mathematics

MDPI

Correction

Correction: Demidova, L.A. A Novel Approach to Decision-Making on Diagnosing Oncological Diseases Using Machine Learning Classifiers Based on Datasets Combining Known and/or New Generated Features of a Different Nature. *Mathematics* 2023, *11*, 792

Liliya A. Demidova

Institute of Information Technologies, Federal State Budget Educational Institution of Higher Education, MIREA–Russian Technological University, 78, Vernadsky Avenue, 119454 Moscow, Russia; liliya.demidova@rambler.ru

The author wishes to make the following corrections to this paper [1]:

Figure Correction

1. In Section 4.1 (Page. 18), Figure 4 is given by

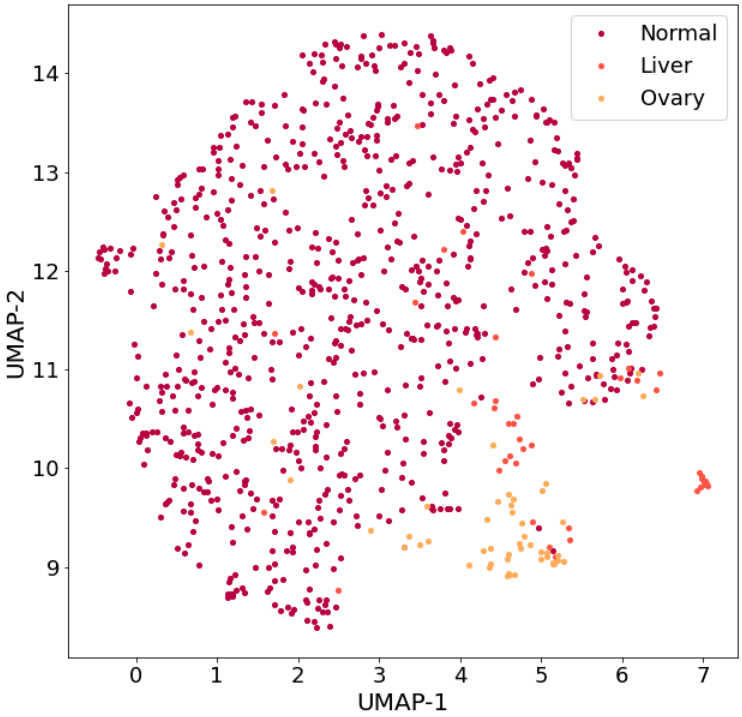

Figure 4. *Cont.*

Citation: Demidova, L.A. Correction: Demidova, L.A. A Novel Approach to Decision-Making on Diagnosing Oncological Diseases Using Machine Learning Classifiers Based on Datasets Combining Known and/or New Generated Features of a Different Nature. *Mathematics* 2023, *11*, 792. *Mathematics* **2023**, *11*, 2150. https://doi.org/10.3390/math11092150

Received: 17 April 2023
Accepted: 20 April 2023
Published: 4 May 2023

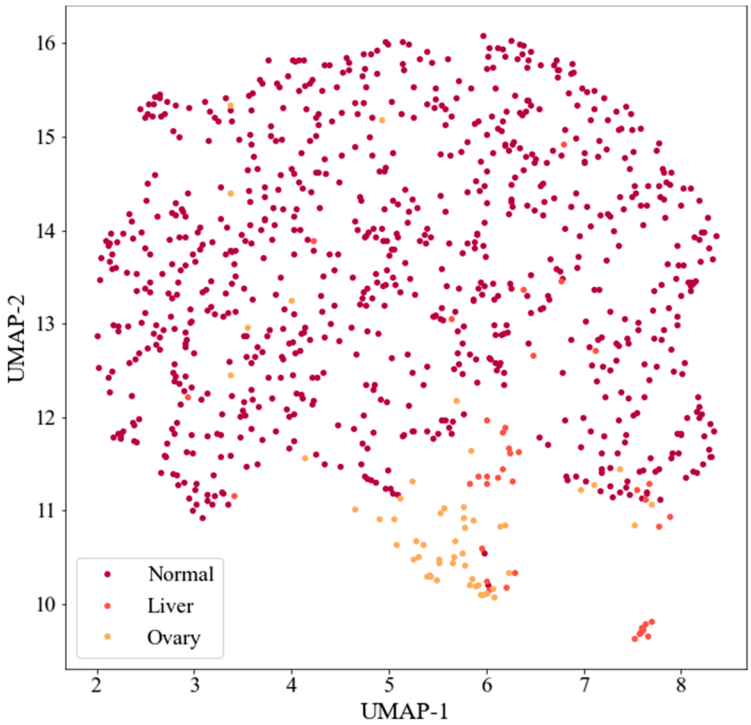

Figure 4. Visualization of three-class dataset of ODs using the UMAP algorithm. (*n_neighbors* = 15, *min_dist* = 0.1, *random_state* = 42, *metric* = *'euclidean'*).

This should be the following:

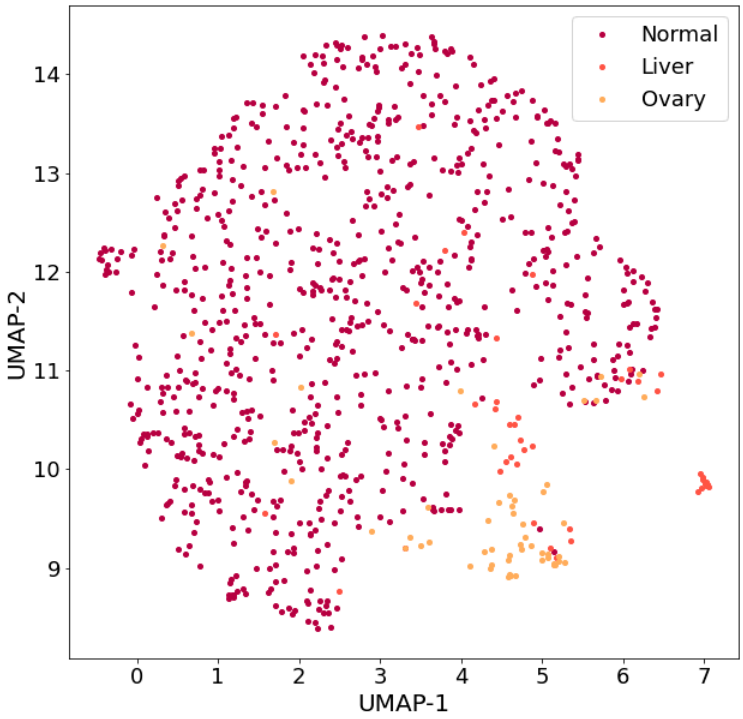

Figure 4. Visualization of three-class dataset of ODs using the UMAP algorithm. (*n_neighbors* = 15, *min_dist* = 0.1, *random_state* = 42, *metric* = *'euclidean'*).

Text Correction

2. The last sentence of the Abstract, the sentence

"At the same time, the average values of the metric *MacroF*$_1$*-score* used to assess the quality of classifiers during cross-validation increased by 16.138% and 7.910%, respectively, compared to the average values of this metric in the case when the original dataset was used in the development of classifiers of the same name"

should be

"At the same time, the average values of the metric *MacroF*$_1$*-score* used to assess the quality of classifiers during cross-validation increased by 16.138% and 4.219%, respectively, compared to the average values of this metric in the case when the original dataset was used in the development of classifiers of the same name".

3. In the first paragraph of the first bulleted list (Page 3) of the Introduction Section, the sentence

- "Approaches using various class balancing algorithms that implement oversampling technologies (for example, SMOTE algorithm (Synthetic Minority Oversampling Technique) [21–23], ADASYN algorithm (Adaptive Synthetic Sampling Approach) [24], undersampling (for example, Tomek Links algorithm) [23,25]) and their combinations;"

should be

- "Approaches using various class balancing algorithms that implement oversampling technologies (for example, SMOTE algorithm (Synthetic Minority Oversampling Technique) [21–23], ADASYN algorithm (Adaptive Synthetic Sampling Approach) [24]), undersampling technologies (for example, Tomek Links algorithm) [23,25] and their combinations;"

4. In the last sentence of the third paragraph of Section 4.2, the phrase

" ... as fractal Petrosian fractal dimension (PFD), Katz fractal dimension (KFD) and Higuchi fractal dimension (HFD)."

should be

" ... as Petrosian fractal dimension (PFD), Katz fractal dimension (KFD) and Higuchi fractal dimension (HFD)".

5. In Section 4.2, the explanation to formula (17)

"where ≥ 1; $\mathrm{AE}(q,0,r)(u) = -\phi^1(r)$."

should be

"where $\xi \geq 1$; $\mathrm{AE}(q,0,r)(u) = -\phi^1(r)$."

6. In the fourth paragraph of Section 4.5, the first sentence

"The experimental results did not reveal a clear advantage of one approximation entropy over another."

should be

"The experimental results did not reveal a clear advantage of the approximation entropy over the sample entropy."

7. In the second paragraph of Section 4.6.1, the penultimate sentence

"In addition, the following information is presented in Figure 5 next to the names of the classifiers developed on the basis of datasets: the number of features that depend on the dimension h of the space into which the original 39-dimensional space is embedded, the dimensions h of the space allowing for building the best classifiers, the final dimension q of the space corresponding to the dataset used for development of classifier, and the best values of classifiers parameters are indicated."

should be

"In addition, the following information is presented in Figure 5 next to the names of the classifiers developed on the basis of datasets: the number of features that depend on the dimension h of the space into which the original 39-dimensional space is embedded, the dimensions h of the space allowing for building the best classifiers, the final dimension q of the space corresponding to the dataset used for development of classifier, and the best values of classifiers parameters are indicated."

8. In Section 4.6.1, the name of Table 5

"**Table 5.** Characteristics of kNN classifier C1 and classifier C6 (with h = 24) in the experiment without class balancing."

should be

"**Table 5.** Characteristics of kNN classifiers C1 and C6 (with h = 24) in the experiment without class balancing."

9. In Section 4.6.1, Table 5, the word

"weights"

should be

"*weights*"

10. In Section 4.6.2, the name of Table 6

"**Table 6.** Characteristics of kNN classifiers C1 and classifier C8 (independent of h) in the experiment using the Borderline SMOTE-1 class balancing algorithm."

should be

"**Table 6.** Characteristics of kNN classifiers C1 and C8 (independent of h) in the experiment using the Borderline SMOTE-1 class balancing algorithm."

11. In the Section 4.6.2, in Table 6, the word

"weights", "***Independent***"

should be

"*weights*", "***independent***"

12. In Section 4.7.1, Table 7, the words

"C", "gamma", "***Independent***"

should be

"*C*", "*gamma*", "***independent***"

13. In Section 4.7.2, Table 8, the words

"C", "gamma"

should be

"*C*", "*gamma*"

14. In Section 5, the third sentence of the penultimate paragraph

"The average values of metric *MacroF*$_1$*-score* used to assess the quality of classifiers during cross-validation increased by 16.138% and 7.910%, respectively, compared to the average values of this metric in the case when an unbalanced original dataset was used in the development of classifiers of the same name."

should be

"The average values of metric *MacroF*$_1$*-score* used to assess the quality of classifiers during cross-validation increased by 16.138% and 4.219%, respectively, compared to the average values of this metric in the case when an unbalanced original dataset was used in the development of classifiers of the same name."

The author states that the scientific conclusions are unaffected. This correction was approved by the Academic Editor. The original publication has also been updated.

Reference

1. Demidova, L.A. A Novel Approach to Decision-Making on Diagnosing Oncological Diseases Using Machine Learning Classifiers based on Datasets Combining Known and/or New Generated Features of a Different Nature. *Mathematics* **2023**, *11*, 792. [CrossRef]