

Reviewer Instructions: NeurIPS ML4H 2019 Workshop

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Questions?

Please send any questions to: ml4h.workshop.neurips.2019@gmail.com

Timeline

Sept. 13: Submissions due.

Sept. 16-17: Reviews assigned. Reviewing period begins!

Sept. 25 AoE: Initial review deadline. Please complete your reviews by this time! We greatly appreciate your help and are on a really tight timeline to get people notice as soon as possible.

Sept. 25-28: Discussions (and emergency reviews where necessary).

Sept. 29: Organizers make final decisions about accepted papers.

Sept. 30: Decisions announced to authors.

Goals for Reviewing Process

For the first time, we will have two tracks at the ML4H workshop: a formal proceedings track for polished work with technical sophistication and clear healthcare impact as well as an extended abstract track for non-traditional research artifacts. Our goal in providing two tracks is to establish ML4H as a strong venue for publishing excellent ML4H work while also providing a forum for insightful discussion of creative and probing ideas. While the bar for acceptance will be higher than in prior years, we sincerely hope that we will be able to maintain the same culture of positivity and candid exchange of ideas (including valuable negative results).

Another key goal of our workshop is to reward outstanding work. Please do rate papers that you are excited about highly, so that authors might be highlighted in a Spotlight talk or be otherwise acknowledged.

A final but crucial goal is to give good feedback. Please do more than just give a numerical score! Be sure to list positive aspects of the paper, as well as a few constructive things the authors could improve for either a camera ready version (if accepted) or for resubmission elsewhere (if rejected).

When should a paper switch to the abstract track?

Works submitted to the Paper track can be considered for consideration to the extended abstract track. If you are reviewing a paper and think that a shortened 4-page version of the work would be strong enough to warrant consideration in the extended abstract track, make sure to select that option in the reviewer form on CMT.

Keep in mind that the primary goal of the extended abstract track is to generate productive and interesting discussion amongst conference attendees. Creative, insightful, and/or potentially divisive contributions (even if less fully developed or not performant) make great additions to the abstract track. As a result, an extended abstract may not necessarily meet the same level of technical sophistication as a paper, as long as it meets the criteria of generating productive / interesting discussions.

What counts as a good ML4H Paper/Abstract?

All reviewers should refer to the guidelines on [how to write a good ML4H paper or extended abstract](#). The criteria for papers and abstracts is distinct and new this year -- while both tracks require high quality submissions, the abstract submissions should also be judged on their likelihood to lead to a good discussion at the workshop.

As a point of reference, you could look at the papers accepted to last year's [NeurIPS ML4H 2018 workshop](#). However, note that the bar for acceptance will be higher this year, and we have two tracks this year, while last year there was only one.

How do I view metadata related to a paper submission?

One of your reviewer questions requires you to review a series of questions that the authors answered when submitting their paper (e.g., statistical evaluation, comparison to baselines, etc.). To access this information, click on the *submission paper id* in the reviewer console on CMT. This will take you to another page that has the questions to review.

The screenshot shows the CMT Reviewer Console interface. At the top, there is a navigation bar with 'Select Your Role: Reviewer' and 'ML4H2019'. Below this, the 'Reviewer Console' header is visible, followed by a link to 'Welcome Message & Instructions'. The main content area is titled 'Reviewing' and shows a table of paper submissions. The table has columns for 'Paper ID', 'Title', 'Track', 'Subject Areas' (Primary and Secondary), and 'Review & Discussion'. The first row of the table has a paper ID of '-1', which is highlighted with a red box and a red arrow pointing to it with the text 'Click Here' below. The 'Review & Discussion' column for this row contains a 'Show Abstract' link and a 'Download' icon. The table also includes pagination controls at the bottom right, showing '1 - 1 of 1'.

Conflict Guidelines

Please check ASAP that your assigned papers do not represent conflicts of interest. You should not recognize any paper you are reviewing as work done by someone you work closely with.

If you find a conflict, report it immediately via email: ml4h.workshop.neurips.2019@gmail.com

Anonymity Guidelines

Papers should be anonymous. If you find a major violation, please report it to the organizers: ml4h.workshop.neurips.2019@gmail.com.

Our process is double-blind. The authors do not know the reviewers' identities, and the reviewers do not know the authors' identities. Of course, no process is perfect: the reviewers might be able to guess the authors' identities based on the data set or the approaches used, or by technical reports posted on the internet. As a reviewer, we expect you will not actively

attempt to discover the identity of the author. We also caution you against assuming that you've discovered an author's identity based on a data set or approach: multiple independent invention is common, and different groups often share data sets.

Formatting Guidelines

Papers should have their main content limited to 8 pages (including figures and text, but excluding references), and extended abstracts should be limited to 4 pages. Both submissions should use the NeurIPS style file. See our [official instructions](#).

Please note that:

- Papers (abstracts) with references that go beyond 8 (4) pages are allowed.
- Papers (abstracts) with appendices that go beyond 8 (4) pages are allowed. However, reviewers should not feel obligated to read any supplementary material. Your time is precious!
- Papers that do not use the NeurIPS style, but otherwise have content within page limit that could easily be made into the right format, are probably OK.

In general, we'd rather accept good work than nitpick about little formatting issues (especially because some clinicians may not be familiar with LaTeX). But big issues (e.g. a 20 page journal-like paper) would be grounds for rejection.

How many reviews?

We've tried our best to grow a large pool of reviewers, so that each reviewer is only given 5 or fewer papers. Please help us keep this number small by completing your assigned reviews on time -- and if you can complete them early, all the better!

How are papers assigned?

Authors labeled each paper with a set of primary and secondary subareas, and each reviewer was asked to list their primary and secondary subareas of expertise. These subareas were used to assign reviewers to the most relevant papers possible.

Our reviewers all have expertise in both ML and healthcare applications. We used prior reviewing experience as well as training level to pair less experienced reviewers with more experienced reviewers.

Alternatives like paper bidding were dismissed as too logistically involved for our workshop.

FAQ

- Can PC members also be authors of papers or extended abstracts?

Yes. Though of course a PC member will not be assigned to review their own papers. That's a conflict of interest.

- What if I don't have sufficient expertise to review a paper assigned to me?

While papers should provide adequate background that nearly all reviewers can provide a reasonable review, we understand that occasionally a paper may fall far outside your area of expertise. If this happens, please contact ml4h.workshop.neurips.2019@gmail.com immediately.

Reviewer Form

Full Papers

Summary

1. Please provide a 2-3 sentence summary of the work.

Technical Sophistication

2. What is your assessment of the technical sophistication of the work (please rate from 1-5)?

5 = very positive

4 = positive

3 = neutral

2 = negative

1 = very negative

3. Please provide comments on the technical sophistication of the work.

Are the methods well motivated? Are there appropriate baselines? Is the evaluation technically sound?

Relevance to Healthcare

4. What is your assessment of the work's relevance to healthcare (please rate from 1-5)?
5. Please provide comments on the work's relevance to healthcare.

Does this paper address a meaningful problem in healthcare? Do the authors exhibit understanding of key domain considerations relevant to the work (could include: understanding clinical bottlenecks, systemic biases in specific data sources, etc.)

Significance

6. What is your assessment of the significance of the work (please rate from 1-5)?
7. Please provide comments on the work's significance.

Do the authors clearly describe how this paper relates to existing work in the field? Does the work represent a significant computational or biomedical advance?

Presentation

8. What is your assessment of the quality of the presentation (please rate from 1-5)?
9. Please provide comments on the presentation of the work.

Are methods described in sufficient detail? Are figures relevant, compelling, and legible? Are the motivating problem and contributions clear?

Overall

10. In our submission form, we asked authors to describe a number of aspects of their submission we consider to often, though not always, be highly important for high-quality, reproducible machine learning research (e.g., statistical evaluation, comparison to baselines, etc.). You, the reviewer, can view the author's answers to these questions by going to the previous page in CMT (the reviewer console) and clicking on the *submission paper id*. Please review them and answer, do you think the author accurately described their own work in answering these questions?
11. Please provide any overall comments on the work, including but not limited to a list of key strengths and weaknesses of the work.
12. Please make a recommendation

Strong Accept

Paper is in top 5% of all submissions. Reviewer would argue strongly for this paper. Very original work of high value to the community. This paper should be considered for an oral presentation at the workshop.

Accept

Paper is in top 15% of all submissions. Reviewer would recommend to a colleague.

Marginal Accept

I tend to vote for accepting this submission, but rejecting it would not be that bad.

Marginal Reject

I tend to vote for rejecting this submission, but accepting it would not be that bad.

Reject

Work suffers from one or more of:

- *Off-topic content (no ML or no healthcare application)*
- *Severe technical flaws*
- *No novel contribution (results are known or trivial)*
- *Extreme formatting violations (e.g. main paper not condensable into 8 pages)*

13. Please indicate your confidence in this assessment

5: Absolutely Certain

You are absolutely certain about your assessment. You are very familiar with the related work.

4: Confident

You are confident in your assessment, but not absolutely certain. It is unlikely, but not impossible, that you did not understand some parts of the submission or that you are unfamiliar with some pieces of related work.

3: Fairly Confident

You are fairly confident in your assessment. It is possible that you did not understand some parts of the submission or that you are unfamiliar with some pieces of related work. Math/other details were not carefully checked.

2: Mildly confident

You are willing to defend your assessment, but it is quite likely that you did not understand central parts of the submission or that you are unfamiliar with some pieces of related work. Math/other details were not carefully checked.

1: Not confident

Your assessment is an educated guess. The submission is not in your area or the submission was difficult to understand. Math/other details were not carefully checked.

14. Would you recommend a shortened 4-page version of this paper be considered for acceptance to the extended abstract track? yes/no (if yes, why?)

The primary goal of the extended abstract track is to generate productive and interesting discussion amongst conference attendees. Creative, insightful, and/or potentially divisive contributions (even if less fully developed or not performant) make great additions to the abstract track.

Extended Abstracts

Summary

1. Please provide a 2-3 sentence summary of the work.

Contribution to the workshop

2. What is your assessment of the contribution of this extended abstract to the workshop (please rate from 1-5)?

5 = very positive

4 = positive

3 = neutral

- 2 = negative
1 = very negative

3. In what ways would this work be valuable to other attendees of the workshop?
Would this work generate fruitful discussion? Are technical innovations (if applicable) particularly creative or generalizable to other application areas? Does the work highlight pitfalls that are broadly applicable? Is the work likely to spur productive collaborations between researchers from different backgrounds?
4. In what ways would attending the workshop help shape this work?
Would the work benefit from presenting at the workshop (e.g. to implement a survey, to initiate a collaboration, etc.)

Relevance to Healthcare

5. What is your assessment of the work's relevance to healthcare (please rate from 1-5)?
6. Please provide comments on the work's relevance to healthcare.
Does this paper address a meaningful problem in healthcare? Do the authors exhibit understanding of key domain considerations relevant to the work (could include: understanding clinical bottlenecks, systemic biases in specific data sources, etc.)

Presentation

7. What is your assessment of the quality of the presentation of the work (please rate from 1-5)?
8. Please provide comments on the presentation of the work.
Are methods described in sufficient detail? Are figures relevant, compelling, and legible? Are the motivating problem and contributions clear?

Overall

9. In our submission form, we asked authors to describe a number of aspects of their submission we consider to often, though not always, be highly important for high-quality, reproducible machine learning research (e.g., statistical evaluation, comparison to baselines, etc.). Do you think the author accurately described their own work in answering these questions?
10. Please provide any overall comments on the work, including but not limited to a list of key strengths and weaknesses of the work.
11. Please make a recommendation

Strong Accept

Extended abstract is in top 5% of all submissions. Reviewer would argue strongly for this extended abstract. Very original work of high value to the community. This extended abstract should be considered for an oral presentation at the workshop, if possible.

Accept

Extended abstract is in top 15% of all submissions. Reviewer would recommend to a colleague.

Marginal Accept

I tend to vote for accepting this submission, but rejecting it would not be that bad.

Marginal Reject

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