

PEER-REVIEW REPORT

Name of journal: World Journal of Critical Care Medicine

Manuscript NO: 53934

Title: Artificial intelligence and computer simulation models in critical illness

Reviewer's code: 04340896

Position: Editorial Board

Academic degree: MD

Professional title: Research Fellow

Reviewer's country: Italy

Author's country: United States

Manuscript submission date: 2019-12-31

Reviewer chosen by: Le Zhang

Reviewer accepted review: 2020-02-22 15:18

Reviewer performed review: 2020-02-25 11:55

Review time: 2 Days and 20 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input checked="" type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input checked="" type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

SPECIFIC COMMENTS TO AUTHORS



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The Authors should better explain the overlap between their description of Machine and Deep learning. The tasks described in the ML section are the same that can be tackled by DL. In some cases (e.g. reinforcement and semisupervised learning) DL is more suited than non-deep ML. Similarly, most if not all of the tasks the Authors associate with DL can be performed with non-deep techniques, such as SMOTE for data augmentation and disease detection and classification with "classical" supervised learning algorithms. Maybe these sections could be edited and reworded for the sake of clarity separating tasks for which ML is used and ML approaches in terms of algorithm families. Furthermore, SVMs and ensemble methods should be mentioned in ML. Especially the latter are widely used and often outperform even DL. When discussing DAGs, Bayesian Networks should be mentioned and included in the discussion.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

BPG Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

PEER-REVIEW REPORT

Name of journal: World Journal of Critical Care Medicine

Manuscript NO: 53934

Title: Artificial intelligence and computer simulation models in critical illness

Reviewer's code: 03093768

Position: Editorial Board

Academic degree: MD, PhD

Professional title: Associate Professor, Doctor, Surgeon, Surgical Oncologist

Reviewer's country: China

Author's country: United States

Manuscript submission date: 2019-12-31

Reviewer chosen by: Le Zhang

Reviewer accepted review: 2020-02-23 01:01

Reviewer performed review: 2020-02-28 13:36

Review time: 5 Days and 12 Hours

SCIENTIFIC QUALITY	LANGUAGE QUALITY	CONCLUSION	PEER-REVIEWER STATEMENTS
<input type="checkbox"/> Grade A: Excellent	<input type="checkbox"/> Grade A: Priority publishing	<input type="checkbox"/> Accept	Peer-Review:
<input type="checkbox"/> Grade B: Very good	<input checked="" type="checkbox"/> Grade B: Minor language	(High priority)	<input checked="" type="checkbox"/> Anonymous
<input checked="" type="checkbox"/> Grade C: Good	polishing	<input checked="" type="checkbox"/> Accept	<input type="checkbox"/> Onymous
<input type="checkbox"/> Grade D: Fair	<input type="checkbox"/> Grade C: A great deal of	(General priority)	Peer-reviewer's expertise on the
<input type="checkbox"/> Grade E: Do not	language polishing	<input type="checkbox"/> Minor revision	topic of the manuscript:
publish	<input type="checkbox"/> Grade D: Rejection	<input type="checkbox"/> Major revision	<input type="checkbox"/> Advanced
		<input type="checkbox"/> Rejection	<input checked="" type="checkbox"/> General
			<input type="checkbox"/> No expertise
			Conflicts-of-Interest:
			<input type="checkbox"/> Yes
			<input checked="" type="checkbox"/> No

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Artificial intelligence (AI) as a novel tool to advance the field of medicine has rapidly become a subject of great interest and intense debate. The complexity of some AI algorithms, their lack of transparency and a widespread lack of prospective validation may serve to dishearten physicians. Awareness, multi-tasking, flexibility and communication skills are human capabilities that no AI has achieved or seem likely to achieve anytime soon. This manuscript introduces some principles of artificial intelligence with a large scale of words. More about the application of artificial intelligence in critical illness treatment and the obstacles currently facing could be introduced.

INITIAL REVIEW OF THE MANUSCRIPT

Google Search:

- ☐ The same title
- ☐ Duplicate publication
- ☐ Plagiarism
- ☐ No

BPG Search:

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