

Essay 1

Introduction and overview:

For this paper, I'd like you to get in the mindset of a reviewer, as well as begin to practice the skills of hunting down references to find clarifications and explanations. I'd like you to find a paper with heavy use of bioinformatics algorithms. This can be something from your own research, if you have something you'd like to examine more closely, or you can dive into a relevant conference and pick something interesting. I might suggest something like the "Algorithms in Bioinformatics" workshop: <https://link.springer.com/book/10.1007/978-3-319-43681-4>, but this can really be anything connected to the topic. (Come see me if you have any questions or concerns on this part of the selection.).

Assignment details:

- Imagine that you were assigned this paper as a reviewer. The first part of any paper review is a succinct summary (two sentences to one paragraph) of the contributions of the paper. This summary should be objective, and easy to read for a PC member (a computational biologist). Write that summary. Note that you should keep your opinions limited in the summary part. (In a paper review, the opinions would come second, but they will not be a part of this assignment).
- Next, spend up to half a page to identify and explain the major algorithmic component of this paper. Are they using any of the algorithmic techniques that we have discussed so far in class? Are they applying heuristics, or giving guaranteed approximations? Do they discuss running times or space usage?
- Now, skim the rest of the paper to get a general idea of what is going on, and then try to read as much detail as you can. Describe where you got lost, using up to one full page.
- Identify a paper that would help enhance your understanding of Paper-1; let's call this Paper-2. This paper can perhaps be found as a reference in Paper-1, or you can get it from your mad googling skills. Read it. First, skim the paper to get a general idea of the paper, then try to read as much detail as you can. Describe where you got lost in Paper-2, using up to one full page.
- Repeat this process one more time: identify Paper-3 that would help you resolve where you got lost in Paper-2. Skim the paper, then read it in as much detail as you can: where do you get lost here? Does this process have an end?