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Associate Editor's Report
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"A framework for mentored data science research"

In this manuscript, the authors describe a framework they have designed and implemented for mentoring undergraduate researchers. The paper develops the framework with reference to the recommendations of Nolan and Temple Lang (2010) and describes its implementation working on data science projects with two honors students. The manuscript has been submitted for consideration for the upcoming 2020 JSE special issue on "Computing in the Statistics and Data Science Curriculum" to be published ten years after the Nolan and Temple Lang article.

In light of the anticipated importance of this special issue, four reviewers and I have read the manuscript. The reviewers have done excellent work and provided very useful feedback for the authors' consideration. The reviewers and I agree that the paper has merit and provides a good case study for mentoring undergraduate research. Primary considerations in a review are, however, whether the paper constitutes a substantial and novel contribution, fits with the journal (and in this case the special issue), and is well situated within the relevant body of literature. In my study of the paper and the reviewer comments, I find peer consensus that the paper in its current form does not constitute a substantial and novel contribution to the "computing in the statistics curriculum" literature. The reviewers and I find the mentoring framework useful but not particularly newsworthy or innovative. Considered as a case study in working with undergraduates, the reviewers are in general agreement that insufficient details are provided to make the framework suitable for ready implementation. Editorially, several reviewers commented on the need for substantial reorganization and revision of the manuscript. What follows is a brief summary of the themes I find across the reviewer reports. I urge the authors to take note of these and the detailed comments of the reviewers in their revisions should they choose to resubmit.

1. **Contribution**. All four reviewers expressed concern that the manuscript in its current form does not constitute a substantial contribution to the literature. Reviewer 2 found the "Results" section short and in need of reconfiguration to "better emphasize the author's contributions." Reviewer 3 felt that the contribution could be improved by providing more details about the mentoring process and relationship. Reviewer 4's concerns focused on the lack of "anything concrete" that could be readily implemented with students.

2. **Mentoring details.** Given the focus on the framework for mentoring, the reviewers expected and encourage the authors to provide more details about the mentoring arrangement. Reviewer 1 asks for details about the student backgrounds for the project while Reviewers 3 and 4 cite the need for more information about the skills students need for these projects, the mentoring process, frequency of meeting, and generation of ideas for research. Reviewer 3 would like to better understand how the mentors benefited from the experience and encourages greater focus on addressing (and publishing about) the substantive science research question at hand.

3. **Contextualization.** Three of the reviewers specifically mentioned that the manuscript needed to provide better contextualization within the relevant literature. Reviewer 2 commented that "how it fits with the broader literature… needs to be better highlighted" and Reviewer 4 recommended that the faculty role be better articulated in a "student-facing way," tying more clearly to Nolan and Temple Lang recommendations.

4. **Organization.** All reviewers made editorial recommendations and Reviewers 1 and 2 specifically discussed the need for better organization, section numbering, and reduction of redundancy. They have made specific suggestions and Reviewer 1, in particular, suggested a reworking of the unnecessarily long Table captioned "Prioritizing Key Terms…"

The authors are referred to the individual detailed reviewer reports for further corrections and editorial recommendations.