My personal checklist when writing an academic paper

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I have been writing academic papers for about five years. Clearly, I am still a newbie on the road of research and not qualified to say certain rules for academic writing. In this article, from the standpoint of a student, I want to share the things that I pay particular attention to when writing academic papers. Note that what I list below doesn't intend to cover all aspects, but only includes those I easily forget to check.

- Be aware of specific rules of your target conferences or journals. As an example, most conferences requires your paper cannot be longer than a pages (e.g., $a = 6, 8$). But for some of the conferences (e.g., ICCV), you can put references (and only references) at the $(a + 1)$-th page. You should pay particular attention to this subtlety, as violating this rule might lead to rejection without review.
- Consistency. Have you written 'X-axis' at beginning while 'x-axis' later? Are captions of tables in the same format throughout your paper?
- Readable. Please be sure that legends/labels/axes in your figures are readable.
- Clearness. Do not use 'A slightly reduces cost'. Use 'A reduces cost by $2\times$'. Quantitative description is better than qualitative description.
- No grammar mistakes. I sometimes might leave a sentence like 'We did.' in the paper, i.e., forgetting to finish the sentence! Please read every word of your paper and make sure no broken sentences or grammar mistakes.
- No math typo. I find I might write $\mathbf{x} \in \mathbf{R}^d$, while the correct one is $\mathbf{x} \in \mathbf{R}$.
- Pay attention to cross reference. Is '(2)' the right number in 'According to Eq (2), we have $\cdots$.'?
- Use fewer adverbs. 'We can easily prove that $\cdots$' should be 'We can prove that $\cdots$'.
- Avoid long sentences. Reviewers will easily forget about what you were talking about at the beginning of your sentence!
- Prof. Zheng Zhang provides a comprehensive checklist on his homepage. I highly recommend you to read it [link].

Even if you did all these things, whether a paper is accepted or rejected is still full of randomness. In my opinion, if we define the quality of a paper as x (where x is normalized into $[0, 1]$), and the acceptance rate as $0 \leq y \leq 1$. I would say that they have relationship: $y = min(x, 0.5)$. In other words, there is a threshold 0.5 and after x reaches that, the acceptance rate y won't increase. There is an interesting experiment conducted by NIPS[1] consistent with my feeling (Price, 2014). Roughly speaking, the experiment sets up two independent program committees, and about 57% of the papers accepted by the first committee were rejected by the second one and vice versa (Price, 2014)! Thus, the best we could do is polish our paper and make our x larger than 0.5, and next pray to God for acceptance!

References

Price, E. (2014). The NIPS experiment.

[1] Now it is known as NeurIPS.