# Author’s Response to the Review Comments

***Journal* : Jurnal Elektronika dan Telekomunikasi**

*Title of Paper* : Infinite Latent Feature Selection Technique for Hyperspectral Image Classification

We appreciate the time and efforts by the editor and referees in reviewing this manuscript. We have addressed all issues indicated in the review report, and believed that the revised version can meet the journal publication requirements. We have included the line numbers in the revised manuscript to help the reviewers identify our changes.

| **Comment** | **Response** | **Location of Response in Revised Manuscript** |
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| **EDITOR’S COMMENTS** |  |  |
| Example : |  |  |
| TABLE 1 CONSTRUCTION: Please use separate columns for each statistic reported (n, %). (Otherwise, the data reported do not line up straight, creating vertical waviness in the table.) | We have revised the table based on this recommendation. | Section: Table 1 |
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| **REVIEWER D COMMENTS** |  |  |
| 1. The manuscript consists of only 5 pages. Please add more information into the manuscript. The JET has a minimum of 6 pages. | Add more information on paragraph 1 and add 1 more paragraph  Add More conclusion paragraph  Add Extracted Spectral figure and data with its explanation  Add LIBSVM explanation  Etc… | Section I, II, III, IV |
| Page 1, I. Introduction, right column, 4th to 7th line:  “One phenomenon due that large feature that occurs in the HSI that is not all channel variables have significant contribution during the classification process.”  Does the sentence mean some features accommodate a useless variable?  Please rewrite in a clear sentence/sentences. | With large number of spectral feature that obtained in the HSI, sometimes only several feature channel that have contribution during the classification process. Eliminating the less influence feature have potential to tackle those issue. | Section I, paragraph 3 |
| * Please describe more about feature extraction and feature selection approach. * Some recent literatures related to those approaches are needed to add. * Why do you select one of them? You may write this in the introduction section. | * done | Already in section 2,A  Already in section 2A and Section I paragraph 3  Section I, Paragraph 3, last sentence. |
| “Fast Constrained Search” → Fast Constrained Search | corrected | Page 1, I. Introduction, right column, the second paragraph: |
| “This study shows that the filter approach has superiority against the wrapper technique, they proved that the random forest approach has the best level of accuracy rather than the other approaches being tested.”  Please check the use of comas in the above sentence. | corrected | Page 2, I. Introduction, left column, the first paragraph: |
| Does G. Roffo et al., [15] fully inspire your work?  How far do you use the idea proposed by the G. Roffo et al., into your work?  Please describe clearly in the introduction section. You may write this in the introduction section. | Yes it does.  My experiment purpose is to implement ILFS (one of the latest FS technique) into hyperspectral data format, which is 3 Dimensional with very large spectral data. The result is then compared with other technique if implemented in HSI dataset (par.4) | Section I Paragraph 4. |
| “The outline of this paper is organized as follow: chapter I present an introduction and problem on hyperspectral images, theoretical background to tackle the problem are explained in chapter II, detailed dataset and experiment method are described in chapter III. Finally, chapter IV and V contain experiments result and conclusion respectively.”  Please rewrite that paragraph in a better way. You may reduce the use of coma.  Chapter → Section | Replace “chapter” to “section” | Page 2, I. Introduction, Left column, the second paragraph: |
| “The next stage is graph weighting, weighting has the most important role in determining the ranking results.”  Please check the use of coma in the above sentence. | Done, replace comma with dot | Page 2, II. Theoretical Background, B. ILFS, right column, the first paragraph: |
| “The purpose of this process is to make fully connected undirected graphs in each node one by one from each feature to the other feature, so that the weight weights can be calculated with probability co-occurrences between features and tokens calculated using the PLSA technique [16] then the weight is optimized using the Expectation Maximization (EM) algorithm.”  Please rewrite in a clear sentence/sentences | done | Page 2, II. Theoretical Background, B. ILFS, right column, the first paragraph: |
| “Matrix that has been obtained from the previous procedure is then calculated its geometric series in order to expand its path into infinity. In these experiments, Gelfand’s formula is used.”  Please cite an appropriate literature for this statement using. | done | Page 2, II. Theoretical Background, B. ILFS, right column, the fourth paragraph: |
| “To classify data that cannot be completed with a linear hyperplane, the boundary plane needs to be more flexible as shown in the figure.”  Which figure do you mean?  Please type the figure number correctly. | Corrected. It’s mean figure 2(b) | Page 3, II. Theoretical Background, C. Support Vector Machine (SVM), left column, the second paragraph: |
| “Inspired by previous research [17], kernel function us  ing the RBF approach shows the best performance in land cover classification. This kernel will be implemented to modelling SVM.”  Please type the continuation of RBF. | Done, add explanation about parameter used in RBF and more explanation of the equation. | Page 3, II. Theoretical Background, C. Support Vector Machine (SVM), left column, the second paragraph: |
| You may relocate figure 3 (a) and 3 (b) in the same line. | done | Page 3: |
| “The experiment detail that has been done is shown in the following figure.”  Which figure do you mean?  Please type the figure number correctly. | Corrected, its mean figure 5. | Page 3, III. Data and Method, B. Method, left column, the second paragraph: |
| You may relocate table 2 and 3 in the same line. Please put those table appropriately in the right page. | There is no space to relocate both tables is the same line. | Page 3 |
| “From Figure 6 and Table 3, it can be seen that reducing features number from 176 to 11 can produce better accuracy rather than using all of the features. In addition, the use of the number of features above 21 will produce the same accuracy as using all of 176 features.”  The second sentence looks like denying the first one. Please describe or rewrite the above sentences clearly, so that there is no misunderstanding | From Figure 8 and Table 3, it can be seen that reducing features number from 176 to 11 can produce better accuracy rather than using the whole features. In addition, the classification accuracy looks constant after implements 21 or more features. | Page 4, IV. Result and Discussion, left column, the second paragraph: |
| “In addition, the accuracy graph tends to be constant after more than 11 features used, this phenomena shows there is an overfitting problem while using a lot of feature in HSI.”  It is better for you to describe more about the overfitting caused by the use huge number of feature in HIS. How far your proposed solution can avoid this problem? | Add more explanation sentences Last paragraph of section IV | Page 4, IV. Result and Discussion, right paragraph, the third paragraph: |
| “There are two feature selection methods tested in this experiment, namely ILFS and Relief, both techniques show better performance than the general classification technique using SVM with original feature.”  Please check the use of coma in the above sentence. Please rewrite it appropriately. | done | Page 5, Conclusion, left column, the first paragraph: |
| Please add additional challenges you haven’t solved, or state further problems in the conclusion section. | Done | Page 5, Conclusion: |