

Literature Review Coding

General

Question	Rating	Notes
1: Does the article include a simulation study?	yes/no	
2: How many simulation studies are included?	integer	A simulation study is defined as having a distinct aim. Make a note if ambiguous

A

Question	Rating	Notes
3: Is there a clearly defined aim?	yes/no	Quote aim as stated by the authors (if given).

D

Question	Rating	Notes
4: Is the DGP resampled, parametric based on actual data, or parametric thin air (i.e., not directly based on a data set)?	yes/no	
5: If parametric, are parameter values given?	yes/no	Answer yes if implied but not explicit such that it could be replicated with some effort.
6: How many simulation conditions are used?	integer	
7: If >1 condition: are these varied fully-factorially, partially-factorially, or one-at-a-time?	fully-factorial/partially-factorially/one-at-a-time/other	
8: How many repetitions n_{sim} are used for each condition?	integer	
9: Is the choice of n_{sim} justified?	yes/no	Quote if possible.

E

Question	Rating	Notes
10: Are estimands stated?	yes/no	
11: How many estimands are there?	integer	
12: If >1 estimands: Are they aggregated?	yes/no	Free text entry on aggregation

Question	Rating	Notes
13: Is true θ known or estimated?	known/estimated	(N/A if resampling studies – could argue either way)

M

Question	Rating	Notes
14: How many methods are included?	integer	Different hyperparameters/settings count as different methods

P

Question	Rating	Notes
15: What is the target of the simulation study?	Classification, Estimation, Testing, Model selection, Prediction, Design, Other	multiple categories possible
16: What performance measures are used?	Convergence, Bias, Emp. SE, Model SE, MSE, RMSE, Type-I Error, Power, Coverage, Sensitivity, Specificity, ...	multiple categories possible
17: Is MC uncertainty reported or described anywhere?	tables, text, plots, boxplots/violin plots, captions, other, nowhere	

Reporting

Question	Rating	Notes
18: How are results reported?	graph, table, text, other	multiple answers possible
19: What statistical software package/s is/are used?	free text	
20: Are user-written commands/packages/macros mentioned?	yes/no	Quote if possible.
21: Is code provided?	with article, accessible online, not accessible anymore, not provided	save link to code if available, Exploratory: Check extent of code reporting

Question	Rating	Notes
22: If code is provided, is seed provided?	yes/not found	
23: Is information on the computational environment provided?	Fully (Docker or "sessionInfo" style: (packages with versions + auxiliary dependencies) / partially (main packages with versions) / minimal (main packages without versions) / no	quote if possible
24: Is information on the operating system provided?	fully (OS + version), partial (OS), no	quote if possible

Other Information

25: How confident are you in your coding of the simulation study?	great / medium / poor	
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