How to do a good review of a research paper

Tips and tricks

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for RecSys 2025 PC Members

Goals of a review

- **Assess** the paper's **quality**
- Give **constructive**, **polite** and **actionable feedback** to the authors
- Give the **meta-reviewer** (SPC) a good and **concise** overview of your **assessment**

Leading principle: "Review for others as you would have others review for you"

McPeek, M. A., D. L. DeAngelis, R. G. Shaw, A. J. Moore, M. D. Rausher, D. R. Strong, A. M. Ellison, L. Barrett, L. Rieseberg, M. D. Breed, J. Sullivan, C. W. Osenberg, M. Holyoak, and M. A. Elgar. 2009. The golden rule of reviewing. American Naturalist 173:E155–E158.

Steps for writing a review

1. **Familiarize** with the structure/criteria for RecSys 2025 reviews
   - Reflect on the **impact** of contributions
   - Highlight points to be **addressed** during **rebuttal**
2. First read-through (**skim-read**)
3. Second read-through (**thorough-read**)
4. **Write** review
5. Re-structure and **fine-tune** review
6. Actively **participate** in the **discussion** and **rebuttal**

1. Familiarize with the structure/criteria for RecSys 2025 reviews (Review Report Format)

RecSys 2025 review form

Relevance/ Originality/ Presentation/ Related Work/ Soundness/ Reproducibility/ Impact	Ordinal rating from 1–5, reflecting on various aspects of the contribution.
Review	General comments with justification, focused on actionable feedback.
Showstopper	Key issues where author responses during rebuttal would be essential.
Overall Evaluation	Final recommendation for the paper's decision.

2. First read-through (skim-read)

Goal of skim-read

Skim-read the article with the following questions in mind:

- Is the article in line with the scope of RecSys?
- What is the overall (first) impression?
- Can you spot potential major flaws?

- From the abstract, you should already have a clear understanding of the manuscript's aims, key data, and conclusions. If you don't, make a note now that you need to provide feedback on how to improve these sections.
- Take notes when skim-reading: either with pen and paper or using a digital version (a simple text file will do).

Points to keep in mind

- Relevance:
  - What is the main question addressed by the research?
  - Is it relevant and interesting to the RecSys community?
  - Note, consider the overall scope of RecSys, and not just your personal interests!
- Contribution:
  - How original is the topic?
  - What does it add to the subject area compared to existing published work?
- Clarity:
  - Is the paper well-written?
  - Is the text clear and easy to understand?
  - Keep in mind:
    - Language issues can easily be resolved before the camera-ready version.
    - "Well-written" does not mean having an "exciting or stylish tone"—it means the message is conveyed clearly, the text is easy to follow, and the structure supports easy comprehension. It does not matter what YOUR favorite writing style is. Sometimes, restructuring the text will already solve the issue.
- Conclusions:
  - Are the conclusions supported by the evidence and arguments presented?
  - Do the conclusions address the main research question(s)?
  - Note, this may not always be stated explicitly (e.g., "Addressing RQ1, we found…"). Sometimes, it is more implicit.
- Presentation:
  - Is the overall structure clear and logical?
  - If the paper includes tables or figures, do they enhance understanding, or are they unnecessary?

Spotting potential major flaws

- Don’t search for such until you find something minor to make it major!
- Likely there are no major flaws; but in case there are, good to spot those
- If there are major flaws:
  → “Specific recommendations to remedy flaws are VERY welcome.”

3. Second read-through (thorough-read)

Points to address in the thorough read

- Is the article publishable in principle?
- You should identify:
  - Any places where the meaning is unclear or ambiguous
  - Any factual errors
  - Any invalid arguments

- You may also wish to consider:
- Does the title properly reflect the subject of the paper? What else needs to be reflected?
- Does the abstract provide a clear summary of the paper?
- Is the paper an appropriate length?
- Are the key messages concise, accurate, and clear?

4. Write review

Suggested Structure

- Brief **summary** of the work and contribution
- Enumeration or **strengths**
- Enumeration of **weaknesses**
- **Major** issues
- **Minor** issues

Drafting your review

- Make a first draft describing the main aim of the article and explain why it is innovative.
- Identify Strengths and Weaknesses
  - What are the paper's strengths? (Every paper has strengths!)
  - What are the paper's weaknesses?
- Provide details
  - Major issues: What is critical to be addressed by the authors?
  - Minor issues: What improvements would be helpful but are not critical?
  - Be specific and provide detailed feedback on how the weaknesses can be addressed.
- Presentation of your review:
  - Always stay polite!
  - Always be constructive!
  - Write clearly and in a way that is easy to understand by people whose first language is not English.
  - Treat the author's work with the same respect and care you would like your own to be treated.

5. Re-structure and fine-tune review

Points to consider

- Is your review clear and easy to understand?
- Is the tone appropriate and respectful?
  - Have you maintained the level of politeness that you expect in reviews that you receive?
  - Is your feedback constructive? Do you suggest concrete ways to address the raised issues?
- Is the structure (and flow) of your review easy to follow?
  - Will it help the author(s) understand and appreciate your perspective?
  - Will the meta-reviewer (SPC) be able to quickly grasp your overall assessment and reasoning?

Keep in mind…

- What can be done to make the paper publishable by the camera-ready deadline?

  → e.g., if the first paragraph of a paper is not aligned with the rest of the paper, it is likely more effective to revise/change the first paragraph than asking the authors to keep the first paragraph adjust the rest of the paper to match it.

- Focus on suggesting changes that bring clarity and consistency with minimal disruption to the core content.

Keep in mind…

- After reading your review, will the authors have the constructive feedback to improve their paper (even if not in time for this conference cycle?)
- If the answer is "no", revisit your review. Your goal as a reviewer has not been fully met yet.

6. Discussion and rebuttal

What is expected during the discussion period

The goal is to ensure that the final decision is fair, well-reasoned, and supported by thoughtful, constructive feedback.

- **Read** the other reviews.
- Clarify differences in opinion: If reviewers have divergent views, engage respectfully to explain your reasoning and seek common understanding.
  - Be **open** to **changing** your **opinion** (positively or negatively!) as new insights or perspectives emerge.
  - Be **open** to **suggesting improvements** (e.g. *R2, I see you mention a lack of baselines, could you make any specific suggestions?*)
- **Update** your review if needed: If the discussion leads to a revised understanding or consensus, reflect that in your final review.
- Maintain a **constructive** tone: The discussion should be respectful and focused on helping the authors improve their work.

What is expected from the rebuttal

- **Write** your review with the **rebuttal in mind**.

  → This is your chance to seek clarifications from the authors.

- **Read** the rebuttal with your **review in mind**.

  → Do authors adequately address your concerns?
  If so, acknowledge this and update your score accordingly!

References

- Wiley's Step by step guide to reviewing a manuscript, https://authorservices.wiley.com/Reviewers/journal-reviewers/how-to-perform-a-peer-review/step-by-step-guide-to-reviewing-a-manuscript.html
- Elsevier's How to conduct a review, https://www.elsevier.com/reviewers/how-to-review