acceptance

> *** Recommendation: Your overall rating.
Borderline Accept (5)

======= Review 2 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Weak Accept (7)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Weak Accept (7)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

The presented paper is a very interesting way for the AND problem in author bibliography databases. The authors use DNNs to perform a classification problem ove AND. Four classes are classified using a very clean and useful dataset.
The results are quite good, even, those results outperform other methods.
Only a few concerns about the paper.
1. The authors took 80% of the dataset to train and 20% to test. But it is not clear how many times they perform the training, they did not mention x-fold cross validation in DNNs or the other methods.
2. I'm concern about overfiting on the training part of the dataset, the authors did not mention that at all.
3. Is well known that boosted algorithms outperform decision trees, it would be good to see Random Forest comparison for example.
4. It is curious to me that the closest results were offered by ANNs, maybe is something related with the features produced by the dataset.

> *** Recommendation: Your overall rating.
Weak Accept (7)

======= Review 3 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Accept (9)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Accept (9)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

Based on my review;
1. Please explain the precision method applied in the article especially on the results and discussion. (the methods of calculation)
2. Please provide some info about Loss curve.

> *** Recommendation: Your overall rating.
Accept (9)

======= Review 4 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Reject (1)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Reject (1)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

This paper seems to be already published

> *** Recommendation: Your overall rating.
Reject (1)

======= Review 5 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Weak Accept (7)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Accept (9)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

Pleases check the grammar such as:
In abstract, "Some previous research has proposed in AND problem,"

"To validation and selection the best model of DNNs, twelve scenarios are designed with different structure."

"Furthermore, this paper is also compared DNNs with other classifiers, such as Support Vector Machine (SVM) and Decision Tree."

"The results show DNNs outperform SVM and Decision Tree methods in all performance metrics"

In the introduction, "several researchers have proposed a solution [3]–[5]"

And many others.

Please add more updated references (published at max 5 years ago)

The abstract should follow IMRAD structure.

The benchmark methods (SVM) should provide the employed parameters or citations.

The training and testing data division percentage have been provided in the manuscript. Please provide the validation data percentage or data number.

> *** Recommendation: Your overall rating.
Borderline Accept (5)

======= Review 6 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Accept (9)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Strong Accept (Excellent) (10)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

This paper is very good.
The accuracy curve and loss curve is somehow confusing. Discuss the relevance of the similarities in shapes.

> *** Recommendation: Your overall rating.
Strong Accept (10)

======= Review 7 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Accept (9)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Accept (9)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

More elaborate description on Data Acquisition is needed.

> *** Recommendation: Your overall rating.
Accept (9)

======= Review 8 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Weak Reject (3)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Weak Accept (7)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

discussion about the proposed work (i.e., Material and Methods) seems to be theoretical.

want to discuss the proposed work with mathematical explanation .

outdated references were used.

what is the necessity of using the deep learning?

What the the drawbacks that the author faced in traditional classification algorithms?

> *** Recommendation: Your overall rating.
Weak Accept (7)

======= Review 9 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Accept (9)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Accept (9)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

Paper is well written.
Plagiarism or Similarity Index should be below 10.
References should be in a consistent style and above 15 at least.
Equation Editor should be used for writing Equations.
Graphs should be sketched using Graph Tool.
The Data linked with Graph should be shown as Table also.
Figures should be sketched rather an inclusion of Photographs.
Grammar and Spelling check should be executed.
Follow the Formatting standards of Template exactly.
Technically this paper is Acceptable after the above corrections.

> *** Recommendation: Your overall rating.
Accept (9)

======= Review 10 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Accept (9)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Accept (9)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

1. Paper is written properly.
2. problem statement is properly defined.
3. proposed solution is good.

> *** Recommendation: Your overall rating.
Accept (9)

======= Review 11 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Weak Accept (7)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Weak Accept (7)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

Need more references and coparing with previous works and re writting english language

> *** Recommendation: Your overall rating.
Weak Accept (7)

======= Revision review 12 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Weak Accept (7)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Weak Accept (7)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

1.Subject searching (searching by topic or theme) is the most common and at the same time the most challenging

type of searching in library catalogs and related quality information services, compared to, for example, a known-title or a known-author search.

2.Subject index terms taken from standardized knowledge organization systems , like classification systems and subject headings systems, provide numerous benefits compared to free-text indexing of commercial search engines: consistency through uniformity in term format and the assignment of terms

3.The four classes of AND are classified with DNNs. The classes consist of Non-Homonym-Synonym (class 0), Homonym (class 1), Synonym (class 2), and Homonym-Synonym (class 3).

4.To automatically classify a resource, we need to build models that map input features, i.e. title, subtitle and, optionally, keywords, to a class. These models learn from known, already classified, data (the LIBRIS database) and can later be used to automatically classify new resources. This is referred to as a supervised learning problem; both input features and correct classifications are known.

5.Machine learning algorithms cannot work with text data directly, so the list of words representing each record in the dataset needs to be encoded as a list of integer or floating point values (referred to as vectorization or feature extraction). The most intuitive way to do so is the "bag of words" representation. The "bag" contains all words that occur at least once in the dataset.

6.A record in the dataset is represented as a vector with the number of occurrences for each word in the title, subtitle and, optionally, keywords. Since the number of distinct words is very high, the vector representing a record is typically very sparse (most values are 0).

7.The preprocessing of the text inputs results in high-dimensional, sparse input vectors of either integer values (counting occurrences only) or floating point values (TF-IDF conversion). Many machine learning algorithms are not suited for this type of input data, leaving only a few options left for our task. Historically, good results for different text classification tasks have been achieved with the Multinomial Naïve Bayes (NB) and Support Vector Machine with linear kernel (SVM) algorithms.

8.Latest references can be added.

> *** Recommendation: Your overall rating.
Accept (9)

======= Revision review 13 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Accept (9)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Accept (9)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

1.   In the introduction section, more recent paper should be reviewed to identify the motivation of this study.
2.   In the introduction section, please identify the reason for research aims. Is there any other methodology or theory implemented earlier for the same problem statement? What are the pros and cons?

> *** Recommendation: Your overall rating.
Accept (9)

======= Revision review 14 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Accept (9)

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Accept (9)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

Not: Electronic plagiarism of the submitted paper is 12%.
1. The abstract is weak and does not contain details of the proposed method used to achieve the goal.
2. Change the (Material and Methods) to the proposed method
3. Rewrite the abstract in the line with the true orientation of research.
4. The general diagram of the proposed method dose not matching the deception in the abstract.

5. The introduction is boring, you should reference to the tools that used in the practical side, reference to the most important recent papers in this filed.
6. There should be a section for the proposed method.
7. Figure 1: This figure should be in the proposed method.
8. All equations must be known by references.
9. Avoid the word of (study, model) in the whole paper
10. Table 4: Reformulate.
11. All the tables: the results must be analyzed, the reason for differences and the differences between of them must be explain and this should be attributing to source.
12. All the figures are unclear in the terms of:
.   Figure type.
.   The reason for using it.
13.   Reformulated section 2.4, you should take into consideration the sequence of the results to be more useful.
14.   The proposed method must be compared to the previous modern methods in this filed.
15.   Each figure need an accurate description that illustrate the mechanism of work.
16. Detailed results cannot be included in the abstract without presenting and examining the evidence.
17. You must highlight the Deep Structure in the proposed method.
18. Where are the algorithms for the proposed method?
19. The Digital Libraries section should be allocated before explaining the proposed method

> *** Recommendation: Your overall rating.
Accept (9)

======= Revision review 15 =======

> *** Novelty and Contribution: Rate the degree of scientific contribution provided by this paper. Do the authors offer new findings? Do they give proper explanation and detailed analysis?
Accept (9)

> *** Paper Presentation: What is your evaluation on the quality of presentation from this paper (e.g. figures, tables, formats, etc.)?
Accept (9)

> *** Detailed Comments: Please provide detailed comments that will be helpful to the TPC for assessing the paper. Also provide feedback to the authors.

This research discussed one of ML algorithms, DNNs, for multiclass classification in Non-Homonym-Synonym, Homonym-Synonym, Synonym, and Homonym Authors task. For the classification task, a knowledge base is required. The DBLP Computer Science Bibliography dataset with five attributes have implemented for the AND problems. Experimental results show that on all the twelve different models, our proposed method clearly outperforms the common existing ML methods, such as SVM and Decision Tree. The DNNs performance with three hidden layers as the best model, achieve accuracy, sensitivity, specificity, precision, and F1-score are 98.85%, 95.95%, 99.26%, 94.80%, and 95.36%, respectively.

> *** Recommendation: Your overall rating.
Accept (9)

We would like your cooperation with the double check of your revised paper:
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(1) TEMPLATE, Please Strictly use and follow to the template Manuscripts (Word Format): http://iaescore.com/gfa/telkomnika.docx

(2) Authors are suggested to present their articles with IMRaD sections structure (outline): Introduction - The Proposed Method/Algorithm/Procedure specifically designed (optional) - Research Method - Results and Discussion – Conclusion. Authors may present complex proofs of theorems or non-obvious proofs of correctness of algorithms after introduction section (obvious theorems & straightforward proofs of existing theorems are NOT needed).

(3) Introduction section: explain the context of the study and state the precise objective. An Introduction should contain the following three parts:
- Background: Authors have to make clear what the context is. Ideally, authors should give an idea of the state-of-the art of the field the report is about.
- The Problem: If there was no problem, there would be no reason for writing a manuscript, and definitely no

reason for reading it. So, please tell readers why they should proceed reading. Experience shows that for this part a few lines are often sufficient.
- The Proposed Solution: Now and only now! - authors may outline the contribution of the manuscript. Here authors have to make sure readers point out what are the novel aspects of authors work.
Authors should place the paper in proper context by citing relevant papers. At least, 15 references (recently journal articles) are referred in this section.

(4) Method section: the presentation of the experimental methods should be clear and complete in every detail facilitating reproducibility by other scientists.

(5) Results and discussion section: The presentation of results should be simple and straightforward in style. This section report the most important findings, including results of statistical analyses as appropriate and comparisons to other research results. Results given in figures should not be repeated in tables. This is where the author(s) should explain in words what he/she/they discovered in the research. It should be clearly laid out and in a logical sequence. This section should be supported suitable references.

(6) (URGENT)!!! About Figures & Tables in your manuscript:
- Because tables and figures supplement the text, all tables and figures should be REFERENCED in the text. Authors MUST EXPLAIN what the reader should look for when using the table or figure. Focus only on the important point the reader should draw from them, and leave the details for the reader to examine on her own.
- Tables are to be presented with single horizontal line under: the table caption, the column headings and at the end of the table. All tables are produced by creating tables in MS Word. Captured tables are NOT allowed.
- All figures MUST in high quality images

(7) Conclusion section: Summarize sentences the primary outcomes of the study in a paragraph. Are the claims in this section supported by the results, do they seem reasonable? Have the authors indicated how the results relate to expectations and to earlier research? Does the article support or contradict previous theories? Does the conclusion explain how the research has moved the body of scientific knowledge forward?

(8) Most importantly, please ensure the similarity score is less than 25%. You can refer to EDAS to see the similarity score of your paper. Any paper with a similarity score of more than 25% will be dropped. Please make sure your revised paper follow this rule. If the similarity score of final version is more than 25%, the TPC has the right to cancel the paper to be presented at TELKOMNIKA.

(9) Please ensure the maximum page of your final paper is 8-page, but still allowed up to 12 pages (required to pay an extra fee).