

Reviewer Report

Title: "Science In the Cloud (SIC): A use case in MRI Connectomics"

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Reviewer name: Peter Li

Reviewer Comments to Author:

Kiar et al. present a framework which they call, "Science In the Cloud (SIC)" for enabling reproducible analyses of data in neuroscience. The framework is comprehensive, providing a set of requirements describing how data should be shared and structured, and how the analysis of the data should be packaged for execution, extension and demonstration in an open and reproducible science manner. A use case is reported which shows a working example of the framework which involves a pipeline that processes M3RI data to generate a brain connectome graph.

I really like the thought that has gone into the framework especially using the Jupyter notebook for documenting how analyses are executed. The manuscript is well written and I was also able to reproduce the results of the use case using AWS with the instructions provided in Appendix A.

Its obvious a lot of effort has gone into the work described in the manuscript so my comments relate to the future of SIC. I think that a collection of neuroscience data analyses presented using the SIC framework would be a fantastic community resource. To this end, I am wondering how the authors will promote their work so it is adopted within the neuroscience science community. I couldn't find a web site showing the work in the manuscript which might be a useful thing to have. Perhaps <http://scienceinthe.cloud> could summarise the SIC framework?

Another barrier to adoption is that the SIC framework requires expertise in Cloud storage and computing, and virtualisation software in order to share neuroscience data analyses. I am wondering if a set of Software Carpentry-like lessons (<http://software-carpentry.org/lessons>) on these topics geared towards SIC might be worth thinking about developing in the future which could then be used as teaching materials in training workshops?

Minor correction

Fix typo on page 9 on the first line of the Discussion section: "The the..."

Peter Li

GigaScience

Methods

Are the methods appropriate to the aims of the study, are they well described, and are necessary controls included? Yes

Conclusions

Are the conclusions adequately supported by the data shown? Yes

Reporting Standards

Does the manuscript adhere to the journal's guidelines on [minimum standards of reporting?](#) Yes

Statistics

Are you able to assess all statistics in the manuscript, including the appropriateness of statistical tests used? There are no statistics in the manuscript.

Quality of Written English

Please indicate the quality of language in the manuscript: Acceptable

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