A.I. Unificated Framework - #161

156 (): Pre-Research work

160 ():

ETRI Journal

2022/01/24 11:38 - Jinwuk Admin

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#1 - 2022/01/24 12:01 - Jinwuk Admin

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Editor Comments to Author:

Section Editor: 1 Comments to the Author: (There are no comments.)

Editor: 2

Comments to the Author:

This manuscript obtained diverse scores. Reviewer 1 appreciated the contributions of the manuscript. However, all reviewers pointed out that the proposed method needs to be compared with recent state-of-the-art methods and the manuscript needs to contain the discussions of recent works.

The structure of the manuscript needs to be revised and the contribution needs to be more strengthened.

Reviewer(s)' Comments to Author:

Reviewer: 1

Comments to the Author

In general, the contribution of this manuscript is very good that the proposed quantize gradient search algorithm can achieve global optimization by monotonically reducing the quantization step value to five fractional part (17 bit) with respect to time when quantization is composed of integer or fixed-point fractional values applied to an optimization algorithm. Therefore, my recommendation is to accept (Major Revision) the manuscript that has ID etrij-2021-0320.

My specific comments are:

1- Please, add some of results in the "Abstract" in order to show the effectiveness of the work.

2- Please put reference in each equation that used in the paper.

3- Add figures to demonstrate each algorithm in benchmark function against proposed algorithm to show the effectiveness of the work as in table-1.

Reviewer: 2

Comments to the Author

The paper does not have knowledge contribution and is not well written considering the uses and habits of scientific academic redaction. For these reasons my recommendation is to reject the paper. Some observations and recommendations for the authors are the following:

a. The importance and the knowledge contribution of the study are not sustained.

b. To review theoretical framework exhaustively. The paper only has 14 references and only 5 references has less than 5 years of antiquity. It is not sufficient for evidencing the originality of the study.

c. There are many ideas and paragraphs without the corresponding cites and references. All the ideas of other authors must have the corresponding cites and references.

d. The structure of the paper is not clear. The IMRD (Introduction, Method, Results, and Discussion) structure is suggested to the authors.

e. Discussion paragraphs are absent.

f. Recommendations for future research are absent.

#2 - 2022/02/16 13:33 - Jinwuk Admin

- [rev]_ETRI_J_Quantization_2021_07.pdf (가) 가

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11-Jan-2022

Dear Dr. Seok:

Manuscript ID etrij-2021-0320 entitled "Nonlinear Optimization Algorithm Using Monotonically Increasing Quantization Resolution" which you submitted to ETRI Journal, has been reviewed. The comments of the reviewer(s) are included at the bottom of this letter.

The reviewer(s) have recommended some revisions to your manuscript. Therefore, I invite you to respond to the reviewer(s)' comments and revise your manuscript.

There are two ways to submit your revised manuscript. You may use the link below to submit your revision online with no need to enter log in details:

• PLEASE NOTE: This is a two-step process. After clicking on the link, you will be directed to a webpage to confirm. ***

https://mc.manuscriptcentral.com/etrij?URL_MASK=67054cc78c1b4693a67d108f8132ee70

Alternatively log into <u>https://mc.manuscriptcentral.com/etrij</u> and enter your Author Center. You will find your manuscript title listed under "Manuscripts with Decisions." Under "Actions," click on "Create a Revision." Your manuscript number has been appended to denote a revision. Please DO NOT upload your revised manuscripts as a new submission.

You will be unable to make your revisions on the originally submitted version of the manuscript. Instead, revise your manuscript using a word processing program and save it on your computer. Please also highlight the changes to your manuscript within the document by using bold or colored text.

Once the revised manuscript is prepared, you can upload it and submit it through your Author Center.

When submitting your revised manuscript, you will be able to respond to the comments made by the reviewer(s) in the space provided. You can use this space to document any changes you make to the original manuscript. In order to expedite the processing of the revised manuscript, please be as specific as possible in your response to the reviewer(s).

IMPORTANT: Your original files are available to you when you upload your revised manuscript. Please delete any redundant files before completing the submission.

Because we are trying to facilitate timely publication of manuscripts submitted to ETRI Journal, your revised manuscript should be uploaded by 23-Feb-2022. If it is not possible for you to submit your revision in a reasonable amount of time, we may have to consider your paper as a new submission. If you feel that you will be unable to submit your revision within the time allowed please contact the Editorial Office (<u>etrij@etri.re.kr</u>) to discuss the possibility of extending the revision time.

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Should you be interested, Wiley Editing Services offers expert help with manuscript, language, and format editing, along with other article preparation services. You can learn more about this service option at <u>www.wileyauthors.com/eeo/preparation</u>. You can also check out Wiley 's collection of free article preparation resources for general guidance about writing and preparing your manuscript at <u>www.wileyauthors.com/eeo/prepresources</u>.

Once again, thank you for submitting your manuscript to ETRI Journal and I look forward to receiving your revision.

Sincerely, Editor, ETRI Journal

- 1. Editor Comments to Author:
- 1. Section Editor: 1 Comments to the Author: (There are no comments.)
- 1. Editor: 2
 - Comments to the Author:

This manuscript obtained diverse scores. Reviewer 1 appreciated the contributions of the manuscript. However, all reviewers pointed out that the proposed method needs to be compared with recent state-of-the-art methods and the manuscript needs to contain the discussions of recent works.

The structure of the manuscript needs to be revised and the contribution needs to be more strengthened.

1. Answer to the Editor

In my opinion, reviewer-1 read all pages of the manuscript and reviewed it concretely. He/she point out the core contents of the manuscript (global optimization) and appropriate suggestion about the manuscript.

This theoretical manuscript deals with global optimization. Therefore, I think that the review point is the consistency of the mathematical logic and performance of the proposed algorithm representing global optimization.

However, reviewer-2 took issue with the structure of the manuscript and the number of references.

For 25 years after receiving Ph.D. degree, writing about a hundred papers to international journals and conferences, it is the first time to receive such a review.

All panels in other international journals and conferences such as IEEE, ICML, NeurIPS, and ICLR didn't point out the structure of the paper written by me or the number of references but argued fiercely about the equations provided by me, one by one.

I guess that reviewer-2 only read the final page of the manuscript and write a review report so that he/she suggests IMRD to me. I have never written a paper including this manuscript that violates the IMRD structure. This manuscript follows IMRD structure very concretely as follows:

IMRD Item	The manuscript	
Introduction	Introduction	
Method	Definition and Analysis of quantization/ Decision scheme of quantization parameter	
Discussiion	Conclusion.	

I think editors should give clear attention to reviewers for such poor reviews. I convince posting reviewer-2's review about this manuscript on the open-review site will become an international issue.

I, one of the authors of the revised manuscript, answer the asking from the reviewers as follows:

- 1. Reviewer(s)' Comments to Author:
- 1. Reviewer: 1

Comments to the Author

In general, the contribution of this manuscript is very good that the proposed quantize gradient search algorithm can achieve global optimization by monotonically reducing the quantization step value to five fractional part (17 bit) with respect to time when quantization is composed of integer or fixed-point fractional values applied to an optimization algorithm. Therefore, my recommendation is to accept (Major Revision) the manuscript that has ID etrij-2021-0320.

My specific comments are:

1- Please, add some of results in the "Abstract" in order to show the effectiveness of the work.

2- Please put reference in each equation that used in the paper.

3- Add figures to demonstrate each algorithm in benchmark function against proposed algorithm to show the effectiveness of the work as in table-1.

1. Reviewer: 2

Comments to the Author

The paper does not have knowledge contribution and is not well written considering the uses and habits of scientific academic redaction. For these reasons my recommendation is to reject the paper. Some observations and recommendations for the authors are the following:

a. The importance and the knowledge contribution of the study are not sustained.

b. To review theoretical framework exhaustively. The paper only has 14 references and only 5 references has less than 5 years of antiquity. It is not sufficient for evidencing the originality of the study.

c. There are many ideas and paragraphs without the corresponding cites and references. All the ideas of other authors must have the corresponding cites and references.

d. The structure of the paper is not clear. The IMRD (Introduction, Method, Results, and Discussion) structure is suggested to the authors.

e. Discussion paragraphs are absent.

- f. Recommendations for future research are absent.
 - 1. Reply to the Reviewer
 - 1. to Reviewer-1
 - 1. Question-1

Please, add some of results in the "Abstract" in order to show the effectiveness of the work.

Answer

3			
,	,	Iteration	가 가 . benchmark function
By following the reviewer's	suggestion, We modify the fina	I sentence in the abstract as follow	vs:
The provided quantization b a search space to each itera Consequently, numerical ex algorithm with a higher succ	based global optimization proper ation in comparison to the conve periments show that the optimiz cess rate and fewer iterations.	ty makes the proposed algorithm s ntional algorithm. ation performance of the propose	show better optimization performance on d algorithm is superior to the conventional
1. Question-2 Please put reference ir	n each equation that used in the	paper.	
Answer			
フト ,	가 가 reference 가	, reference	가 .
Almost all the equations use Some equations used in def Therefore, there is no need developed by the author.	ed in this paper were derived by initions and assumptions are the I to place additional references t	the author. most basic equations, so it is unn o each equation. All major equatio	ecessary to put a reference. ns in the manuscript are originally
1. Question-3 Add figures to demons work as in table-1.	strate each algorithm in benchma	ark function against proposed algo	rithm to show the effectiveness of the
Answer Reviewer-1 1	benchmark fu	nction searching trace	2 가 .
As suggested by Reviewer, shown in Figure 2.	the diagram about searching tra	ace for each benchmark function w	vas added over one and a half pages as
1. to Reviewer-2 1. Question-1 The importance a	and the knowledge contribution c	of the study are not sustained.	
Answer			
review Glob	val optimization	가 .	
Global optimization	sustain global optimization	Local Convexity 가	
Lipschitz continuous 가 ·	5	. sust	ain , Reviewer
This is an incomprehensible This manuscript shows that Therefore, I do not agree at sustained	ereview. computation based on quantizat t all with the review's opinion th	tion is possible as a methodology f at the importance and the knowled	for global optimization. Ige contribution of the study are not
Numerous studies pursue g methodology proposed in th be found.	lobal optimization, but in the end ie manuscript only introduces th	d, all those efforts involve the loca e Lipschitz continuous assumption	I convexity assumption, whereas the and proves that the optimal solution can
If the reviewer insists that	the importance and knowledge in	n the manuscript is not sustained,	the reviewer has not read the manuscript.
1. Question-2 To review theoretical antiquity. It is not suff	framework exhaustively. The pa icient for evidencing the origina	aper only has 14 references and o lity of the study.	nly 5 references has less than 5 years of
Answer Theoritical frame ref Framework , , 가 Global Optimization	erence , 가 , , 가 가	. ,	, Refernce
가 Theoritic	al frame	NeurIPS, ICML and ICLR	가

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The theoretical frame is never determined by the number of references.

This is a common	misconception a	mong undergradu	ate students	s and gra	duate studer	nts in beginner courses.				
in appropriate definition, assumption, proposition, and the consistency of proof about the theorems in the paper determines the neoretical frame, not the number of references.										
loreover, citing the most recent papers does not determine the guality of the paper.										
In particular, on q	particular, on global optimization, the citable crucial results of the theoretical studies are very few for decades.									
The reviewer sho	uld be reminded	that the theoretic	al foundatio	n of artif	icial intellige	ence is based on the study of local convex				
optimality, which	is established 60) years ago, and s	o many rese	earchers	did not deal	with global optimization appropriately.				
If a reviewer wan	ts to criticize the	e theoretical fram	e of this mar	nuscript,	like the revi	iewers of NeurIPS, ICML, and ICLR, ask about each				
equation of this pa	aper.									
The author is alw	ays ready to ans	wer.								
1. Question-3 There are m the correspo	any ideas and pa anding cites and r	ragraphs wihtout references.	the corresp	onding c	ites and refe	erences.All the ideas of other authors must have				
Answer										
	idea	가		,	가	citeded proposition				
Reference										
Almost all ideas a respect to the equ	nd equations in t uations except ea	the manuscript are arly represented e	e originally o equations us	construct ed in ass	ted and made sumptions an	e by authors. Thus, there are no references with ad the cited proposition.				
1. Question-4										

The structure of the paper is not clear. The IMRD (Introduction, Method, Results, and Discussion) structure is suggested to the authors.

Answer 25 , 100 Reviewer		,	Review 기?			
A.I.	,	,	,		Cor	clusion
	Discussion	, Future Research		가	5	Conclusion
IMRD	Discussion	i uture nesearch				

IMRD . Introduction-Introduction, Method - Definition and Analysis of quantization/ Decision scheme of quantization parameter, Results- Numerical Experiments, Discussiion-Conclusion.

Over the past 25 years, writing over 100 papers to international journals and conferences, this is the first time that I have received such a review about the structure of a paper.

Did the reviewer not read this manuscript properly and wrote a review after only looking at the last page?

Recently, so many authors in EE and CS put the proof of theorems and propositions, which is the main contents in the proposed papers at the end of the manuscript as an appendix, when they write a paper about a theoretical or mathematical study.

Therefore, the submitted manuscript also has been written with the same structure as academic leading-edge papers, which have an appendix.

In the manuscript, there is the conclusion paragraph on the 5-th page, and there are contents about the issue of discussion and future research.

Before suggesting the IMRD structure to authors, the reviewers should read the manuscript carefully from cover to cover. The submitted manuscript already follows the IMRD structure as follows:

IMRD Item	The manuscript	
Introduction	Introduction	
Method	Definition and Analysis of quantization/ Decision scheme of quantization parameter	
Discussiion	Conclusion.	

1. Question-5 Discussion paragraphs are absent.

Answer

It is already written in the conclusion

1. Question-6

Recommendations for future research are absent.

Answer

It is already written in the conclusion, too.

- () ().

Review Comments 11-Jan_2022.pdf	87.388 KB	2022/02/16	Jinwuk Admin
[rev]_ETRI_J_Quantization_2021_07.pdf	5.1 MB	2022/02/16	Jinwuk Admin