Reviewer's report

Title: MySeq: Privacy-protecting Browser-based Personal Genome Analysis for Genomics Education and Exploration

Version: 1 Date: 09 Oct 2019

Reviewer: Samuel Handelman

Reviewer's report:

Linderman and colleagues report a browser-based front-end for handling indexed, variant-call-format files entirely within the local browser. This is an important tool given, as the authors ably explain, the difference between genome-sequencing and array based genotyping.

The manuscript is crisp and well-written, and the needed information is efficient conveyed to the reader. This reviewer finds the course-instruction case report especially encouraging. Therefore, this reviewer has no mandatory revisions.

However, this reviewer suggests that one or two sentences on the following topics would improve the conclusion:

* HIPAA does not apply since a user cannot be medical provider to themself, and furthermore genetic information is not uniformly treated as Personal Health Information (PHI). Nonetheless, the authors might be wise to point out that MySeq is not a substitute for local encryption if the local user is not working in a secure environment. The authors might wish to opine on future directions in this area.

* The FDA has recently issued guidance on the use of genetic tests in precision pharmacotherapy:

the authors would be prudent to assert (in the manuscript text) that MySeq is not intended to "predict response to specific medications" or "diagnose or treat any disease or condition".

Again, the authors opinion on future directions in this area would be of interest to this reviewer, especially in a pedagogical context, but this is not a mandatory change.
Are the methods appropriate and well described?
If not, please specify what is required in your comments to the authors.

Yes

Does the work include the necessary controls?
If not, please specify which controls are required in your comments to the authors.

Unable to assess

Are the conclusions drawn adequately supported by the data shown?
If not, please explain in your comments to the authors.

Unable to assess

Are you able to assess any statistics in the manuscript or would you recommend an additional statistical review?
If an additional statistical review is recommended, please specify what aspects require further assessment in your comments to the editors.

Not relevant to this manuscript

Quality of written English
Please indicate the quality of language in the manuscript:

Acceptable

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