How to Review CS Papers

Even young computer scientist has to read many scientific papers, assigned or otherwise, throughout his or her career. As such, you will be better equipped to understand concepts, processes, and algorithms and improve the quality of your writing in your area of expertise. As emphasis on publishing papers is increasing in academia, so is demand for reviewing material. Although you won’t usually get brownie points for reviewing, you will get praise for volunteering. The review process is normally more relaxed for conferences than journals, here are some easy tips to help you get started:

1. Skim and read. The basic concept of the peer-review process is to give honest and intellectual criticism. Although it depends on the paper (full/short/ poster/workshops) and the venue for which you are reviewing, mastering the reading technique called “skimming helps a lot. The idea is to speed read but with care.

2. Meet the deadlines. Meeting the review deadlines for conferences and journals are important as it can affect the entire publication process. Normally, conferences will give you one month to review two or three short articles; journals will give slightly more for one longer article (5–6 weeks).

3. Advice about your advice. Your review should always be honest, polite, respectable, focused on potential improvements, and succinctly communicate the paper’s strengths and weaknesses. Papers under review are regarded as highly confidential.

4. Act as a neutral observer. Remember the goal is to review the work presented in the paper, not its author(s). Imagine yourself as a judge in a courtroom and the case you are observing is “the paper.” Listen to both sides of arguments (i.e., strengths and weaknesses), validate the claims (and the evidence) and never make a decision in a hurry. Your review should be a comprehensive feedback report if the decision is negative (i.e., rejections, and major revisions).

5. Ask yourself tough questions. Is this paper worth reading? In which field does the paper advance? Can the experiments conducted be reused? Are the research questions interesting enough? Is there any potential in investigating such-and-such approach/technique/methods? What are the methodologies used? Are they valid enough? How does this paper answer relevant questions on existing scientific literature? What is the significance of the results? Does this paper merit publication? Furthermore, good reviews should always help the author(s) advance their own career and field of inquiry.

One last thing, don’t forget to put that you have volunteered for a conference or journal in your CV. Happy reviewing!

—Santosh Kalwar

Biography

Santosh Kalwar is a doctoral student at the Lappeenranta University of Technology, Lappeenranta, Finland working on human-computer interaction. He holds an M.S. in information technology from Lappeenranta University of Technology and a B.E. in computer science and engineering from Visvesvaraya Technological University, Bangalore, India.