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Journal Name:	<u>British Journal of Mathematics & Computer Science</u>
Manuscript Number:	Ms_BJMCS_22588
Title of the Manuscript:	Comparative Analysis of Self-Organizing Feature Map and Counter Propagation Network in Face Recognition
Type of the Article	Original Research Article

General guideline for Peer Review process:

This journal's peer review policy states that **NO** manuscript should be rejected only on the basis of '**lack of Novelty**', provided the manuscript is scientifically robust and technically sound.

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PART 1: Review Comments

	Reviewer's comment	Author's comment (if agreed with reviewer, correct the manuscript and highlight that part in the manuscript. It is mandatory that authors should write his/her feedback here)
<u>Compulsory</u> REVISION comments	1. There are many different algorithms can acquire the face recognition, why the SOFM and CPN are introduced and compared. The authors should revise the "introduction" to give a more constructive overview and literature review. In current state, the aim of the manuscript is unclear. 2. The manuscript contains many flaws needed to be corrected. The writing skills are encouraged to fit to the general technical writing style. The motivation of the manuscript is not clear and the technical novelty is deficient to deliver the contribution. The above-mentioned algorithms which have been well-known for many years, so the technical novelty of the manuscript is restricted. 3. If an abbreviation is defined, the authors can use this abbreviation to replace the whole definition. 4. References [13]-[19] are not cited in context, therefore, these references can be removed.	They were introduced because SOFM is an unsupervised network why CPN is hybrid of unsupervised network and supervised network. The introduction have been revised. Those references have been removed
<u>Minor</u> REVISION comments	1. Lines 51-52: "Self-Organizing Feature Map" is an unsupervised learning technique and "Counter Propagation Network" is a supervised learning technique with fast fused clustering network. It is suggested to revise as: "SOFM" is an unsupervised learning technique and "Counter Propagation Network (CPN)" is a supervised learning technique with fast fused clustering network. 2. Lines 52-53: "Self-Organizing Feature Map (SOFM)	Definitions have been replaced with the appropriate abbreviation



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	“ and “Counter Propagation Network (CPN)” are two techniques that have... is to revise as: “SOFM” and “CPN” are two techniques... 3. Lines 59-60: This work focuses on the use of ~~self-organizing feature map (SOFM)~~ and ~~counter propagation network (CPN)~~ techniques for face recognition. Other related areas such as face detection are not considered. 4. Line 73: “An alternative holistic approach to face recognition is discrete cosine transform [3]”. The reference is wrongly cited, or, the wording may be revised. 5. Lines 79-80: A suitable reference is required for citing. 6. Lines 90-91: SOFM is used to classify ~~Discrete Cosine Transform~~ DCT-based vectors into groups to identify if the subject in the input image is “present” or “not present” in the image database [7]. 7. Line 93: “a SOM network depends on ...”, SOM is not defined in content. 8. Lines 93-94: A modified ~~Counter Propagation Neural Network (CPN)~~ is employed by Fenwa in 2012 for handwritten character... Also, a suitable reference is required. 9. Line 102: The ~~Counter Propagation Network (CPN)~~ is a supervised learning algorithm that combines the Grossberg... 10. Lines 107-108: [1] Presented an experiment based on black African faces (with and without tribal marks) using the optimized Fisher Discriminant Analysis. The citing manner is not in a general form. 11. Line 113: “Principal Component Analysis, Binary Principal Component Analysis (BPCA), and Principal Component...” revise as: “PCA, Binary Principal Component Analysis (BPCA), and Principal Component...”	
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	12. Lines 125: [11] Implemented three different algorithms and methods in FaceIVQA to extract the faceness, pose.. The citing manner is not in a general form. 13. Lines 129-130: FaceIVQA using three recognition algorithms namely ~~principal component analysis (PCA), linear discriminant analysis (LDA)~~ and a commercial recognition SDK. 14. Line 141: ICA is not defined before used. 15. Line 153: by the ~~Self Organizing Feature Map~~ SOFM was compared. MCP was noticed to be superior to the SOFM. 16. Lines 158-159: [19] Experimented based on black African faces using Principal Component Analysis (OPCA) and Fisher Discriminant Analysis (OFDA) techniques were carried out. The citing manner is not in a general form. 17. Line 168: These techniques created a platform for image enhancement. Principal Component Analysis, revise as : These techniques created a platform for image enhancement. PCA, 18. Line 225: In this study, Principal Component Analysis was used as feature extraction which converts the set of., revise as: In this study, PCA was used as feature extraction which converts the set of.. 19. Line 235: Equation (1) should be corrected as $C=A \cdot A^T$. 20. Line 237: A is a matrix, so the setting "$A=N^2 \times M$, N here.. " should be corrected. The same correction should be done for Line 241. 21. Lines 257-258: "Self-Organizing Feature Map and Counter Propagation Network classifiers were used after feature extraction" should revise as: "SOFM and CPN classifiers were used after feature extraction". 22. Line 268: The performance of ~~Self organizing feature~~	
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	~~map (SOFM) and counter propagation network (CPN)~~ on... 23. Line 275: The equation (4) is not required. 24. Lines 286-287: "Table 1 deduced that the training time of Counter Propagation Network had lesser time as a result of the unsupervised nature of the Network compared with the supervised self-organizing feature map." Should revise as : "Table 1 deduced that the training time of CPN had lesser time as a result of the unsupervised nature of the Network compared with the supervised SOFM."	
<u>Optional/General</u> comments		